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Barbara L Hendry

BARBARA L. HENDRY
Chief, Technical Services Division
USAF Historical Research Center


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HEADQUARTERS
1st COMBAT EVALUATION GROUP

STANDARDIZATION/EVALUATION ANALYSIS

1 January - 30 June 1979

31 August 1979

1CEVG/AN

BARKSDALE AIR FORCE BASE, LOUISIANA

IRIS WORK SHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 00000381/31,000006

SECURITY WARNING/ADMIN MARKINGS

RD FR CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

PROPRIETARY INFO

THIS DOCUMENT CONTAINS NATO _____ INFO

501 DOCUMENT SECURITY

501 U

DOWNGRADING INSTRUCTIONS

DECLASSIFY ON

REVIEW ON

CLASSIFICATION AND DOWNGRADING INSTRUCTIONS FOR

502 ____ / ____ / ____

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STANDARDIZATION/EVALUATION RESULTS

JANUARY - JUNE 1979

SUMMARY

1. OVERALL SAC: SAC Standardization/Evaluation activity totaled 16,761 checks for a decrease of 2,024 evaluations. Overall command qualified rate for all evaluations was 95.5% which includes an emergency procedures examination rate of 98.7% and an inflight rate of 93.4 percent. Included in the inflight rate is a 4.2% qualification level two rate.

2. UNIT: Unit activity including notice, no-notice and spot checks totaled 15,515 evaluations with a 95.5% overall qualified rate. Unit activity decreased by 1,290 while the overall qualified status increased by 0.7 percent. Inflight activity totaled 8,014 evaluations with a 93.3% inflight qualified rate. Included is a 4.3% qualification level two rate. Emergency Procedure Examinations administered by the units totaled 9,948 checks resulting in a 98.6% qualified rate. The breakout by type aircraft follows (Inflight/EP Exam): B-52 - 91.2%/98.6%; FB-111 - 95.7%/100%; KC/EC-135 - 94.2%/98.5% Recon 97.2%/99.4%; Combat Support Aircraft (CSA) - 100%/100 percent. Areas discussed where a less than 97% qualified rate was achieved on unit notice or no-notice are: B-52 Pilot - Flight Simulator, Emergency Procd (inflight); B-52 Co-pilot - Flight Simulator, Instruments, Emergency Procd (Inflight), Crew Coordination; B-52 RN - Crew Coordination, Bombing, Navigation, AGM-69; B-52 Navigator - Crew Coordination, Bombing, Navigation, AGM-69; B-52 EWO - Electronic Warfare, B-52 Gunner - Emergency Procd (exam), Mission Planning, FCS Operations/Procd; KC-135 Copilot - Emergency Procd (exam), Instruments; KC-135 Navigator - Navigation; KC-135 Boom Operator - Air Refueling; FB-111 Pilot - Instruments; FB-111 Navigator - AGM-69.

3. 1CEVG: 1CEVG Standardization/Evaluation activity totaled 1245 checks, a decrease of 735 evaluations. Personnel evaluated by 1CEVG achieved a 95.6% overall qualified rate including 2.1% qualified with training. Of the 868 inflight evaluations, a 94.0% qualified rate was achieved which includes a 3.0% qualified with training. Emergency procedure examinations administered by 1CEVG totaled 686 checks with a 99.6% qualified rate. The breakout by type aircraft is (Inflight/EP Exam): B-52 - 92.0%/100% FB-111 - 97.5%/100% KC/EC-135 - 94.8%/99.2%; Recon - 89.3%/100%; CSA - (None administered).

4. QUALIFICATION LEVEL TWO: Areas discussed in the Unit Qual Level Two Analysis include crew coordination, equipment operation, judgment and compliance, air refueling, AGM-69 (Qual), bombing, navigation, electronic warfare, mission planning, and FCS operation.

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STANDARDIZATION/EVALUATION ANALYSIS

1 JANUARY - 30 JUNE 1979

PURPOSE: This report is prepared at the conclusion of each six month training period to provide the command a consolidated summary of unit and 1st Combat Evaluation Group administered standardization checks.

SCOPE: This report presents results of unit and 1CEVG Standardization/Evaluation Checks administered during 1 Jan - 30 June 1979. Graded areas pertaining to individual crew positions, by type aircraft, are covered in this report. Problem areas and trends are identified with recommendations for corrective actions where applicable.

SOURCE: Data contained in this report was extracted from the RCS: SAC-DOT(M) 7109 Part 1, Statistical Data Section (SAC Form 111), and Part II, Reasons for Unqualified Status, and results of 1CEVG evaluations.

DISCUSSION: This report discusses all standardization/evaluation checks administered throughout the Strategic Air Command and is divided by overall SAC, Unit Evaluations and CEVG administered checks.

SECTION A

SAC STANDARDIZATION/EVALUATION RECAP

During the period 1 Jan - 30 June 1979, 15,515 unit and 1,245 1CEVG evaluations were administered. Aircrew members evaluated by the unit achieved a 95.5% overall qualified rating, while those evaluated by 1CEVG received a rating of 95.6 percent. Compared to the previous training period, the unit overall qualification rate increased by 0.7 percent. The number of unit evaluations decreased by 1,290 checks, while 1CEVG evaluations decreased by 735 checks. Unit spot, emergency procedures examinations, and flight simulators administered as separate checks are also included in both unit and 1CEVG total evaluations.

The following eight charts depict overall SAC evaluations by type aircraft for ARF, 3AD, 8AF, 15AF and SAC totals. Unit and 1CEVG statistics are separated by type aircraft and crew positions. Figures include all inflight evaluations, emergency procedures examinations, flight simulator evaluations and unit spot checks.

PREPARED 79 JUL 30 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 / 30 JUN 1979
ARF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN LAC2A-A1C

AIRCRAFT	NUMBER CHECKED CEVG	UNIT	PERCENT HIGHLY QUAL CEVG	UNIT	PERCENT QUALIFIED CEVG	UNIT	PERCENT QUAL/TRNG REQ CEVG	UNIT	PERCENT QUALIFIED*** CEVG	UNIT
KC-135	84	1546	35.7	23.9	57.1	68.8	1.2	2.5	94.0	95.1
TOTAL	84	1546	35.7	23.9	57.1	68.8	1.2	2.5	94.0	95.1

*** REPRESENTS OVERALL QUALIFICATION (HQ, Q AND QT)

PREPARED 79 JUL 30 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 / 30 JUN 1979
3AC CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN 1AC26-A1C

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
P-E2	46	300	35.4	44.0	56.3	49.3	8.3	0.7	97.9	98.0
KC-135	50	202	46.0	39.1	52.0	55.9	0.0	1.5	98.0	96.5
TOTAL	96	502	40.8	42.0	54.1	52.0	3.1	1.0	98.0	95.0

*** REPRESENTS OVERALL QUALIFICATION (HQ, C AND GT)

PREPARED 79 JUL 30 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 / 30 JUN 1979

PAF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN 1A026-N10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
F-52	224	2882	29.9	46.6	61.2	45.6	3.1	2.4	94.2	94.7
FB-111	83	362	51.8	38.2	44.6	56.8	2.4	2.1	98.8	97.1
KC-135	264	3378	40.2	45.6	54.5	49.6	0.8	2.0	95.5	97.2
EC-135		120		37.5		55.8		1.7		95.0
TOTAL	571	6762	37.8	45.5	55.7	48.4	1.9	2.2	95.4	96.1

*** REPRESENTS OVERALL QUALIFICATION (HQ, Q AND QT)

PREPARED 79 JUL 30 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 / 30 JUN 1979

15AF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN LAB2A-M1C

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
B-52	134	2591	26.5	39.9	63.4	50.9	2.3	3.2	92.4	94.1
KC-135	227	3217	35.7	40.7	59.0	52.5	3.1	2.1	97.8	95.3
EC-135	34	242	29.4	40.1	55.0	51.2	2.9	6.2	88.2	97.5
F-4		29		6.9		82.8		0.0		89.7
RC-135M	10	39	0.0	25.6	80.0	64.1	0.0	5.1	80.0	94.9
RC-135S		102		25.5		70.6		2.0		98.0
RC-135U	14	67	35.7	26.9	64.3	65.7	0.0	6.0	100.0	98.5
RC-135V	25	170	68.0	42.4	28.0	52.9	0.0	2.4	96.0	97.6
SR-71	10	32	50.0	37.5	50.0	62.5	0.0	0.0	100.0	100.0
U-2	9	49	66.7	40.8	33.3	53.1	0.0	2.0	100.0	95.9
T-38	17	98	82.4	51.0	17.6	46.9	0.0	1.0	100.0	99.0
RC-135**		29		24.1		69.0		0.0		93.1
OTHER	14	41	71.4	19.5	28.6	78.0	0.0	2.4	100.0	100.0
TOTAL	492	6706	37.2	39.8	56.1	52.7	2.2	2.7	95.5	95.1

** PG SAC LOGISTIC SUPPORT

*** REPRESENTS OVERALL QUALIFICATION (HQ, C AND QT)

PREPARED 79 JUL 30 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 / 30 JUN 1979

SAC CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN UA026-M1C

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG PEC CEVG	PERCENT QUAL/TRNG PEC UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
F-52	404	5773	29.5	43.5	61.4	88.2	3.2	2.7	94.1	94.4
FB-111	83	382	51.8	38.2	44.6	56.8	2.4	2.1	98.8	97.1
KC-135	625	8343	38.4	39.6	56.3	54.4	1.6	2.1	96.3	96.1
RC-135	34	382	29.4	39.2	55.9	52.8	2.9	4.7	88.2	96.7
T-4		29		6.9		82.8		0.0		89.7
RC-135M	10	39	0.0	25.6	80.0	64.1	0.0	5.1	80.0	94.9
RC-135S		102		25.5		70.6		2.0		98.0
RC-135L	14	67	35.7	26.9	64.3	65.7	0.0	6.0	100.0	98.5
RC-135V	25	170	48.0	42.4	28.0	52.9	0.0	2.4	96.0	97.6
SR-71	10	32	50.0	37.5	50.0	62.5	0.0	0.0	100.0	100.0
U-2	9	49	66.7	40.8	33.3	53.1	0.0	2.0	100.0	95.9
T-38	17	98	82.4	51.0	17.6	46.9	0.0	1.0	100.0	99.0
RC-135**		29		24.1		69.0		0.0		93.1
OTHER	14	41	71.4	19.5	28.6	78.0	0.0	2.4	100.0	100.0
TOTAL	1245	15516	37.7	40.8	55.8	52.4	2.1	2.4	95.6	95.5

** HQ SAC LOGISTIC SUPPORT

*** REPRESENTS OVERALL QUALIFICATION (HQ, Q AND QT)

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) FOR LA02A-NC7
01 JAN 1979 - 30 JUN 1979

B-52

POSITION	1CEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	99	5	5.1	94.9	1393	59	4.2	95.8
COPILOT *	0	0			5	1	20.0	80.0
COPILOT	77	3	3.9	96.1	960	52	5.4	94.6
RADAR NAVIGATOR	73	4	5.5	94.5	970	64	6.6	93.4
NAVIGATOR	65	4	6.2	93.8	829	60	7.2	92.8
EWO	45	3	6.7	93.3	793	34	4.3	95.7
GUNNER	45	5	11.1	88.9	823	55	6.7	93.3
TOTAL	404	24	5.9	94.1	5773	325	5.6	94.4

FB-111

POSITION	1CEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	43	1	2.3	97.7	192	7	3.6	96.4
RADAR NAVIGATOR	40	0	0.0	100.0	190	4	2.1	97.9
TOTAL	83	1	1.2	98.8	382	11	2.9	97.1

K/E/RC/135

POSITION	1CEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	218	12	5.5	94.5	3254	113	3.5	96.5
COPILOT *	1	0	0.0	100.0	19	0	0.0	100.0
COPILOT	142	7	4.9	95.1	2048	95	4.6	95.4
RC-135 NAV 1	11	0	0.0	100.0	10	1	10.0	90.0
NAVIGATOR	160	3	1.9	98.1	1795	65	3.6	96.4
TACTICAL CMDR	2	0	0.0	100.0	12	0	0.0	100.0
MANUAL TRACKER	0	0			12	0	0.0	100.0
R-1	9	0	0.0	100.0	64	0	0.0	100.0

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) FOR LAC26-807
01 JAN 1979 - 30 JUN 1979

K/E/RC/135

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
R-2	3	0	0.0	100.0	26	1	3.8	96.2
R-3	4	0	0.0	100.0	28	0	0.0	100.0
R-4	0	0			16	0	0.0	100.0
BOOM OPERATOR	158	8	5.1	94.9	1770	74	4.2	95.8
SCANNR/FLT-STRD	0	0			29	1	3.4	96.6
TOTAL	708	30	4.2	95.8	9083	350	3.9	96.1

E-4

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	0	0			16	2	12.5	87.5
NAVIGATOR	0	0			8	0	0.0	100.0
FLT ENGR/FMT/WO	0	0			5	1	20.0	80.0
TOTAL	0	0			29	3	10.3	89.7

SR-71

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	5	0	0.0	100.0	15	0	0.0	100.0
RSO	5	0	0.0	100.0	17	0	0.0	100.0
TOTAL	10	0	0.0	100.0	32	0	0.0	100.0

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) PCN LA026-007
01 JAN 1979 - 30 JUN 1979

U-2

POSITION	1CEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	9	0		0.0	100.0	49	2		4.1	95.9
TOTAL	9	0		0.0	100.0	49	2		4.1	95.9

T-38

POSITION	1CEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	17	0		0.0	100.0	98	1		1.0	99.0
TOTAL	17	0		0.0	100.0	98	1		1.0	99.0

RC-135**

POSITION	1CEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	0	0				20	2		10.0	90.0
NAVIGATOR	0	0				6	0		0.0	100.0
BOOM OPERATOR	0	0				3	0		0.0	100.0
TOTAL	0	0				29	2		6.9	93.1

OTHER

POSITION	1CEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	7	0		0.0	100.0	29	0		0.0	100.0
NAVIGATOR	4	0		0.0	100.0	11	0		0.0	100.0
BOOM OPERATOR	3	0		0.0	100.0	1	0		0.0	100.0
TOTAL	14	0		0.0	100.0	41	0		0.0	100.0

SECTION B

UNIT STANDARDIZATION/EVALUATION RECAP

A total of 8,014 unit inflight evaluations were administered for a 93.3% inflight qualified rate. This includes a QL 2 rate of 4.3 percent. A breakout by type of aircraft follows: (Percent QL2/QL3) B-52 - 5.0/8.8; FB-111 - 3.1/4.3; KC-135 - 3.8/6.0; EC-135 - 7.8/3.4,E-4 - 0/0; Recon Acft - 4.7/2.8. This section discusses all inflight areas where a minimum of fifty (50) evaluations were administered and a qualified rate of 97% or less was received on unit notice or no-notice evaluations. The 97% is an arbitrarily selected reference point used over a period of time as a means of providing continuity to trend analysis. Eleven aircrew positions, encompassing 24 graded areas, failed to attain the 97% qualified for unit notice or no-notice evaluations. The positions and areas were: B-52 Pilot - Flight Simulator, Emergency Procedures (inflight); B-52 Copilot - Flight Simulator, Instruments, Emergency Procedures (inflight) Crew Coordination; B-52 - RN - Crew Coordination, Bombing, Navigation, Guided Air Missiles, B-52 EWO - Electronic Warfare; B-52 Gunner - Emergency Procedures (exam); KC-135 Copilot - Emergency Procedures (exam), Instruments; KC-135 Navigator - Navigation; KC-135 Boom Operator - Air Refueling; FB-111 Pilot - Instruments; FB-111 NAV - Guided Air Missiles.

1. UNIT QUALIFICATION LEVEL 3 RESULTS:

The following charts depict results of the unit evaluations where a qualified rate of less than 97% exists and compares those same graded areas with the results obtained during 1CEVG evaluations.

AREA	POSITION	UNIT NOTICE #CK/U/%Q	UNIT NO-NOTICE #CK/U/%Q	1CEVG #CK/U/%Q
B-52				
Flight Simulator	Pilot	345/3/99.1	6/1/83.3	12/0/100
Emergency Procd (inflight)	Pilot	449/7/98.4	29/2/93.1	21/1/95.2
Flight Simulator	Copilot	182/1/99.5	8/1/87.5	12/0/100
Instruments	Copilot	234/8/96.6	82/1/98.8	54/0/100
Emergency Procd (inflight)	Copilot	222/3/98.6	27/2/92.6	19/0/100
Crew Coordination	Copilot	217/4/98.2	82/3/96.3	54/2/96.3
Crew Coordination	Radar Navigator	320/1/99.7	77/5/93.5	57/0/100
Bombing	Radar Navigator	343/11/96.8	74/15/79.7	50/4/92.0
Navigation	Radar Navigator	342/13/96.2	74/8/89.2	58/0/100
Guided Air Missiles	Radar Navigator	234/6/97.4	53/2/96.2	39/0/100
Crew Coordination	Navigator	198/3/98.5	81/5/93.8	57/0/100
Bombing	Navigator	202/2/99.0	80/7/91.3	50/1/98.0
Navigation	Navigator	217/7/96.8	79/10/86.3	57/1/98.2
Guided Air Missiles	Navigator	156/4/97.4	52/5/90.4	39/0/100
Electronic Warfare	EWO	310/11/96.5	80/6/92.5	32/1/96.9
Emergency Procd (exam)	Gunner	273/2/99.3	347/13/96.3	27/0/100
Mission Planning	Gunner	333/2/99.4	87/3/96.6	28/0/100
FCS Ops/Procedure	Gunner	353/17/95.2	83/9/89.2	29/2/93.1
KC-135				
Emergency Procd (exam)	Copilot	479/6/98.7	696/27/96.1	38/0/100
Instruments	Copilot	491/19/96.7	185/4/97.8	102/2/98.0
Navigation	Navigator	515/17/96.7	239/13/94.6	105/1/99.0
Air Refueling Tanker	Boom Operator	624/22/96.5	226/12/94.7	96/4/95.8
FB-111				
Instruments	Pilot	88/3/96.6	12/0/100	24/1/95.8
Guided Air Missiles	Navigator	56/1/98.2	7/1/85.7	16/0/100

The remainder of this section discusses the areas identified on the SAC Form 817 for all Unit Evaluations. The discrepancies noted for each area are for the most part self explanatory and it is hoped that units will place emphasis on these discrepancies in their training programs. All U's and T's for notice and no-notice evaluations are noted in the charts. The Qualified rates are displayed to allow you to compare that graded area with previous rates using the same criteria.

2. B-52 QUALIFICATION LEVEL 3 RESULTS:

a. PILOT:

(1) FLIGHT SIMULATOR: B-52 pilots achieved a 83.3% qualified rate during this training period in the unit no-notice program. Four mission ready pilots were unqualified. Pilots had the most problems with engine out procedures. More study of section III of the Dash-1 is indicated.

B-52 PILOT

DEFICIENCIES

REASON	#U	#QT
Failed to recognize abort situation	2	0
Engine out Procedures	2	0
TOTAL	4	0

SIMULATOR QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	372/99.7	18/100	6/100
Jan - Jun 77	448/99.6	23/95.7	22/95.5
Jul - Dec 77	366/100	11/100	16/100
Jan - Jun 78	380/99.7	28/96.4	15/100
Jul - Dec 78	355/99.7	6/100	1/100
Jan - Jun 79	345/99.1	6/83.3	12/100

NOTE: Total checks/% qualified.

(2) EMERGENCY PROCEDURE (INFLIGHT): B-52 pilots achieved 93.1% qualified rate during this training period in the unit no-notice program. Overall, nine were unqualified and two were qualified with training. Three were students and eight were mission ready. Engine out airspeed control accounted for the majority of problems. More hands on experience is needed. Control of pitch and power was deficient more than a lack of procedural knowledge. The same problems were encountered during flaps up approaches with airspeed being out of tolerance both on the high and the low side.

B-52 PILOT

DEFICIENCIES

REASON	#U	#QT
Airspeed tolerance during engine out work	5	1
Flaps up airspeed errors	2	0
Landing gear related problems	2	0
Excessive altitude loss during engine out	0	1
TOTAL	9	2

EMERGENCY PROCEDURE (INFLIGHT) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	424/99.3	44/100	19/94.7
Jan - Jun 77	497/98.8	53/98.1	34/100
Jul - Dec 77	415/99.0	37/97.3	23/100
Jan - Jun 78	449/99.6	32/100	28/100
Jul - Dec 78	405/99.5	31/100	21/100
Jan - Jun 79	449/98.4	29/93.1	21/95.2

NOTE: Total checks/% qualified.

b. COPILOT:

(1) FLIGHT SIMULATOR: B-52 copilots received a 87.5% qualified rate in the unit no-notice program. Two mission ready copilots were unqualified. One error related to crew coordination and the other was a failure to recognize a definite abort situation.

B-52 COPILOT

DEFICIENCIES

REASON	#U	#QT
Failed to recognize abort situation	1	0
Improper engine out aircraft configuration	1	0
TOTAL	2	0

FLIGHT SIMULATOR QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	198/99.0	13/100	2/100
Jan - Jun 77	251/99.6	21/95.2	22/100
Jul - Dec 77	231/91.1	6/100	13/100
Jan - Jun 78	214/99.5	18/94.4	15/100
Jul - Dec 78	212/99.5	8/100	13/100
Jan - Jun 79	182/99.5	8/87.5	12/100

NOTE: Total checks/% qualified.

(2) INSTRUMENTS: B-52 copilots receive a 96.6% qualified rate in the unit notice program. Nine were unqualified and two were qualified with training. Two were students and nine were mission ready. This is a repeat area from the last report with the most discrepancies being for basic instrument areas of poor airspeed, altitude, or heading control. Part of the problems appear to be a lack of knowledge of AFM 51-37, Instrument Flying. Some copilots were so distracted with trying to figure out where they were on an approach and what procedures were necessary, that they got behind the aircraft.

B-52 COPILOT

DEFICIENCIES

REASON	#U	#QT
Poor airspeed, altitude, or heading control	6	1
ATC clearance	2	0
Improper approach aid	1	0
Holding	0	1
TOTAL	9	2

INSTRUMENT QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	219/96.8	107/96.3	65/100
Jan - Jun 77	272/98.2	109/98.2	82/98.8
Jul - Dec 77	256/97.7	86/97.7	47/100
Jan - Jun 78	277/96.0	121/98.3	78/97.4
Jul - Dec 78	216/95.8	96/99.0	55/100
Jan - Jun 79	234/96.6	82/98.8	54/100

NOTE: Total checks/% qualified

(3) EMERGENCY PROCEDURES (INFLIGHT): B-52 copilots received a rate of 92.6% in this area on unit no-notice evaluations. A total of 5 copilots were unqualified. Four copilots were mission ready and one was a student. There was no trend, but emphasis on systems knowledge during CPT periods could help.

B-52 COPILOT

DEFICIENCIES

REASON	#U	#QT
Landing gear related problems	2	0
Electrical systems problems	2	0
Systems limitations	1	0
TOTAL	5	0

EMERGENCY PROCEDURES (INFLIGHT) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	185/98.9	33/100	15/100
Jan - Jun 77	252/99.6	46/97.8	25/96.0
Jul - Dec 77	240/99.2	36/97.2	15/100
Jan - Jun 78	237/99.2	38/100	25/100
Jul - Dec 78	195/99.5	29/100	17/100
Jan - Jun 79	222/98.6	27/92.6	19/100

NOTE: Total checks/% qualified.

(4) CREW COORDINATION: B-52 copilots received a 96.3% qualified rate in the unit no-notice program. Seven CPs were unqualified and eight were unqualified with training. Two were students, two were spares, and the remainder were mission ready. The most common problem was related to not advising the pilot of errors during instrument work. Mission and checklist pacing caused problems throughout all areas of flight. Better mission planning with emphasis on the briefing and table flying the mission could alleviate some of the problems. Individual crews sitting down for a self critique and ironing out problems while they are still fresh in the crew's minds immediately following a flight can be extremely helpful.

B-52 COPILOT

DEFICIENCIES

REASON	#U	#QT
Instruments	2	2
Low altitude coordination	1	1
Air refueling	1	0
Taxiing	1	0
Aircraft limitation	1	0
Altitude clearance	1	0
Checklist pacing	0	3
Bombing	0	1
Engine-out problems	0	1
TOTAL	7	8

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	197/97.0	108/98.1	65/92.3
Jan - Jun 77	249/98.8	108/94.4	82/96.3
Jul - Dec 77	242/97.5	87/95.4	47/97.9
Jan - Jun 78	247/98.0	120/94.2	78/93.6
Jul - Dec 78	191/97.4	95/95.8	55/98.2
Jan - Jun 79	217/98.2	82/96.3	54/96.3

NOTE: Total checks/% qualified.

c. RADAR NAVIGATOR:

(1) CREW COORDINATION: The unit no-notice qualified rate in crew coordination for B-52 radar navigators was 93.5 percent. Six were unqualified and three were qualified with training. Two were students; one was a spare; six were mission ready. RNs were not properly monitoring the aircraft during low level and in the landing pattern. A more vigilent attitude is necessary for crew safety.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Pilot not informed of airspeed/altitude deviations	5	0
Total uncooperative attitude toward navigator	1	0
Timing error for entry into low level	0	1
Improper bombing system check	0	1
Late changing clearance plane setting	0	1
TOTAL	6	3

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	334/99.4	90/98.9	77/98.7
Jan - Jun 77	343/99.1	82/97.6	89/98.9
Jul - Dec 77	281/99.6	91/100	61/100
Jan - Jun 78	328/98.5	91/100	80/100
Jul - Dec 78	285/99.6	86/96.5	68/98.5
Jan - Jun 79	320/99.7	77/93.5	57/100

NOTE: Total checks/% qualified.

(2) BOMBING: B-52 radar navigators had a 96.8% qualified rate for unit notice evaluations and a 79.7% qualified rate for unit no-notice evaluations. Twenty-six were unqualified and six were qualified with training. There were twenty-six mission ready individuals, one spare, one student, and four staff members. This trend has been identified since 1973. The unit no-notice qualified rate is one of the lowest since the beginning of this report. OAP/target identification has the most errors, indicating a need for better target study. Bomb run checklist deviations were still prevalent and displayed a need for increased emphasis during T-10 training periods.

B-52 RADAR NAVIGATOP DEFICIENCIES

REASON	#U	#QT
OAP/target ID	8	0
Bomb run checklist deviations	5	2
Alternate bombing procedure	3	1
Failed to recognize system malfunctions	3	0
Heading error problems	2	1
Downgrade without cause	2	0
Improper scope tuning	1	1
Improperly set destination counters	1	0
Wrong offset selection	1	0
Synchronous to alternate transition too slow	0	1
TOTAL	26	6

BOMBING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	371/96.8	86/80.2	66/95.5
Jan - Jun 77	364/95.1	69/84.1	76/96.1
Jul - Dec 77	299/97.3	84/86.9	50/96.0
Jan - Jun 78	351/94.3	88/86.4	69/91.3
Jul - Dec 78	307/93.8	83/83.1	63/98.4
Jan - Jun 79	343/96.8	74/79.7	50/92.0

NOTE: Total checks/% qualified.

(3) NAVIGATION: B-52 radar navigators received a 96.2% qualified rate in the unit notice evaluations and a 89.2% qualified rate in unit no-notice evaluations. There were twenty-one unqualified grades and five qualified with training grades. There were two students, one spare, one staff, and twenty-two mission ready crew members. This is a continuing trend, but far worse this reporting period with twice as many individuals unqualified. Better mission planning with emphasis on complete low route study is needed. Some problems could be worked out in the T-10 trainer.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Exceeded corridor limits	18	0
Course deviation excessive (high altitude)	2	2
Low level timing error	1	0
Mission data recording	0	1
Marginal low level DR procedures	0	1
Celestial navigation errors	0	1
TOTAL	21	5

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	367/96.5	91/91.2	76/96.1
Jan - Jun 77	369/96.5	81/96.3	88/98.9
Jul - Dec 77	300/98.7	91/94.5	60/98.3
Jan - Jun 78	354/98.0	89/94.4	80/96.3
Jul - Dec 78	300/97.3	83/96.4	67/98.5
Jan - Jun 79	342/96.2	74/89.2	58/100

NOTE: Total checks/% qualified.

(4) GUIDED AIR MISSILES: B-52 radar navigators received a 96.2% qualified rate in unit no-notice evaluations. Eight were unqualified and seven were qualified with training. Three were students, one was a staff member, and eleven were mission ready crew members. Lack of system knowledge indicates a need for more tech order study, AGM-69 procedures study, and T-10 training sessions.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Weak system knowledge	5	2
Launch point fix error	2	1
Unauthorized target launch	1	0
Target verification not IAW flight manual	0	2
Poor pacing	0	1
SRAM pitch and roll limits exceeded	0	1
TOTAL	8	7

GUIDED AIR MISSILES QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	152/98.7	73/98.6	36/100
Jan - Jun 77	211/98.6	62/96.8	39/94.4
Jul - Dec 77	144/95.8	69/89.9	28/100
Jan - Jun 78	200/96.5	64/100	42/100
Jul - Dec 78	140/95.7	67/98.5	42/97.6
Jan - Jun 79	234/97.4	53/96.2	39/100

NOTE: Total checks/% qualified.

d. NAVIGATOR:

(1) CREW COORDINATION: The unit no-notice qualified rate for B-52 navigators in unit no-notice evaluations was 93.8 per cent. Eight were unqualified and five were qualified with training. Two were students, and eleven were mission ready crew members. As with the RNs, the navigators were not properly monitoring the aircraft during low level and in the landing pattern. This jeopardizes crew safety.

B-52 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Pilot not informed of airspeed/altitude deviations	5	0
Failed to monitor aircraft heading or FCI	1	0
Bomb doors not opened on bomb run	1	0
Timing error entering low level	1	0
Did not notify RN of systems malfunctions	0	2
Ineffective crew communication	0	2
Late changing clearance plane setting	0	1
TOTAL	8	5

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	193/99.0	96/99.0	63/98.4
Jan - Jun 77	254/98.8	95/97.9	83/100
Jul - Dec 77	163/100	111/98.2	48/100
Jan - Jun 78	239/98.3	92/100	77/100
Jul - Dec 78	165/99.4	90/96.7	52/100
Jan - Jun 79	198/98.5	81/93.8	57/100

NOTE: Total checks/% qualified.

(2) BOMBING: B-52 navigators received a 91.3% qualified rate for unit no-notice evaluations. Nine were unqualified and twelve were qualified with training. Twenty crew members were mission ready and one was a student. Bomb run checklist deviations accounted for the majority of problems.

B-52 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Bomb run checklist deviations	4	3
Alternate bombing procedures	2	3
Heading error problems	1	1
Improperly set destination counters	1	0
Selected wrong offset panel	1	0
OAP/target ID	0	2
Failed to recognize system malfunctions	0	2
Downgrade without cause	0	1
TOTAL	9	12

BOMBING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	202/99.0	91/90.1	54/100
Jan - Jun 77	258/99.2	88/95.5	73/100
Jul - Dec 77	173/98.8	103/95.1	41/100
Jan - Jun 78	248/99.2	85/94.1	67/95.5
Jul - Dec 78	180/97.8	86/98.8	32/97.9
Jan - Jun 79	202/99.0	80/91.3	50/98.0

NOTE: Total checks/% qualified.

(3) NAVIGATION: B-52 navigators received a 96.8% qualified rate for unit notice evaluations and an 86.3% qualified rate for unit no-notice evaluations. Seventeen were unqualified and nine were qualified with training. Four were students and twenty-two were mission ready crew members. Exceeding corridor limits corresponds with identified weakness for radar navigators.

B-52 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Exceeded low level altitude/corridor	12	0
Celestial errors	2	2
Failed to meet force timing	2	0
Off course high altitude	1	3
Mission data recording	0	4
TOTAL	17	9

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	ICEVG
Jul - Dec 76	237/92.8	104/85.6	62/93.1
Jan - Jun 77	292/92.1	97/96.9	82/93.9
Jul - Dec 77	202/96.0	109/86.2	48/95.8
Jan - Jun 78	267/94.0	91/94.5	77/97.4
Jul - Dec 78	192/92.2	90/96.7	51/98.0
Jan - Jun 79	217/96.8	79/86.3	57/98.2

NOTE: Total checks/% qualified.

(4) GUIDED AIR MISSILES: Navigators received a 90.4% qualified rate for unit no-notice evaluations. Nine were unqualified and seven were qualified with training. Three were students and thirteen were mission ready crew members. These weaknesses correspond with radar navigator problems in the same area.

B-52 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Lack of system knowledge	3	2
Deviation in missile programming	2	2
Deviation in check point fixing	2	1
Checklist deviation	2	1
SRAM pitch and roll limits exceeded	0	1
TOTAL	9	7

GUIDED AIR MISSILES QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	152/98.7	73/98.6	36/100
Jan - Jun 77	211/98.6	62/96.8	39/94.9
Jul - Dec 77	144/95.8	69/89.9	28/100
Jan - Jun 78	200/96.5	64/100	42/100
Jul - Dec 78	140/95.7	67/98.5	42/97.6
Jan - Jun 79	156/97.4	52/90.4	39/100

NOTE: Total checks/% qualified.

e. EWO:

(1) ELECTRONIC WARFARE: Electronic Warfare Officers received a qualified rate of 96.5% for unit notice checks and a 92.5% qualified rate for no-notice checks during this period. EWO unqualified grades decreased by five while the total checks increased by two. There were seventeen unqualified grades this period, and twenty-one qualified with training grades. One EW was a student and the rest were mission ready crew members. Procedural knowledge showed a definite weakness this training period.

B-52 EWO DEFICIENCIES

REASON	#U	#QT
Improper procedure	9	15
Failed to counter threat	7	1
Signal recognition	1	2
IFM procedures	0	2
Jammed restricted band	0	1
TOTAL	17	21

ELECTRONIC WARFARE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	284/97.5	100/95.0	37/94.6
Jan - Jun 77	332/96.1	123/91.9	46/95.7
Jul - Dec 77	305/95.4	92/98.9	30/96.7
Jan - Jun 78	344/96.8	103/90.3	46/89.1
Jul - Dec 78	292/95.2	96/91.7	33/100
Jan - Jun 79	310/96.5	80/92.5	32/96.9

NOTE: Total checks/% qualified.

f. GUNNER:

(1) EMERGENCY PROCEDURES (EXAM): B-52 Fire Control Operators received a 96.3% qualified rate for unit no-notice evaluations. Fifteen mission ready crew members were unqualified. More study of the technical order is needed.

B-52 FCS DEFICIENCIES

REASON	#U
General knowledge	11
Critical action	4
TOTAL	15

EMERGENCY PROCEDURES (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	239/99.6	516/97.7	135/100
Jan - Jun 77	297/99.0	465/98.5	169/98.2
Jul - Dec 77	217/100	453/97.8	103/100
Jan - Jun 78	295/99.7	543/98.3	147/98.6
Jul - Dec 78	227/99.6	531/97.6	117/100
Jan - Jun 79	273/99.3	347/96.3	27/100

NOTE: Total checks/% qualified.

(2) MISSION PLANNING: Unit no-notice qualified rate for B-52 gunners was 96.6 percent. Five were unqualified and seven were qualified with training. One was a staff member and the rest were mission ready crew members. The majority of write-ups were for missing or out of date publications.

B-52 FCS DEFICIENCIES

REASON	#U	#QT
Publications	3	6
Briefing incomplete	1	0
Failed to report to mission planning	1	0
Mission planning	0	1
TOTAL	5	7

MISSION PLANNING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	239/100	75/100	25/100
Jan - Jun 77	294/100	76/100	34/100
Jul - Dec 77	242/99.6	65/98.5	19/100
Jan - Jun 78	318/100	96/99.0	37/100
Jul - Dec 78	263/100	105/99.0	30/100
Jan - Jun 79	333/99.4	87/96.6	28/100

NOTE: Total checks/% qualified.

(3) FCS OPERATIONS/PROCEDURES: B-52 Fire Control Operators received a 95.2% qualified rate for unit notice evaluations and a 89.2% qualified rate for unit no-notice evaluations. Twenty-six were unqualified and fifteen were qualified with training. Six were students, one from the staff, and the rest were mission ready. Most of the failures were for not having the FCS configured to the optimum mode, but many were for not knowing how to correct malfunctions. More work is needed in the T-1 trainer.

B-52 FCS DEFICIENCIES

REASON	#U	#QT
Non-compliance with procedures	13	5
IFM procedures	7	1
System knowledge	3	6
Non-compliance with directives	3	2
Checklist deviation	0	1
TOTAL	26	15

FCS OPERATIONS/PROCEDURES QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	249/97.6	92/97.8	27/92.6
Jan - Jun 77	303/97.0	91/95.6	41/97.6
Jul - Dec 77	242/97.9	90/96.7	28/100
Jan - Jun 78	324/97.5	99/93.9	41/97.1
Jul - Dec 78	279/93.9	102/95.1	30/100
Jan - Jun 79	353/95.2	83/89.2	29/93.1

NOTE: Total checks/% qualified.

3. KC-135 QUALIFICATION LEVEL 3 RESULTS:

a. COPILOT:

(1) EMERGENCY PROCEDURES (EXAM): KC-135 copilots received a qualified rate of 96.1% in unit no-notice evaluations. Thirty-three were unqualified. Three were students, ten were spares, and twenty were mission ready. Increased unit training is necessary to lower these failure rates.

KC-135 COPILOT DEFICIENCIES

REASON	#U
General knowledge	29
Critical action	4
TOTAL	33

EMERGENCY PROCEDURES (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	437/98.6	884/96.9	236/98.3
Jan - Jun 77	524/97.9	932/96.7	215/97.7
Jul - Dec 77	487/98.2	802/96.9	251/99.2
Jan - Jun 78	498/98.6	915/97.5	215/100
Jul - Dec 78	473/98.5	777/98.1	216/98.0
Jan - Jun 79	479/98.7	696/96.1	38/100

NOTE: Total checks/% qualified.

(2) INSTRUMENTS: KC-135 copilots received a 96.7% qualified rate on unit notice evaluations. Twenty were unqualified, and fifteen were qualified with training. Seven were students, three were spares, and twenty-five were mission ready. Most of the problems came from leveling off above or below assigned altitudes, deviating from assigned airspace, or otherwise failing to properly acknowledge and comply with instructions given by Air Traffic Control. Problems such as these are not easily worked out in a simulator. Since this comes under the realm of safety of flight, the copilots must be instructed as to the importance of their duties in the area of ATC clearances. Instructors must teach the copilots how to prioritize their time in the air.

KC-135 COPILOT DEFICIENCIES

REASON	#U	#QT
ATC clearance	6	1
Precision approach	4	3
Non-precision approach	3	3
Improper approach aid	3	0
Missed approach	2	1
ATC communications	1	3
Holding	1	1
Poor basic instruments	0	2
Penetration	0	1
TOTAL	20	15

INSTRUMENTS QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	455/97.8	236/97.0	128/100
Jan - Jun 77	534/96.6	218/98.6	122/100
Jul - Dec 77	512/97.3	213/97.7	144/98.6
Jan - Jun 78	527/97.7	193/97.9	116/99.1
Jul - Dec 78	480/97.9	171/98.8	121/99.2
Jan - Jun 79	491/96.7	185/97.8	102/98.0

NOTE: Total checks/% qualified.

b. NAVIGATOR:

(1) NAVIGATION: Unit notice qualified rate for KC-135 navigators was 96.7% and unit no-notice rate was 94.6 percent. Thirty navigators were unqualified and nineteen were qualified with training. Eight were students, one from the staff, sixteen spares, and twenty-four were mission ready crew members. This is the second report in a row that course deviation during air refueling and celestial errors were the highest unqualified areas. Using all available navigation aids to stay in protected airspace is essential and must be emphasized. Many celestial errors were not from lack of knowledge, but were from careless plotting and/or computation errors. Rechecking the work is the only way to catch these errors.

KC-135 NAVIGATOR DEFICIENCIES

REASON	#U	QT
Celestial errors	18	11
Off course high altitude/AR	10	4
Insufficient mission data record	1	4
Unauthorized aid for nav leg	1	0
TOTAL	30	19

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	489/96.1	209/91.9	128/97.7
Jan - Jun 77	515/95.3	236/94.9	114/97.4
Jul - Dec 77	538/94.2	221/96.4	127/99.2
Jan - Jun 78	562/96.4	236/94.5	115/96.5
Jul - Dec 78	553/97.1	186/95.2	138/97.1
Jan - Jun 79	515/96.7	239/94.6	105/99.0

NOTE: Total checks /% qualified.

c. BOOM OPERATOR:

(1) AIR REFUELING: Unit notice qualified rate for Boom Operators was 96.5%, and while the unit no-notice rate was 94.7 percent. There were thirty-four unqualified grades and seventeen qualified with training grades. Two were students, seventeen were spares and thirty-two were mission ready. Contacting the receiver outside the recepticle was the most common error.

KC-135 BOOM OPERATOR DEFICIENCIES

REASON	U	QT
Contacted receiver outside of recepticle	11	1
Break-away procedures	8	1
Checklist deviation	5	4
Tanker manual operation	4	2
Erratic boom control	3	2
Equipment and procedural knowledge	2	5
Improper radio call	1	2
TOTAL	34	17

AIR REFUELING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	440/97.0	208/94.7	98/96.9
Jan - Jun 77	526/95.8	252/97.2	109/99.1
Jul - Dec 77	480/97.9	193/95.9	110/98.2
Jan - Jun 78	613/97.1	230/94.8	110/99.1
Jul - Dec 78	535/97.6	222/95.0	121/96.7
Jan - Jun 79	624/96.5	226/94.7	96/95.8

NOTE: Total checks /% qualified.

4. FB-111 QUAL 3 RESULTS:

a. PILOT:

(1) INSTRUMENTS: FB-111 pilots received a 96.6% qualified rate for unit notice evaluations. Three students were unqualified, and one mission ready pilot was qualified with training. There were no trends to any of these areas.

FB-111 PILOT DEFICIENCIES

REASON	U	QT
Airspeed and altitude control	1	0
ATC clearance	1	0
Altitude deviation	1	0
Holding	0	1
TOTAL	3	1

INSTRUMENTS QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	115/98.3	24/95.8	10/90.0
Jan - Jun 77	125/96.8	47/100	18/94.4
Jul - Dec 77	100/98.0	33/100	10/100
Jan - Jun 78	68/98.5	35/100	15/100
Jul - Dec 78	97/99.0	16/93.8	7/100
Jan - Jun 79	88/96.6	12/100	24/95.8

NOTE: Total checks /% qualified.

b. NAVIGATOR:

(1) GUIDED AIR MISSILES: FB-111 Navigators received an 85.7% on unit no-notice evaluations. Two were unqualified and two were qualified with training. Two were students and two were mission ready.

FB-111 NAVIGATOR DEFICIENCIES:

REASON	U	QT
Checklist deviation	2	1
Launched SRAM with significant navigation errors	0	1
TOTAL	2	2

GUIDED AIR MISSILES QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 76	59/98.3%	15/93.3%	9/100%
Jan - Jun 77	79/97.5%	20/90%	11/90%
Jul - Dec 77	59/100%	15/86.7%	10/100%
Jan - Jun 78	58/96.6	21/100%	8/100%
Jul - Dec 78	47/95.7	15/100%	2/100%
Jan - Jun 79	56/98.2	7/85.7	16/100%

NOTE: Total checks /% qualified.

5. COMMAND UNIT OVERALL ANALYSIS SUMMARY:

The following charts summarize the statistical data submitted to 1CEVG/ANY by all units in SAC. The information is categorized by type aircraft for all unit evaluations including ground, in-flight, and Emergency Procedures.

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN LA026-N11

ORG	QUALIFICATION LEVEL CHKD	EQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	EQ	Q	QT	U	% QUAL	INDIVIDUAL E.P.EXAMS CHKD	EQ	C	L	% QUAL
BOMBERS (B-52)																	
###7	52	29	21	1	1	96.1	48	26	20	1	1	97.9	0	0	0	0	
0009	127	41	77	4	5	96.1	101	32	60	4	5	95.0	7	7	0	0	100.0
0019	257	108	77	6	6	97.7	85	21	53	6	5	94.1	154	140	13	1	99.4
0020	133	49	72	4	8	94.0	99	33	54	4	8	91.9	12	12	0	0	100.0
0042	357	211	121	5	20	94.4	129	31	80	5	13	89.9	293	250	36	7	97.6
0062	195	61	114	4	16	91.8	116	32	66	4	14	87.9	109	95	12	2	98.2
0068	374	196	162	6	10	97.3	130	14	101	6	9	93.1	230	202	27	1	99.6
0097	154	44	96	6	8	94.8	121	23	86	6	6	95.0	101	93	6	2	98.0
0379	139	27	90	8	14	89.9	104	19	64	8	13	87.5	74	62	11	1	98.6
041C	471	250	188	12	21	95.5	183	43	114	12	14	92.3	345	306	32	7	98.0
0416	351	199	120	6	26	92.6	120	36	62	5	17	85.8	170	146	19	5	97.1
0596	172	47	106	6	13	92.4	107	13	77	6	11	89.7	93	84	7	2	97.8
401P	100	22	70	2	6	94.0	63	11	44	2	6	90.5	0	0	0	0	
8AF	2882	1344	1314	70	154	94.7	1406	334	881	69	122	91.3	1588	1397	163	28	98.2
0043	300	132	148	2	18	94.0	171	54	105	2	10	94.2	175	143	27	5	97.1
3AD	300	132	148	2	18	94.0	171	54	105	2	10	94.2	175	143	27	5	97.1
0005	336	178	143	3	14	95.9	123	26	82	3	12	90.2	235	190	43	2	99.1
0022	173	88	78	5	4	97.7	111	43	59	5	4	94.4	124	109	15	0	100.0
0037	235	79	129	6	21	91.1	123	12	90	2	19	84.6	143	112	29	2	98.6
0077	237	105	112	8	12	94.9	102	9	80	7	6	94.1	158	142	12	4	97.5
0092	343	163	156	9	15	95.6	152	17	114	9	12	92.1	294	254	37	3	99.0
0093	252	152	95	1	4	98.4	146	57	84	1	4	97.3	148	134	14	0	100.0
0096	233	55	150	9	19	91.8	125	18	86	7	14	88.8	141	111	27	3	97.9
0319	348	153	159	16	20	94.3	161	9	117	16	19	88.2	273	243	29	1	99.6
0320	156	12	118	8	18	88.5	124	15	86	7	16	87.1	94	91	1	2	97.9
4017	276	49	182	19	26	90.6	236	26	165	20	25	89.4	210	191	19	0	100.0
15AF	2591	1034	1320	84	153	94.1	1403	232	963	77	131	90.7	1820	1577	226	17	99.1
SAC	5773	2510	2782	156	325	94.4	2980	620	1949	148	263	91.2	3583	3117	416	50	98.6
BOMBERS (FB111)																	
#380	20	3	17	0	0	100.0	20	4	16	0	0	100.0	19	14	5	0	100.0

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN LA026-M11

ORG	QUALIFICATION LEVEL CHKD	EQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	EQ	Q	QT	U	% QUAL	INDIVIDUAL E.E.EVANS CHKD	EQ	Q	U	% QUAL
BOMBERS (FB111)																	
0393	92	47	44	0	1	98.9	42	10	31	0	1	97.6	52	42	10	0	100.0
0528	57	24	32	0	1	98.2	43	12	30	0	1	97.7	35	32	3	0	100.0
0529	44	15	26	2	1	97.7	37	11	23	2	1	97.3	28	24	4	0	100.0
0715	121	57	60	3	1	99.2	85	13	48	3	1	98.5	74	66	8	0	100.0
4007	48	0	38	3	7	85.4	48	2	36	3	7	85.4	41	31	10	0	100.0
BAF	382	148	217	8	11	97.1	255	52	184	8	11	95.7	240	209	40	0	100.0
SAC	382	148	217	8	11	97.1	255	52	184	8	11	95.7	240	209	40	0	100.0

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN UA026-M11

ORG	QUALIFICATION LEVEL CHKD	PQ	%	GT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	PQ	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	PQ	Q	U	% QUAL
TANKERS																	
0108	93	32	58	1	2	97.8	70	26	41	1	2	97.1	65	49	16	0	100.0
0117	51	14	32	4	1	98.0	49	14	30	4	1	98.0	38	34	4	0	100.0
0126	106	25	68	7	6	94.3	56	8	41	7	0	100.0	68	46	16	6	91.2
0132	191	54	137	0	0	100.0	46	18	28	0	0	100.0	112	59	53	0	100.0
0133	95	28	65	1	1	98.9	70	16	52	1	1	98.6	82	63	19	0	100.0
0141	97	15	77	1	4	95.9	64	8	54	1	1	98.4	69	50	16	3	95.7
0145	79	24	49	4	2	97.5	52	9	38	3	2	96.2	49	34	15	0	100.0
0147	80	10	59	3	8	90.0	67	13	46	2	6	91.0	50	30	18	2	96.0
0150	78	22	55	1	0	100.0	50	8	42	0	0	100.0	48	36	12	0	100.0
0151	66	13	50	1	2	97.0	55	7	45	1	2	96.4	54	40	14	0	100.0
0154	110	46	59	0	5	95.5	54	13	39	0	2	96.3	54	35	16	3	94.4
0191	91	5	72	7	7	92.3	58	3	48	5	2	96.6	58	34	15	5	90.7
0197	143	34	94	5	10	93.0	71	7	53	5	6	91.5	94	59	31	4	95.7
0314	98	23	67	2	6	93.9	57	8	42	2	5	91.2	50	33	16	1	98.0
0336	69	4	53	0	10	85.5	60	1	52	0	7	88.3	46	37	6	3	93.5
0931	98	19	66	2	11	88.8	62	10	45	2	5	91.9	73	48	19	6	91.8
ARF	1545	308	1063	39	75	95.1	941	169	696	34	42	95.5	1006	687	286	33	96.7
###7	9	6	3	0	0	100.0	6	3	3	0	0	100.0	6	6	0	0	100.0
0007	200	69	122	5	4	98.0	94	6	79	3	3	96.8	129	96	33	0	100.0
0011	135	29	91	3	12	91.1	98	22	67	3	6	93.9	89	77	6	6	93.3
0032	152	76	70	3	3	98.0	96	33	57	3	3	96.9	89	82	7	0	100.0
0041	182	95	80	1	6	96.7	65	17	43	1	4	93.8	109	99	8	2	98.2
0042	155	68	79	3	5	96.8	70	13	49	3	5	92.9	114	87	27	0	100.0
0048	265	119	130	5	11	95.8	114	18	81	5	10	91.2	212	166	45	1	99.5
0070	289	112	154	7	11	96.2	124	26	85	4	9	92.7	156	124	30	2	98.7
0071	135	76	55	2	2	98.5	44	9	31	2	2	95.5	65	57	8	0	100.0
0091	108	36	67	3	2	98.1	49	4	40	3	2	95.9	61	51	10	0	100.0
0097	115	35	76	4	0	100.0	76	7	65	4	0	100.0	92	81	11	0	100.0
0305	231	113	106	6	6	97.4	77	20	47	5	5	93.5	130	104	25	1	99.2
0310	165	69	88	3	5	97.0	83	16	64	3	0	100.0	124	103	16	5	95.0
0380	167	70	89	4	4	97.6	84	17	60	4	3	96.4	121	102	18	1	99.2
0384	108	44	60	3	1	99.1	37	8	26	2	1	97.3	58	46	12	0	100.0
0407	163	73	82	3	5	96.9	79	21	51	3	4	94.9	120	95	24	1	99.2

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
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ORG	QUALIFICATION LEVEL CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	HQ	Q	L	% QUAL
TANKERS																	
0509	185	93	87	1	4	97.8	85	15	65	1	4	95.3	145	132	13	0	100.0
0911	315	206	98	4	7	97.8	92	10	71	4	7	92.4	177	165	12	0	100.0
0912	176	91	77	1	7	96.0	66	11	49	1	5	92.4	122	107	14	1	99.2
0913	139	68	70	1	0	100.0	39	5	33	1	0	100.0	48	45	3	0	100.0
0920	85	21	52	6	6	92.9	64	13	39	6	6	90.6	50	38	11	1	98.0
4018	19	18	1	0	0	100.0	0	0	0	0	0		0	0	0	0	
8AF	3498	1587	1742	68	101	97.1	1542	297	1105	61	79	94.9	2217	1863	333	21	99.1
0043	6	5	1	0	0	100.0	6	5	1	0	0	100.0	4	4	0	0	100.0
0909	196	74	112	3	7	96.4	98	13	76	3	6	93.9	63	48	14	1	98.4
3AD	202	79	113	3	7	96.5	104	18	77	3	6	94.2	67	52	14	1	98.5
0004	118	53	54	10	1	99.2	67	11	46	9	1	98.5	91	88	5	0	100.0
0006	15	3	12	0	0	100.0	14	2	12	0	0	100.0	10	10	0	0	100.0
0009	154	60	79	2	13	91.6	87	18	55	2	12	86.2	93	89	4	0	100.0
0022	188	61	118	2	7	96.3	78	14	56	2	6	92.3	92	74	17	1	98.9
0028	184	69	101	3	11	94.0	71	10	52	3	6	91.5	109	63	41	5	95.4
0043	240	110	117	1	12	95.0	98	13	75	1	9	90.8	192	157	31	4	97.9
0055	182	67	105	5	5	97.3	88	26	54	6	2	97.7	109	87	19	3	97.2
0092	231	104	115	5	7	97.0	86	9	67	5	5	94.2	190	160	28	2	98.9
0093	194	101	82	0	1	99.5	156	90	56	0	1	99.4	145	141	4	0	100.0
0349	179	56	104	5	14	92.2	107	16	74	4	13	87.9	97	85	11	1	99.0
0904	127	25	88	7	7	94.5	65	5	50	7	3	95.4	76	58	16	2	97.4
0905	187	65	118	1	3	98.4	81	14	64	1	2	97.5	140	118	21	1	99.3
0906	290	130	142	7	11	96.2	108	16	80	4	8	92.6	237	187	47	3	98.7
0916	194	67	108	9	10	94.8	110	14	79	7	10	90.9	123	113	10	0	100.0
0917	280	158	115	0	7	97.5	59	8	45	0	6	89.8	125	112	12	1	99.2
0924	272	196	65	5	6	97.8	84	25	50	3	6	92.9	153	141	12	0	100.0
4017	424	52	309	20	43	89.9	355	22	279	20	34	90.4	330	250	72	8	97.6
15AF	3459	1407	1612	82	158	95.4	1714	322	1194	74	124	92.8	2312	1931	350	31	98.7
SAC	8704	3441	4730	192	341	96.1	4301	806	3072	172	251	94.2	5602	4533	983	86	98.5
RECON																	
0004	102	28	72	2	2	98.0	67	12	51	2	2	97.0	77	60	17	0	100.0

PREPARED 79 JUL 27 STANDARDIZATION EVALLATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN UA026-M11

ORG RECON	QUALIFICATION LEVEL CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL E.P.EXAMS CHKD	HQ	Q	U	% QUAL
0009	81	32	46	1	2	97.5	72	25	44	1	2	97.2	73	66	7	0	100.0
0055	276	100	159	10	7	97.5	187	37	135	10	5	97.3	235	197	36	2	99.1
15AF	459	158	277	13	11	97.6	326	74	230	13	9	97.2	385	323	60	2	99.5
SAC	459	158	277	13	11	97.6	326	74	230	13	9	97.2	385	323	60	2	99.5

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
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	QUALIFICATION LEVEL					%	INDIVIDUAL INFLIGHT					%	INDIVIDUAL F.P.EXAMS				%
ORG	CHKD	PG	Q	QT	U	QUAL	CHKD	PG	Q	QT	U	QUAL	CHKD	PG	Q	U	QUAL
MISSION SUPPORT																	
0009	98	50	46	1	1	99.0	65	31	32	1	1	98.5	79	63	16	0	100.0
0055	70	15	52	1	2	97.1	64	16	45	1	2	96.9	43	35	8	0	100.0
15AF	168	65	98	2	3	98.2	129	47	77	2	3	97.7	122	98	24	0	100.0
SAC	168	65	98	2	3	98.2	129	47	77	2	3	97.7	122	98	24	0	100.0

SECTION C

1CEVG STANDARDIZATION/EVALUATION RECAP

Twenty units throughout the command were visited by 1CEVG this period. Overall aircrew results are depicted in this section. Areas evaluated were Aircrew Performance, STAN/EVAL Administrative Program and Staff Support. A total of 868 1CEVG inflight evaluations were administered in the command for a 94.0% inflight qualified rate. The 1CEVG inflight qualified with training rate was 3.0 percent. The 1CEVG breakout by aircraft follows: (percent QL2/3) B-52 - 4.3%/8.0%; FB-111 - 5.0%/2.5%; KC-EC-135 - 2.4%/5.2%; Recon-MSN Spt - 0%/4.8 percent.

Following is a discussion of 1CEVG evaluations administered this period. Details on unqualified performance in the areas reported were provided by 1CEVG evaluators and from the 1CEVG/ST semiannual newsletter. The performance rates listed below represent overall 1CEVG percent qualified for all crew members by aircraft type.

	JUL - DEC 78		JAN - JUN 79	
	INFLIGHT	EP EXAM	INFLIGHT	EP EXAM
B-52	97.4	99.5	92.0	100.0
FB-111	100.0	100.0	97.5	100.0
EC/KC-135	96.0	99.2	94.8	99.2
RECON	100.0	97.1	93.2	100.0

1. B-52: The following is a summary and analysis of QT and unqualified performance by selected areas. Listed grades refer only to a specific area and not to a crewmember's overall status unless specifically noted.

a. PREFLIGHT - An instructor electronic warfare officer was unqualified for failing to insure the flare door was closed during preflight.

b. PRETAKEOFF - An instructor pilot failed to position the heading selector switch to manual for takeoff precluding cross-check of the attitude directional indicators. A pilot, copilot, and navigator from the same crew were unqualified. They failed to detect that the heading indicators did not respond to turns. Four 90 degree turns were made with the heading system frozen. The pilot and copilot were overall Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

c. TAKEOFF - An instructor pilot was qualified with training. He did not maintain throttle control between the 70 knot acceleration timing call and S-1 speed. A pilot was unqualified when he demonstrated a lack of knowledge in takeoff procedures. He made his 70 knot call at approximately 80 knots. He did not maintain throttle control throughout a light gross weight takeoff.

d. CRUISE - Two gunners were unqualified in cruise. One jeopardized Fire Control System Operation. When leaving his position, he left the search radar in an operate condition, violating a caution in T.O. 1B-52G-1 which states: "If it becomes necessary to leave the seat, the gunner will place the radar search/emergency search switch off." The other failed to install the ejection seat

arming lever safety pins when the parachute was removed in preparation for donning the life preserver (LPU). The overall status was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

e. EMERGENCY PROCEDURES - A pilot was unqualified. He failed to thoroughly evaluate the emergency procedures for window cracks. He failed to follow the technical order information in the proper sequence, and failed to return the windshield anti-ice and defogging switch to ON after pulling the affected window circuit breaker. A further analysis of system operation was not conducted and nonapplicable procedures were implemented.

f. COMMUNICATIONS - An electronic warfare officer was unqualified when he failed to submit a hazardous weather report when thunderstorms at the primary low level entry point required that the alternate entry point be used.

g. CREW COORDINATION - Four crew members were unqualified. During a night instrument approach, a pilot failed to respond to repeated requests to activate the windshield wipers. A copilot failed to thoroughly evaluate the procedure for window cracks. He failed to assure the technical order information was followed in the proper sequence and failed to insure the windshield anti-ice and defogging switch was returned ON after pulling the affected window circuit breaker. A further analysis of system operation was not conducted and nonapplicable procedures were implemented. A spare pilot failed to advise the pilot that the aircraft had begun a descent from the assigned altitude.

Descent continued for 1200 feet. Recovery was initiated after an abrupt pitchdown. Additionally, he failed to advise the pilot that the aircraft heading had varied 10 degrees during a celestial observation. His overall status was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b. Approaching a critical phase of flight (10 minutes prior to low level) an electronic warfare officer failed to respond to five interphone calls from the pilot. The pilot twice called the gunner, having him bring to the EW's attention that he was being called. The evaluator observed the EW to be in a state of complete relaxation. Overall status was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

h. DESCENT AND LANDING - An instructor radar navigator was qualified with training. His approach monitoring procedures were not in accordance with the flight manual. The BNS was not properly configured with radar crosshairs positioned on the approach end of the runway. BNS radar heading and navigation marks were displayed throughout multiple approaches. A gunner failed to insure the upper sliding deck hatch was open and locked prior to penetration for landing. Overall status was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

i. POSTFLIGHT - A pilot was qualified with training for failing to record a fuel quantity gauge malfunction in the aircraft AFTO 781. An EW was unqualified for activating transmitters in a restricted band. After landing, he turned the ALT-16 transmitters ON instead of OFF.

An instructor gunner neglected to install the ejection seat arming lever safety pins after landing. The evaluator intervened at final parking. Overall status was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

j. INSTRUCTOR CHECK - A total of 51 QT or unqualified grades were awarded 34 crew members in 18 different areas. Instructor personnel were awarded 18 of the grades. Additionally, two instructor pilots were unqualified for lack of proficiency during their mission.

k. AIR REFUELING - Two radar navigators were qualified with training. Both computed the tanker offset correctly, but failed to establish the correct offset at the turn range. An instructor pilot was qualified with training when he accomplished air refueling activity without attempting to engage the aerial refueling mode of the autopilot. A gunner was unqualified when during the rendezvous, he positioned the FCS master switch to OFF prior to the pilot confirming visual contact with the tanker. The switch should have been positioned to standby after visual contact was confirmed. Positioning the switch to OFF unnecessarily prevented the monitoring of the practice emergency separation.

l. BOMBING - Six crew members received QT or unqualified grades during the reporting periods as opposed to only three the previous six months. Three radar navigators were unqualified for inability to identify the release offset aiming point. Simulated releases exceeded the reliability criteria in SACR 50-4, Volume II.

In one instance, inability to resolve BNS heading error contributed to the OAP misidentification. An instructor radar navigator failed to complete all the items of the weapons preparation for release checklist. The weapons were never armed and were released safe over the designated target. His navigator was unqualified for failing to advise the radar navigator of a safe setting on the DCU-9/A during the weapons preparation for release checklist. A navigator was qualified with training for failing to advise the radar navigator of erroneous crosshair placement during two consecutive bomb runs.

m. NAVIGATION - During a celestial navigation leg, a navigator's total error points exceeded the maximum allowable for qualified as specified in SACR 60-4, Volume V. One plotting error and one pressure line of position computation error resulted in two major errors. An instructor navigator was unqualified for failure to record sufficient inflight information for reconstruction of the celestial navigation leg.

n. EQUIPMENT OPERATION - There were three unqualified grades in this area. A navigator displayed poor operating techniques, faulty analysis, and a lack of knowledge of MD-1 Astrocompass and AJN-8 heading-vertical reference system resulting in degredation of the primary heading system. The secondary heading system was used for the remainder of flight even though the primary heading system was completely operable. An instructor pilot continued use of a malfunctioning autopilot without attempting to isolate or analyze the source of the malfunction. His overall status was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

A copilot reset a fuel quantity indicator circuit breaker that had been pulled to stop rotation of a malfunctioning fuel gauge. Overall status of the copilot was Qualification Level III, in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

o. TERRAIN AVOIDANCE - Terrain avoidance is becoming a problem area again. Demonstrated lack of knowledge of terrain avoidance equipment, procedures, and techniques resulted in three unqualified grades. A pilot made unnecessary changes in range gates in the descent from IFR to final TA altitude. In mountainous terrain, he consistently allowed the terrain trace to be displayed above the horizontal reference line in excess of 10 consecutive scans prior to initiating corrective action. Another pilot twice accomplished the FRL and FVR stabilization mode comparison (after tilt comparison was applied) in both 1000 fpm rate of climb and 500 fpm rate of descent. When advised of high terrain, he made unnecessary changes in range gates when making peak crossovers. During low level navigation, flydown indications were disregarded and the terrain trace was consistently maintained well below the HRL for as many as 10 consecutive scans by both the pilot and copilot.

p. ELECTRONIC WARFARE - An electronic warfare officer was unqualified when he demonstrated unacceptable transmitter and receiver centering procedures. He also failed to adequately counter a threat on two area penetrations.

q. FCS EQUIPMENT OPERATION - Two gunners were unqualified. While maintenance was being performed on the aircraft, one gunner departed the tail compartment leaving the Search Radar operating.

The other gunner failed to configure the FCS for optimum combat capability. After determining the system would not automatically radar track, the track select switch was not positioned to manual to prevent the system from entering automatic track.

r. FORMATION - An instructor pilot was qualified with training. On several occasions as cell leader, he used poor trimming techniques which resulted in the aircraft altitude varying in excess of qualified tolerances.

s. JUDGMENT AND COMPLIANCE - Eight crewmembers were unqualified in this area. After failing to properly analyze the emergency procedures for window cracks, a pilot made the following errors in judgment:

(1) maintained priority handling with ARTCC when not required.

(2) terminated mission when technical order guidance permitted mission continuation.

(3) failed to advise command post in accordance with SACM 51-52, Volume VI.

(4) proceeded to a holding pattern which exceeded the approved radius clearance.

t. NAVIGATION - Despite malfunctions in two modes of the aircraft autopilot, a second pilot elected to continue its use. Continued use directly caused the following discrepancies:

(1) Celestial navigation accuracy was reduced. In one instance, the pilot allowed the aircraft heading to vary 10 degrees during a celestial observation.

Heading changes of three degrees were common during other observations.

(2) During high altitude cruise, the aircraft was allowed to descend 1200 feet on autopilot. Recovery was initiated after an abrupt pitchdown resulting in a loss of 1500 feet of altitude.
A pilot and copilot attempted to take off without operative flight instruments in both the pilot and copilot position. An EW and gunner did not attempt to accomplish the Defensive Coordination Exercise at a later time in the mission after clearance was denied for the planned activity. During an STR attack, an EW jammed a signal in a restricted band for an extended period of time. A navigator failed to have oxygen readily available above FL 250. While using a headset, the oxygen system was not properly configured to 100% and ON. A navigator did not carry T.O. 1B-52G-30-2 (B-52/AGM-69A Weapon Delivery Technical Manual) in flight as required by T.O. 1B-52G-1.

2. EC/KC-135: The following is a summary and analysis of substandard performance by selected areas. Listed grades refer only to a specific area and not to a crewmember's overall status unless specifically noted.

a. PRETAKEOFF - An instructor pilot and a copilot computed their S-1 speed four knots in error. This resulted in a Qualification Level II status as a crew member, and Qualification Level III as an instructor for the pilot.

b. PUBLICATIONS - There was a drastic increase in the number of publications discrepancies discovered during this evaluation period. Sixteen crew members were discovered to have pages missing, changes not posted, out-of-date changes, and supplement discrepancies either in their checklists or their manuals. Four of these individuals were instructors and in some cases, records indicated that the local standardization section had given the crew member some type of check after the change should have been posted. The crew members had received an "H" in the publications block.

c. INSTRUMENTS - Four pilots were unqualified. Ineffective pitch management by an instructor pilot in one case and a pilot in another resulted in a controller directed missed approach during a PAR approach due to the aircraft being either too high or too low for a safe approach. An instructor pilot attempted to fly his original flight planned route after requesting and receiving an amended clearance from ARTCC.

A copilot descended his aircraft through a restricted low approach altitude assigned by ATC during a PAR approach. An instructor pilot attempted to intercept and fly a TACAN approach using course deviation indicator information for the localizer final approach course for the opposite runway.

d. CREW COORDINATION - Four crew members failed to advise other crew members of deviations or discrepancies. A copilot was unqualified when he failed to properly monitor the aircraft attitude and advise the pilot that the aircraft was descending shortly after takeoff. Qualification Level III status was assigned in accordance with SACR 60-4, Volume I, Paragraph 3-22b. An instructor pilot was qualified with training for failure to advise his copilot that he was descending below a minimum assigned altitude during a restricted low approach. An instructor navigator was qualified with training because he did not notify the crew of a deviation from an ATC assigned clearance. A copilot was qualified with training for failure to advise the pilot that he had not selected TACAN final approach. A pilot was qualified with training for failure to insure that a new approach was planned and briefed, resulting in selection of improper navigation aids for the approach flown.

e. AIR REFUELING - Four boom operators were unqualified. They displayed erratic and inaccurate boom control, allowing the boom to strike or drag across various receivers outside the receptacle area. In some cases fuel could not be off-loaded within the time available.

During a receiver air refueling operation, a boom operator was unable to monitor the receptacle and manifold for leaks or respond to any possible abnormal conditions due to his assumption of a state of complete relaxation. He was placed in Qualification Level III status in accordance with SACR 60-4, Volume I, Paragraph 3-22b. A tanker navigator was qualified with training for his lack of knowledge of alternate rendezvous procedures when insufficient UHF/DF bearings and incorrect alternate procedures resulted in a 10 NM abeam separation at rollout. The receiver required 15 minutes to arrive at the contact position.

f. NAVIGATION - One navigator was unqualified and two navigators were qualified with training for accumulating excessive error points for the number of LOPs accomplished during a celestial navigation leg. A navigator was qualified with training for failure to use all methods available to determine alternate winds when his APN-81 doppler failed.

g. COMPLIANCE WITH DIRECTIVES - An instructor pilot and a copilot were unqualified for failure to descend from FL 330 to FL 250 or below when the cabin altitude exceeded FL 250. A pilot was unqualified for attempting to fly into an area of forecast and reported thunderstorm activity while in IMC conditions without a functioning airborne radar. A boom operator who failed to have oxygen readily available above FL 250 was also unqualified. An instructor pilot was qualified with training for allowing a student pilot to control the aircraft while a receiver copilot was attempting a refueling.

h. EQUIPMENT OPERATION - Two pilots, two copilots, and one navigator were unqualified in Equipment Operation. The navigator failed to properly configure the APN-59 search radar for thunderstorm avoidance. Information supplied to the pilot due to incorrect scope interpretation caused by an improperly tuned scope would have made thunderstorm penetration imminent. An instructor pilot and a copilot allowed the water boost pumps to operate under no-flow conditions for a period that would have exceeded three minutes. A pilot and a copilot would have allowed the forward air refueling pump in the aft body tank to operate dry in excess of two minutes. An instructor navigator was qualified with training for demonstrating minimum acceptable procedures for operation of the APN-59 search radar.

i. POST FLIGHT - In two separate evaluations, a boom operator left the crew entry chute floor grill in the open position after installing the entrance ladder. Crew members were in close proximity to the entry chute and were not prepared to depart the aircraft. The overall status of each boom operator was Qualification Level III in accordance with SACR 60-4, Volume I, Paragraph 3-22b.

3. FB-111: The following is a summary and analysis of substandard activity by selected areas. Listed grades refer only to a specific area and not to a crewmember's overall status unless specifically noted.

a. EMERGENCY PROCEDURES - An instructor pilot was unqualified for shutting down the wrong engine during an engine bleed duct failure. When he proceeded to isolate the air bleed leak, he misidentified the engine. This resulted in compounding the emergency rather than resolving it. (NOTE: This grade was recorded during the Jul - Dec 78 time frame.)

b. INSTRUCTOR - An instructor navigator was unqualified in Instructor Ability and Student Critique. While controlling a point parallel rendezvous at the console of the Weapon System Trainer, he turned the tanker in the wrong direction causing an ineffective rendezous and loss of training. During the student critique, he failed to critique the student's failure to observe a flight manual caution.

c. PREFLIGHT - An instructor pilot was unqualified when he did not observe the failed airspeed and mach tape during preflight checks.

c. PENETRATION/LETDOWN - An instructor was unqualified for improper planning of pitch and power requirements which resulted in crossing a position 1000 feet above a mandatory altitude.

d. EQUIPMENT OPERATION - A navigator was unqualified for failure to turn off the RHAWs during emergency operation of the air conditioning system.

4. 1CEVG Inspection Program Results:

UNIT	OVERALL RATING	AIRCREW PERFORMANCE	STAN/EVAL PROGRAM	STAFF SUPPORT
2BMW	SAT	SAT	EXC	SAT
5BMW	EXC	EXC	EXC	EXC
19BMW	SAT	SAT	EXC	EXC
22BMW	EXC	EXC	EXC	EXC
320BMW	MARG	MARG	EXC	MARG
380BMW	EXC	EXC	EXC	EXC
410BMW	MARG	MARG	MARG	SAT
416BMW	EXC	EXC	EXC	EXC
509BMW	EXC	EXC	EXC	SAT
9 SRW	OUT	OUT	EXC	OUT
55 SRW	SAT	SAT	EXC	EXC
43 SW	SAT	SAT	SAT	EXC
376 SW	EXC	EXC	OUT	EXC
100AREFW	EXC	EXC	EXC	SAT
307AREFW	EXC	EXC	EXC	EXC
384AREFW	SAT	SAT	EXC	EXC
161AREFG	UNSAT	UNSAT	EXC	EXC
189AREFG	EXC	OUT	EXC	EXC
940AREFG	SAT	SAT	EXC	EXC

5. 1CEVG STATISTICAL SUMMARY:

The next 5 charts compare the 1 January - 30 June 79 1CEVG and unit no-notice evaluations for B-52 and KC-135 aircraft. The following 3 charts compare 1CEVG visits this period with the previous period. It should be noted that these figures include all 1CEVG and no-notice checks given including inflight, EP Exam and flight simulator. The remaining 3 charts total 1CEVG results inflight, EP exams and overall by unit.

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
AIRCRAFT TYPE B-52 CREW VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UAC26-M12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CREW	UNIT	CREW	UNIT	CREW	UNIT	CREW	UNIT	CREW	UNIT	CREW	UNIT
6	0	34	0	13	0	20	0	1	0	0		100.0
19	36	107	7	83	28	19	0	4	1	1	97.2	99.1
20	0	30	0	14	0	7	0	3	0	6		80.0
42	2	226	0	181	2	37	0	1	0	7	100.0	96.9
62	46	46	13	20	27	19	2	0	4	7	91.3	84.8
68	0	154	0	106	0	38	0	1	0	9		94.2
97	2	50	0	19	2	24	0	3	0	4	100.0	92.0
379	0	17	0	2	0	13	0	0	0	2		88.2
410	56	252	17	181	32	51	3	8	4	12	92.9	95.2
416	44	103	15	76	28	20	1	0	2	7	95.5	93.2
596	38	30	15	11	20	13	1	1	2	5	94.7	83.3
BAF TOTAL	224	1049	67	706	137	261	7	22	13	60	94.2	94.3

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
AIRCRAFT TYPE B-52 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UA026-N12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
43	46	116	17	80	27	31	3	0	1	5	97.9	95.7
3AD TOTAL	46	116	17	80	27	31	3	0	1	5	97.9	95.7
5	46	181	13	125	33	47	1	2	1	7	97.9	96.1
22	42	58	13	35	28	20	0	2	1	1	97.6	98.3
37	0	78	0	43	0	29	0	2	0	4		94.9
77	0	91	0	66	0	10	0	3	0	3		96.7
92	0	212	0	142	0	60	0	3	0	7		96.7
93	0	30	0	18	0	11	0	0	0	1		96.7
96	0	68	0	34	0	35	0	5	0	14		84.1
319	0	199	0	133	0	57	0	2	0	7		96.5
320	42	31	9	3	23	15	2	3	8	10	81.0	67.7
15AF TOTAL	132	968	35	599	84	293	3	22	10	54	92.4	94.4
SAC TOTAL	404	2133	119	1385	248	585	13	44	24	119	94.1	94.4

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
AIRCRAFT TYPE KC-135 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN LAC26-N12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
108	0	23	0	7	0	16	0	0	0	0		100.0
117	0	8	0	1	0	7	0	0	0	0		100.0
126	0	26	0	6	0	13	0	1	0	6		76.9
128	2	0	1	0	1	0	0	0	0	0	100.0	
132	2	80	0	34	2	46	0	0	0	0	100.0	100.0
133	0	32	0	15	0	16	0	1	0	0		100.0
141	0	27	0	4	0	21	0	0	0	2		92.6
145	0	14	0	0	0	14	0	0	0	0		100.0
147	0	19	0	3	0	14	0	0	0	2		89.5
150	0	22	0	3	0	19	0	0	0	0		100.0
151	0	9	0	1	0	7	0	1	0	0		100.0
154	27	22	10	9	17	13	0	0	0	0	100.0	100.0
191	0	16	0	0	0	12	0	1	0	3		81.3
197	28	48	9	17	13	24	1	2	3	5	88.5	89.6
314	27	18	10	1	15	13	0	1	2	3	92.6	83.3
336	0	20	0	1	0	16	0	0	0	3		85.0
931	0	36	0	9	0	19	0	1	0	7		80.6
ARF TOTAL	84	420	30	111	48	270	1	8	5	31	94.0	92.6
7	0	81	0	43	0	36	0	1	0	1		98.8
11	0	40	0	8	0	24	0	1	0	7		82.5

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
AIRCRAFT TYPE KC-135 CEVG VS UNIT NC-NOTICE(QUALIFICATION LEVEL) FOR LA02E-AA12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
32	0	27	0	13	0	10	0	1	0	3		88.9
41	33	78	14	55	19	21	0	0	0	2	100.0	97.4
42	0	77	0	43	0	29	0	1	0	4		94.8
46	49	162	14	95	30	62	1	0	4	5	91.8	96.9
70	0	55	0	27	0	28	0	0	0	0		100.0
71	25	35	12	21	12	12	0	2	1	0	96.0	100.0
91	25	39	6	23	17	13	1	2	1	1	96.0	97.4
97	0	51	0	25	0	26	0	0	0	0		100.0
305	0	100	0	53	0	39	0	4	0	4		96.0
310	0	74	0	44	0	25	0	0	0	5		93.2
380	0	83	0	50	0	29	0	2	0	2		97.6
384	27	31	15	24	10	7	0	0	2	0	92.6	100.0
407	0	82	0	47	0	33	0	1	0	1		98.8
509	42	109	26	73	16	34	0	0	0	2	100.0	98.2
911	2	127	0	100	2	23	0	0	0	4	100.0	96.9
912	36	97	11	71	23	23	0	0	2	3	94.4	96.9
913	23	20	8	15	13	5	0	0	2	0	91.3	100.0
920	2	12	0	2	2	4	0	4	0	2	100.0	83.3
RAF TOTAL	464	1380	106	832	144	483	2	19	12	46	95.5	96.7

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
AIRCRAFT TYPE KC-135 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UA02A-A12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
909	50	78	23	49	28	24	0	2	1	3	98.0	96.2
3AD TOTAL	50	78	23	49	28	24	0	2	1	3	98.0	96.2
9	49	46	21	29	28	14	0	0	0	1	100.0	97.8
22	31	52	10	24	20	24	1	0	0	2	100.0	96.2
28	0	65	0	26	0	31	0	2	0	6		90.8
43	0	148	0	95	0	46	0	1	0	6		95.9
55	0	3	0	1	0	2	0	0	0	0		100.0
92	0	153	0	89	0	54	0	3	0	5		96.7
93	0	25	0	12	0	13	0	0	0	0		100.0
349	34	45	13	25	16	15	3	1	2	4	94.1	91.1
904	31	47	17	13	13	26	1	5	0	3	100.0	93.6
905	0	96	0	55	0	39	0	1	0	1		99.0
906	35	177	7	113	26	54	0	2	2	8	94.3	95.5
916	47	81	13	43	31	32	2	3	1	3	97.9	96.3
917	0	110	0	84	0	22	0	0	0	4		96.4
924	0	115	0	84	0	30	0	0	0	1		99.1
15AF TOTAL	227	1163	81	693	134	408	7	18	5	44	97.8	96.2
SAC TOTAL	625	3041	240	1685	352	1185	10	47	23	124	96.3	95.9

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 1 JUL 1978 - 30 JUN 1979
PAGE 2 TREND ANALYSIS PCN LA026-N13

CEVG UNIT	VISITS NUMB CHKD	1 JUL 78 - 31 DEC 78 MG	Q	QT	L	% QUAL
37	65	30	34	1		100.0
42	83	47	34		2	97.6
77	74	33	38	2	1	98.6
92	82	44	37	1		100.0
93	84	48	34		2	97.6
96	72	34	35	2	1	98.6
97	65	37	28			100.0
319	85	40	40	2	3	96.5
379	66	29	34	1	2	97.0
4017	7		7			100.0
TOTAL	683	342	321	9	11	98.4

CEVG UNIT	VISITS NUMB CHKD	1 JAN 79 - 30 JUN 79 MG	Q	QT	L	% QUAL
5	48	13	33	1	1	97.9
19	36	7	28		1	97.2
22	42	13	28		1	97.6
42	2		2			100.0
43	48	17	27	3	1	97.9
62	46	13	27	2	4	91.3
67	2		2			100.0
320	42	9	23	2	8	81.0
410	56	17	32	3	4	92.9
416	44	15	26	1	2	95.5
506	38	15	20	1	2	94.7
TOTAL	404	119	248	13	24	94.1

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 1 JUL 1978 - 30 JUN 1979
KC-135 TREND ANALYSIS PCN LAC26-N13

CEVG UNIT	VISITS NUMB CHKD	HG	G	GT	L	% QUAL
	1 JUL 78 - 31 DEC 78					
6	4	1	3			100.0
11	61	26	33		2	96.7
28	33	12	18	1	2	93.9
32	49	22	26		1	98.0
41	2		2			100.0
42	51	18	27	2	4	92.2
43	54	20	29	3	2	96.3
70	30	13	14		3	90.0
92	46	29	15	2		100.0
93	106	88	16	1	1	99.1
97	46	20	24		2	95.7
108	2	2				100.0
116	42	21	21			100.0
133	40	29	11			100.0
145	52	33	17	1	1	98.1
147	40	25	13		2	95.7
150	40	25	15			100.0
151	40	21	19			100.0
305	39	17	13	5	4	89.7
310	56	33	21	2		100.0
336	45	25	19		1	97.8
380	49	19	28	1	1	98.0
407	45	21	23	1		100.0
904	1		1			100.0

CEVG UNIT	VISITS NUMB CHKD	HG	G	GT	L	% QUAL
	1 JAN 79 - 30 JUN 79					
9	49	21	28			100.0
22	31	10	20	1		100.0
41	33	14	19			100.0
46	49	14	30	1	4	91.8
71	25	12	12		1	96.0
91	25	6	17	1	1	96.0
128	2	1	1			100.0
132	2		2			100.0
154	27	10	17			100.0
197	26	9	13	1	3	88.5
314	27	10	15		2	92.6
349	34	13	16	3	2	94.1
384	27	15	10		2	92.6
509	42	26	16			100.0
904	31	17	13	1		100.0

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 1 JUL 1978 - 30 JUN 1979
KC-135 TREND ANALYSIS PCN LA026-N13

CEVG VISITS 1 JUL 78 - 31 DEC 78

UNIT	NUMB CHKD	EG	G	GT	L	% QUAL
905	56	22	33	1		100.0
917	46	27	19			100.0
920	44	16	27	1		100.0
924	46	14	25	6	1	97.8
TOTAL	1171	599	518	27	27	97.7

CEVG VISITS 1 JAN 79 - 30 JUN 79

UNIT	NUMB CHKD	EG	G	GT	L	% QUAL
906	35	7	26		2	94.3
909	50	23	26		1	98.0
911	2		2			100.0
912	36	11	23		2	94.4
913	23	8	13		2	91.3
916	47	13	31	2	1	97.9
920	2		2			100.0
TOTAL	625	240	352	10	23	96.3

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND CEVG OVERALL ANALYSIS SUMMARY PCN LA026-M11

ORG	QUALIFICATION LEVEL CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	HQ	Q	U	% QUAL
BOMBERS (B-52)																	
0019	36	7	28	0	1	97.2	33	5	27	0	1	97.0	19	18	1	0	100.0
0042	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
0062	46	13	27	2	4	91.3	30	4	20	2	4	86.7	22	19	3	0	100.0
0097	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
0410	56	17	32	3	4	92.9	42	6	29	3	4	90.5	26	22	4	0	100.0
0416	44	15	28	1	2	95.5	31	8	20	1	2	93.5	21	16	5	0	100.0
0596	38	15	20	1	2	94.7	27	6	18	1	2	92.6	21	20	1	0	100.0
8AF	224	67	137	7	13	94.2	163	29	114	7	13	92.0	109	95	14	0	100.0
0043	48	17	27	3	1	97.9	31	7	20	3	1	96.8	23	19	4	0	100.0
3AD	48	17	27	3	1	97.9	31	7	20	3	1	96.8	23	19	4	0	100.0
0005	48	13	33	1	1	97.9	40	6	32	1	1	97.5	18	16	2	0	100.0
0022	42	13	28	0	1	97.6	30	6	23	0	1	96.7	21	20	1	0	100.0
0320	42	9	23	2	8	81.0	36	3	23	2	8	77.8	22	22	0	0	100.0
15AF	132	35	84	3	10	92.4	106	15	78	3	10	90.6	61	58	3	0	100.0
SAC	404	119	248	13	24	94.1	300	51	212	13	24	92.0	193	172	21	0	100.0
BOMBERS (FB111)																	
0380	10	10	0	0	0	100.0	0	0	0	0	0		10	10	0	0	100.0
0393	20	11	8	1	0	100.0	12	4	7	1	0	100.0	14	13	1	0	100.0
0509	15	12	2	0	1	93.3	2	0	1	0	1	50.0	15	14	1	0	100.0
0528	13	1	11	1	0	100.0	11	0	10	1	0	100.0	8	8	0	0	100.0
0529	13	3	10	0	0	100.0	9	0	9	0	0	100.0	9	8	1	0	100.0
0715	12	6	6	0	0	100.0	6	0	6	0	0	100.0	7	7	0	0	100.0
8AF	83	43	37	2	1	98.8	40	4	33	2	1	97.5	63	60	3	0	100.0
SAC	83	43	37	2	1	98.8	40	4	33	2	1	97.5	63	60	3	0	100.0

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND CEVG OVERALL ANALYSIS SUMMARY PCN UA026-N11

	QUALIFICATION LEVEL					%	INDIVIDUAL INFLIGHT					%	INDIVIDUAL E.P.EXAMS				%
ORG	CHKD	HQ	Q	QT	U	QUAL	CHKD	HQ	Q	QT	U	QUAL	CHKD	HQ	Q	U	QUAL
TANKERS																	
0128	2	1	1	0	0	100.0	0	0	0	0	0		0	0	0	0	
0132	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
0154	27	10	17	0	0	100.0	20	4	16	0	0	100.0	18	17	1	0	100.0
0197	26	9	13	1	3	88.5	19	2	13	1	3	84.2	17	17	0	0	100.0
0314	27	10	15	0	2	92.6	20	3	15	0	2	90.0	20	19	1	0	100.0
AFF	84	30	48	1	5	94.0	59	9	44	1	5	91.5	55	53	2	0	100.0
0041	33	14	19	0	0	100.0	24	6	18	0	0	100.0	19	18	1	0	100.0
0046	49	14	30	1	4	91.8	36	5	26	1	4	88.9	23	23	0	0	100.0
0071	25	12	12	0	1	96.0	12	1	11	0	0	100.0	16	13	2	1	93.8
0091	25	6	17	1	1	96.0	17	0	15	1	1	94.1	11	11	0	0	100.0
0384	27	15	10	0	2	92.6	16	6	8	0	2	87.5	15	14	1	0	100.0
0509	42	26	16	0	0	100.0	19	4	15	0	0	100.0	27	26	1	0	100.0
0911	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
0912	36	11	23	0	2	94.4	26	8	16	0	2	92.3	20	17	3	0	100.0
0913	23	8	13	0	2	91.3	21	6	13	0	2	90.5	12	11	1	0	100.0
0920	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
PAF	264	106	144	2	12	95.5	171	36	122	2	11	93.6	143	133	9	1	99.3
0909	50	23	26	0	1	98.0	31	7	23	0	1	96.8	32	31	1	0	100.0
3AD	50	23	26	0	1	98.0	31	7	23	0	1	96.8	32	31	1	0	100.0
0009	49	21	28	0	0	100.0	41	13	28	0	0	100.0	22	22	0	0	100.0
0022	31	10	20	1	0	100.0	23	3	19	1	0	100.0	14	14	0	0	100.0
0055	34	10	19	1	4	88.2	19	1	15	1	2	89.5	20	17	1	2	90.0
0349	34	13	16	3	2	94.1	26	6	15	3	2	92.3	21	19	2	0	100.0
0904	31	17	13	1	0	100.0	26	12	13	1	0	100.0	18	18	0	0	100.0
0906	35	7	26	0	2	94.3	30	4	24	0	2	93.3	18	16	2	0	100.0
0916	47	13	31	2	1	97.9	39	6	30	2	1	97.4	17	16	1	0	100.0
15AF	261	91	153	8	9	96.6	204	45	144	8	7	96.6	130	122	6	2	98.5
SAC	659	250	371	11	27	95.9	465	97	333	11	24	94.8	360	339	18	3	99.2
RECON																	
0009	15	11	8	0	0	100.0	16	8	8	0	0	100.0	13	13	0	0	100.0

PREPARED 79 JUL 27 STANDARDIZATION EVALUATION ANALYSIS 01 JAN 1979 - 30 JUN 1979
COMMAND CEVG OVERALL ANALYSIS SUMMARY PCN UA026-M11

ORG RECOM	QUALIFICATION LEVEL CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL F.E.EXAMS CHKD	HQ	Q	U	% QUAL
00SS	49	22	24	0	3	93.9	28	5	20	0	3	89.3	41	32	9	0	100.0
15AF	66	33	32	0	3	95.6	44	13	28	0	3	93.2	54	45	9	0	100.0
SAC	66	33	32	0	3	95.6	44	13	28	0	3	93.2	54	45	9	0	100.0

SECTION D

QUALIFICATION LEVEL 2 ANALYSIS

Unit Evaluations: The following statistics have been extracted from the units' SAC-DOT(M)7109 Report and the Part II as a means of identifying areas that unit results indicate needing additional emphasis. The following section breaks out unit evaluations by aircraft type, crew position and area.

1. B-52

POSITION	AREA	NOTICE #CHKD/#T/%T	NO-NOTICE #CHKD/#T/%T
Pilot	Crew Coordination	428/5/1.2	94/4/4.3
Copilot	Crew Coordination	217/5/2.3	82/3/3.7
Copilot	Equipment Operation	195/4/2.1	62/3/4.8
Copilot	Judgment/Compliance	219/1/0.5	82/4/4.9
RN	Air Refueling	301/3/1.0	55/2/3.6
RN	Guided Air Missiles	234/4/1.7	53/3/5.7
RN	Equipment Operation	293/4/1.4	64/5/7.8
NAV	Crew Coordination	198/2/1.0	81/3/3.7
NAV	Bombing	202/5/2.5	80/7/8.8
NAV	Navigation	217/6/2.8	79/3/3.8
NAV	Guided Air Missiles	156/5/3.2	52/2/3.8
EWO	Electronic Warfare	310/14/4.5	80/7/8.8
Gunner	Mission Planning	333/2/0.6	87/5/5.7
Gunner	FCS Operations	353/7/2.0	83/8/9.6

a. Pilot:

(1) CREW COORDINATION - This area is a repeat from the previous two six month reports. Nine T's were awarded with one to a student, one to a spare, and seven to mission ready crew members. Fuel panel monitoring and bomb run procedures again accounted for the most write-ups. Specific items included improper fuel sequence or fuel switch configuration, failure to insure bomb doors being open for bomb run, failure to acknowledge EW threat calls, insufficient assistance to crew members during bomb run, attempting to enter low level on erroneous timing, over flying turn point, confusion during VOR holding, failure to monitor other pilot flying too low on an ILS approach, and changing mission without coordinating with the rest of the crew.

b. Copilot:

(1) CREW COORDINATION - Eight T's were awarded to five mission ready crew members, two spares, and one student. As with the pilots, this is a repeat area. Areas where items were not coordinated included: slow mission pacing in two instances, not monitoring airspeed on penetration and on six engine approach, too little assistance on bomb runs, erroneous timing for entering low level, and allowing pilot to set and fly an incorrect TACAN final approach course.

(2) EQUIPMENT OPERATION - The seven T's were awarded to one student, one spare, and five mission ready crew members. The obvious trend is with fuel panel knowledge. Five copilots failed to follow proper fuel panel sequences or allowed a fuel imbalance to develop. One copilot did not use anti-icing when required, and another allowed ignition system to on in execess of ten minutes.

(3) Judgment/Compliance - Five mission ready crew copilots received T's for the following reasons: two copilots occupied ejection seats for extended periods of time with parachute, seat belt and helmet on with number one seat safety pins installed; failure to file a takeoff alternate with a reported RVR of 2000 feet; improperly accepted navigators instruction to descend at incorrect action point during low level entry; and allowing discussion of aircraft malfunction with command post to take precedence over copilot duties while on final approach.

c. Radar Navigator:

(1) AIR REFUELING - All five T's came as a result of errors in directing the tanker during rendezvous. Three overrun conditions caused by inaccurate offset or turn range alignments were the most common reasons for the substandard performances. One RN missed numerous required range calls, while another called slant ranges instead of forward ranges.

(2) GUIDED AIR MISSILES (AGM-69) - Procedural/checklist errors accounted for four T grades, while lack of system knowledge was responsible for two other T's. The remaining T was for insertion of a set of wrong launch point fix coordinates.

(3) EQUIPMENT OPERATION - This area showed a wide diversification of causes for subtandard performance. Lack of systems knowledge appears as the largest single reason with three T's, two for AOU interface with SRAM and one for doppler interface with the astro tracker.

Two operators updated SRAMs with the offset selection switch engaged allowing erroneous fix data into the SRAM system. Memory point wind procedures, failure to monitor BNS temperature, failure to properly update the N-1 compass during a celestial navigation leg, and allowing present position counters to drift excessively were the remaining causes.

d. Navigator:

(1) CREW COORDINATION - Failure to coordinate with the RN on equipment malfunctions accounted for two of the five T's in this area. Two T's came after the NAV failed to advise the crew of required action points. One navigator was qualified with training for failing to "vocally exert himself in a forceful manner throughout a mission."

(2) BOMBING - Three main reasons were responsible for nine of the twelve T's; three timing errors, three checklist omissions, and three failures to advise the RN of inaccurate cross-hair placement on OAPs. Failure to detect heading error, allowing RN to unneccessarily downgrade a bomb run, and failure to detect doppler runaway were other reasons.

(3) NAVIGATION - Nine T's in this area were due to four discrepancies in mission data recording, three for excessive course deviations, and one each for celestial precomputation error and astro tracker procedures.

(4) GUIDED AIR MISSILES (AGM-69) - Procedural errors or checklist deviations accounted for five of the seven T's in this area. One navigator initialized the SRAM system with the doppler memory light illuminated, and one set incorrect air temperature into the system prior to launch.

e. Electronic Warfare Officer:

(1) ELECTRONIC WARFARE - Of the twenty-one T's, seven were for checklist and HHCL procedures not in accordance with regulations or unit directives. There were four instances of failure to properly identify and/or counter AAA threat status. Three EW's were written up for minimum knowledge of procedures and techniques required in the threat area. Two EW's activated transmitters outside cleared frequency bands. In two cases, the threat was counted too late. In some instances, the EW did not notify the crew of the threat, or he delayed this call until much too late. One EW discovered a blinking fault light prior to the first low level target, but malfunction analysis was not accomplished until after low level.

f. Gunner:

(1) MISSION PLANNING - Five gunners had errors or omissions in their technical manuals or checklist and one gunner failed to have his flight manual available during flight. The remaining T grade was due to errors on the SAC Form 206.

(2) FIRE CONTROL SYSTEM OPERATIONS/PROCEDURES - This period saw a slight rise in the number of T's in this area. Of the fifteen T's, three were due to procedural errors in the defensive coordinating exercise, and one for an EWO profile exercise error.

Three operators failed to detect or erroneously analyzed system malfunctions. Two gunners did not call on watch when required, and two failed to respond to interphone calls after they were on watch. Failure to operate FCS in optimum mode, checklist omission, errors in receiver gain adjustment, and lack of system knowledge were each a cause of four separate T grades.

2. KC-135

POSITION	AREA	NOTICE #CHKD/#T/%T	NO-NOTICE #CHKD/#T/%T
Copilot	Mission Planning	457/9/2.0	184/9/4.9
Copilot	Crew Coordination	464/10/2.2	183/10/5.5
Navigator	Mission Planning	483/17/3.5	248/13/5.2
Navigator	Equipment Operations	470/6/1.3	234/10/4.3
Boom Operator	Air Refueling	624/10/1.6	226/7/3.1

a. Copilot:

(1) MISSION PLANNING - There were eighteen T's this time divided among eleven mission ready copilots, two students, and five spares. Thirteen of the T's were the result of flight manual/checklist publication errors. Two fuel logs were incorrect; two errors were found in take-off data; and one copilot arrived late for mission planning which overloaded crew members in avoiding a late take-off.

(2) CREW COORDINATION - Of twenty T's, two went to spares, three to students, and fifteen to mission ready crewmembers. This area increased by eight T's this period. There was no identifiable trend. Three copilots were weak in backing up approaches such as allowing the pilot to begin a turn to base leg with the gear retracted,

failing to notify the pilot that he was not on the assigned altitude during a PAR approach, or not setting in the TACAN course as a back-up during a TACAN approach. Two copilots were slow in complying with ATC requests. Three copilots were slow in running checklists, especially during busy periods of flight. Failure to clear and coordinate during formation activity was mentioned twice. One copilot talked too much over the interphone causing disruption to crew performance. Other areas included: failure to notify the pilot he was retracting flaps prior to clean-up height; failure to notify the pilot of fuel panel changes; allowing pilot to descend 300 feet below an assigned altitude; ineffective coordination in transferring the HF radio monitoring requirements during refueling; and allowing the pilot to violate local OI's.

b. Navigator:

(1) MISSION PLANNING - Errors in this area increased slightly this period. Of the thirty T's, eight were due to technical order/checklist errors or omissions. Another eight were caused by errors on the SAC flight plan. Two navigators planned incorrect hemispherical altitudes while one used low altitude structure TACANS to define points along the high route segment. An incorrectly planned orbit point accounted for the final T grade.

(2) EQUIPMENT OPERATION - Failure to keep the navigation computer's present position counters or wind updated properly accounted for eight of the sixteen T's in this area. Two navigators performed incorrect inflight maintenance actions. Failure to monitor radar during departure and/or cell formation were causes for two other T's.

Incorrect use of the IFF, ASN-6, or radar pressurization systems contributed to the final four T grades.

c. Boom Operator:

(1) AIR REFUELING - Of the seventeen T's, eleven went to mission ready crewmembers, and six to spares. Checklist deviations accounted for the most T's with a total of five. Other areas were: four T's for marginal knowledge of procedures and equipment; two for poor refueling communications; two for marginal boom control; two for allowing receivers to reach limits without a disconnect; one for contacting the receiver outside the recepticle; and one for checking the lower deviation only to 42 degrees during the boom control check.

3. FB-111

POSITION	AREA	NOTICE #CKD/#T/%T	NO-NOTICE #CKD/#T/%T
Pilot	Judgment and Compliance	88/3/3.4	12/0/0
NAV	Descent and Landing	65/2/3.1	2/0/0
NAV	Guided Air Missiles (AGM-69)	56/2/3.6	2/0/0
NAV	Equipment Operation	65/2/3.1	7/0/0

a. Pilot:

(1) JUDGMENT AND COMPLIANCE - All three T's went to students and none were related. They were: deviation in handling of classified data in a failed computer (WST); during IMC, briefed nonprecision as first approach and also flew to ASR MDA for simulated single engine approach; and initiated pull to closed downwind at less than published altitude.

b. Navigator:

(1) DESCENT AND LANDING - One navigator did not correctly compute landing data. Slow detection of flap/slat extention caused the other T grade.

(2) GUIDED AIR MISSILES (AGM-69) - One of the two T's in this area was a result of an improperly positioned switch, and one was due to excessive errors in the SRAM at time of launch.

(3) EQUIPMENT OPERATION - One T was for improper weapon bay door operation and poor fuel management with a failed boost pump. The other was for allowing a GNC overheat condition to continue.

STANDARDIZATION/EVALUATION RESULTS

SAC Totals by Aircraft and Crew Position

PREPARED 79 JLL 27
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CMDR

01 JAN 1979 - 30 JUN 1979
PCM LAC2A-NCR

AREA CHECKED	UNIT NOTICE CHKD	HQ	C	GT	L	% QUAL	NO NOTICE CHKD	HQ	C	GT	L	% QUAL	CEVG ALL CHECKS CHKD	HQ	C	GT	L	% QUAL
EMERG PROCD EXAM	338	304	33	0	1	99.7	351	309	37	0	5	98.6	52	41	11	0	0	100.0
QUAL EXAM	345	339	6	0	0	100.0	5	5	0	0	0	100.0	1	1	0	0	0	100.0
FLT SIMULATOR	345	188	154	0	3	99.1	6	1	4	0	1	83.3	12	0	12	0	0	100.0
MISSION PLANNING	424	332	86	5	1	99.8	96	57	36	1	2	97.9	61	43	18	0	0	100.0
PREFLIGHT	450	368	82	0	0	100.0	94	67	27	0	0	100.0	59	44	15	0	0	100.0
PRETAKEOFF	442	334	101	6	1	99.8	90	45	43	1	2	97.8	62	41	19	1	1	98.4
TAKEOFF	441	274	166	0	1	99.8	91	55	35	0	1	98.9	61	35	24	1	1	98.4
CLIMB	427	325	102	0	0	100.0	89	56	33	0	0	100.0	61	40	21	0	0	100.0
LEVEL OFF	424	393	31	0	0	100.0	89	77	12	0	0	100.0	61	54	7	0	0	100.0
CRUISE	423	363	60	0	0	100.0	92	76	15	0	1	98.9	61	46	15	0	0	100.0
INSTRUMENTS	510	134	363	3	10	98.0	95	25	68	2	2	97.9	61	11	50	0	0	100.0
EMER PROCD (INFLT)	449	286	154	2	7	98.4	29	19	8	0	2	93.1	21	12	8	0	1	95.2
COMMUNICATIONS	423	350	73	0	0	100.0	94	67	27	0	0	100.0	61	36	25	0	0	100.0
CREW COORD	428	271	148	5	4	99.1	94	42	48	4	2	97.9	61	25	34	1	1	98.4
DESCENT & LDG	449	277	171	0	1	99.8	79	53	26	0	0	100.0	61	34	27	0	0	100.0
POSTFLIGHT	423	376	45	2	0	99.5	92	77	15	0	0	100.0	61	51	9	1	0	98.4
COPILOT FAM	5	4	1	0	0	100.0	-	-	-	-	-	-	-	-	-	-	-	-
AIR REFLG RCVR	381	239	135	5	2	99.5	74	36	37	1	0	98.4	51	27	22	2	0	96.9
BOMBING	358	275	83	0	0	100.0	84	53	29	2	0	97.6	53	39	14	0	0	100.0
NAVIGATION	419	348	70	3	2	99.5	89	57	30	0	2	97.8	61	43	18	0	0	100.0
FB-111 FORMATION	2	0	2	0	0	100.0	1	1	0	0	0	100.0	2	1	0	1	0	50.0
TERRAIN RADAR	364	196	157	7	4	98.9	48	20	27	1	0	97.9	34	18	14	0	2	94.1
EQUIPMENT OPS	386	274	106	1	5	98.7	75	44	27	2	2	97.3	61	24	34	0	1	98.4
JUDGMENT/CEARLT	459	348	111	1	3	99.3	95	49	42	1	3	96.8	43	35	25	0	3	93.2

PREPARED 79 JUL 27
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
COPILOT

01 JAN 1979 - 30 JUN 1979
FOR LAR26-ACE

AREA CHECKED	UNIT NOTICE CHKD	HQ	G	GT	L	% GT	% QUAL	UNIT NO NOTICE CHKD	HQ	G	GT	L	% GT	% QUAL	CEVG ALL CHECKS CHKD	HQ	G	GT	L	% GT	% QUAL
EMERG PROCD EXAM	211	183	26	0	2	0.0	99.1	357	294	53	0	10	0.0	97.2	28	24	4	0	0	0.0	100.0
DUAL EXAM	204	195	9	0	0	0.0	100.0	4	4	0	0	0	0.0	100.0	*	*	*	*	*	*	*
FLT SIMULATOR	182	51	130	0	1	0.0	99.5	8	7	0	0	1	0.0	87.5	12	0	12	0	0	0.0	100.0
MISSION PLANNING	217	142	69	5	1	2.3	99.5	85	51	31	1	2	1.2	97.6	58	35	19	0	0	0.0	100.0
PREFLIGHT	228	169	58	0	1	0.0	99.6	82	59	23	0	0	0.0	100.0	57	46	10	0	0	0.0	100.0
PRETAKEOFF	219	167	55	5	2	2.3	99.1	81	40	39	1	1	1.2	98.8	55	34	17	1	1	1.8	98.2
TAKEOFF	213	165	46	1	1	0.5	99.5	79	49	29	1	0	1.3	100.0	54	33	21	0	0	0.0	100.0
CLIMB	214	141	73	0	0	0.0	100.0	80	46	33	1	0	1.3	100.0	58	39	19	0	0	0.0	100.0
LEVEL OFF	212	177	35	0	0	0.0	100.0	79	69	10	0	0	0.0	100.0	58	48	10	0	0	0.0	100.0
CRUISE	210	169	41	0	0	0.0	100.0	82	58	23	1	0	1.2	100.0	54	40	14	0	0	0.0	100.0
INSTRUMENTS	234	24	200	2	8	0.9	96.6	82	15	65	1	1	1.2	98.8	54	7	47	0	0	0.0	100.0
EMER PROCD (INFLT)	222	193	26	0	3	0.0	98.6	27	18	7	0	2	0.0	92.6	19	18	1	0	0	0.0	100.0
COMMUNICATIONS	213	149	63	1	0	0.5	100.0	82	53	29	0	0	0.0	100.0	54	29	25	0	0	0.0	100.0
CREW COORD	217	113	95	5	4	2.3	98.2	82	34	42	3	3	3.7	96.3	54	21	30	1	2	1.9	96.3
DESCENT & LDG	222	86	127	4	5	1.8	97.7	70	32	36	2	0	2.9	100.0	56	30	24	0	0	0.0	100.0
POSTFLIGHT	212	184	26	2	0	0.9	100.0	79	61	18	0	0	0.0	100.0	58	41	13	0	0	0.0	100.0
AIR REFLG RCVR	209	166	43	0	0	0.0	100.0	62	35	27	0	0	0.0	100.0	46	36	10	0	0	0.0	100.0
BOMBING	215	161	54	0	0	0.0	100.0	75	53	22	0	0	0.0	100.0	46	42	4	0	0	0.0	100.0
NAVIGATION	215	165	47	1	2	0.5	99.1	80	53	25	1	1	1.3	98.8	53	35	18	0	0	0.0	100.0
FB-111 FORMATION	-	-	-	-	-	-	-	1	1	0	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0
TERRAIN RADAR	222	98	122	2	0	0.9	100.0	42	20	22	0	0	0.0	100.0	31	17	13	0	1	0.0	98.8
EQUIPMENT OPS	195	120	71	4	0	2.1	100.0	62	32	27	3	0	4.8	100.0	54	25	28	0	1	0.0	98.1
JUDGEMENT/COMPLT	219	143	74	1	1	0.5	99.5	82	38	38	4	2	4.9	97.6	54	36	18	0	1	0.0	98.2

PREPARED 79 JUL 27
AIRCRAFT TYPE F-4E

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
RADAR NAVIGATOR

01 JAN 1979 - 30 JUN 1979
PCM LAUNCH/NOR

AREA CHECKED	UNIT NOTICE CHKD	HQ	G	GT	L	%GT	% QUAL	UNIT NO NOTICE CHKD	HQ	G	GT	L	%GT	% QUAL	CEVG ALL CHECKS CHKD	HQ	G	GT	L	%GT	% QUAL
EMERG PROCD EXAM	293	277	15	0	1	0.0	99.7	330	296	33	0	1	0.0	99.7	33	32	1	0	0	0.0	100.0
QUAL EXAM	299	292	7	0	0	0.0	100.0	3	3	0	0	0	0.0	100.0	*	*	*	*	*	*	*
MISSION PLANNING	319	247	69	3	0	0.9	100.0	79	44	34	1	0	1.3	100.0	57	50	7	0	0	0.0	100.0
PREFLIGHT	335	302	33	0	0	0.0	100.0	76	64	12	0	0	0.0	100.0	57	56	1	0	0	0.0	100.0
PRETAKEOFF	316	263	53	0	0	0.0	100.0	76	58	18	0	0	0.0	100.0	57	48	9	0	0	0.0	100.0
TAKEOFF	315	312	3	0	0	0.0	100.0	76	73	3	0	0	0.0	100.0	57	57	0	0	0	0.0	100.0
CLIMB	315	293	22	0	0	0.0	100.0	76	72	4	0	0	0.0	100.0	57	56	1	0	0	0.0	100.0
LEVEL OFF	315	291	24	0	0	0.0	100.0	75	63	12	0	0	0.0	100.0	57	57	0	0	0	0.0	100.0
CRUISE	313	283	30	0	0	0.0	100.0	75	64	11	0	0	0.0	100.0	56	48	8	0	0	0.0	100.0
EMER PROCD (INFLT)	*	*	0	0	0	0.0	100.0	4	3	1	0	0	0.0	100.0	*	*	*	*	*	*	*
COMMUNICATIONS	315	297	18	0	0	0.0	100.0	76	68	8	0	0	0.0	100.0	57	51	6	0	0	0.0	100.0
CREW COORD	320	212	105	2	1	0.6	99.7	77	35	36	1	5	1.3	93.5	57	36	20	1	0	1.8	100.0
DESCENT & LDG	315	270	45	0	0	0.0	100.0	75	55	20	0	0	0.0	100.0	57	52	4	1	0	1.8	100.0
POSTFLIGHT	315	264	51	0	0	0.0	100.0	75	56	18	1	0	1.3	100.0	57	53	4	0	0	0.0	100.0
ATR RFLG RCVR	301	193	104	3	1	1.0	99.7	55	33	20	2	0	3.6	100.0	46	26	18	2	0	4.3	100.0
BOMBING	343	223	105	4	11	1.2	96.8	74	29	28	2	15	2.7	79.7	50	35	11	0	4	0.0	92.0
NAVIGATION	342	168	158	3	13	0.9	96.2	74	26	38	2	8	2.7	89.2	58	38	20	0	0	0.0	100.0
FB-111 FORMATION	*	*	*	*	*	*	*	2	1	1	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0
ACM 6S QUAL	234	188	36	4	6	1.7	97.4	53	32	16	3	2	5.7	96.2	30	27	12	0	0	0.0	100.0
TERRAIN RADAR	320	241	77	1	1	0.3	99.7	41	17	24	0	0	0.0	100.0	32	25	7	0	0	0.0	100.0
EQUIPMENT OPS	243	170	116	4	3	1.4	99.0	64	19	39	5	1	7.8	98.4	57	31	25	1	0	1.8	100.0
JUDGEMENT/CEMPLT	348	277	69	0	2	0.0	99.4	76	41	35	0	0	0.0	100.0	58	36	22	0	0	0.0	100.0

PREPARED 79 JUL 27
AIRCRAFT TYPE F-5?

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
NAVIGATOR

01 JAN 1979 - 30 JUN 1979
PCN LA026-NOR

	UNIT NOTICE						UNIT NO NOTICE						CEVG ALL CHECKS					
AREA CHECKED	CHKD	HQ	Q	QT	U	%QT	QUAL	CHKD	HQ	Q	QT	U	%QT	QUAL	CHKD	HQ	Q	QT	U	%QT	QUAL
EMERG PROCD EXAM	181	162	19	0	0	0.0	100.0	332	281	44	0	7	0.0	97.9	25	23	2	0	0	0.0	100.0
QUAL EXAM	189	171	17	0	1	0.0	99.5	6	6	0	0	0	0.0	100.0	*	*	*	*	*	*	*
MISSION PLANNING	193	134	57	2	0	1.0	100.0	84	56	26	2	0	2.4	100.0	57	50	7	0	0	0.0	100.0
PREFLIGHT	206	178	27	1	0	0.5	100.0	80	69	11	0	0	0.0	100.0	58	49	9	0	0	0.0	100.0
PRETAKEOFF	189	172	17	0	0	0.0	100.0	80	71	9	0	0	0.0	100.0	58	48	9	0	1	0.0	98.3
TAKEOFF	188	185	3	0	0	0.0	100.0	80	77	3	0	0	0.0	100.0	56	56	0	0	0	0.0	100.0
CLIMB	189	178	11	0	0	0.0	100.0	80	70	10	0	0	0.0	100.0	57	55	2	0	0	0.0	100.0
LEVEL OFF	188	178	10	1	1	0.5	99.5	80	76	4	0	0	0.0	100.0	56	56	0	0	0	0.0	100.0
CRUISE	190	171	19	0	0	0.0	100.0	77	65	12	0	0	0.0	100.0	57	49	8	0	0	0.0	100.0
EMER PROCD (1 FLT)	5	5	0	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	*	*	*	*	*	*	*
COMMUNICATIONS	189	165	24	0	0	0.0	100.0	79	64	15	0	0	0.0	100.0	57	52	5	0	0	0.0	100.0
CREW COORD	198	97	96	2	3	1.0	98.5	81	32	41	3	5	3.7	93.8	57	34	23	0	0	0.0	100.0
DESCENT & LDG	189	171	18	0	0	0.0	100.0	80	69	11	0	0	0.0	100.0	57	54	3	0	0	0.0	100.0
POSTFLIGHT	189	164	24	1	0	0.5	100.0	80	66	13	1	0	1.3	100.0	57	54	3	0	0	0.0	100.0
AIR REFLG RCVR	188	143	43	1	1	0.5	99.5	55	43	11	1	0	1.8	100.0	44	35	11	0	0	0.0	100.0
BOMBING	202	134	61	5	2	2.5	99.0	80	39	27	7	7	8.8	91.3	50	34	14	1	1	2.0	98.0
NAVIGATION	217	67	137	6	7	2.8	96.8	79	20	44	3	10	3.8	87.3	57	26	29	1	1	1.8	98.2
FB-111 FORMATION	*	*	*	*	*	*	*	1	0	1	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0
ACM & QUAL	156	107	40	5	4	3.2	97.4	52	29	16	2	5	3.8	90.4	39	28	11	0	0	0.0	100.0
TERRAIN RADAR	201	163	35	3	0	1.5	100.0	50	36	13	1	0	2.0	100.0	31	27	4	0	0	0.0	100.0
EQUIPMENT OPS	179	114	59	5	1	2.8	99.4	69	37	30	2	0	2.9	100.0	55	33	21	0	1	0.0	98.2
JUDGEMENT/COMPLT	216	150	66	0	0	0.0	100.0	79	49	30	0	0	0.0	100.0	58	33	23	0	2	0.0	96.6

PREPARED 79 JUL 27
AIRCRAFT TYPE F-5E

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
END

01 JAN 1979 - 30 JUN 1979
PCH LAR26-A0B

AREA CHECKED	UNIT NOTICE CHKD	HS	G	GT	U	% GT	% QUAL	NO NOTICE CHKD	HS	G	GT	U	% GT	% QUAL	CRVG ALL CHECKS CHKD	HS	G	GT	U	% GT	% QUAL
EMERG PROCD EXAM	241	227	14	0	0	0.0	100.0	320	287	45	0	8	0.0	97.5	28	25	3	0	0	0.0	100.0
ORAL EXAM	237	228	9	0	0	0.0	100.0	4	4	0	0	0	0.0	100.0	-	-	-	-	-	-	-
MISSION PLANNING	284	217	65	2	0	0.7	100.0	86	59	25	2	0	2.3	100.0	33	26	7	0	0	0.0	100.0
PREFLIGHT	282	209	72	1	0	0.4	100.0	78	53	24	1	0	1.3	100.0	34	25	8	0	1	0.0	97.1
PRETAKEOFF	283	276	7	0	0	0.0	100.0	77	73	4	0	0	0.0	100.0	33	32	1	0	0	0.0	100.0
CLIMB	283	272	11	0	0	0.0	100.0	77	73	4	0	0	0.0	100.0	33	31	2	0	0	0.0	100.0
CRUISE	261	237	48	0	0	0.0	100.0	76	60	14	0	0	0.0	100.0	33	25	8	0	0	0.0	100.0
EMER PROCD (INFLT)	4	4	0	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	-	-	-	-	-	-	-
COMPLICATIONS	284	208	71	5	0	1.8	100.0	79	49	24	2	2	2.5	97.5	33	23	9	0	1	0.0	97.0
CREW COORD	285	257	28	0	0	0.0	100.0	77	59	17	1	0	1.3	100.0	34	27	6	0	1	0.0	97.1
DESCENT & LDG	283	258	23	1	1	0.4	99.6	77	69	6	2	0	2.6	100.0	33	32	1	0	0	0.0	100.0
POSTFLIGHT	283	220	61	2	0	0.7	100.0	78	54	23	0	1	0.0	98.7	33	29	3	0	1	0.0	97.0
NAVIGATION	278	264	14	0	0	0.0	100.0	48	48	0	0	0	0.0	100.0	19	18	1	0	0	0.0	100.0
ELEC WARFARE	310	70	215	14	11	4.5	96.5	80	12	55	7	6	8.8	92.5	32	9	22	0	1	0.0	96.9
JUDGEMENT/CENFLT	304	249	48	0	7	0.0	97.7	79	58	18	2	1	2.5	98.7	34	24	8	0	2	0.0	94.1

PREPARED 79 JUL 27
AIRCRAFT TYPE F-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
GUNNER

01 JAN 1979 - 30 JUN 1979
PCN LAC26-NOB

AREA CHECKED	UNIT NOTICE CHKD	MC	G	GT	U	%GT	% QUAL	UNIT NO NOTICE CHKD	MC	G	GT	U	%GT	% QUAL	CREW ALL CHECKS CHKD	MC	G	GT	U	%GT	% QUAL
EMERG PROCD EXAM	273	236	35	0	2	0.0	99.3	347	272	62	0	13	0.0	95.3	27	27	0	0	0	0.0	100.0
QUAL EXAM	263	254	9	0	0	0.0	100.0	8	8	0	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0
MISSION PLANNING	333	262	67	2	2	0.6	99.4	87	51	28	5	3	5.7	94.6	28	23	4	0	0	0.0	100.0
PREFLIGHT	332	258	66	6	2	1.8	99.4	83	47	32	2	2	2.4	97.6	27	25	2	0	0	0.0	100.0
PRETAKEOFF	329	288	39	0	2	0.0	99.4	83	69	13	1	0	1.2	100.0	29	27	2	0	0	0.0	100.0
TAKEOFF	327	323	4	0	0	0.0	100.0	83	81	2	0	0	0.0	100.0	28	28	0	0	0	0.0	100.0
CLIMB	325	317	8	0	0	0.0	100.0	83	81	2	0	0	0.0	100.0	28	28	0	0	0	0.0	100.0
CRUISE	326	312	14	0	0	0.0	100.0	81	75	5	0	1	0.0	98.8	28	24	2	0	2	0.0	92.9
EMER PROCD (IN FLT)	5	5	0	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	*	*	*	*	*	*	*
COMMUNICATIONS	327	311	15	1	0	0.3	100.0	84	76	8	0	0	0.0	100.0	28	24	4	0	0	0.0	100.0
CREW COORD	329	294	34	0	1	0.0	99.7	84	69	14	1	0	1.2	100.0	28	24	4	0	0	0.0	100.0
DESCENT & LDG	328	316	12	0	0	0.0	100.0	82	77	5	0	0	0.0	100.0	28	27	0	0	1	0.0	96.8
POSTFLIGHT	330	285	58	4	3	1.2	99.1	83	60	20	2	1	2.4	98.8	28	18	9	0	1	0.0	96.4
ATP RELG RQVT	260	261	15	2	2	0.7	99.3	55	44	7	1	1	1.8	98.2	23	21	1	0	1	0.0	95.7
RCS CPS/PROCD	353	239	90	7	17	2.0	95.2	83	34	32	8	9	9.6	89.2	29	17	10	0	2	0.0	93.1
JUDGEMENT/CCEPLT	334	278	51	4	5	1.2	98.5	85	58	23	2	2	2.4	97.6	29	24	4	0	1	0.0	96.4

PREPARED 79 JUL 27
AIRCRAFT TYPE FB-111

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CREW

01 JAN 1979 - 30 JUN 1979
PCM LAOZ6*ACB

AREA CHECKED	UNIT ACTICE CHKD	HC	C	QT	U	%QT	QUAL	UNIT HC ACTICE CHKD	HC	C	QT	U	%QT	QUAL	CEVG ALL CHECKS CHKD	HC	C	QT	U	%QT	QUAL
EMERG PROCD EXAM	86	80	6	0	0	0.0	100.0	53	46	7	0	0	0.0	100.0	31	28	3	0	0	0.0	100.0
DUAL EXAM	77	69	8	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISSION PLANNING	85	75	10	0	0	0.0	100.0	12	11	1	0	0	0.0	100.0	23	21	2	0	0	0.0	100.0
PREFLIGHT	79	55	24	0	0	0.0	100.0	9	9	0	0	0	0.0	100.0	17	13	3	0	1	0.0	94.1
PRETAKEOFF	77	49	28	0	0	0.0	100.0	12	11	1	0	0	0.0	100.0	24	20	4	0	0	0.0	100.0
TAKEOFF	76	45	29	1	1	1.3	98.7	12	7	5	0	0	0.0	100.0	24	19	5	0	0	0.0	100.0
CLIMB	73	58	15	0	0	0.0	100.0	9	7	2	0	0	0.0	100.0	23	20	3	0	0	0.0	100.0
LEVEL OFF	73	63	10	0	0	0.0	100.0	10	8	2	0	0	0.0	100.0	23	23	0	0	0	0.0	100.0
CRUISE	73	57	16	0	0	0.0	100.0	8	8	0	0	0	0.0	100.0	20	20	0	0	0	0.0	100.0
INSTRUMENTS	88	22	62	1	3	1.1	98.8	12	4	8	0	0	0.0	100.0	24	10	13	0	1	0.0	95.8
EMER PROCD (INFLT)	79	30	47	0	2	0.0	97.5	8	4	4	0	0	0.0	100.0	11	8	3	0	0	0.0	100.0
COMMUNICATIONS	74	63	10	1	0	1.4	100.0	12	11	1	0	0	0.0	100.0	24	23	1	0	0	0.0	100.0
CREW COORD	75	59	16	0	0	0.0	100.0	12	12	0	0	0	0.0	100.0	24	24	0	0	0	0.0	100.0
DESCENT & LDG	75	32	42	1	0	1.3	100.0	11	5	6	0	0	0.0	100.0	22	17	5	0	0	0.0	100.0
POSTFLIGHT	72	62	10	0	0	0.0	100.0	8	8	0	0	0	0.0	100.0	16	13	3	0	0	0.0	100.0
ATR RFLG RCVR	77	51	26	0	0	0.0	100.0	7	6	1	0	0	0.0	100.0	14	12	2	0	0	0.0	100.0
BOMBING	69	54	15	0	0	0.0	100.0	6	5	1	0	0	0.0	100.0	7	7	0	0	0	0.0	100.0
NAVIGATION	76	66	10	0	0	0.0	100.0	7	7	0	0	0	0.0	100.0	10	10	0	0	0	0.0	100.0
ELEC WARFARE	56	36	20	0	0	0.0	100.0	2	0	2	0	0	0.0	100.0	4	3	1	0	0	0.0	100.0
FB-111 FORMATION	79	45	33	0	1	0.0	98.7	7	5	2	0	0	0.0	100.0	10	7	3	0	0	0.0	100.0
ACM &S QUAL	56	55	1	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	6	6	0	0	0	0.0	100.0
TERRAIN RADAR	71	54	16	1	0	1.4	100.0	6	5	1	0	0	0.0	100.0	9	9	0	0	0	0.0	100.0
EQUIPMENT OPS	75	53	20	2	0	2.7	100.0	9	8	1	0	0	0.0	100.0	22	20	2	0	0	0.0	100.0
JUDGEMENT/CORRLT	88	52	31	3	2	3.4	97.7	12	9	3	0	0	0.0	100.0	24	23	1	0	0	0.0	100.0

PREPARED 79 JUL 27
AIRCRAFT TYPE FB-111

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
RADAR NAVIGATOR

01 JAN 1979 - 30 JUN 1979
PCM LANGUAGE

AREA CHECKED	UNIT NOTICE CHKD	HC	C	GT	L	% GT	% QUAL	NO NOTICE CHKD	HC	C	GT	L	% GT	% QUAL	CFVG ALL CHECKS CHKD	HC	C	GT	L	% GT	% QUAL
EMERG PROCD EXAM	64	50	14	0	0	0.0	100.0	46	43	13	0	0	0.0	100.0	32	32	0	0	0	0.0	100.0
QUAL EXAM	72	72	0	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISSION PLANNING	63	78	5	0	0	0.0	100.0	13	12	1	0	0	0.0	100.0	15	13	2	0	0	0.0	100.0
PREFLIGHT	71	41	30	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	6	4	2	0	0	0.0	100.0
PRETAKEOFF	63	50	13	0	0	0.0	100.0	6	6	0	0	0	0.0	100.0	12	10	2	0	0	0.0	100.0
TAKEOFF	64	54	7	0	1	0.0	98.4	7	7	0	0	0	0.0	100.0	13	13	0	0	0	0.0	100.0
CLIMB	63	54	7	0	0	0.0	100.0	7	6	1	0	0	0.0	100.0	13	12	1	0	0	0.0	100.0
LEVEL OFF	63	53	10	0	0	0.0	100.0	7	6	1	0	0	0.0	100.0	13	11	2	0	0	0.0	100.0
CRUISE	63	54	7	0	0	0.0	100.0	7	5	2	0	0	0.0	100.0	14	12	2	0	0	0.0	100.0
EMER PROCD (INFLT)	63	39	24	0	0	0.0	100.0	7	7	0	0	0	0.0	100.0	16	9	7	0	0	0.0	100.0
COMMUNICATIONS	65	36	28	1	0	1.5	100.0	7	1	6	0	0	0.0	100.0	16	10	6	0	0	0.0	100.0
CREW COORD	64	48	18	1	1	1.6	98.4	7	5	2	0	0	0.0	100.0	16	13	3	0	0	0.0	100.0
DESCENT & LDG	65	43	20	2	0	3.1	100.0	2	1	1	0	0	0.0	100.0	13	8	5	0	0	0.0	100.0
POSTFLIGHT	68	66	2	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	7	7	0	0	0	0.0	100.0
ATR RFLG RCVR	64	42	22	0	0	0.0	100.0	3	2	1	0	0	0.0	100.0	13	11	2	0	0	0.0	100.0
BOMBING	63	36	26	1	0	1.6	100.0	7	6	1	0	0	0.0	100.0	15	7	8	0	0	0.0	100.0
NAVIGATION	64	52	11	0	1	0.0	98.4	7	7	0	0	0	0.0	100.0	15	13	2	0	0	0.0	100.0
ELEC WARFARE	63	30	32	1	0	1.6	100.0	7	3	4	0	0	0.0	100.0	11	8	3	0	0	0.0	100.0
FB-111 FORMATION	68	54	14	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	3	3	0	0	0	0.0	100.0
ACM 6S QUAL	54	30	23	2	1	3.6	98.2	7	4	2	0	1	0.0	85.7	16	9	7	0	0	0.0	100.0
TERRAIN RADAR	62	42	20	0	0	0.0	100.0	6	5	1	0	0	0.0	100.0	16	13	3	0	0	0.0	100.0
EQUIPMENT OPS	65	41	22	2	0	3.1	100.0	7	5	2	0	0	0.0	100.0	16	4	11	0	1	0.0	93.8
JUDGEMENT/COMPLT	67	63	23	1	0	1.1	100.0	13	8	5	0	0	0.0	100.0	16	10	6	0	0	0.0	100.0

PREPARED 79 JUL 27
AIRCRAFT TYPE MC=135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CMDR

01 JAN 1979 - 30 JUN 1979
PCM LACRA-MOB

AREA CHECKED	UNIT NOTICE CHKD	MC	G	GT	L	%GT	%QUAL	UNIT NO NOTICE CHKD	MC	G	GT	L	%GT	%QUAL	CEVG ALL CHECKS CHKD	MC	G	GT	L	%GT	%QUAL
ENERG PROCD EXAM	888	782	103	0	3	0.0	99.7	762	596	149	0	17	0.0	97.8	118	108	9	0	1	0.0	99.2
QUAL EXAM	858	823	35	0	0	0.0	100.0	21	18	3	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0
FLT SIMULATOR	868	393	470	4	1	0.5	99.9	17	7	10	0	0	0.0	100.0	15	3	12	0	0	0.0	100.0
MISSION PLANNING	951	717	220	9	5	0.9	99.5	256	170	79	5	2	2.0	99.2	128	105	18	3	0	2.8	100.0
PREFLIGHT	961	701	258	1	1	0.1	99.9	245	167	77	1	0	0.4	100.0	115	98	17	0	0	0.0	100.0
PRETAKEOFF	977	722	249	5	6	0.5	99.2	247	181	61	0	5	0.0	98.0	116	91	25	0	0	0.0	100.0
TAKEOFF	975	694	273	2	6	0.2	99.4	251	151	92	2	6	0.8	97.6	115	80	34	0	1	0.0	99.1
CLIMB	951	707	242	2	0	0.2	100.0	248	167	80	0	1	0.0	99.6	116	93	23	0	0	0.0	100.0
LEVEL OFF	943	858	84	0	1	0.0	99.9	243	221	21	0	1	0.0	99.6	115	100	15	0	0	0.0	100.0
CRUISE	943	859	84	0	0	0.0	100.0	249	221	28	0	0	0.0	100.0	117	108	9	0	0	0.0	100.0
INSTRUMENTS	1123	302	790	11	24	1.0	98.2	255	87	157	6	5	2.4	98.0	123	58	62	0	3	0.0	97.6
ENER PROCD (INFLT)	958	583	365	1	9	0.1	99.1	69	45	23	1	0	1.4	100.0	42	36	6	0	0	0.0	100.0
COMMUNICATIONS	941	772	169	0	0	0.0	100.0	253	172	81	0	0	0.0	100.0	123	95	28	0	0	0.0	100.0
CREW COORD	953	679	255	10	9	1.0	99.1	254	156	93	5	0	2.0	100.0	123	76	45	1	1	0.8	99.2
DESCENT & LDG	960	577	390	5	8	0.5	99.2	247	155	88	3	1	1.2	99.6	124	65	59	0	0	0.0	100.0
POSTFLIGHT	937	777	159	1	0	0.1	100.0	243	188	55	0	0	0.0	100.0	118	90	28	0	0	0.0	100.0
COPILOT EVAL	46	37	9	0	0	0.0	100.0	4	4	0	0	0	0.0	100.0	-	-	-	-	-	-	-
ATR REFLG RCVR	8	3	4	0	1	0.0	87.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NAVIGATION	956	837	116	2	1	0.2	99.9	239	191	48	0	0	0.0	100.0	120	107	13	0	0	0.0	100.0
ATR REFLG TANK	934	604	325	5	0	0.5	100.0	207	122	83	2	1	1.0	99.5	104	74	32	0	0	0.0	100.0
EQUIPMENT OPS	916	723	188	3	5	0.3	99.5	239	176	59	2	2	0.8	99.2	122	100	19	1	2	0.8	98.4
JUDGEMENT/COMPLT	1000	714	267	6	13	0.6	98.7	255	167	81	4	3	1.6	98.8	128	92	30	1	2	0.8	98.4

PREPARED 79 JUL 27
AIRCRAFT TYPE MC=135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
COPILOT

01 JAN 1979 - 30 JUN 1979
PCN LAC26-MCP

	UNIT NOTICE						UNIT NO NOTICE						CRVG ALL CHECKS					
AREA CHECKED	CHKD	NO	G	GT	U	%GT	%QUAL	CHKD	NO	G	GT	U	%GT	%QUAL	CHKD	NO	G	GT	U	%GT	%QUAL
EMERG PROCD EXAM	479	386	87	0	0	0.0	98.7	696	525	144	0	27	0.0	96.1	35	34	0	0	0	0.0	100.0
QUAL EXAM	434	408	26	0	0	0.0	100.0	27	24	3	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0
FLT SIMULATOR	447	129	312	5	1	1.1	99.8	15	8	7	0	0	0.0	100.0	15	3	12	0	0	0.0	100.0
MISSION PLANNING	457	329	118	9	1	2.0	99.8	184	123	46	9	3	6.9	98.4	101	80	18	3	0	3.0	100.0
PREFLIGHT	457	307	149	1	0	0.2	100.0	180	103	76	0	1	0.0	99.4	100	87	13	0	0	0.0	100.0
PRETAKEOFF	465	324	129	5	7	1.1	98.5	182	119	58	0	5	0.0	97.3	100	83	17	0	0	0.0	100.0
TAKEOFF	458	365	91	1	1	0.2	99.8	176	107	67	1	1	0.6	99.4	99	71	28	0	0	0.0	100.0
CLIMB	459	339	120	0	0	0.0	100.0	174	121	52	1	0	0.6	100.0	99	88	11	0	0	0.0	100.0
LEVEL OFF	459	421	37	1	0	0.2	100.0	166	157	11	0	0	0.0	100.0	99	98	1	0	0	0.0	100.0
CRUISE	456	402	54	0	0	0.0	100.0	177	156	21	0	0	0.0	100.0	100	95	5	0	0	0.0	100.0
INSTRUMENTS	491	55	406	10	16	2.0	96.7	185	71	105	5	4	2.7	97.8	102	38	62	0	2	0.0	98.0
EMER PROCD (INFLT)	215	188	26	0	1	0.6	99.5	25	19	6	0	0	0.0	100.0	31	30	1	0	0	0.0	100.0
COMMUNICATIONS	457	312	144	1	1	0.2	99.8	182	108	72	2	0	1.1	100.0	102	78	24	0	0	0.0	100.0
CREW COORD	464	288	158	10	8	2.2	98.3	183	102	67	10	4	5.5	97.8	102	63	37	0	2	0.0	98.0
DESCENT & LDG	472	208	254	5	5	1.1	98.9	176	95	77	2	2	1.1	98.9	101	42	59	0	0	0.0	100.0
POSTFLIGHT	456	393	63	0	0	0.0	100.0	179	154	25	0	0	0.0	100.0	99	88	11	0	0	0.0	100.0
ATR BELO ROVE	4	3	1	0	0	0.0	100.0	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NAVIGATION	458	391	67	0	0	0.0	100.0	172	149	22	1	0	0.6	100.0	100	86	14	0	0	0.0	100.0
ATR BELO TANF	461	305	154	2	0	0.4	100.0	157	101	55	0	1	0.0	99.4	93	74	19	0	0	0.0	100.0
EQUIPMENT OPS	445	314	126	1	2	0.2	99.6	176	115	58	3	0	1.7	100.0	100	74	23	1	2	1.0	98.0
JUDGEMENT/CEMPLT	468	312	148	2	6	0.4	98.7	182	115	63	2	2	1.1	98.9	102	85	16	0	1	0.0	99.0

PREPARED 79 JUL 27
AIRCRAFT TYPE KC-135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
NAVIGATOR

01 JAN 1979 - 30 JUN 1979
PCN LA026-ACP

AREA CHECKED	UNIT NO NOTICE CHKD	NO	Q	QT	L	% QUAL	UNIT W NOTICE CHKD	NO	Q	QT	L	% QUAL	CREW ALL CHECKS CHKD	NO	Q	QT	L	% QUAL
EMERG PROCD EXAM	475	426	48	0	1	0.0 99.8	739	608	128	0	7	0.0 99.1	90	86	4	0	0	0.0 100.0
PUBLICATIONS	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0	0	0	0.0 100.0
QUAL EXAM	472	439	33	0	0	0.0 100.0	14	14	0	0	0	0.0 100.0	-	-	-	-	-	-
MISSION PLANNING	463	337	124	17	5	3.5 99.0	248	139	93	13	3	5.2 98.8	105	89	12	4	0	7.3 100.0
PREFLIGHT	463	348	133	5	1	1.0 99.8	236	153	81	1	1	0.4 99.6	102	89	13	0	0	0.0 100.0
PRETAKEOFF	460	448	33	1	0	0.2 100.0	234	215	23	1	0	0.4 100.0	104	104	0	0	0	0.0 100.0
TAKEOFF	466	451	15	0	0	0.0 100.0	234	224	10	0	0	0.0 100.0	103	99	4	0	0	0.0 100.0
CLIMB	480	429	50	1	0	0.2 100.0	239	208	29	1	1	0.8 99.6	103	95	8	0	0	0.0 100.0
CRUISE	476	436	39	1	0	0.2 100.0	246	223	23	0	0	0.0 100.0	104	99	5	0	0	0.0 100.0
EMER PROCD (INFLT)	66	66	22	0	0	0.0 100.0	3	3	0	0	0	0.0 100.0	1	0	1	0	0	0.0 100.0
COMMUNICATIONS	481	368	108	4	1	0.8 99.8	241	169	70	1	1	0.8 99.6	105	86	18	1	0	1.0 100.0
CREW COORD	494	358	125	6	5	1.2 99.0	246	160	78	5	5	2.0 98.0	105	68	34	0	1	0.0 99.0
DESCENT & LDG	481	347	132	2	0	0.4 100.0	240	161	79	0	0	0.0 100.0	103	73	30	0	0	0.0 100.0
POSTFLIGHT	462	370	107	4	1	0.8 99.8	237	176	61	0	0	0.0 100.0	104	83	21	0	0	0.0 100.0
ATR RFLG RCVR	10	6	4	0	0	0.0 100.0	1	1	0	0	0	0.0 100.0	-	-	-	-	-	-
NAVIGATION	515	318	168	12	17	2.3 96.7	239	131	88	7	13	2.9 94.6	105	64	37	3	1	2.9 99.0
ATR RFLG TNKR	486	288	193	4	1	0.8 99.8	208	104	99	3	0	1.4 100.0	97	56	40	1	0	1.0 100.0
EQUIPMENT OPS	470	339	120	6	5	1.3 98.9	234	142	82	10	4	6.3 98.3	105	79	24	1	1	1.0 99.0
JUDGEMENT/COMPLT	565	397	160	3	5	0.5 99.1	248	157	86	0	5	0.0 98.0	110	76	34	0	0	0.0 100.0

PREPARED 79 JUL 27 — STANDARDIZATION EVALUATION RESULTS — 01 JAN 1979 - 30 JUN 1979
AIRCRAFT TYPE KC-135 — SAC TOTALS BY POSITIONS — PCM LAOZA-NOR
BOOM OPERATOR

AREA CHECKED	UNIT NOTICE CHKD	MC	G	QT	L	% QUAL	UNIT AC NOTICE CHKD	MC	G	QT	L	% QUAL	CFVG ALL CHECKS CHKD	MC	G	QT	L	% QUAL
EMERG PROCD EXAM	560	438	104	0	6	0.0	98.5	740	530	180	1	11	0.1	98.5	94	94	0	0	0	0.0	100.0
QUAL EXAM	533	491	41	0	1	0.0	99.8	22	19	3	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0
MISSION PLANNING	585	482	91	10	2	1.7	99.7	242	180	55	6	1	2.5	99.6	108	94	13	0	1	0.0	99.1
PREFLIGHT	576	335	229	11	3	1.9	99.5	231	104	120	4	3	1.7	98.7	101	82	98	1	0	1.0	100.0
PRETAKEOFF	574	504	67	1	0	0.2	100.0	226	178	44	1	3	0.4	98.7	100	86	14	0	0	0.0	100.0
CLIMB	574	549	24	0	1	0.0	99.8	231	213	18	0	0	0.0	100.0	100	98	2	0	0	0.0	100.0
CRUISE	575	570	5	0	0	0.0	100.0	237	230	2	0	1	0.0	99.6	100	100	0	0	0	0.0	100.0
EMER PROCD (INFLT)	78	65	11	0	2	0.0	97.4	6	4	2	0	0	0.0	100.0	-	-	-	-	-	-	-
COMMUNICATIONS	574	541	33	0	0	0.0	100.0	236	225	13	0	1	0.0	99.6	102	100	2	0	0	0.0	100.0
CREW COORD	577	536	40	0	1	0.0	99.8	239	223	16	0	0	0.0	100.0	102	100	1	1	0	1.0	100.0
DESCENT & LDG	574	541	32	1	0	0.2	100.0	231	200	30	0	1	0.0	99.6	99	98	0	1	0	1.0	100.0
POSTFLIGHT	574	461	112	1	0	0.2	100.0	231	185	44	1	1	0.4	99.6	101	78	21	0	2	0.0	98.0
COPILOT FAM	2	0	2	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATR REFLG RCVR	1	1	0	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	-	-	-	-	-	-	-
NAVIGATION	582	566	16	1	0	0.2	100.0	160	150	10	0	0	0.0	100.0	88	86	2	0	0	0.0	100.0
ATR REFLG TNKR	624	340	252	10	22	1.6	96.5	226	113	98	7	12	3.1	94.7	94	89	33	0	4	0.0	95.8
DIFFERENT/CERFLT	605	530	69	1	5	0.2	98.5	243	192	45	2	4	0.8	98.4	107	98	8	0	1	0.0	99.1


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HEADQUARTERS
1st COMBAT EVALUATION GROUP

STANDARDIZATION/EVALUATION ANALYSIS

1 JULY - 31 DECEMBER 1979

31 MAR 80
1CEVG/AN

BARKSDALE AIR FORCE BASE, LOUISIANA

IRIS WORKSHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)
0057303

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER
00000 38131,00011 1

SECURITY WARNING/ADMIN MARKINGS

RD FR CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

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501 DOCUMENT SECURITY

501 U

DOWNGRADING INSTRUCTIONS

DECLASSIFY ON

REVIEW ON

CLASSIFICATION AND DOWNGRADING INSTRUCTIONS FOR

502 ____ / ____ / ____
TITLE ABSTRACT LISTINGS

028
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INSERT TO _____ DUP OF _____

027 NUMBER IN AUDIO REEL SERIES

CATALOGING RECORD

MAIN ENTRY *(Use one)* (150AN)

100 - PERSONAL NAME

109 - ISSUING AGENCY

129 - TITLE AS MAIN ENTRY

TITLE *(Use one)* *(DO NOT USE IF TITLE IS MAIN ENTRY)* (150AN)

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☐ 222E END OF TOUR REPORT

☐ 223H HISTORY (AND SUPPORTING DOCUMENTS)

☐ 224C CHECO MICROFILM

☐ 225Q CORRESPONDENCE

☐ 226Z PAPERS

☐ 227P CALENDAR

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STANDARDIZATION/EVALUATION RESULTS

JULY - DECEMBER 1979

SUMMARY

1. OVERALL SAC: Total SAC Standardization/Evaluation activity totaled 14,184 checks and reflects a decrease of 2,576 checks from the previous period. This is a continuation in the decrease of total number checks administered which totaled 24.3% over the past year. Areas where these decreases occurred are covered in paragraphs 2 and 3 below. The overall command percent qualified rate by aircraft type for unit and CEVG in-flight and exams are represented in the following chart.

	UNIT INFLIGHT %	UNIT EP EXAM %	1CEVG INFLIGHT %	1CEVG EP EXAM %
B-52	91.6	98.2	90.0	98.5
FB-111	96.7	100.0	None Administered	
KC/EC-135	93.9	98.4	93.6	99.5
RECON	96.2	100.0	100.0	100.0
Combat Support Aircraft (CSA)	96.6	100.0	None Administered	

2. UNIT: Unit activity including notice, no-notice, and spot checks totaled 13,103 evaluations with a 95.4% overall qualified rate. Unit activity decreased by 2,412 and the overall qualified status decreased by 0.1 percent. When compared with the July - December 1978 report, unit activity decreased by 3,702 and overall qualified status decreased by 0.8 percent. Inflight activity totaled 6,781 evaluations with a 93.3% inflight qualified rate and a 4.2% qualification level two rate. Emergency procedure examinations administered by the units totaled 8,702 checks resulting in a 98.4% qualified rate.

3. 1CEVG: 1CEVG Standardization/Evaluation activity totaled 1,081 checks, a decrease of 164 evaluations from the last period and a decrease of 899 over one year. Personnel evaluated by 1CEVG achieved a 94.9% overall qualified rate including a 3.1% qualified with training. Of the 690 in-flight evaluations, a 92.8% qualified rate was achieved which includes a 3.1% qualified with training. Emergency procedure examinations administered by 1CEVG totaled 645 checks with a 99.2% qualified rate.

4. QUALIFICATION LEVEL TWO: Areas discussed in the Unit Qual Level Two Analysis include mission planning, preflight, pretakeoff, instruments, air refueling, equipment operation, communication, electronic warfare, FCS operations, emergency procedures, descent and landing, and judgment/compliance.

5. GENERAL COMMENTS: An unfavorable trend was noted as developing for B-52 copilots in the number of subareas identified on unit checks as falling below the 97% mark. While the overall copilot qualified rate was 98.5%, those areas falling below the 97% was eight compared to four times last period and two areas a year previous. The Jul - Dec 77 did not identify any copilot areas where the failure rate fell below the 97% mark.

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STANDARDIZATION/EVALUATION ANALYSIS

1 JULY - 31 DEC 1979

PURPOSE: This report is prepared at the conclusion of each six month training period to provide the command a consolidated summary of unit and 1st Combat Evaluation Group administered standardization checks.

SCOPE: This report presents results of unit and 1CEVG Standardization/Evaluation Checks administered during 1 Jul - 31 Dec 1979. Graded areas pertaining to individual crew positions, by type aircraft, are covered in this report. Problem areas and trends are identified with recommendations for corrective actions where applicable.

SOURCE: Data contained in this report was extracted from the RCS: SAC-DOT (M)7109 Part I, Statistical Data Section (SAC Form 111), and Part II, Reasons for Unqualified Status, and results of 1CEVG evaluations.

DISCUSSION: This report discusses all standardization/evaluation checks administered throughout the Strategic Air Command and is divided by overall SAC, Unit Evaluations and 1CEVG administered checks.

SECTION A

SAC STANDARDIZATION/EVALUATION RECAP

During the period 1 July to 31 December 1979, SAC aircrews were administered 14,184 standardization/evaluation checks. Of these, 13,103 were unit administered with the remaining 1,080 checks given on 1CEVG visits. The total number of checks administered this period continue to show a decline in total evaluations which resulted in a 24.3% decrease over the past year. During the past six months, the decreases were 2,412 unit checks and 164 fewer CEVG evaluations. Included in these figures are all spot checks and inflight evaluations as well as emergency procedures exams and flight simulator checks administered as a separate check.

Aircrew members evaluated by unit Stan/Eval achieved a 95.4% overall qualified rating while those evaluated by 1CEVG received a qualified rating of 94.9 percent. Overall the combined rating decreased by 0.1 percent qualified this period.

The following eight charts depict overall SAC evaluations by type aircraft for ARF, 3AD, 8AF, 15AF and SAC totals. Unit and 1CEVG statistics are separated by type aircraft and crew positions. Figures include all inflight evaluations, emergency procedures examinations, flight simulator evaluations and unit spot checks.

PREPARED 80 MAR 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
ARF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PGM UAC2A-M10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG PER CEVG	PERCENT QUAL/TRNG PER UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
KC-135	242	1256	45.5	39.8	47.1	52.5	1.2	2.0	93.8	95.2
TOTAL	242	1256	45.5	39.8	47.1	52.5	1.2	2.0	93.8	95.2

*** REPRESENTS OVERALL QUALIFICATION (HQ, Q AND QT)

PREPARED 80 MAR 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
RAF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN HA02E-M10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
F-5E		263		39.5		51.3		2.3		93.2
KC-135		170		42.4		48.2		3.5		88.1
TOTAL		433		40.6		50.1		2.8		93.5

*** REPRESENTS OVERALL QUALIFICATION (HQ, O AND OT)

PREPARED 80 MAR 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
RAF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN U8026-M10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
F-52	54	2414	35.0	47.1	55.5	48.0	3.7	3.0	89.1	94.1
FB-111		325		27.4		60.5		0.6		87.5
KC-135	105	2772	35.2	46.9	61.0	47.7	1.0	1.6	98.1	96.2
EC-135	17	69	11.8	55.1	47.1	42.0	35.3	2.0	94.1	100.0
TOTAL	176	5580	34.1	46.0	58.5	47.3	5.1	2.2	97.7	95.4

*** REPRESENTS OVERALL QUALIFICATION (HQ, C AND GT)

PREPARED 80 MAR 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
15AF CREW AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN U8026-M10

AIRCRAFT	NUMBER CHECKED CREW	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CREW	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CREW	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG PEC CREW	PERCENT QUAL/TRNG PEC UNIT	PERCENT QUALIFIED*** CREW	PERCENT QUALIFIED*** UNIT
B-52	294	2534	44.6	43.0	45.2	48.5	2.7	3.0	92.5	95.3
KC-135	309	2134	53.4	44.7	38.8	48.8	3.9	1.0	94.1	95.4
EC-135	30	175	23.3	44.0	70.0	52.6	0.0	1.1	93.3	97.7
F-4		39		28.2		71.8		0.0		100.0
RC-135M		14		42.1		57.9		0.0		100.0
RC-135S	30	48	36.7	29.2	56.7	66.7	6.7	2.1	100.0	97.9
RC-135U		16		50.0		50.0		0.0		100.0
RC-135V		146		23.3		67.8		4.1		95.2
SR-71		20		25.0		75.0		0.0		100.0
U-2		55		25.5		67.3		3.6		96.4
T-38		65		35.4		58.5		0.0		93.8
EC-135**		3		33.3		66.7		0.0		100.0
OTHER		50		20.0		76.0		4.0		100.0
TOTAL	663	5804	47.4	43.0	43.0	50.2	3.3	2.0	94.6	95.6

** HQ SAC LOGISTIC SUPPORT
*** REPRESENTS OVERALL QUALIFICATION (HQ, C AND QT)

PREPARED BY MAR 80 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
SAC CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN UA02A-M10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT HIGHLY QUAL CEVG	PERCENT HIGHLY QUAL UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG PEC CEVG	PERCENT QUAL/TRNG PEC UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
B-52	348	5211	43.7	45.2	46.8	46.5	2.9	2.0	93.4	94.8
FB-111		325		37.4		60.5		0.8		97.5
KC-135	656	6882	47.8	42.7	45.8	51.2	2.4	1.8	95.8	95.7
EC-135	47	244	19.1	47.1	61.7	49.6	12.8	1.6	93.6	98.4
E-4		39		28.2		71.8		0.0		100.0
EC-135N		19		42.1		57.9		0.0		100.0
EC-135S	30	48	36.7	29.2	56.7	66.7	6.7	2.1	100.0	97.9
EC-135U		16		50.0		50.0		0.0		100.0
EC-135V		146		23.3		67.8		4.1		95.2
SR-71		20		25.0		75.0		0.0		100.0
T-2		55		25.5		67.3		3.6		96.4
T-38		65		35.4		58.5		0.0		93.8
EC-135**		3		33.3		66.7		0.0		100.0
OTHER		50		20.0		76.0		4.0		100.0
TOTAL	1081	13103	44.8	42.8	47.0	50.3	3.1	2.3	94.9	95.4

** FOR SAC LOGISTIC SUPPORT
*** REPRESENTS OVERALL QUALIFICATION (HQ, C AND GT)

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) FOR LAC96-007
01 JUL 1979 - 31 DEC 1979

B-52

POSITION	IOEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	99	8	8.1	91.9	1344	57	4.2	95.8
COPILOT *	0	0			2	0	0.0	100.0
COPILOT	46	5	10.9	89.1	858	64	7.5	92.5
RADAR NAVIGATOR	73	3	4.1	95.9	817	43	5.3	94.7
NAVIGATOR	33	5	15.2	84.8	698	41	5.9	94.1
EWO	49	1	2.0	98.0	734	27	3.7	96.3
GUNNER	48	1	2.1	97.9	758	47	6.2	93.8
TOTAL	348	23	6.6	93.4	5211	279	5.4	94.6

FB-111

POSITION	IOEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	0	0			176	6	3.4	96.6
RADAR NAVIGATOR	0	0			149	2	1.3	98.7
TOTAL	0	0			325	8	2.5	97.5

K/E/RC/135

POSITION	IOEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	236	13	5.5	94.5	2688	105	3.9	96.1
COPILOT *	8	0	0.0	100.0	21	2	9.5	90.5
COPILOT	105	6	5.7	94.3	1549	69	4.5	95.5
RC-135 NAV 1	3	0	0.0	100.0	7	0	0.0	100.0
NAVIGATOR	185	6	3.2	96.8	1468	44	3.0	97.0
TACTICAL CMDR	2	0	0.0	100.0	6	0	0.0	100.0
MANUAL TRACKER	4	0	0.0	100.0	8	0	0.0	100.0
B-1	8	0	0.0	100.0	33	0	0.0	100.0

(NOTE: (*) DENOTES QUALIFIED PILOT)

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) FOR LAC2E-M07
01 JUL 1979 - 31 DEC 1979

K/E/RC/135

POSITION	1CEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
E-2	0	0			16	0	0.0	100.0
E-3	0	0			23	0	0.0	100.0
E-4	4	0	0.0	100.0	10	0	0.0	100.0
ROOM OPERATOR	178	7	3.9	96.1	1494	90	6.0	94.0
SCANNR/FLT-STRD	0	0			12	0	0.0	100.0
TOTAL	733	32	4.4	95.6	7335	310	4.2	95.8

E-4

POSITION	1CEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	0	0			23	0	0.0	100.0
COPILOT	0	0			2	0	0.0	100.0
NAVIGATOR	0	0			5	0	0.0	100.0
FLT ENGR/FMT/WO	0	0			8	0	0.0	100.0
ROOM OPERATOR	0	0			1	0	0.0	100.0
TOTAL	0	0			39	0	0.0	100.0

SE-71

POSITION	1CEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	0	0			9	0	0.0	100.0
RSO	0	0			11	0	0.0	100.0
TOTAL	0	0			20	0	0.0	100.0

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) FOR UAQ26-NQ7
01 JUL 1979 - 31 DEC 1979

U-2

POSITION	1CEVG EVALUATIONS CHECKED	NR'D	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR'D	%U	%QUAL
AIRCRAFT CMDR	0	0			55	2	3.6	96.4
TOTAL	0	0			55	2	3.6	96.4

T-38

POSITION	1CEVG EVALUATIONS CHECKED	NR'D	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR'D	%U	%QUAL
AIRCRAFT CMDR	0	0			65	4	6.2	93.8
TOTAL	0	0			65	4	6.2	93.8

EC-135**

POSITION	1CEVG EVALUATIONS CHECKED	NR'D	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR'D	%U	%QUAL
AIRCRAFT CMDR	0	0			3	0	0.0	100.0
TOTAL	0	0			3	0	0.0	100.0

OTHER

POSITION	1CEVG EVALUATIONS CHECKED	NR'D	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR'D	%U	%QUAL
AIRCRAFT CMDR	0	0			32	0	0.0	100.0
NAVIGATOR	0	0			15	0	0.0	100.0
BOOM OPERATOR	0	0			3	0	0.0	100.0
TOTAL	0	0			50	0	0.0	100.0

EC-135** = HQ SAC LOGISTIC SUPPORT

SECTION B

UNIT STANDARDIZATION/EVALUATION RECAP

A total of 13,103 unit inflight evaluations were administered for a 95.4% inflight qualified rate. This includes a QL 2 rate of 4.2 percent. A breakout by type of aircraft follows: (Percent QL2/QL3) B-52 - 5.7/8.4; FB-111 - .8/3.4; KC-135 - 3.4/6.2; EC-135 - 2.3/3.1, E-4 - 0/0; Recon Acft - 3.4/3.8. This section discusses all inflight areas where a minimum of fifty (50) evaluations were administered and a qualified rate of less than 97% were received on unit notice or no-notice evaluations. The 97% is an arbitrarily selected reference point used over a period of time as a means of providing continuity to trend analysis. Twelve aircrew positions, encompassing 28 graded areas, failed to attain the 97% qualified for unit notice or no-notice evaluations. The positions and areas by aircraft type are listed in tabular format on the next two charts.

1. UNIT QUALIFICATION LEVEL 3 RESULTS:

The following charts depict results of the unit evaluations where a qualified rate of less than 97% exists and compares those same graded areas with the results obtained during ICEVG evaluations.

AREA	POSITION	UNIT NOTICE #CK/U/%Q	UNIT NO-NOTICE #CK/U/%Q	1CEVG #CK/U/%Q
B-52				
Instruments	Pilot	478/12/97.5	77/3/96.1	47/2/95.7
Air Refueling	Pilot	375/8/97.9	55/2/96.4	32/0/100
Equipment Operation	Pilot	378/4/98.9	64/3/95.3	47/2/95.7
Emergency Procd (Exam)	Copilot	172/8/95.3	335/17/94.9	14/0/100
Mission Planning	Copilot	171/2/98.8	62/2/96.8	32/0/100
Pretakeoff	Copilot	171/1/99.4	62/3/95.2	32/0/100
Instruments	Copilot	196/8/95.9	61/1/98.4	32/1/96.9
Crew Coordination	Copilot	177/5/97.2	61/4/93.4	32/1/96.9
Descent & Landing	Copilot	181/6/96.7	49/0/100	32/1/96.9
Equipment Operation	Copilot	164/6/96.3	53/1/98.1	31/3/90.3
Judgment/Compliance	Copilot	177/1/99.4	61/2/96.7	32/0/100
Bombing	Radar Navigator	301/9/97.0	52/3/94.2	41/2/95.1
Navigation	Radar Navigator	310/7/97.7	59/3/94.9	45/0/100
Equipment Operation	Radar Navigator	290/1/99.7	59/3/94.9	45/0/100
Navigation	Navigator	208/8/96.2	54/4/92.6	30/3/90.0
Electronic Warfare	EWO	271/16/94.1	61/1/98.4	24/1/95.8
Emergency Procd (Exam)	Gunner	232/3/98.7	348/11/96.8	35/0/100
FCS Ops/Procedure	Gunner	302/15/95.0	91/6/93.4	19/1/94.7
Judgment/Compliance	Gunner	290/5/98.3	93/4/95.7	22/0/100
KC-135				
Pretakeoff	Pilot	875/6/99.3	172/8/95.3	129/0/100
Emergency Procd (Exam)	Copilot	397/6/98.5	540/19/96.5	21/0/100
Crew Coordination	Copilot	374/7/98.1	123/4/96.7	76/5/93.4
Mission Planning	Navigator	513/4/99.2	128/5/96.1	109/0/100

AREA	POSITION	UNIT NOTICE #CK/U/%Q	UNIT NO-NOTICE #CK/U/%Q	1CEVG #CK/U/%Q
Navigation	Navigator	532/9/98.3	124/8/93.5	104/4/96.2
Preflight	Boom Operator	510/4/99.2	176/6/96.6	98/0/100
Air Refueling Tanker	Boom Operator	550/18/96.7	163/12/92.6	88/4/95.5
Judgment/Compliance	Boom Operator	564/7/98.8	182/12/93.4	106/4/96.2
FB-111				
Instruments	Pilot	96/3/96.9	10/0/100	0/ N/A

The remainder of this section discusses the areas identified on the SAC Form 817 for all Unit Evaluations. The discrepancies noted for each area are for the most part self explanatory and it is hoped that units will place emphasis on these discrepancies in their training programs. All U's and T's for notice and no-notice evaluations are noted in the charts. The qualified rates are displayed to allow you to compare that graded area with previous rates using the same criteria.

2. B-52 QUALIFICATION LEVEL 3 RESULTS:

a. PILOT:

(1) INSTRUMENTS: B-52 pilots achieved a 96.1% qualified rate during this training period in the unit no-notice program. Of fifteen unqualified pilots, there were two staff, three students, four spares, and six mission ready. Most of the problems related to procedural knowledge rather than aircraft control. The majority of the ATC clearance violations related to altitude clearances or corridor limits during low level activity. More situational knowledge is needed. Pilots may know individual instrument rules, but they are not applying this knowledge to situations where more than one rule at a time must be used. Hangar flying type workshops could be helpful.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
ATC Clearance	7	2
Penetration/Letdown	3	1
Precision Approach	2	0
Instrument Departure	1	1
Non-Precision Approach	1	0
Missed Approach	1	0
Holding	0	2
Instrument Procedures	0	1
TOTAL	15	7

INSTRUMENT QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	512/98.0	95/97.9	69/96.8
Jan - Jun 78	548/97.4	120/95.0	84/95.2
Jul - Dec 78	473/98.5	101/100	65/100
Jan - Jun 79	510/98.0	95/97.9	61/100
Jul - Dec 79	478/97.5	77/96.1	47/95.7

NOTE: Total checks/% qualified.

(2) AIR REFUELING: B-52 pilots received a 96.4% qualified rate in the unit no-notice program. Overall, ten were unqualified and three were qualified with training. Of those Qualification Level 3 pilots, there were five mission ready, four students, and one staff. Rough and erratic power and control movements caused most of the problems. Rendezvous errors included being off altitude and/or airspeed. Breakaway errors included failure to press IFR boom release button and failure to maintain visual contact. Most of the students just require A/R practice. The rendezvous errors were mainly procedural in nature and show a need for more thorough study and planning.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
Multiple Disconnects	3	3
Rendezvous	3	0
Breakaway	2	0
Insufficient Contact Time	2	0
TOTAL	10	3

AIR REFUELING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	358/97.5	75/96.0	50/100
Jan - Jun 78	389/98.7	101/97.0	66/97.0
Jul - Dec 78	357/99.4	86/100	59/96.6
Jan - Jun 79	381/99.5	74/100	51/100
Jul - Dec 79	375/97.9	55/96.4	32/100

NOTE: Total Checks/% qualified

(3) EQUIPMENT OPERATION: The unit no-notice qualified rate for B-52 pilots was 95.3 percent. Seven were unqualified and three were qualified with training. Exceeding airspeed limitations was the biggest error. Confusion with the fuel panel caused other unqualified grades.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
Aircraft Limitations	3	0
Fuel System	2	1
Anti-ice	1	1
TA System	1	0
Electrical System	0	1
TOTAL	7	3

EQUIPMENT OPERATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	*	*	*
Jan - Jun 78	300/98.0	70/98.6	69/100
Jul - Dec 78	359/98.6	88/98.9	65/100
Jan - Jun 79	386/98.7	75/97.3	61/98.4
Jul - Dec 79	378/98.9	64/95.3	47/95.7

NOTE: Total checks/% qualified
* No data available

b. COPILOT:

(1) EMERGENCY PROCEDURE (EXAM): B-52 copilots received a 95.3% qualified rate for unit notice evaluations and a 94.9% qualified rate for unit no-notice evaluations. Twenty two mission ready, two spares, and one student were unqualified. More study of the technical order is needed.

B-52 COPILOT DEFICIENCIES

REASON	#U
General Knowledge	17
Critical Actions	8
TOTAL	25

EMERGENCY PROCEDURE (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	246/96.3	480/97.3	58/100
Jan - Jun 78	268/98.1	581/94.3	143/98.6
Jul - Dec 78	207/97.1	537/95.7	97/100
Jan - Jun 79	211/99.1	357/97.2	28/100
Jul - Dec 79	172/95.3	335/94.9	14/100

NOTE: Total checks /% qualified.

(2) MISSION PLANNING: B-52 copilots received a qualified rate of 96.8% in this area on unit no-notice evaluations. This is a repeat item. Four copilots were unqualified and ten were qualified with training. The same areas were mentioned in the last report.

B-52 COPILOT DEFICIENCIES

REASON	# U	# QT
Fuel/%MAC/Takeoff Data	4	0
Publications	0	10
TOTAL	4	10

MISSION PLANNING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	229/100	82/97.6	47/100
Jan - Jun 78	234/99.1	122/96.7	76/100
Jul - Dec 78	186/98.9	97/96.9	55/100
Jan - Jun 79	217/99.5	85/97.6	54/100
Jul - Dec 79	171/98.8	62/96.8	32/100

NOTE: Total checks/% qualified.

(3) PRETAKEOFF: Copilots received a 95.2% qualified rate on unit no-notice evaluations. Four mission ready copilots were unqualified and two mission ready copilots were qualified with training. All problems were with takeoff data.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Takeoff Data	4	2
TOTAL	4	2

PRETAKEOFF QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	227/99.6	86/100	47/100
Jan. - Jun 78	234/99.6	117/96.6	78/100
Jul - Dec 78	192/99.0	95/97.9	54/100
Jan - Jun 79	219/99.1	81/98.8	55/98.2
Jul - Dec 79	171/99.4	62/95.2	32/100

NOTE: Total checks /% qualified.

(4) INSTRUMENTS: B-52 copilots had a 95.9% qualified rate in the unit notice program. Overall, nine were unqualified and seven were qualified with training. Twelve were mission ready and four were students. This is the third report that instruments has been recorded. More problems developed during approaches this period. Lack of knowledge of AFM 51-37, Instrument Flying, was again a factor.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Non-Precision Approach	3	1
Precision Approach	2	0
ATC Clearance	2	0
Penetration	1	1
Departure	1	0
Holding	0	3
ATC Communications	0	1
Poor Airspeed, Altitude, or Heading Control	0	1
TOTAL	9	7

INSTRUMENT QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	256/97.7	86/97.7	47/100
Jan - Jun 78	277/96.0	121/98.3	78/97.4
Jul - Dec 78	216/95.8	98/99.0	55/100
Jan - Jun 79	234/96.6	82/98.8	54/100
Jul - Dec 79	196/95.9	61/98.4	32/96.9

NOTE: Total checks /% qualified.

(5) CREW COORDINATION: The unit no-notice qualified rate for B-52 copilots was 93.4 percent. Nine were unqualified and five were qualified with training. Only four of these were students, and the rest were mission ready. Most problems were encountered during low level activity such as corridor violations, missed altitude restrictions, incorrect clearance plane adjust, etc. This is the third period that crew coordination has been identified. Better mission planning would solve some of the problems. The increased workload demanded at low level requires a plan of attack rather than just waiting to react to requirements as they arise. Such things as TA calibration numbers should be precanned to the extent possible. If a fuel panel change is going to be required during low altitude, a note reminder on the low level chart at the appropriate point is better than trying to recover from an unbalance that could occur from a missed change.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Low Altitude Coordination	3	2
Aircraft Limitation	3	1
Instruments	2	0
High Level Navigation	1	0
Preflight	0	1
Postflight	0	1
TOTAL	9	5

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	242/97.5	87/95.4	47/97.9
Jan - Jun 78	247/98.0	120/94.2	78/93.6
Jul - Dec 78	191/97.4	95/95.8	35/98.2
Jan - Jun 79	217/98.2	82/96.3	54/96.3
Jul - Dec 79	177/97.2	61/93.4	32/96.9

NOTE: Total checks /% qualified.

(6) DESCENT AND LANDING: The unit notice qualified rate for B-52 copilots in this area is 96.7 percent. A total of six pilots were unqualified and five were qualified with training. Seven were mission ready, three were students, and one was a spare. Unable to control the aircraft all the way to the runway was the main problem. Hands on practice is needed in almost every case.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Landing Too Firm	2	1
Unable to Land	2	0
Trim and Power Problems	1	2
Flared Too High	1	0
Brake Energy Limits	0	1
Crosswind Landing	0	1
TOTAL	6	5

DESCENT AND LANDING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	241/98.3	79/96.2	47/100
Jan - Jun 78	249/96.4	110/98.2	75/97.8
Jul - Dec 78	201/97.0	87/98.9	54/100
Jan - Jun 79	222/97.7	70/100	54/100
Jul - Dec 79	181/96.7	49/100	32/96.9

NOTE: Total checks /% qualified.

(7) EQUIPMENT OPERATION: The unit notice qualified rate for B-52 copilots was 96.3 percent. Overall seven copilots were unqualified. Five were mission ready and two were students. No identifiable trend was apparent.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Alternator Operation	2	0
Fuel System	2	0
Anti-ice	1	0
Aircraft Limitation	1	0
TA System	1	0
TOTAL	7	0

EQUIPMENT OPERATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	1/100	1/100	—
Jan - Jun 78	163/97.5	72/97.2	63/100
Jul - Dec 78	171/97.7	87/97.7	55/100
Jan - Jun 79	195/100	62/100	54/98.1
Jul - Dec 79	164/96.3	53/98.1	31/90.3

NOTE: Total checks /% qualified.

(8) JUDGMENT/COMPLIANCE: B-52 copilots received a 96.7% unqualified rate on unit no-notice evaluations. Overall, three copilots were unqualified and three were qualified with training. All were mission ready. Most of the errors happened during low level operations.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Off Altitude	1	1
Ejection Seat	1	0
Gross Weight Limit Low Level	1	0
STV/FLIR Use Low Level	0	1
Oxygen System	0	1
TOTAL	3	3

JUDGMENT/COMPLIANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	235/98.3	87/96.6	47/100
Jan - Jun 78	240/98.3	121/96.7	78/100
Jul - Dec 78	191/99.0	97/99.0	55/100
Jan - Jun 79	219/99.5	82/97.6	56/98.2
Jul - Dec 79	177/99.4	61/96.7	32/100

NOTE: Total checks /% qualified.

c. RADAR NAVIGATOR:

(1) BOMBING: The unit No-Notice qualified rate in bombing for B-52 RNs was 94.2% and the CEVG rate was 95.1 percent. The CEVG failures are covered in Section C of this report. Alternate bomb run planning and procedures write ups have increased significantly over the previous periods while all other errors have decreased. The total number of Us and Ts have decreased from 32 last period to only 15 for this semester, a 57.7% decrease. This decrease in the number of failures reverses a trend that has been identified for six consecutive years. Overall number of unit evaluations in bombing decreased from 417 to 352 checks, a 15.6% decrease. The unit No-Notice rate in bombing rose 14.5% over the previous period and this is the first time in four years that the rate has been above 87% qualified for these evaluations. Although this area is still identified based upon the 97% criteria we congratulate the crew members and the bomb-nav staff for doing such an outstanding job of adapting their training programs to eliminate the unit identified deficiencies.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Alternate Bombing Procedures/Planning	4	3
Checklist Completion	3	0
Equipment Malfunction Analysis	3	0
OAP/Target ID	2	0
TOTAL	12	3

BOMBING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	299/97.3	84/86.9	50/96.0
Jan - Jun 78	351/94.3	88/86.4	69/91.3
Jul - Dec 78	307/93.8	83/83.1	63/98.4
Jan - Jun 79	343/96.8	74/79.7	50/92.0
Jul - Dec 79	301/97.0	52/94.2	41/95.1

NOTE: Total Checks/% qualified

(2) NAVIGATION: B-52 radar navigators received a 94.9% qualified rate during unit no-notice evaluations. The unit notice rate for Navigation was 97.7% and there were no 1CEVG failures during the period. It is interesting to note that there were no QTs awarded to RNs this period in Navigation. All but one of the ten failures were for course deviations, six during low level flight and three during high altitude flight. The

remaining unqualified grade was awarded for failure to fly the proper low level altitude during a bomb run. These ten failures were a reduction of eleven from the previous period and reversed this undesirable trend.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Exceeded Low Level Corridor Limits	6	0
Exceeded High Altitude ARTCC Limits	3	0
Failed to Fly Published IFR Altitude	1	0
TOTAL	10	0

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	300/98.7	91/94.5	60/ 98.3
Jan - Jun 78	354/98.0	89/94.4	80/ 96.3
Jul - Dec 78	300/97.3	83/96.4	67/ 98.5
Jan - Jun 79	342/96.2	74/89.2	58/100.0
Jul - Dec 79	310/97.7	59/94.4	45/100.0

NOTE: Total Checks/% Qualified

(3) EQUIPMENT OPERATION: B-52 Radar Navigators recorded four failures and four qualified with training grades during unit evaluation in this area. The unit No-Notice rate, with three failures, was 94.9 percent. Although the sample size was small for these evaluations, it was the first time since 1975 that this many failures occurred and does indicate a trend. Equipment operation problems was also manifested in failures in other different areas as a contributing factor, adding emphasis to this area. Hopefully, this is not the beginning of a trend caused by emphasis on ISD and subsequent aircrew knowledge of the actual system specifics and consequences of malfunctions not understood. The unit training programs in malfunction analysis, and more emphasis on ISD abnormal operations takes on new importance. An excellent way to stop gap possible future problems is to have the Avionics Maintenance Squadron Tech rep and/or supervisor conduct a class for all RN and Navs during alert tours explaining the BNS Systems in detail and relaying to the crews current problems other operators have had with equipment. It is also an excellent vehicle for cross-talk between the operators and maintenance folks to develop a AFTO Form 781 write up that accurately identifies the problems encountered. The AMS specialist then can hopefully go right to the problem and correct it. With the cold seat swap flights and quick turn around requirements, it becomes imperative to conduct quick repairs.

B-52 RN DEFICIENCIES

REASON	#U	#QT
Heading Equipment	2	1
BNS Systems	2	2
Doppler	0	1
TOTAL	4	4

EQUIPMENT OPERATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
JUL-DEC 77	266/99.6	85/100.0	60/ 96.7
JAN-JUN 78	301/98.7	84/ 98.8	80/100.0
JUL-DEC 78	256/99.2	77/100.0	67/100.0
JAN-JUN 79	293/99.0	64/ 98.4	57/100.0
JUL-DEC 79	290/99.7	59/ 94.9	45/100.0

d. NAVIGATOR:

(1) NAVIGATION: B-52 Navigators have been below the 97% qualified criteria for both the unit notice and no-notice evaluations since January of 1972. The majority of the discrepancies continues to be caused by either low level route corridor violations or Celestial Navigation errors. The Celestial Nav errors were, for the most part, mathematical or plotting errors. Low altitude flight deviations have plagued the SAC crew force for years but the number of occurrences has decreased significantly during the past period and for the first time in three periods this subarea of navigation does not contain the most discrepancies for the area. Complete mission familiarity and accurate recording/forms completion is the only was to further eliminate these failures.

B-52 NAVIGATOR DEFICIENCIES

REASON	# U	# QT
Celestial Navigation Errors	5	1
Low Level Corridor/Altitude Violations	4	0
High Level Deviations/Recording	3	3
	12	4

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
JUL-DEC 77	202/96.0	109/86.2	48/95.8
JAN-JUN 78	267/94.0	91/94.5	77/97.4
JUL-DEC 78	192/92.2	90/96.7	51/98.0
JAN-JUN 79	217/96.8	79/86.3	57/98.2
JUL-DEC 79	208/96.2	54/92.6	30/90.0

e. ELECTRONIC WARFARE OFFICER:

(1) ELECTRONIC WARFARE: Electronic Warfare Officers received a qualified rate of 94.1% for unit notice checks and 98.4% for unit no-notice checks during this period. Unit checks for combined notice and no-notice activity decreased by 58 to 332, while the number of unqualified grades remained at 17. Of the unqualified grades, 8 were given to non-mission ready individuals. A significant increase of 30 qualified with training grades occurred this semester for a total of 32 QT's. Three of the qualified with training grades were NMR EW's. The relative increase in unqualified grades and the large increase in qualified with training grades indicates a definite weakness and increasing trend in Electronic Warfare Procedures.

B-52 EW DEFICIENCIES

REASON	#U	#QT
Threat Area Tactics	11	15
Penestration and Withdrawal Tactics	2	10
Penetration Procedures	4	5
Area Penetration (ALQ-T-4)	0	1
Threat Area Penetration (ALQ-T-4)	0	1
TOTAL	17	32

ELECTRONIC WARFARE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
JUL-DEC 77	305/95.4	92/98.9	30/96.7
JAN-JUN 78	344/96.8	103/90.3	46/89.1
JUL-DEC 78	292/95.2	96/91.7	33/100
JAN-JUN 79	310/96.5	80/92.5	32/96.6
JUL-DEC 79	271/94.1	61/98.4	24/95.8

NOTE: Total checks/percent qualified

f. GUNNER:

(1) FCS OPERATION/PROCEDURES: B-52 Fire Control System Operators received a 95.0 percent qualified rate for unit notice activity and 93.4 percent for unit no-notice checks. The number of notice checks for this period decreased by 51 to 302 and the no-notice activity increased by 8 to 91. Of the 21 unqualified grades, 8 were given to non-mission ready individuals and 7 of the 19 qualified with training grades were NMR. The large number of unqualified and qualified with training grades for FCS Equipment Operation and Procedures indicates a continuing area of concern.

B-52 FCSO DEFICIENCIES

REASON	#U	#QT
FCS Equipment Operation	18	15
Procedures	2	3
Firing Procedures	0	0
Fighter Intercept Exercise	0	1
FEO	1	0
TOTAL	21	19

FCS OPERATIONS/PROCEDURES QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
JUL-DEC 77	242/97.9	90/96.7	28/100
JAN-JUN 78	324/97.5	99/93.9	41/97.1
JUL-DEC 78	279/93.9	102/95.1	30/100
JAN-JUN 79	353/95.2	83/89.2	29/93.1
JUL-DEC 79	302/95.0	91/93.4	19/94.7

NOTE: Total checks/% qualified

(2) EMERGENCY PROCEDURES (EXAM): The overall number of unit Emergency Procedure Exams administered to FCSO's, and the percent qualified continues to decrease. This is the fourth reporting period that the combined unit notice and no-notice exams decreased in the number given and qualified. Of the 14 unqualified grades, 2 were given to non-mission ready individuals.

B-52 FCSO DEFICIENCIES

REASON	#U	#QT
General Knowledge	12	0
Critical Action	2	0
TOTAL	14	0

EMERGENCY PROCEDURES EXAM

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
JUL-DEC 77	217/100	453/97.8	103/100
JAN-JUN 78	295/99.7	543/98.3	147/ 98.6
JUL-DEC 78	227/99.6	531/97.6	117/100
JAN-JUN 79	273/99.3	347/96.3	27/100
JUL-DEC 79	232/98.7	348/96.8	35/100

NOTE: Total checks/% qualified

(3) JUDGMENT/COMPLIANCE: The FCSO unit notice qualified rate for judgment and compliance was 98.3 percent and 95.7 percent for unit no-notice checks. Only one unqualified of the nine unqualified and both qualified with training grades were given to a non-mission ready individual.

B-52 FCSO DEFICIENCIES

REASON	#U	#QT
Judgment	3	0
Compliance with Directives	6	2
TOTAL	9	2

JUDGMENT AND COMPLIANCE

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
JUL-DEC 77	246/100	93/97.8	28/100
JAN-JUN 78	329/98.8	100/96.0	41/100
JUL-DEC 78	269/98.1	105/99.0	31/100
JAN-JUN 79	334/98.5	85/97.6	29/96.6
JUL-DEC 79	290/98.3	93/95.7	22/100

NOTE: Total checks/% qualified

3. KC-135 QUALIFICATION LEVEL 3 RESULTS:

a. PILOT:

(1) PRETAKEOFF: The unit no-notice qualification rate in this area was 96.1 percent. Overall, fourteen pilots were unqualified and six were qualified with training. There were two students, two spares, one staff pilot, and fifteen mission ready pilots. Takeoff data was a problem in the majority of cases. There seems to be a need for classes taught by instructors who have developed some good, practical takeoff data situations to solve.

KC-135 PILOT DEFICIENCIES

REASON	#U	#QT
Takeoff Data	14	3
MITO Radio Procedures	0	2
Improper Engine Start Procedures	0	1
TOTAL	14	6

PRETAKEOFF QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	795/99.5	239/97.9	163/99.4
Jan - Jun 78	930/99.2	233/99.6	143/99.3
Jul - Dec 78	873/99.3	212/99.1	163/99.4
Jan - Jun 79	977/99.2	247/98.0	116/100
Jul - Dec 79	875/99.3	172/95.3	129/100

NOTE: Total checks /% qualified.

b. COPILOT:

(1) EMERGENCY PROCEDURES (EXAM): Unit no-notice qualification rate in this area was 96.5 percent. Overall, twenty-five copilots were unqualified. The majority were mission ready copilots. This is a repeat area from the last period. Again, better unit training is necessary to lower these failure rates.

KC-135 COPILOT DEFICIENCIES

REASON	#U
General Knowledge	23
Critical Actions	2
TOTAL	25

EMERGENCY PROCEDURES (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	487/98.2	802/96.9	251/99.2
Jan - Jun 78	498/98.6	915/97.5	215/100
Jul - Dec 78	473/98.5	777/98.1	216/98.0
Jan - Jun 79	479/98.7	696/96.1	38/100
Jul - Dec 79	397/98.5	540/96.5	21/100

NOTE: Total checks /% qualified.

(2) CREW COORDINATION: KC-135 copilots received a 96.7% qualified rate for unit no-notice evaluations. Eleven copilots were unqualified and eleven were qualified with training. Eighteen were mission ready and four were students. Copilots allowing pilots to miss altitude restrictions was the biggest problem area.

KC-135 COPILOT DEFICIENCIES

REASON	#U	#QT
ATC Clearance	6	5
Checklist	1	2
Fuel Problems	1	1
Cell Procedures	1	1
Approach Speed	1	1
Holding	1	0
Three Engine Approach	0	1
TOTAL	11	11

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	487/99.4	230/99.6	133/98.5
Jan - Jun 78	491/98.4	192/96.9	119/100
Jul - Dec 78	460/97.2	170/98.8	121/95.9
Jan - Jun 79	464/98.3	183/97.8	102/98.0
Jul - Dec 79	374/98.1	123/96.7	76/93.4

NOTE: Total checks /% qualified.

c. NAVIGATOR:

(1) MISSION PLANNING: The unit no-notice qualified rate for KC-135 Navigators was 96.1 percent. All nine unqualified grades and eleven of the QT's were for mission planning errors on the SAC form 200. They include distance measurement errors up to 75NM, heading errors up to 140° and groundspeed errors up to 35 knots. Other errors include reciprocal radials and ETA's computed in error. All six QT's awarded for publication discrepancies were for missing and/or incorrect supplement annotations in Tech Orders. These errors can only be corrected by the Navigators themselves being more careful.

KC-135 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Flight Planning	9	11
Publications	0	6
TOTAL	9	17

MISSION PLANNING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	486/98.8	220/97.3	122/100
Jan - Jun 78	521/99.0	245/97.6	120/100
Jul - Dec 78	518/99.6	196/97.4	147/99.3
Jan - Jun 79	483/99.0	248/98.8	109/100
Jul - Dec 79	513/99.2	128/96.1	109/100

(2) NAVIGATION: Unit no-notice qualified rate for KC-135 Navigators was 93.5 with eight failures. Overall in both unit programs,17 individuals were unqualified and 21 were qualified with training in the Navigation area. This is a significant improvement from the 30 U's recorded last semester. The major discrepancy noted continues to be celestial navigation plotting and computations. The General Navigation write ups include failure to record sufficient information and deviations prior to and during the Air Refueling portion of the sortie which jeopardized mission accomplishments. The QT's in this area are to be covered in the Qual Level 2 Analysis Section.

KC-135 NAVIGATOR DEFICIENCIES

REASON	#U	#T
Celestial Navigation	9	15
General Navigation	8	6
TOTAL	17	21

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	538/94.2	221/96.4	127/99.2
Jan - Jun 78	562/96.4	236/94.5	115/96.5
Jul - Dec 78	553/97.1	186/95.2	138/97.1
Jan - Jun 79	515/96.7	239/94.6	105/99.0
Jul - Dec 79	532/98.3	124/93.5	104/96.2

d. BOOM OPERATOR:

(1) PREFLIGHT: Unit notice checks for Boom Operator preflights had a 99.2% qualified rate and a 96.6% rate for unit no-notice activity. There were ten unqualified and 21 qualified with training grades. The problem areas stemmed from sextant checkout, oxygen system checkout and quipment stowage.

KC-135 BOOM OPERATOR DEFICIENCIES

REASON	#U	#T
Preflight	10	21
TOTAL	10	21

PREFLIGHT QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	460/99.3	208/98.6	128/100
Jan - Jun 78	565/98.9	240/98.8	122/100
Jul - Dec 78	502/99.8	241/97.9	137/99.3
Jan - Jun 79	578/99.5	231/98.7	101/100
Jul - Dec 79	510/99.2	176.96.6	98/100

NOTE: Total checks /% qualified.

(2) AIR REFUELING: Unit notice qualified rate for Boom operators was 96.7%, and while the unit no-notice rate was 92.6 percent. There were 30 unqualified grades and 13 qualified with training grades. All forty-three QT or U grades were given to mission ready individuals. Boom control and receiver contact outside the boom refueling limits were the main problems.

KC-135 BOOM OPERATOR DEFICIENCIES

REASON	#U	#QT
Tanker Manual Operation	28	13
Breakaway	2	0
TOTAL	30	13

AIR REFUELING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	480/97.9	193/95.9	110/98.2
Jan - Jun 78	613/97.1	230/94.8	110/99.1
Jul - Dec 78	535/97.6	222/95.0	121/96.7
Jan - Jun 79	624/96.5	226/94.7	96/95.8
Jul - Dec 79	550/96.7	163/92.6	88/95,5

NOTE: Total checks /% qualified.

(3) JUDGMENT AND COMPLIANCE: Boom operators had a 98.8% qualified rate for unit notice checks and a 93.4% unit no-notice rate. There were nineteen unqualified grades and six qualified with training grades. Of the nineteen U's, seventeen were for non compliance with directives, while the remaining two were in the judgment subarea. The majority of problems were in the area of SACR 60-16 oxygen requirement violations.

KC-135 BOOM OPERATOR DEFICIENCIES

REASON	#U	#QT
Judgment	2	0
Compliance with Directives	17	6
TOTAL	19	6

JUDGMENT/COMPLIANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	474/98.5	222/97.7	139/98.6
Jan - Jun 78	576/98.6	259/100	130/99.2
Jul - Dec 78	529/97.7	255/96.5	143/98.6
Jan - Jun 79	609/98.5	243/98.4	107/99.1
Jul - Dec 79	564/98.8	182/93.4	106/96.2

NOTE: Total checks /% qualified.

4. FB-111 QUALIFICATION LEVEL 3 RESULTS:

a. PILOT:

(1) INSTRUMENTS: This area repeats from the previous report with a 96.9% qualification rate in the unit notice program. Two mission ready pilots and one student were unqualified. One mission ready pilot was qualified with training. No trends were identified in this area.

FB-111 PILOT DEFICIENCIES

REASON	U	QT
Airspeed and Altitude Control	1	1
ATC Clearance	1	0
Holding	1	0
TOTAL	3	1

INSTRUMENT QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 77	100/98.0	33/100	10/100
Jan - Jun 78	68/98.5	35/100	15/100
Jul - Dec 78	97/99.0	16/93.8	7/100
Jan - Jun 79	88/96.6	12/100	24/95.8
Jul - Dec 79	96/96.9	10/100	0/-

NOTE: Total checks/% qualified.

5. COMMAND UNIT OVERALL ANALYSIS SUMMARY: The following charts summarize the statistical data submitted to 1CEVG/ANY by all units in SAC. The information is categorized by type aircraft for all unit evaluations including ground, inflight, and Emergency Procedures.

PREPARED BY NAR CP

STANDARDIZATION EVALUATION ANALYSIS
COMMAND UNIT OVERALL ANALYSIS SUMMARY

01 JUL 1979 - 31 DEC 1979
FOR UAOZE-M11

ORG	QUALIFICATION LEVEL CMD	HQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CMD	HQ	Q	QT	U	% QUAL	INDIVIDUAL F.F.EVANS CMD	HQ	Q	U	% QUAL
FORCES (F=52)																	
###7	46	35	11	0	0	100.0	32	24	8	0	0	100.0	1	1	0	0	100.0
0007	6	4	2	0	0	100.0	4	2	2	0	0	100.0	0	0	0	0	
0008	185	84	71	1	9	96.5	87	30	48	1	8	90.8	51	40	10	1	98.0
0010	221	127	79	4	11	95.0	91	22	56	4	9	90.1	183	123	18	2	98.4
0020	138	83	53	2	0	100.0	44	25	37	2	0	100.0	45	42	4	0	100.0
0042	233	148	69	3	13	96.4	76	12	51	3	10	88.8	200	185	12	3	98.5
0043	185	39	80	12	14	90.3	87	8	58	12	11	87.4	88	73	12	3	96.6
0048	151	69	78	0	4	97.4	83	15	65	0	3	96.4	118	107	4	1	99.1
0057	211	74	124	4	9	95.7	123	18	95	4	6	93.5	178	144	31	1	99.4
0070	145	9	113	5	18	87.6	114	1	95	5	15	87.1	80	68	10	2	97.8
0410	367	208	124	13	22	94.0	143	24	85	13	21	85.3	277	259	17	1	99.4
0416	360	201	122	13	24	93.3	135	26	80	12	17	87.4	234	204	25	5	97.9
0504	110	38	66	5	7	94.1	78	14	50	5	6	92.3	75	67	7	1	98.7
4018	106	18	69	7	12	88.7	78	15	46	5	12	80.6	0	0	0	0	
BDE	2413	1137	1061	72	143	94.1	1197	234	774	69	120	90.0	1404	1313	183	20	98.7
0043	243	104	135	6	18	93.2	121	21	87	6	7	94.2	191	148	31	12	93.4
3RD	243	104	135	6	18	93.2	121	21	87	6	7	94.2	191	148	31	12	93.4
0005	237	95	115	9	18	94.1	118	21	77	9	11	90.7	103	144	45	4	97.9
0022	230	125	96	3	6	97.4	96	25	63	3	5	94.8	171	151	20	0	100.0
0027	218	95	109	3	11	95.0	92	18	62	3	9	90.2	110	94	15	1	99.1
0077	215	111	90	4	10	95.3	88	15	62	4	7	92.0	123	115	5	3	97.6
0092	267	127	130	4	6	97.8	84	0	70	4	3	96.5	188	158	28	4	97.0
0093	235	148	83	1	5	97.9	138	52	77	1	4	97.0	118	112	5	1	99.2
0094	284	120	142	6	16	94.4	110	18	91	2	6	93.3	200	174	28	7	96.7
0210	325	172	134	11	8	97.5	112	10	85	10	7	93.8	242	221	20	1	99.6
0220	144	18	105	7	11	92.4	115	10	81	7	8	93.0	88	72	11	3	96.5
4017	370	95	222	27	31	91.8	278	30	194	27	25	90.9	263	213	34	6	97.6
15BF	2534	1112	1229	75	118	95.3	1238	217	862	70	87	93.0	1713	1483	221	30	98.2
SAC	5210	2353	2425	153	279	94.6	2554	472	1723	105	214	91.6	3300	2933	405	62	98.2
FORCES (FF111)																	
#3RD	23	1	22	0	0	100.0	23	1	22	0	0	100.0	22	17	5	0	100.0

PREPARED BY NAP OR

STANDARDIZATION EVALUATION ANALYSIS
COMMAND UNIT OVERALL ANALYSIS SUMMARY

01 JUL 1979 - 31 DEC 1979
PCN 11A02F-011

		QUALIFICATION LEVEL				%	INDIVIDUAL INFLIGHT					%	INDIVIDUAL F.E.EXAMS			%
PEC	CHKD	HQ	W	QT	I	QUAL	CHKD	HQ	Q	QT	I	QUAL	CHKD	HQ	Q	U	QUAL
MONKEES (FF111)																	
0393	52	40	40	0	2	97.6	38	8	28	0	2	94.7	57	55	2	0	100.0
0528	58	11	44	1	2	94.6	54	8	43	1	2	94.3	33	29	4	0	100.0
0520	45	6	34	0	0	100.0	40	2	38	0	0	100.0	33	25	8	0	100.0
0716	72	30	40	1	1	96.6	40	0	20	1	1	97.5	46	38	8	0	100.0
4007	44	0	41	0	3	93.2	44	0	41	0	3	93.2	41	35	6	0	100.0
DAE	324	88	220	2	8	97.5	220	28	201	2	8	96.7	231	198	33	0	100.0
SAT	324	88	220	2	8	97.5	220	28	201	2	8	96.7	231	198	33	0	100.0

PREPARED BY MAP CO

STANDARDIZATION EVALUATION ANALYSIS
COMMAND UNIT OVERALL ANALYSIS SUMMARY

01 JUL 1979 - 31 DEC 1979
RCS USAPA-R11

DEC TAKERS	QUALIFICATION LEVEL CHKD	HQ	Q	QT	L	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	L	% QUAL	INDIVIDUAL E.P.EXAMS CHKD	HQ	Q	U	% QUAL
0072	33	11	20	0	2	93.9	30	9	19	0	2	93.3	23	16	7	0	100.0
010F	78	23	49	3	3	96.2	68	19	45	1	3	95.6	55	40	15	0	100.0
011A	74	17	53	0	4	94.6	50	6	43	0	1	98.0	47	29	15	3	93.6
0117	76	19	51	4	1	98.7	46	6	35	4	1	97.8	30	24	6	0	100.0
012A	61	18	41	2	0	100.0	46	7	37	2	0	100.0	45	36	9	0	100.0
0132	177	95	81	0	1	99.4	71	30	40	0	1	98.6	110	97	22	0	100.0
0133	50	24	26	0	0	100.0	27	6	21	0	0	100.0	34	30	4	0	100.0
014E	46	11	31	2	2	95.7	38	9	26	2	1	97.4	39	27	11	1	97.4
0147	72	8	53	6	4	91.8	57	9	40	6	2	96.5	48	28	16	4	91.7
015C	80	23	55	1	5	98.0	71	13	55	1	2	97.2	67	43	21	3	95.5
0151	54	8	44	0	2	96.3	35	2	33	0	0	100.0	35	27	6	2	94.3
015A	100	50	50	3	4	94.5	66	13	26	3	4	91.3	41	27	12	2	95.1
0191	61	8	48	2	3	95.1	54	12	39	2	3	94.8	46	37	9	0	100.0
0197	109	21	81	2	5	95.4	50	6	48	2	3	94.9	50	40	17	2	96.6
021A	91	12	65	1	10	89.0	57	5	44	3	5	91.2	53	30	18	5	90.6
023A	70	17	50	0	12	84.8	65	9	45	0	11	83.1	52	39	11	2	96.2
0031	32	13	19	0	0	100.0	24	8	16	0	0	100.0	27	23	4	0	100.0
APF	1284	378	820	26	62	95.2	844	189	612	28	39	95.4	829	603	202	24	97.1
###7	1	1	0	0	0	100.0	0	0	0	0	0		0	0	0	0	
0007	202	99	95	0	8	96.0	83	23	53	0	7	91.6	128	92	35	1	99.2
0011	116	27	82	4	3	97.4	90	19	65	4	2	97.8	75	67	7	1	98.7
0032	2	2	0	0	0	100.0	1	1	0	0	0	100.0	1	1	0	0	100.0
0041	185	101	75	1	8	95.7	71	14	50	1	6	91.5	122	106	14	0	100.0
0042	182	82	87	6	7	96.2	67	9	48	4	6	91.0	114	91	22	1	99.1
004A	185	68	103	5	9	95.1	80	13	54	5	8	90.0	121	83	37	1	99.2
0070	260	163	98	4	4	98.5	81	20	54	3	4	95.1	178	151	27	0	100.0
0071	50	15	29	5	1	98.0	32	8	19	5	0	100.0	23	18	3	2	91.3
0091	102	44	57	0	1	99.0	67	15	51	0	1	97.9	70	56	14	0	100.0
0097	104	28	71	1	4	96.2	58	5	50	1	2	96.6	73	54	17	2	97.3
030E	273	180	83	3	7	97.4	81	16	59	3	3	95.1	200	176	20	4	98.1
0310	110	49	57	1	3	97.3	65	15	44	1	2	96.9	79	73	5	1	98.7
0380	109	32	70	1	6	94.5	65	11	49	1	4	93.8	80	70	8	2	97.5
038A	103	35	59	3	6	94.2	60	7	46	3	4	93.3	72	58	12	2	97.2

PREPARED BY NAVAIR

STANDARDIZATION EVALUATION ANALYSIS
COMMAND UNIT OVERALL ANALYSIS SUMMARY

01 JUL 1979 - 31 DEC 1979
FCF UA02E-A11

DEC TANKERS	QUALIFICATION LEVEL CHKD	QUAL	Q	QT	U	% QUAL	INDIVIDUAL TAKEOFF CHKD	QUAL	Q	QT	U	% QUAL	INDIVIDUAL F.P. EXAMS CHKD	QUAL	Q	U	% QUAL
0007	210	113	87	3	7	96.7	87	22	55	3	7	92.0	117	101	14	0	100.0
0010	119	53	60	2	4	96.6	58	10	44	2	2	96.6	78	66	12	2	97.4
0011	194	118	68	1	7	96.4	66	8	51	1	6	90.9	112	107	4	1	99.1
0012	166	75	81	2	8	95.2	70	9	52	2	7	90.0	128	101	25	2	98.4
0013	47	13	28	2	4	91.5	33	8	19	2	4	87.9	28	24	2	0	100.0
0020	94	23	61	3	7	92.6	79	12	57	3	7	91.1	61	57	4	0	100.0
4018	18	18	0	0	0	100.0	0	0	0	0	0		0	0	0	0	
BAE	2841	1339	1351	47	104	96.3	1254	248	880	44	82	93.5	1847	1552	203	22	98.8
0043	7	4	3	0	0	100.0	6	3	3	0	0	100.0	4	4	0	0	100.0
0000	163	68	79	6	10	93.9	80	17	50	6	7	91.3	132	104	25	3	97.7
3AD	170	72	82	6	10	94.1	86	20	53	6	7	91.9	136	108	25	3	97.8
0004	133	69	61	0	3	97.7	53	10	40	0	3	94.3	60	50	10	0	100.0
0006	8	0	8	0	0	100.0	8	0	8	0	0	100.0	4	4	0	0	100.0
0009	138	56	75	2	5	96.4	76	21	48	2	5	93.4	86	78	7	0	100.0
0022	194	87	92	1	14	92.8	64	7	48	1	8	87.5	104	85	14	3	97.1
0028	101	34	63	0	4	96.0	43	4	37	0	2	95.3	60	55	13	1	98.6
0043	151	104	76	7	4	97.9	58	8	42	7	1	98.3	141	128	21	2	98.8
0055	128	59	66	2	1	99.2	69	30	37	1	1	98.6	53	49	4	0	100.0
0092	202	114	79	3	6	97.0	61	11	43	3	4	93.4	165	135	28	2	98.8
0093	135	80	55	0	0	100.0	112	64	48	0	0	100.0	105	104	1	0	100.0
0300	138	52	73	2	11	92.0	80	13	56	2	9	88.8	81	74	7	0	100.0
0004	110	37	64	7	11	90.8	78	18	49	5	6	92.3	86	67	15	4	95.3
0005	208	111	90	6	1	99.5	86	25	54	6	1	98.8	178	152	26	0	100.0
0008	226	109	102	2	13	94.2	91	14	66	2	9	90.1	174	140	32	4	97.7
0016	112	44	58	7	3	97.3	72	17	47	5	3	95.8	78	74	4	0	100.0
0017	193	106	80	4	3	98.4	78	19	53	4	2	97.4	163	132	30	1	99.3
0024	197	147	44	0	6	97.1	68	13	29	0	6	87.5	73	66	7	0	100.0
4017	388	45	292	8	41	89.4	320	14	267	6	31	90.3	296	212	76	8	97.3
1BAE	2809	1254	1378	51	126	96.5	1307	288	972	48	91	93.5	1927	1605	307	25	98.7
SAC	7106	3043	3031	130	302	96.8	3583	725	2517	122	219	93.9	4750	3848	817	70	98.4
RECON																	
0006	68	14	32	1	1	97.9	47	16	29	1	1	97.9	35	30	5	0	100.0

PREPARED BY MAR 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
COMMAND UNIT OVERALL ANALYSIS SUMMARY PGM UA026-M11

ORG RECD	QUALIFICATION LEVEL CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL F.F.EXAMS CHKD	HQ	Q	U	% QUAL
0000	75	19	52	2	2	97.3	69	22	43	2	2	97.1	68	58	5	0	100.0
0055	181	50	110	6	7	96.1	147	25	109	6	7	95.2	141	121	20	0	100.0
1EAF	304	83	202	9	10	96.7	263	63	181	9	10	96.2	240	210	30	0	100.0
SAC	304	83	202	9	10	96.7	263	63	181	9	10	96.2	240	210	30	0	100.0

PREPARED BY MAR 68

STANDARDIZATION EVALUATION ANALYSIS
COMMAND UNIT OVERALL ANALYSIS SUMMARY

01 JUL 1970 - 31 DEC 1970
FOR HA026-N11

ORG	QUALIFICATION LEVEL CHKD	HQ	Q	QT	L	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	L	% QUAL	INDIVIDUAL F.F.EXAMS CHKD	HQ	Q	U	% QUAL
MISSION SUPPORT																	
0000	65	23	38	0	4	93.8	65	25	36	0	4	93.8	47	45	2	0	100.0
0055	53	11	40	2	0	100.0	51	11	38	2	0	100.0	30	34	5	0	100.0
1ST/F	118	34	78	2	4	96.6	118	36	74	2	4	96.6	86	79	7	0	100.0
SAC	118	34	78	2	4	96.6	118	36	74	2	4	96.6	86	79	7	0	100.0

SECTION C

1CEVG STANDARDIZATION/EVALUATION RECAP

Sixteen units throughout the command were visited by 1CEVG this period. Overall aircrew results are depicted in this section. Areas evaluated were aircrew performance, Stan/Eval administrative program and Staff Support. A total of 690 1CEVG inflight evaluations were administered in the command for a 92.8% inflight qualified rate. The 1CEVG inflight qualified with training rate was 4.9 percent. The 1CEVG breakout by aircraft follows: (percent QL2/3) B-52 - 5.0%/10.0%; KC/EC-135 - 4.7%/6.4%; Recon/Mission Support - 11.8%/0.0 percent.

This section will discuss the 1CEVG evaluations administered this period. Details on unqualified performance in the areas reported were provided by 1CEVG evaluators and from the 1CEVG/ST semiannual newsletter. There were no visits to FB-111 units this period. The performance rates listed below represent overall 1CEVG percent qualified for all crew members by aircraft type.

	JAN - JUN 79		JUL - DEC 79	
	INFLIGHT	EP EXAM	INFLIGHT	EP EXAM
B-52	92.0	100.0	90.0	98.5
FB-111	97.5	100.0	-	-
EC/KC-135	94.8	99.2	93.6	99.5
RECON	93.2	100.0	100.0	100.0

1. B-52: The follcwing is a summary and analysis of QT and U performance by selected areas. Listed grades refer only to a specific area and not to a crew member's overall status unless specifically noted.

a. TAKEOFF - A copilot was unqualified for failing to adjust the throttles during a wet takeoff to within the allowable 0.10 scatter.

b. INSTRUMENTS - Three unqualified grades were awarded, and represent the first B-52 instrument failures since January - June 1978. A pilot failed to attain the proper altitude at the final approach fix, and failed to establish a proper descent rate on a localizer approach to arrive at the minimum descent altitude prior to the published missed approach point. Ineffective pitch and power coordination caused his problem. Insufficient reference to performance instruments resulted in airspeed on final approach being in excess of five knots below the computed approach speed. During an ILS approach, a copilot demonstrated a lack of instrument proficiency and familiarity with ILS procedures. His ineffective instrument crosscheck resulted in continuing final approach after full scale CDI deflection, allowing the airspeed to decrease and remain at best flare speed, and an inability to coordinate pitch, bank, and power inputs to successfully accomplish the approach.

c. CREW COORDINATION - Six crew members were unqualified in crew coordination although three were from the same crew. The copilot, radar navigator, and navigator from the same crew failed to advise the pilot of an inadvertent descent from the low level IFR altitude. The aircraft descended 1000 feet below the published IFR altitude and 300 feet below the minimum TA/visual contour altitude. Though crew coordination is a noncritical area, their overall status was Qualification Level Three in accordance with SACR 60-4, Vol I, para 3-22b. A pilot and instructor pilot on different flights failed to adequately supervise their copilots during fuel panel operations. Major omissions and deviations occurred during climb, cruise, and traffic pattern operations. A radar navigator failed to inform the pilot that the TA system calibration should be discontinued and that the TA system should not be used. The tilt compensation value was in excess of two degrees. With the exception of the altitude deviation, crew coordination failures were in the equipment operation and system knowledge areas; currently, the major problem areas for B-52 crew members.

d. DESCENT AND LANDING - Although two failures do not, in themselves, constitute a trend, 1CEVG pilot evaluators agree that the descent and landing phase is beginning to cause problems again. Failure to use available glide path information, "ducking under", and pitch and power coordination are often causes. After transitioning from a TACAN MDA, a copilot was unable to maintain a proper descent rate with respect to VASI and visual runway references. Upon reaching the touchdown zone, the aircraft was too high to accomplish a safe landing. During an ILS approach and landing, ineffective pitch and power control by a copilot resulted in the airspeed deteriorating to 10 knots below computed final approach speed. Pitch, power, and trim control resulted in a nose gear first landing. He also failed to reestablish the proper landing attitude to preclude continued aircraft bounces.

e. INSTRUCTOR CHECK - Fourteen instructors were unqualified in the instructor area due to Qualification Level Two or Three grades in other areas. Four instructors were Qualification Level One as crew members, but Qualification Level Three as instructors. An instructor gunner received a noncritical T in publications because his checklist was missing a change. An instructor pilot received a noncritical T for failure to recompute takeoff data when the planned gross weight changed by more than 5000 pounds. An instructor navigator was unqualified in the student critique area. Numerous inflight discrepancies were not identified or adequately covered during the critique. An instructor pilot was unqualified in instructor proficiency/ability. Ineffective power management rendered the boom envelope limit demonstration ineffective, and also prevented a stable refueling platform during a visual reference demonstration. While demonstrating a clean missed approach at a light gross weight, he permitted the aircraft to enter a descent prior to attaining ATC assigned altitude.

f. BOMBING - Only two individuals were unqualified in bombing. Both attacked the wrong target when they failed to insure planned target coordinates were displayed in the automated offset unit for a synchronous bomb run.

g. NAVIGATION - A pilot was unqualified. Insufficient reference to the performance instruments resulted in an inadvertent descent in excess of 1000 feet per minute. The aircraft descended 1000 feet below the published low level IFR altitude and 3000 feet below the minimum TA/visual contour altitude. Three instructor navigators were unqualified. One used erroneous heading information during celestial grid navigation to derive dead reckoning positions which resulted in less than 80 percent of the scored positions being within the celestial navigation corridor specified in SACR 50-4, Vol I. The second also failed to maintain the required 80 percent and had a 23 NM terminal circular error upon termination. The third failed to use time control procedures during low level and exceeded SACR 50-4 time tolerance.

h. EQUIPMENT OPERATIONS - Equipment operation, and related systems knowledge, especially fuel panel and terrain avoidance systems, is one of the largest problem areas. After inadvertently placing the attitude gyro power switch off, a pilot incorrectly analyzed the equipment malfunction and elected to abort the mission. Three copilots and an instructor pilot were unqualified for fuel panel operations. Typical deviations were failure to follow the fuel sequence during climb, thereby establishing a lateral imbalance; feeding the aft body to all engines until empty, thereby failing to establish proper differential between main tanks; inability to correct lateral imbalance during cruise; failure to open cross feed valves during transition with either or both main tank gauges in the green band range; and feeding auxiliary fuel directly to the engines instead of replenishing main tanks during transition.

i. TERRAIN AVOIDANCE - Terrain avoidance continues to be a problem area, especially in the area of scope interpretation and composite TA/EVS flight. After tilt compensation was applied, a pilot accomplished the FVR-FRL stabilization mode comparison with the aircraft in a 300 FPM climb or descent. During low level navigation and bombing, fly down indications were disregarded and the terrain trace was consistently maintained below the HRL. An instructor pilot also demonstrated a lack of knowledge of TA system operation and unsatisfactory scope interpretation. During descent to TA altitude, the terrain trace was maintained two inches above the HRL for seven consecutive scans.

During an enroute turn, the terrain trace was allowed to remain with the extremities of the HRL for eight consecutive scans prior to initiating corrective action. During enroute navigation, the terrain trace was permitted to remain above or below the HRL for up to six consecutive scans prior to initiating corrective action. During systems calibration, a navigator computed a tilt compensation in excess of two degrees. He failed to inform the pilot of the computations and to discontinue calibration and use of the terrain avoidance system.

j. JUDGMENT AND COMPLIANCE - A pilot and copilot team failed to insure flight service station radio frequency was maintained during low level operations in accordance with SACR 50-4, Vol I. An instructor navigator altered celestial navigation station information and celestial plotting after the navigation leg was completed which was in violation of SACR 50-4, Vol I. A staff instructor pilot simulated an engine failure on takeoff during the hours of darkness. He also failed to alert the crew prior to attempting the maneuver.

k. ELECTRONIC WARFARE - Three electronic warfare officers were Qualification Level Two. An instructor was qualified with training for failing to determine the proper AAA threat status on the initial engagement which resulted in premature jamming of the threat. During the AN/ALQ-T4 exercise, another instructor improperly used modulation and incorrectly positioned the antenna selector switch which degraded ECM effectiveness against SAM threats. He also failed to direct jamming against a required frequency band in accordance with the unit SIOP. A third EW failed to insure the ALR-20A power switch was placed to OFF before removing and replacing fuses. He also misinterpreted the ALR-46 threat indications and failed to counter a threat. Aircraft electronics interferences were interpreted to be a threat indication.

l. FCS EQUIPMENT OPERATION - An instructor gunner was unqualified for failure to accomplish the required procedures as outlined in the applicable FCS equipment checkout checklist. He failed to check the ready to fire light which determines system capability.

m. GUIDED AIR MISSILE - Three navigators were qualified with training in AGM-69 operations. An instructor allowed the carrier aircraft equipment to remain on in excess of 30 minutes with an environmental NO GO indication. Another instructor demonstrated a lack of AGM-69A system knowledge and proper operating procedures with an inoperative doppler radar. During a manual launch of the AGM-69, the third navigator failed to call up the target specified in the checklist. Missile launch was jeopardized, but subsequently successful.

2. EC/KC-135: The following is a summary and analysis of QT AND U performance by selected areas. Listed grades refer only to a specified area and not to a crew member's overall status unless specifically noted.

a. PUBLICATIONS - Complacency continues to be evident in crew member publications as demonstrated by the 18 people who received corrective training for publications discrepancies. Errors found repeatedly include: pages missing from the flight manual or checklist; supplements incorrectly filed, posted, or missing completely; and out-of-date pages in checklists or flight manuals. By crew specialty, one instructor pilot, and one boom operator were less than fully qualified. Publications is one of the easiest areas of an evaluation to prepare for, yet this area was found to have the most discrepancies. For a professional crew member to perform his duties effectively and efficiently, it is mandatory that he maintains an up-to-date set of publications.

b. INSTRUMENTS - Four pilots were overall Qualification Level Three for instrument discrepancies. Two pilots attempted to climb above ATC assigned altitudes. Another descended too low for a safe approach while flying a PAR. Qualification Level Three status in accordance with SACR 60-4, Vol I, para 3-22b, was assigned to a pilot who attempted to fly a VOR approach with the ILS frequency set in the receiver. One pilot attempted to fly a TACAN approach without selecting TACAN. Another crossed the nonprecision final approach fix above 215 KIAS without having the aircraft properly configured for the approach.

c. CREW COORDINATION - Crew coordination continues to indicate that added emphasis is needed for improvement. There were 13 crew members who received corrective training in this area. A copilot and a navigator failed to advise the pilot that proper altitude separation had not been obtained for the rendezvous. A pilot did not insure that the proper VOR frequency was set for a VOR approach and a copilot failed to advise other crew members that an assigned ATC altitude had been exceeded. As a result, each was assigned QL3 status. A copilot and navigator failed to advise the pilot that he did not have clearance to delay at the rendezvous point. An instructor pilot and navigator allowed the pilot to climb through an intermediate level off altitude. A pilot failed to insure the copilot had the oxygen mask in place for air refueling, and another pilot allowed his copilot to attempt flying a TACAN approach without selecting TACAN. A copilot failed to advise the pilot that existing weather conditions would not allow VFR traffic pattern activity. Another copilot did not advise the pilot that MRT power would be exceeded during a practice emergency gear extension. Finally, a copilot allowed the pilot to attempt taxi without left system hydraulic pressure available (engines one and two were not operating).

d. INSTRUCTOR CHECK - The instructor area was not mentioned in the last News Bulletin because there was an indication that instructor failures were declining. That is no longer a valid indication. There were more instructor proficiency failures during the July - December 1979 time frame than in any other six month period of the News Bulletin. Twenty-eight crew members were unqualified in the instructor area. Thirteen of these were pilots, ten were navigators, and five were boom operators. Twenty-two of the instructors were unqualified for discrepancies that occurred in other areas; however, two instructor pilots failed either the critical action or the general knowledge portion of the emergency procedures test. An instructor pilot failed to insure that his student pilot had immediate communications during air refueling.

An instructor navigator and instructor boom operator failed to adequately identify or cover several inflight discrepancies during the student critique.

e. NAVIGATION - Three pilots and four navigators were unqualified for failure to arrive at the rendezvous point on time or to maintain the aircraft within the air refueling track protected lateral airspace. Two navigators were unqualified for errors which caused a navigation leg to be unreliable. Two other navigators accrued excessive error points for the number of LOPs accomplished. A navigator recorded insufficient information to accurately reconstruct the mission, and a boom operator's celestial observation techniques jeopardized the timing and effectiveness of the navigation leg.

f. COMPLIANCE - A pilot and copilot were unqualified for not complying with oxygen requirements above FL 350, and a copilot was unqualified because his oxygen mask was not in place during air refueling. A pilot was unqualified for attempting to fly a VFR traffic pattern when the prevailing cloud ceiling was less than the published pattern altitude. A pilot was also unqualified for attempting to taxi without left system hydraulic pressure available. Three boom operators were unqualified for attempting or allowing a student to attempt a second contact with a receiver after experiencing a delayed disconnect. One boom operator was unqualified for going to the rear of the aircraft without oxygen readily available at FL 410, and another for departing his air refueling station above FL 290 with an empty portable oxygen bottle. A navigator and a boom operator did not fasten their shoulder harness for touch and go landings. A navigator replanned an abbreviated celestial navigation leg, following a late takeoff, when ample time was available to accomplish the scheduled leg. Another navigator was qualified with training for verifying extraneous paperwork during traffic pattern operations.

g. EQUIPMENT OPERATION - Twelve crew members received corrective training for erroneous equipment operation. A pilot and copilot exceeded an aircraft system limitation by attempting to extend the landing gear above 270 KIAS. A pilot and a copilot isolated all generators prior to takeoff to correct a 6.5 KVAR imbalance. A copilot demonstrated inadequate knowledge of the aircraft pressurization system and malfunction procedures. Two navigators displayed a lack of knowledge of the operation of the ASN-7. Other discrepancies included a pilot and copilot who failed to set the throttles at or below NRT prior to using engine anti-ice, and a navigator who could not analyze or locate the malfunction chart for the APN-59 Search Radar. Another navigator was unfamiliar with the INS operating procedures. A navigator failed to insert a manual wind in the ASN-6 navigation computer.

h. AIR REFUELING - Four boom operators were unqualified and one was qualified with training for boom control techniques. In three cases the boom was allowed to strike the receiver outside the receptacle area. The fourth was for failure to initiate a disconnect on an inner limit, and the fifth was for over controlling the boom. A pilot was placed in Qualification Level Three status in accordance with SACR 60-4, Vol I, para 3-22b, for attempting to climb through the receiver's altitude during the final turn to air refueling track. A navigator failed to adjust timing to insure arrival at the rendezvous point one minute ahead of the receivers, which resulted in a large overrun.

3. FB-111: No FB-111 evaluations were scheduled during the reporting period.

4. 1CEVG INSPECTION PROGRAM RESULTS:

UNIT	OVERALL RATING	AIRCREW PERFORMANCE	STAN/EVAL PROGRAM	STAFF SUPPORT
6SW	EXC	EXC	EXC	EXC
28BMW	MARG	MARG	SAT	MARG
68BMW	EXC	EXC	EXC	SAT
92BMW	MARG	MARG	SAT	SAT
93BMW*			EXC	EXC
101AREFW	EXC	EXC	EXC	EXC
126AREFW	EXC	EXC	EXC	EXC
128AREFG	SAT	SAT	EXC	EXC
141AREFW*			EXC	EXC
151AREFG	UNSAT	UNSAT	SAT	EXC
157AREFG*			EXC	EXC
160AREFG*			SAT	EXC
190AREFG	EXC	OUT	EXC	SAT
305AREFW	SAT	SAT	EXC	SAT
319BMW	SAT	SAT	SAT	SAT
931AREFG*			OUT	EXC

*Final results since November 1979 no longer give a final adjective rating.

5. 1CEVG STATISTICAL SUMMARY:

The next 5 charts compare the 1 Jul - 31 Dec 79 1CEVG and unit no-notice evaluations for B-52 and KC-135 aircraft. A second group of 3 charts compare 1CEVG visits this period with the previous period. It should be noted that these figures include all 1CEVG and no-notice checks given, including inflight, EP Exam, and flight simulator. The remaining 3 charts total 1CEVG results inflight, EP exams and overall by unit.

PREPARED BY MAJOR OB
AIRCRAFT TYPE F-5A

STANDARDIZATION EVALUATION ANALYSIS
CREW VS UNIT NO-NOTICE/QUALIFICATION LEVELS)

01 JUL 1970 - 31 DEC 1970
FOR MARCH-MAY

	NUMBER CHECKED CREW	NUMBER CHECKED UNIT	NUMBER HIGHLY QUAL CREW	NUMBER HIGHLY QUAL UNIT	NUMBER QUALIFIED CREW	NUMBER QUALIFIED UNIT	NUMBER QUALIFYING FOR CREW	NUMBER QUALIFYING FOR UNIT	NUMBER UNQUALIFIED CREW	NUMBER UNQUALIFIED UNIT	% QUAL CREW	% QUAL UNIT
C	0	46	0	41	0	15	0	0	0	1		98.2
10	0	50	0	43	0	21	0	0	0	5		98.0
20	0	55	0	43	0	12	0	0	0	0		100.0
42	0	185	0	133	0	24	0	1	0	7		95.0
43	0	35	0	21	0	11	0	1	0	2		94.3
44	52	52	21	30	28	17	2	0	1	1	98.1	98.1
47	0	115	0	50	0	50	0	3	0	4		96.5
370	0	39	0	0	0	25	0	3	0	8		77.8
410	2	204	0	147	2	20	0	2	0	8	100.0	96.1
414	0	143	0	115	0	30	0	4	0	10		93.0
504	0	28	0	15	0	8	0	1	0	0		100.0
RAF TOTAL	54	1000	21	800	30	280	2	15	1	66	98.1	95.0

PREPARED 80 MAR 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1970 - 31 DEC 1970
AIRCRAFT TYPE B-52 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UAD2E-N12

	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	NUMBER HIGHLY QUAL CEVG	NUMBER HIGHLY QUAL UNIT	NUMBER QUALIFIED CEVG	NUMBER QUALIFIED UNIT	NUMBER QUAL/TNG PER CEVG	NUMBER QUAL/TNG PER UNIT	NUMBER UNQUALIFIED CEVG	NUMBER UNQUALIFIED UNIT	% QUAL CEVG	% QUAL UNIT
42	0	118	0	72	0	91	0	3	0	12		80.8
2AD TOTAL	0	118	0	72	0	91	0	3	0	12		80.8
##02	122	0	95	0	23	0	1	0	3	0	97.5	
5	0	123	0	70	0	48	0	2	0	3		97.6
22	0	126	0	88	0	35	0	2	0	1		99.2
37	37	66	3	43	24	20	2	2	6	1	83.8	98.5
77	46	80	14	53	27	23	1	1	4	3	91.3	96.3
02	40	132	6	90	28	34	2	3	7	3	82.5	97.7
03	0	13	0	5	0	8	0	0	0	0		100.0
04	0	145	0	94	0	38	0	1	0	10		93.1
310	49	184	13	143	32	30	2	1	2	1	95.9	99.5
320	0	27	0	3	0	22	0	1	0	1		96.3
15AF TOTAL	294	896	131	501	133	260	8	13	22	23	92.5	97.4
5AC TOTAL	348	2014	152	1353	183	580	10	31	23	81	93.4	96.0

PREPARED BY MAC Oo — STANDARDIZATION EVALUATION ANALYSIS — 01 JUL 1970 - 31 DEC 1970
AIRCRAFT TYPE KC-135 — CREW VS UNIT NO-NOTICE(QUALIFICATION LEVEL) — RCN HAC26-N12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CREW	UNIT	CREW	UNIT	CREW	UNIT	CREW	UNIT	CREW	UNIT	CREW	UNIT
72	28	5	21	1	6	3	0	0	1	1	96.4	80.0
108	27	13	5	3	21	9	0	0	1	1	96.3	92.3
114	26	11	15	2	7	7	2	0	2	2	92.3	81.8
117	22	11	6	0	15	9	0	1	1	1	95.5	90.9
126	25	6	9	0	16	6	0	0	2	0	92.0	100.0
132	29	61	18	51	9	10	0	0	2	0	93.1	100.0
133	30	14	14	10	15	9	1	0	0	0	100.0	100.0
145	24	12	12	3	13	7	0	0	1	2	96.2	83.3
147	1	18	0	0	1	11	0	2	0	5	100.0	72.2
150	0	22	0	4	0	10	0	1	0	4		85.7
151	0	7	0	0	0	7	0	0	0	0		100.0
154	0	10	0	1	0	6	0	0	0	3		70.0
161	28	10	10	2	13	7	0	1	5	0	82.1	100.0
167	0	28	0	6	0	10	0	0	0	1		96.2
314	0	22	0	3	0	15	0	0	0	4		81.8
336	0	12	0	2	0	7	0	0	0	3		75.0
931	0	14	0	5	0	9	0	0	0	0		100.0
ARF TOTAL	242	285	110	93	114	160	3	5	15	27	93.8	90.5
7	0	77	0	39	0	32	0	0	0	6		92.2
11	0	30	0	4	0	24	0	2	0	0		100.0

PREPARED 80 MAR 08 — STANDARDIZATION EVALUATION ANALYSIS — 01 JUL 1970 - 31 DEC 1970

AIRCRAFT TYPE KC-135 — CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) — PGM UAC2E-M12

	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	NUMBER HIGHLY QUAL CEVG	NUMBER HIGHLY QUAL UNIT	NUMBER QUALIFIED CEVG	NUMBER QUALIFIED UNIT	NUMBER QUALIFYING REQ CEVG	NUMBER QUALIFYING REQ UNIT	NUMBER UNQUALIFIED CEVG	NUMBER UNQUALIFIED UNIT	% QUAL CEVG	% QUAL UNIT
41	0	60	0	41	0	17	0	0	0	2		97.5
42	0	74	0	66	0	25	0	0	0	3		95.0
44	0	52	0	46	0	30	0	2	0	5		94.6
70	25	97	10	72	15	24	0	1	0	0	100.0	100.0
71	0	3	0	0	0	1	0	2	0	0		100.0
81	0	36	0	22	0	14	0	0	0	0		100.0
87	0	42	0	19	0	21	0	0	0	2		95.2
305	48	172	13	137	32	31	0	0	1	4	97.8	97.7
310	0	37	0	28	0	7	0	1	0	1		97.3
320	0	37	0	20	0	14	0	1	0	2		94.6
324	0	48	0	18	0	30	0	2	0	6		87.0
407	0	77	0	52	0	20	0	0	0	5		93.5
509	0	41	0	20	0	19	0	0	0	2		95.1
911	34	87	14	53	18	32	1	0	1	2	97.1	97.0
912	0	81	0	51	0	24	0	0	0	4		95.1
920	0	24	0	3	0	15	0	2	0	4		83.3
401F	0	7	0	7	0	0	0	0	0	0		100.0
PAF TOTAL	105	1120	37	608	65	341	1	13	2	48	97.1	95.7

PREPARED BY MAP 08 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1979 - 31 DEC 1979
AIRCRAFT TYPE: KC-135 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN MAP26-M12

	NUMBER CHECKED		NUMBER HIGHLY QUAL		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
90C	0	74	0	47	0	19	0	4	0	4		94.9
3AC TOTAL	0	74	0	47	0	19	0	4	0	4		94.9
4	0	7	0	4	0	3	0	0	0	0		100.0
6	3	0	0	0	3	0	0	0	0	0	100.0	
8	0	34	0	23	0	9	0	0	0	2		94.1
22	0	60	0	53	0	13	0	0	0	3		95.7
2F	33	42	14	25	17	14	1	0	1	1	97.0	97.6
43	3E	107	12	71	20	29	5	5	1	2	97.4	98.1
5E	0	1	0	1	0	0	0	0	0	0		100.0
5C	32	111	11	81	18	24	4	0	2	4	93.8	96.4
63	113	10	90	2	10	8	0	0	4	0	96.5	100.0
3A0	0	34	0	19	0	11	0	0	0	4		88.2
904	0	46	0	23	0	14	0	2	0	5		89.1
90E	45	127	22	90	15	33	4	3	4	1	91.1	99.2
90F	2	123	0	83	2	32	0	0	0	8	100.0	93.5
916	0	35	0	24	0	6	0	1	0	2		94.3
917	0	104	0	77	0	24	0	2	0	1		99.1
926	43	75	14	41	24	14	1	0	0	0	100.0	100.0
15AF TOTAL	309	927	165	630	120	242	12	13	12	23	96.1	96.4
5AC TOTAL	656	2406	312	1477	200	782	16	35	29	112	95.6	95.3

PREPARED 80 MAR 06 STANDARDIZATION EVALUATION ANALYSIS 1 JAN 1979 - 31 DEC 1979
PAGE 2 TREND ANALYSIS FOR HAOPA-N13

CEVC UNIT	VISITS NUMB CHKD	1 JAN 79 - 30 JUN 79 MG	C	OT	I	% QUAL
C	48	13	33	1	1	97.9
1C	36	7	28		1	97.2
22	42	13	28		1	97.6
42	2		2			100.0
43	48	17	27	3	1	97.9
52	46	13	27	2	4	91.3
07	2		2			100.0
320	42	9	23	2	8	81.0
410	56	17	32	3	4	92.9
411	44	15	28	1	2	95.5
504	38	15	20	1	2	94.7
TOTAL	404	119	248	13	24	94.1

CEVC UNIT	VISITS NUMB CHKD	1 JUL 79 - 31 DEC 79 MG	C	OT	I	% QUAL
0003	122	96	23	1	3	97.5
07	37	3	26	2	6	83.8
48	52	21	28	2	1	98.1
77	66	14	27	1	4	91.3
92	40	6	25	2	7	82.5
319	49	13	32	2	2	95.0
410	2		2			100.0
TOTAL	348	152	183	10	23	93.0

PREPARED 80 MAR 06 STANDARDIZATION EVALUATION ANALYSIS 1 JAN 1979 - 31 DEC 1979
KC-135 TREND ANALYSIS FOR WARSAW-13

CREW VISITS 1 JAN 79 - 30 JUN 79

UNIT	NUMB CHKD	NO	G	GT	L	% QUAL
0	49	21	28			100.0
22	31	10	20	1		100.0
41	33	14	19			100.0
44	49	14	30	1	4	91.8
71	25	12	12		1	96.0
91	25	6	17	1	1	96.0
124	2	1	1			100.0
132	2		2			100.0
154	27	10	17			100.0
107	26	9	13	1	3	88.5
314	27	10	15		2	92.6
340	34	13	14	3	2	84.1
384	27	15	10		2	92.6
500	42	26	16			100.0
904	31	17	13	1		100.0
906	35	7	26		2	94.3
909	50	23	26		1	98.0
911	2		2			100.0
912	36	11	23		2	94.4
913	23	8	13		2	91.3

CREW VISITS 1 JUL 79 - 31 DEC 79

UNIT	NUMB CHKD	NO	G	GT	L	% QUAL
6	3		3			100.0
28	33	14	17	1	1	97.0
43	38	12	20	5	1	97.4
70	24	9	15			100.0
72	28	21	6		1	96.4
82	32	11	18	1	2	93.8
83	113	90	19		4	96.5
108	27	5	21		1	96.3
116	28	15	7	2	2	92.3
117	22	6	15		1	95.5
126	25	9	14		2	92.0
132	29	18	9		2	93.1
133	30	14	15	1		100.0
145	24	12	13		1	96.3
147	1		1			100.0
101	28	10	13		5	82.1
305	46	13	32		1	97.8
905	45	22	15	4	4	91.1
906	2		2			100.0
911	34	14	18	1	1	97.1

PREPARED 80 MAR 08 STANDARDIZATION EVALUATION ANALYSIS 1 JAN 1979 - 31 DEC 1979
MC-135 TREND ANALYSIS PCM 1802A-N12

CREW VISITS	1 JAN 79 - 30 JUN 79						CREW VISITS	1 JUL 79 - 31 DEC 79					
UNIT	NUMB CHKD	MG	G	CT	L	% QUAL	UNIT	NUMB CHKD	MG	G	CT	L	% QUAL
91A	47	13	31	2	1	97.9							
92C	2		2			100.0							
							924	43	18	24	1		100.0
TOTAL	425	240	352	10	23	98.3	TOTAL	455	311	209	18	29	95.8

PREPARED BY NAF OB — STANDARDIZATION EVALUATION ANALYSIS — 01 JUL 1979 - 31 DEC 1979
CONRAD CEVG OVERALL ANALYSIS SUMMARY — PCN 11802E-N11

PRG NUMBERS (F-52)	QUALIFICATION LEVEL CHKD	HQ	W	GT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	U	% QUAL	INDIVIDUAL F.F.EXAMS CHKT	HQ	Q	U	% QUAL
0048	52	21	28	2	1	98.1	36	8	25	2	1	97.2	23	22	1	0	100.0
0410	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
AAF	54	21	30	2	1	98.1	36	8	25	2	1	97.2	23	22	1	0	100.0
##03	122	95	23	1	3	97.5	38	14	21	1	2	94.7	105	101	3	1	99.0
0037	37	3	26	2	6	83.8	31	0	24	2	5	83.9	14	9	4	1	92.9
0077	46	14	27	1	4	91.3	31	6	20	1	4	87.1	19	15	4	0	100.0
0092	40	6	25	2	7	82.5	31	1	22	2	6	80.6	17	15	1	1	94.1
0310	49	13	32	2	2	95.9	34	2	28	2	2	94.1	24	19	5	0	100.0
1FAF	294	131	133	8	22	92.5	165	23	115	8	19	88.5	179	159	17	3	98.3
SAC	348	152	163	10	23	93.4	201	31	140	10	20	90.0	202	181	18	3	98.5

PREPARED BY HAP OR

STANDARDIZATION EVALUATION ANALYSIS
COMMAND CEVG OVERALL ANALYSIS SUMMARY

01 JUL 1979 - 31 DEC 1979
PCN 14026-N11

ORG TANKERS	QUALIFICATION LEVEL CHKD	HQ	Q	QT	L	% QUAL	INDIVIDUAL INFLIGHT CHKD	HQ	Q	QT	L	% QUAL	INDIVIDUAL F.F.EVANS CHKD	HQ	Q	U	% QUAL
0072	28	21	0	0	1	96.4	20	13	4	0	1	95.0	22	22	0	0	100.0
010B	27	6	21	0	1	96.3	20	0	19	0	1	95.0	18	14	4	0	100.0
011A	26	15	7	2	2	92.3	20	5	7	2	2	90.0	18	18	0	0	100.0
0117	22	4	15	0	1	95.5	20	5	15	0	0	100.0	11	10	0	1	90.9
012A	25	9	14	0	2	92.0	20	4	14	0	2	90.0	13	11	2	0	100.0
0132	29	18	9	0	2	93.1	20	10	9	0	1	95.0	20	19	0	1	95.0
0133	30	14	15	1	0	100.0	20	4	13	1	0	100.0	15	15	0	0	100.0
014E	24	12	13	0	1	96.2	20	6	13	0	1	95.0	13	12	1	0	100.0
0147	1	0	1	0	0	100.0	1	0	1	0	0	100.0	1	0	1	0	100.0
0191	28	10	13	0	5	82.1	20	2	13	0	5	75.0	14	14	0	0	100.0
ARE	242	110	114	3	15	93.8	181	65	110	3	13	92.8	145	135	8	2	98.6
0070	41	11	23	6	1	97.6	31	5	19	6	1	96.8	25	24	1	0	100.0
030E	48	13	32	0	1	97.8	30	2	27	0	1	96.7	27	26	1	0	100.0
0011	34	14	18	1	1	97.1	28	8	18	1	1	96.4	20	20	0	0	100.0
RAE	121	38	73	7	3	97.5	89	15	64	7	3	96.6	72	70	2	0	100.0
0004	30	7	21	0	2	93.3	24	3	19	0	2	91.7	17	16	1	0	100.0
000A	3	0	3	0	0	100.0	3	0	3	0	0	100.0	3	2	1	0	100.0
002F	33	14	17	1	1	97.0	20	6	12	1	1	95.0	15	14	1	0	100.0
0043	38	12	20	5	1	97.4	27	3	18	5	1	96.3	9	9	0	0	100.0
0052	32	11	18	1	2	93.8	25	6	16	1	2	92.0	10	10	0	0	100.0
0053	113	96	14	0	4	96.5	30	18	17	0	4	86.7	22	20	2	0	100.0
0056	45	22	15	4	4	91.1	36	13	15	4	4	88.9	20	20	0	0	100.0
0058	2	0	2	0	0	100.0	0	0	0	0	0		0	0	0	0	
0059	43	16	26	1	0	100.0	28	6	21	1	0	100.0	27	25	2	0	100.0
15AE	336	172	141	12	14	95.9	202	65	121	12	14	93.1	202	105	7	0	100.0
SAC	702	320	320	22	32	95.4	472	125	295	22	30	93.8	410	400	17	2	98.5
RECON																	
000A	30	11	17	2	0	100.0	17	2	13	2	0	100.0	24	20	4	0	100.0

PREPARED BY NAME OR

STANDARDIZATION EVALUATION ANALYSIS
COMMAND CEVG OVERALL ANALYSIS SUMMARY

01 JUL 1979 - 31 DEC 1979
ECN 14024-N11

OBC RECOM	CHKD	QUALIFICATION LEVEL HC	Q	QT	U	% QUAL	INITIAL INFLIGHT CHKD	HC	Q	QT	L	% QUAL	INITIAL F.F.EXAMS CHKD	HC	Q	U	% QUAL
1FAF	30	11	17	2	0	100.0	17	2	13	2	0	100.0	24	20	4	0	100.0
CAF	30	11	17	2	0	100.0	17	2	13	2	0	100.0	24	20	4	0	100.0

SECTION D

QUALIFICATION LEVEL 2 ANALYSIS

Unit Evaluations: The following statistics have been extracted from the unit's SAC-DOT(M)7109 Report and the Part II as a means of identifying areas that unit results indicate needing additional emphasis. The following section breaks out unit evaluations by aircraft type, crew position and area.

1. B-52

POSITION	AREA	NOTICE #CHKD/#T/%T	NO-NOTICE #CHKD/#T/%T
Pilot	Pretakeoff	414/0/0	74/3/4.1
Pilot	Instruments	478/4/0.8	77/3/3.9
Pilot	Descent and Landing	413/1/1.0	64/2/3.1
Copilot	Mission Planning	171/8/4.7	62/2/3.2
Copilot	Pretakeoff	171/0/0	62/2/3.2
Copilot	Instruments	196/4/2.0	61/3/4.9
Copilot	Crew Coordination	177/3/1.7	61/2/3.3
RN	Mission Planning	298/7/2.3	62/3/4.8
RN	Judgement/Compliance	319/0/0	62/2/3.2
NAV	Crew Coordination	187/2/1.1	56/2/3.6
NAV	Equipment Operation	181/7/3.9	53/2/3.8
EWO	Mission Planning	248/6/2.4	60/3/5.0
EWO	Communications	250/7/2.8	63/4/6.3
EWO	Electronic Warfare	271/22/8.1	61/10/16.4
Gunner	Mission Planning	285/3/1.1	92/8/8.7
Gunner	Air Refueling	239/1/0.4	71/3/4.2
Gunner	FCS Operations	302/14/4.6	91/4/4.4

a. Pilot:

(1) PRETAKEOFF - Three QT's were awarded to three mission ready pilots for takeoff data related errors.

(2) INSTRUMENTS - Seven QT's went to one spare, one student, two staff, and three mission ready pilots. Among the errors were: two pilots failing to initiate mandatory radio calls, two pilots exceeding holding limits, failure to timely select correct approach aid, wrong course set in selector window for departure course, and making descent prior to being parallel or on an intercept heading to the outbound course.

(3) DESCENT AND LANDING - Three QT's awarded in this area were related to landings that were too firm.

b. Copilot:

(1) MISSION PLANNING - Ten QT's were given to seven mission ready copilots and three students. Publication errors were the problem in all instances.

(2) PRETAKEOFF - Two mission ready copilots were given T's for incorrect takeoff data.

(3) INSTRUMENTS - Seven QT's went to four mission ready pilots and three students for the following reasons: incorrect holding procedures in two instances, flew departure with course improperly set, slow to meet altitude restrictions at low level, failure to initiate mandatory radio calls, started to fly an ILS with warning flags in view, and set an inbound course incorrectly on a TACAN penetration.

(4) CREW COORDINATION - Five mission ready copilots were given T's for the following reasons: failure to inform pilot to record engine malfunctions in the AFTO 781, allowed unscheduled turns resulting in confusion and marginal navigation, did not complete preflight actions, improper anti-ice operation, and failure to advise pilot of airspeed deviations during low level.

c. Radar Navigator:

(1) MISSION PLANNING - Ten individuals received QT's in mission planning this past semester, seven for publications discrepancies and the other three for chart annotation errors.

(2) COMPLIANCE - Only two individuals recieved QT's this period, both during no-notice unit evaluations for a 3.2% rate. One was an altitude descrepancy during low altitude flight that was not corrected and one for oxygen discipline.

d. Navigator:

(1) CREW COORDINATION - Four Navigators were awarded QT's in this area in the past six months. Two were for failure to coordinate on altitudes

at low altitude while one was for poor RN/NAV coordination that caused the loss of SRAM training. The other was for unsatisfactory knowledge and coordination of Air Refueling procedures with the Pilots.

(2) EQUIPMENT OPERATION - Nine individuals were placed in qualification level two in this area for failure to recognize or correct malfunctions in the Doppler or heading systems. Doppler write-ups include improper use of the doppler drift switch during memory point wind runs, unfamiliarity with malfunction analysis and improper RF switch positioning. Heading system errors include MD-1, AJ4-1, and N-1 discrepancies for failure to properly configure the systems to input the most accurate information into the BNS. More thorough study of malfunction analysis and degraded systems operation in the 1-6-1 and 1-6-3 could eliminate these problems.

e. Electronic Warfare Officer:

(1) ELECTRONIC WARFARE - There were thrity-two qualified with training grades given in the area of Electronic Warfare Procedures. Fifteen of those were for threat area tactics, with the majority concerning threat countermeasures and equipment configuration. Penetration and withdrawal tactics ranked second highest with the ten QT's given for incomplete or improper checklist procedures, improper SACR 55-21, Vol II procedures, and equipment configuration.

(2) COMMUNICATIONS - There were eleven qualified with training grades given for communications procedures. Giant Talk monitoring procedures contributed the largest portion, followed by weather/hazardous weather reporting procedures.

(3) MISSION PLANNING - Seven of the eight qualified with training grades were in the area of publications errors involving omissions predominately. The remaining QT was for mission paperwork errors.

f. Gunner:

(1) FCS OPERATIONS/PROCEDURES - There were nineteen qualified with training grades in this category. The Equipment Operations subarea accounted for fifteen of those. The majority of problems associated with equipment operation were for improper accomplishment of the Defense Coordination Exercise (DCE), and malfunction detection and analysis. Three of the remaining four QT's were for incorrect or improper FCS procedures, while the remaining one was associated with the required crew calls during a Fighter Intercept Exercise (FIE).

(2) MISSION PLANNING - Seven of the QT grades were for publications errors or omissions. The other qualification with training grade was for the FCSO mission paperwork reflecting incorrect date and times.

(3) AIR REFUELING - Incorrect or improper air refueling procedures accounted for five qualified with training grades. Four QT's were for improper overrun procedures, while the remaining QT was for improper FCS switch configuration prior to air refueling contact.

(4) JUDGEMENT/COMPLIANCE - Non-compliance with local directives/ operating procedures were the factors for the two QT grades in this category.

2. KC-135

POSITION	AREA	NOTICE # CHKD/#T/%T	NO-NOTICE # CHKD/#T/%T
Navigator	Navigation	532/14/2.6	124/7/5.6
Navigator	Equipment Operation	501/7/1.4	123/4/3.3
Boom Operator	Mission Planning	503/16/3.2	175/8/4.6
Boom Operator	Preflight	510/14/2.7	176/7/4.0

a. Navigator:

(1) NAVIGATION - Of the twenty-one qualified with training grades this semester, eleven were due to accumluation of minor errors so as to exceed the qualified standard for error points in celestial navigation. Insufficient navigation log entries were the reason for five other QT grades. Three navigators allowed their aircraft to deviate excessively from course during general navigation. Improper recording of heading checks and failure to establish a final DR position on the celestial navigation leg accounted for the final two QT grades.

(2) EQUIPMENT OPERATION - Failure to have the correct variation in the ASN-6 was responsible for four of eleven QT grades in equipment operations. Three navigators allowed incorrect wind inputs into the navigation computer, causing excessive present position error. A navigator did not perform correct Doppler malfunction analysis; one failed to configure the radar set for weather avoidance; another used incorrect APN-59 shutdown procedures; and one operated the ARN-90 TACAN for an excessive length of time.

b. Boom Operator:

(1) MISSION PLANNING - There were twenty-four qualified with training grades in this category for Boom Operators. All of the QT grades were for omissions and errors found in publications.

(2) PREFLIGHT - Boom Operators had twenty-one QT grades for preflight. The discrepancies were due to improper sextant checkout, unsecured equipment and cargo, errors concerning weight and balance, and improper oxygen system checkout.

(3) AIR REFUELING - Qualified with training grades were given to 13 mission ready Boom Operators. Boom control accounted for the majority of the discrepancies.

(4) JUDGEMENT AND COMPLIANCE - Six qualified with training grades were given to Boom Operators in this category. All QT's were for non-compliance with various directives involving passenger requirements, available publications, and water survival gear.

STANDARDIZATION/EVALUATION RESULTS

SAC Totals by Aircraft and Crew Position

Atch 1

PREPARED FOR USAF OF
AIRCRAFT TYPE R-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CREW

01 JUL 1978 - 31 DEC 1978
PCN UAC52A-NOR

AREA CHECKED	CHKD	NO	UNIT NOTICE O	QT	U	% SAT	% QUAL	CHKD	NO	UNIT NO NOTICE O	QT	U	% SAT	% QUAL	CHKD	NO	CREW ALL CHECKS O	QT	U	% SAT	% QUAL
FLYING PROFD EXAM	946	318	22	0	6	0.0	98.2	287	204	34	0	5	0.0	94.4	40	52	5	0	2	0.0	95.0
QUAL EXAM	338	328	13	0	0	0.0	100.0	5	8	1	0	0	0.0	100.0	-	-	-	-	-	-	-
FLT SIMULATOR	371	232	147	1	1	0.3	99.7	1	0	1	0	0	0.0	100.0	10	3	7	0	0	0.0	100.0
MISSION PLANNING	863	332	75	3	3	0.7	99.3	71	68	33	0	0	0.0	100.0	67	37	0	1	0	2.1	100.0
PREFLIGHT	821	328	81	1	1	0.2	99.8	78	55	10	0	0	0.0	100.0	67	37	10	0	0	0.0	100.0
PRETAKEOFF	816	328	86	0	2	0.0	99.5	78	68	25	3	2	6.1	93.9	67	38	11	2	0	4.3	100.0
TAKEOFF	817	273	134	1	7	0.2	98.3	69	30	20	0	1	0.0	98.6	67	33	15	0	0	0.0	100.0
CLIMB	967	318	81	0	0	0.0	100.0	71	51	20	0	0	0.0	100.0	67	33	15	0	0	0.0	100.0
LEVEL OFF	958	345	33	0	0	0.0	100.0	71	62	9	0	0	0.0	100.0	67	61	6	0	0	0.0	100.0
CRUISE	969	368	83	0	2	0.0	99.5	73	62	11	0	0	0.0	100.0	67	58	9	0	0	0.0	100.0
INSTRUMENTS	878	181	321	4	12	0.8	97.5	77	20	51	3	3	3.9	94.1	67	18	31	0	0	0.0	95.7
ENDR PROFD (INFLT)	615	270	148	0	1	0.0	99.8	18	10	7	0	1	0.0	94.4	20	12	8	0	0	0.0	100.0
COMMUNICATIONS	958	324	74	0	0	0.0	100.0	72	52	20	0	0	0.0	100.0	67	33	18	0	0	0.0	100.0
CREW COORD	869	270	117	3	10	0.7	97.4	71	38	33	1	1	1.4	98.6	67	31	33	2	2	4.3	95.7
DESCENT & LND	813	270	138	4	1	1.0	99.8	48	40	33	2	0	3.1	100.0	48	25	21	0	0	0.0	100.0
POSTFLIGHT	946	340	33	1	5	0.3	98.7	71	63	8	0	0	0.0	100.0	67	50	8	0	0	0.0	100.0
COPILOT FAM	9	8	1	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATR REFL PCNT	975	290	136	3	8	0.8	97.0	55	33	20	0	2	0.0	96.4	33	18	14	0	0	0.0	100.0
REFUEL	948	272	76	0	0	0.0	100.0	63	48	14	0	1	0.0	98.4	67	30	13	0	0	0.0	100.0
NAVIGATION	967	338	67	1	1	0.3	99.7	72	50	20	2	0	3.8	100.0	64	33	13	0	1	0.0	97.8
EE-111 FORMATION	8	2	0	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	-	-	-	-	-	-	-
TERRAIN FARMS	951	105	145	7	4	2.0	98.0	82	18	22	2	0	8.8	100.0	30	18	10	0	2	0.0	93.3
EQUIPMENT OPS	978	287	86	2	4	0.5	98.0	68	39	21	1	3	1.6	94.3	67	34	18	1	2	2.1	95.7
JURISDICTN/CONFLT	825	317	103	1	4	0.2	99.1	78	38	33	1	2	1.6	94.3	67	30	15	1	1	2.1	97.9

PREPARED FOR NAF DF
AIRCRAFT TYPE P-3C

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
CREWLIST

01 JUL 1979 - 31 DEC 1979
RCN UAD2A-NDR

AREA CHECKED	CHKL	NO	UNIT NOTICE S	ST	U	% WGT	% GLAL	CHKD	NO	UNIT NO NOTICE S	ST	U	% WGT	% GLAL	CHKD	NO	AVG ALL CHECKS S	ST	U	% WGT	% QUAL
ENEMY PROOD EXAM	176	137	27	0	4	0.0	85.3	335	245	53	0	17	0.0	92.9	18	7	7	0	0	0.0	100.0
QUAL EXAM	155	152	3	0	0	0.0	100.0	8	6	2	0	0	0.0	100.0	-	-	-	-	-	-	-
FLT STELLATUR	174	87	108	2	1	1.1	99.4	2	1	1	0	0	0.0	100.0	10	9	9	0	0	0.0	100.0
MISSION PLANNING	171	122	30	8	2	4.7	98.8	62	40	18	2	2	3.2	94.8	32	23	9	2	0	6.3	100.0
PREFLIGHT	177	160	36	0	1	0.0	99.4	63	48	15	0	0	0.0	100.0	32	27	5	0	0	0.0	100.0
PRETAKEOFF	174	131	39	0	1	0.0	99.4	62	32	25	2	3	3.2	96.2	32	23	9	2	0	6.3	100.0
TAKEOFF	165	120	38	2	0	1.2	100.0	59	31	28	0	0	0.0	100.0	32	21	10	0	1	0.0	96.9
CLIMB	168	111	57	0	0	0.0	100.0	60	38	22	0	0	0.0	100.0	31	19	12	0	0	0.0	100.0
LEVEL OFF	167	150	17	0	0	0.0	100.0	60	53	7	0	0	0.0	100.0	32	23	9	0	0	0.0	100.0
CRUISE	165	148	25	0	0	0.0	100.0	62	51	10	1	0	1.6	100.0	32	7	24	0	1	0.0	96.9
INSTRUMENTS	162	93	151	4	8	2.0	95.6	61	9	88	3	1	4.9	96.4	11	4	6	0	0	0.0	100.0
ENEM PROOD (INFLT)	173	166	17	0	1	0.0	99.4	16	11	4	0	1	0.0	93.8	32	19	13	0	0	0.0	100.0
COMMUNICATIONS	168	122	84	0	0	0.0	100.0	62	37	24	1	0	1.6	101.0	32	17	14	1	1	3.1	96.9
DEEP DOORD	177	88	81	3	5	1.7	97.2	61	24	31	2	4	3.3	93.4	32	16	14	1	1	3.1	96.9
DESCENT & LDG	161	87	84	4	6	2.2	98.7	59	25	29	1	0	2.0	100.0	32	26	6	0	0	0.0	100.0
POSTFLIGHT	176	162	18	0	0	0.0	100.0	67	55	12	0	0	0.0	100.0	18	12	6	0	0	0.0	100.0
ATO RELG RQMT	171	135	36	0	0	0.0	100.0	65	31	14	0	0	0.0	100.0	27	22	5	0	0	0.0	100.0
BOMBING	173	143	30	0	0	0.0	100.0	58	41	17	0	1	0.0	98.1	31	21	10	0	0	0.0	100.0
NAVIGATION	176	131	38	1	0	0.6	100.0	61	30	31	0	1	0.0	98.4	-	-	-	-	-	-	-
EE-111 FORMATION	1	1	0	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	18	5	13	0	0	0.0	100.0
TERRAIN RADAR	175	90	82	2	1	1.1	99.4	35	12	22	1	0	2.9	100.0	31	13	15	0	3	0.0	90.3
EQUIPMENT DES	164	104	52	0	6	0.0	96.3	53	26	26	0	1	0.0	98.1	32	20	11	1	0	3.1	100.0
JUDGEMENT/CUMPLT	177	118	54	2	1	1.1	99.4	61	20	20	1	2	1.6	96.7	32	20	11	1	0	3.1	100.0

PERFORM AD HOC OR
STANDARD TYPE EVAL

STANDARDIZATION EVALUATION RESULTS
SUB TOTALS BY POSITIONS
RADAR NAVIGATOR

01 JUL 1979 - 31 DEC 1979
PCN UA026-NOR

AREA CHECKED	CHKD	HQ	UNIT NOTICE C	QT	U	% QUAL	CHKD	HQ	UNIT NO NOTICE C	QT	U	% QUAL	CHKD	HQ	CFVG ALL CHECKS C	QT	U	% QUAL
EVERY PHASE EVAL	261	264	14	0	1	0.0	95.4	312	287	20	0	1	0.0	95.7	64	65	1	0	0	0.0	100.0
DUAL EVAL	262	265	7	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0
MISSION PLANNING	256	236	51	7	4	2.3	98.7	47	41	14	3	0	6.8	100.0	65	37	8	0	0	0.0	100.0
PREFLIGHT	265	271	35	0	0	0.0	100.0	41	48	13	0	0	0.0	100.0	65	43	2	0	0	0.0	100.0
PREFLIGHT	265	271	35	0	0	0.0	100.0	41	53	8	0	0	0.0	100.0	65	37	8	0	0	0.0	100.0
PREFLIGHT	265	264	40	0	0	0.0	100.0	41	53	8	0	0	0.0	100.0	65	43	2	0	0	0.0	100.0
TAKEOFF	265	262	13	0	0	0.0	100.0	41	41	0	0	0	0.0	100.0	65	43	2	0	0	0.0	100.0
CLIMB	265	274	10	0	0	0.0	100.0	41	58	3	0	0	0.0	100.0	65	44	1	0	0	0.0	100.0
LEVEL OFF	263	271	22	0	0	0.0	100.0	40	55	5	0	0	0.0	100.0	66	43	1	0	0	0.0	100.0
CRUISE	263	262	31	0	0	0.0	100.0	41	58	7	0	0	0.0	100.0	-	-	-	-	-	-	-
FREE PROCT (INFLT)	6	6	0	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	65	30	6	0	0	0.0	100.0
COMMUNICATIONS	264	268	30	0	0	0.0	100.0	41	58	7	0	0	0.0	100.0	65	20	22	0	2	0.0	95.6
DEEP CORE	263	187	100	1	6	0.3	98.0	43	34	25	0	2	0.0	94.8	65	30	6	0	0	0.0	100.0
DESCENT & LNG	264	260	36	0	0	0.0	100.0	40	45	15	0	0	0.0	100.0	65	63	3	0	0	0.0	100.0
POSTFLIGHT	264	268	34	0	0	0.0	100.0	41	53	8	0	0	0.0	100.0	28	10	0	0	0	0.0	100.0
ATP REQ FOR	251	179	102	7	3	2.4	99.0	47	27	18	1	1	2.1	97.5	61	28	11	0	0	0.0	95.1
BOMBING	263	211	78	3	9	1.0	97.0	52	22	27	0	3	0.0	97.2	65	29	14	0	0	0.0	100.0
NAVIGATION	216	156	147	0	7	0.0	97.7	55	29	27	0	3	0.0	97.5	-	-	-	-	-	-	-
FB-111 FORMATION	1	1	0	0	0	0.0	100.0	2	0	2	0	0	0.0	100.0	63	36	0	0	0	0.0	100.0
ACM AS QUAL	218	149	48	1	0	0.5	100.0	37	28	8	1	2	2.7	94.6	30	18	12	0	0	0.0	100.0
TERRAIN RADAR	278	190	87	1	0	0.4	100.0	36	22	17	0	0	0.0	100.0	65	21	22	1	0	2.2	100.0
EQUIPMENT OPS	266	188	137	4	1	1.4	99.7	55	28	28	0	3	0.0	97.5	65	27	18	0	0	0.0	100.0
JUDGEMENT/OUTPUT	215	205	71	0	3	0.0	99.1	47	40	20	2	0	3.2	100.0							

PREPARED FOR MAP OR
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
NAVIGATOR

01 JUL 1979 - 31 DEC 1979
SCN UA026-NOB

AREA CHECKED	UNIT NOTICE CHKD	NO	G	OT	U	% QUAL	UNIT NO NOTICE CHKD	NO	G	OT	U	% QUAL	CREW CHKD	NO	G	OT	U	% QUAL
EMERG PROCD EXAM	122	121	20	0	1	95.0	302	294	33	0	4	96.7	13	13	1	0	0	100.0
DUAL EXAM	177	144	13	0	0	100.0	1	1	0	0	0	100.0	-	-	-	-	-	-
MISSION PLANNING	164	137	44	1	2	95.0	54	34	30	1	1	96.2	30	28	4	0	0	100.0
REFLIGHT	152	145	27	0	0	100.0	56	54	0	0	1	98.2	30	27	3	0	0	100.0
REFTAKEOFF	150	143	17	0	0	100.0	54	48	8	0	0	100.0	30	24	4	0	0	100.0
TAKEOFF	150	139	2	0	0	100.0	54	52	1	0	0	100.0	30	28	2	0	0	100.0
CLIMB	125	122	7	0	0	100.0	54	53	2	0	0	100.0	30	29	1	0	0	100.0
LEVEL OFF	125	118	11	0	0	100.0	52	50	4	0	0	100.0	30	30	0	0	0	100.0
CRUISE	126	122	21	0	0	100.0	54	47	7	0	0	100.0	30	28	2	0	0	100.0
EMER PROCD-(SAFE)	2	2	1	0	0	100.0	2	2	0	0	0	100.0	-	-	-	-	-	-
COMMUNICATIONS	125	123	17	0	0	100.0	52	44	0	0	0	100.0	30	28	2	0	0	100.0
CREW COORD	127	95	84	2	4	97.6	56	28	30	2	0	98.6	30	8	20	1	1	96.7
DESCENT & LNG	121	118	12	0	1	99.6	54	51	5	0	0	100.0	30	26	4	0	0	100.0
PRETELIGHT	128	125	13	0	0	100.0	54	53	3	0	0	100.0	30	29	1	0	0	100.0
ATR REFLG RCVR	132	126	36	1	2	95.5	42	28	17	0	1	99.6	17	15	2	0	0	100.0
BOMBING	124	123	48	3	0	96.6	49	21	27	1	0	98.0	27	16	11	0	0	100.0
NAVIGATION	248	78	120	4	8	94.9	54	15	35	0	4	95.4	30	7	18	2	3	90.0
EE-111 FORMATION	-	-	-	-	-	-	2	0	2	0	0	100.0	-	-	-	-	-	-
ARM AR DUAL	147	112	31	3	1	98.0	31	10	17	1	3	93.3	20	21	5	2	1	96.4
TERRAIN RADAR	123	109	34	0	0	100.0	34	22	11	1	0	98.9	15	13	8	0	1	94.4
EQUIPMENT OPS	121	117	55	7	2	93.9	53	24	28	2	1	93.8	30	17	13	1	0	100.0
JUDGEMENT/CUMELT	244	144	55	0	5	99.0	57	31	25	1	0	98.8	30	18	15	0	1	96.7

PREPARED BY NAF OA
AIRCRAFT TYPE P-3C

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
EWC

01 JUL 1979 - 31 DEC 1979
FCF UADZA-NOR

AREA CHECKED	CHKD	NO	UNIT NOTICE O	OT	U	% QUAL	CHKD	NO	UNIT NO NOTICE O	OT	U	% QUAL	CHKD	NO	CEVG ALL CHECKS O	OT	U	% TOT	% QUAL
EMERG PROCD EXAM	214	104	17	0	3	96.4	393	378	48	0	1	99.7	38	33	2	0	0	0.0	100.0
QUAL EXAM	217	213	4	0	0	100.0	8	8	0	0	0	100.0	-	-	-	-	-	-	-
MISSION PLANNING	246	173	68	6	1	99.4	60	29	28	3	0	100.0	28	16	7	2	0	8.3	100.0
PREFLIGHT	245	182	62	1	0	100.0	63	60	10	0	0	100.0	24	22	2	0	0	0.0	100.0
PRETAKEOFF	245	236	9	0	0	100.0	62	50	2	0	0	100.0	24	22	2	0	0	0.0	100.0
CLIMB	246	228	18	0	0	100.0	63	56	8	0	0	100.0	24	22	2	0	0	0.0	100.0
CRUISE	247	215	31	1	0	100.0	62	50	12	0	0	100.0	24	22	2	0	0	0.0	100.0
EMER PROCD (1+FLT)	4	3	1	0	0	100.0	3	3	0	0	0	100.0	-	-	-	-	-	-	-
COMMUNICATIONS	250	176	68	7	2	99.2	63	40	10	4	0	96.3	28	16	8	2	0	8.0	100.0
CREW COORD	247	204	42	1	0	100.0	63	48	10	0	0	100.0	24	20	4	0	0	0.0	100.0
DESCENT & LDG	246	230	16	0	0	100.0	63	61	2	0	0	100.0	24	24	0	0	0	0.0	100.0
POSTFLIGHT	247	182	63	2	0	100.0	63	46	17	1	0	101.6	28	18	8	0	0	0.0	100.0
NAVIGATION	241	228	13	0	0	100.0	51	49	2	0	0	100.0	15	15	0	0	0	0.0	100.0
FLEC WARFARE	271	52	181	22	16	84.1	41	12	28	10	1	104.4	28	8	14	2	1	8.3	95.8
JUDGEMENT/CUMFLT	276	218	51	4	5	104.4	46	48	18	1	1	104.4	24	22	2	0	0	0.0	100.0

PREPARED FOR NAF OF
AIRCRAFT TYPE F-4S

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
GUNNER

01 JUL 1979 - 31 DEC 1979
PCN UA02A-NOP

AREA CHECKED	CHKD	NO	UNIT NOTICE S	UNIT NOTICE T	UNIT NOTICE U	% WGT	% QUAL	CHKD	NO	UNIT NO NOTICE S	UNIT NO NOTICE T	UNIT NO NOTICE U	% WGT	% QUAL	CHKD	NO	CEVG ALL CHECKS S	CEVG ALL CHECKS T	CEVG ALL CHECKS U	% WGT	% QUAL
PREFLT PROCD EXAM	938	109	30	0	3	0.0	96.7	388	250	78	0	11	0.0	94.5	35	33	2	0	0	0.0	100.0
QUAL EXAM	926	215	11	0	0	0.0	100.0	13	12	1	0	0	0.0	100.0	-	-	-	-	-	-	-
MISSION PLANNING	985	214	66	3	4	1.1	98.4	99	49	16	8	0	8.7	100.0	21	18	2	0	0	9.5	100.0
PREFLIGHT	983	228	58	1	0	0.4	100.0	91	62	28	0	1	0.0	98.9	10	10	0	0	0	0.0	100.0
PRETAKEOFF	983	228	24	0	1	0.0	99.6	91	73	18	0	0	0.0	100.0	10	10	0	0	0	0.0	100.0
TAKEOFF	980	222	7	0	1	0.0	99.6	90	87	3	0	0	0.0	100.0	10	10	0	0	0	0.0	100.0
CLIMB	981	221	10	0	0	0.0	100.0	91	85	6	0	0	0.0	100.0	10	10	0	0	0	0.0	100.0
CRUISE	981	240	10	1	1	0.4	99.6	90	81	8	0	1	0.0	98.9	10	10	1	0	0	0.0	100.0
ENER PROCD (INFLT)	3	3	0	0	0	0.0	100.0	3	3	0	0	0	0.0	100.0	-	-	-	-	-	-	-
COMMUNICATIONS	980	247	23	0	0	0.0	100.0	99	79	12	1	0	1.1	100.0	21	20	1	0	0	0.0	100.0
CREW COORD	981	240	18	2	1	0.7	99.6	99	71	21	0	0	0.0	100.0	10	10	1	0	0	0.0	100.0
DESCENT & LDG	980	225	6	0	0	0.0	100.0	91	85	6	0	0	0.0	100.0	10	10	0	0	0	0.0	100.0
POSTFLIGHT	968	224	47	7	6	2.4	97.6	91	61	24	2	2	2.2	97.8	20	17	2	0	0	0.0	100.0
ATP RELG PROF	934	225	10	1	3	0.4	98.7	71	55	12	3	1	4.2	96.6	12	12	0	0	0	0.0	100.0
EQS PRS/PROF	962	103	80	14	15	4.6	95.0	91	62	30	4	4	4.4	93.8	19	14	4	0	1	0.0	94.7
JUDGEMENT/COMPLT	960	238	45	2	5	0.7	98.3	93	65	26	0	4	0.0	96.7	22	10	2	0	0	0.0	100.0

PREPARED BY NAF OF
AIRCRAFT TYPE FB-111

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CMDR

01 JUL 1979 - 31 DEC 1979
RCN UADSA-NOR

Stan/Eval Analysis Attachment 1

AREA CHECKED	CMBT	MD	UNIT ACTION C	ET	U	% WGT	% QUAL	CMBT	MD	UNIT AD ACTION C	ET	L	% WGT	% QUAL	CMBT	MD	CRWG ALL CHECKS C	DT	U	% WGT	% QUAL
CNFRC PROCD EXAM	66	A7	13	0	0	0.0	100.0	44	38	6	0	0	0.0	100.0	-	-	-	-	-	-	-
DUAL EXAM	63	79	6	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISSION PLANNING	62	7E	17	0	0	0.0	100.0	12	10	2	0	0	0.0	100.0	-	-	-	-	-	-	-
REFFLIGHT	65	6C	24	0	0	0.0	100.0	5	3	2	0	0	0.0	100.0	-	-	-	-	-	-	-
REFTAKEOFF	64	A2	24	0	0	0.0	100.0	10	9	1	0	0	0.0	100.0	-	-	-	-	-	-	-
TAKEOFF	61	83	30	1	0	1.2	100.0	11	6	5	0	0	0.0	100.0	-	-	-	-	-	-	-
CLIMB	62	6E	27	0	0	0.0	100.0	11	7	4	0	0	0.0	100.0	-	-	-	-	-	-	-
LEVEL OFF	63	77	6	0	1	0.0	98.8	11	7	4	0	0	0.0	100.0	-	-	-	-	-	-	-
CRUISE	62	72	10	0	0	0.0	100.0	9	8	1	0	0	0.0	100.0	-	-	-	-	-	-	-
INSTRUMENTS	66	18	78	1	3	1.6	98.6	10	3	7	0	0	0.0	100.0	-	-	-	-	-	-	-
EMER PROCD (INFLT)	67	37	46	1	0	1.1	100.0	8	3	5	0	0	0.0	100.0	-	-	-	-	-	-	-
COMMUNICATIONS	64	7A	8	0	0	0.0	100.0	10	9	1	0	0	0.0	100.0	-	-	-	-	-	-	-
CREW COORD	6C	A2	20	0	0	0.0	100.0	10	6	4	0	0	0.0	100.0	-	-	-	-	-	-	-
DESCENT & LDG	6E	83	34	0	1	0.0	98.9	9	3	6	0	0	0.0	100.0	-	-	-	-	-	-	-
POSTFLIGHT	65	83	9	0	0	0.0	100.0	8	7	1	0	0	0.0	100.0	-	-	-	-	-	-	-
ATR FELG EQUP	6E	A3	22	0	1	0.0	98.8	3	2	1	0	0	0.0	100.0	-	-	-	-	-	-	-
BOMBING	7E	A7	9	0	0	0.0	100.0	5	3	2	0	0	0.0	100.0	-	-	-	-	-	-	-
NAVIGATION	64	AE	16	0	0	0.0	100.0	5	3	2	0	0	0.0	100.0	-	-	-	-	-	-	-
ELEC WARFARE	64	39	2E	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	-	-	-	-	-	-	-
FB-111 FORMATION	67	6A	31	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-
ACM AD DUAL	66	A0	8	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	-	-	-	-	-	-	-
TERRAIN RADAR	6C	A0	20	0	0	0.0	100.0	4	2	2	0	0	0.0	100.0	-	-	-	-	-	-	-
EQUIPMENT DFS	64	A0	1E	0	0	0.0	100.0	5	4	1	0	0	0.0	100.0	-	-	-	-	-	-	-
JUDGEMENT/CORRECT	66	A0	23	0	2	0.0	97.0	12	9	3	0	0	0.0	100.0	-	-	-	-	-	-	-

PREPARED FOR NAS OK
AIRCRAFT TYPE FF=111

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
RADAR NAVIGATOR

01 JUL 1979 - 31 DEC 1979
PCN UAB26-NOR

AREA CHECKED	CHKD	NO	UNIT NOTIFIED O	OT	U	% GT	% QUAL	CHKD	NO	UNIT NO NOTICE O	OT	U	% GT	% QUAL	CHKD	NO	DEVD ALL CHECKS O	OT	U	% OT	% QUAL
EVERG PROCD EXAM	71	A2	9	0	0	0.0	100.0	36	31	5	0	0	0.0	100.0	-	-	-	-	-	-	-
QUAL EXAM	72	72	0	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MISSION PLANNING	EE	73	13	0	0	0.0	100.0	4	2	2	0	0	0.0	100.0	-	-	-	-	-	-	-
PREFLIGHT	71	A7	23	0	1	0.0	95.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRETAKEOFF	76	E7	13	0	0	0.0	100.0	2	0	2	0	0	0.0	100.0	-	-	-	-	-	-	-
TAKEOFF	76	A3	7	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-
CLIMB	76	E9	11	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-
LEVEL OFF	76	A2	8	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	-	-	-	-	-	-	-
CRUISE	76	A6	10	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-
EVER PROCD (INFLT)	76	E3	17	0	0	0.0	100.0	1	0	1	0	0	0.0	100.0	-	-	-	-	-	-	-
COMMUNICATIONS	76	44	24	0	0	0.0	100.0	2	0	2	0	0	0.0	100.0	-	-	-	-	-	-	-
CREW COORD	71	E7	13	0	1	0.0	96.4	2	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-
DESCENT & LDG	76	E7	13	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	-	-	-	-	-	-	-
POSTFLIGHT	76	A3	7	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	-	-	-	-	-	-	-
ATR REFG EVAL	76	4F	22	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BOMBING	76	E4	14	0	0	0.0	100.0	1	0	1	0	0	0.0	100.0	-	-	-	-	-	-	-
NAVIGATION	76	4E	26	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	-	-	-	-	-	-	-
FIRE WARFARE	76	33	37	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	-	-	-	-	-	-	-
FF-111 FORMATION	7E	EA	14	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARM AD QUAL	61	41	20	0	0	0.0	100.0	1	0	1	0	0	0.0	100.0	-	-	-	-	-	-	-
TERRAIN RADAR	76	41	20	0	0	0.0	100.0	1	0	1	0	0	0.0	100.0	-	-	-	-	-	-	-
EQUIPMENT OPS	76	32	38	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-
JUDGEMENT/CONFLT	EE	AA	20	0	0	0.0	100.0	4	3	1	0	0	0.0	100.0	-	-	-	-	-	-	-

PREPARED BY NAF EP
AIRCRAFT TYPE KC-135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT RATE

01 JUL 1970 - 31 DEC 1970
PCN UA02A-NOA

Stan/Eval Analysis Attachment 1

AREA CHECKED	CHKD	NO	UNIT NOTICE 0	QT	U	% WGT	% QUAL	UNIT NO NOTICE CHKD	NO	0	QT	U	% WGT	% QUAL	CHKD	NO	CREW ALL CHECKS 0	QT	U	% WGT	% QUAL
PREFD PROCD EXAM	836	712	111	0	9	0.0	85.0	818	817	90	0	10	0.0	98.4	130	128	0	0	2	0.0	98.4
QUAL EXAM	742	740	32	0	0	0.0	100.0	12	12	0	0	0	0.0	100.0	-	-	-	-	-	-	-
FLT SIMULATOR	788	484	350	2	1	0.3	99.0	14	8	8	0	0	0.0	100.0	12	1	11	0	0	0.0	100.0
MISSION PLANNING	858	600	344	11	4	1.3	99.5	179	115	55	6	3	2.8	98.3	131	103	28	5	0	3.8	100.0
PREFLIGHT	866	685	215	0	2	0.0	99.8	171	112	58	0	1	0.0	99.4	128	107	17	0	0	0.0	100.0
POSTFLIGHT	875	678	192	3	6	0.3	98.3	178	128	37	3	8	1.7	98.3	125	102	23	0	0	0.0	100.0
TAKEOFF	866	813	248	1	6	0.1	99.3	167	113	51	1	2	0.6	99.8	128	101	27	0	0	0.0	100.0
CLIMB	856	685	184	0	1	0.0	99.8	161	115	85	0	1	0.0	99.4	124	110	14	0	0	0.0	100.0
LEVEL OFF	852	700	60	1	1	0.1	99.0	156	130	17	0	0	0.0	100.0	127	115	12	0	0	0.0	100.0
CRUISE	853	780	72	1	0	0.1	100.0	168	165	23	0	0	0.0	100.0	127	124	3	0	0	0.0	100.0
INSTRUMENTS	871	203	654	6	14	0.6	98.6	173	67	99	2	5	1.2	99.1	127	78	40	9	0	1.4	98.4
CHEF PROOF (TAFLT)	858	561	290	1	7	0.1	99.5	65	34	19	0	0	0.0	100.0	55	50	5	0	0	0.0	100.0
COMMUNICATIONS	853	601	182	0	0	0.0	100.0	177	129	67	1	0	0.6	100.0	131	100	29	0	0	0.0	100.0
CREW COORD	859	686	208	3	2	0.3	99.8	177	119	52	3	3	1.7	98.3	131	91	34	1	3	0.8	97.7
DESCENT & LDG	874	584	318	4	6	0.5	99.3	168	90	76	2	0	1.2	100.0	130	83	44	1	2	0.8	98.5
POSTFLIGHT	850	736	112	1	1	0.1	99.0	167	143	23	1	0	0.6	100.0	120	114	13	0	0	0.0	100.0
CRPTLOT EXAM	47	40	7	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	-	-	-	-	-	-	-
ATP RELG EXAM	16	11	7	1	0	5.3	100.0	1	1	0	0	0	0.0	100.0	6	1	5	0	0	0.0	100.0
NAVIGATION	854	770	83	0	1	0.0	99.9	145	147	22	0	0	0.0	100.0	128	108	18	0	1	1.6	100.0
ATP RELG TNGE	822	583	231	4	4	0.5	99.3	184	91	83	1	1	0.7	99.3	104	84	21	0	1	0.0	99.1
EQUIPMENT OPS	842	672	154	7	7	0.8	99.2	162	123	33	2	5	1.2	99.4	131	105	23	0	1	1.5	99.2
JUDGEMENT/CONFLT	815	650	148	0	7	0.0	99.2	177	111	61	1	4	0.6	99.7	132	99	30	0	4	0.0	97.0

PREPARED BY HQ USAF DP
AIRCRAFT TYPE MDS=135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
COPILOT

01 JUL 1979 - 31 DEC 1979
PER UAD2A-NOR

AREA CHECKED	CHKD	HQ	UNIT NOTICE O	OT	U	% QUAL	CHKD	HQ	UNIT NO NOTICE O	OT	L	% QUAL	CHKD	HQ	CEVG ALL CHECKS O	OT	U	% QUAL
EMERG PROCD EXAM	367	319	72	0	4	0.0 98.5	580	427	98	0	19	0.0 94.5	21	20	1	0	0	0.0 100.0
QUALIFICATIONS	1	1	0	0	0	0.0 100.0	-	-	-	-	-	- -	-	-	-	-	-	- -
QUAL EXAM	368	367	10	0	0	0.0 100.0	11	10	1	0	0	0.0 100.0	-	-	-	-	-	- -
FLT SIMULATOR	343	108	238	0	1	0.0 99.7	10	3	7	0	0	0.0 100.0	12	0	12	0	0	0.0 100.0
MISSION PLANNING	366	241	98	8	3	2.2 99.2	127	79	48	1	3	0.8 99.6	76	54	14	2	0	2.7 100.0
PREFLIGHT	365	268	100	2	0	0.5 100.0	125	78	47	0	0	0.0 100.0	73	48	9	0	0	0.0 100.0
PRETAKEOFF	370	280	88	3	3	0.8 99.2	125	93	30	1	3	0.8 99.6	83	62	11	0	0	0.0 100.0
TAKEOFF	365	273	87	2	3	0.5 99.2	121	83	36	2	1	1.7 99.2	73	50	13	0	1	0.0 98.6
CLIMB	364	274	90	0	1	0.0 99.7	111	90	21	0	0	0.0 100.0	73	55	8	0	0	0.0 100.0
LEVEL OFF	364	329	40	0	0	0.0 100.0	112	109	3	0	0	0.0 100.0	73	71	2	0	0	0.0 100.0
CRUISE	363	323	39	1	0	0.3 100.0	120	113	7	0	0	0.0 100.0	73	68	5	0	0	0.0 100.0
INSTRUMENTS	356	67	315	3	11	0.8 97.2	126	68	77	0	1	0.0 99.2	75	68	25	0	2	0.0 97.3
EMER PROCD (INFLT)	185	165	20	1	0	0.5 100.0	28	18	10	0	0	0.0 100.0	25	23	2	0	0	0.0 100.0
COMMUNICATIONS	363	269	111	2	1	0.6 99.7	124	51	69	1	0	0.8 100.0	75	52	23	0	0	0.0 100.0
CREW COORD	374	230	127	10	7	2.7 98.1	123	71	47	1	4	0.8 94.7	74	65	24	0	5	0.0 93.8
DESCENT & LDG	372	180	225	7	6	1.9 98.4	118	65	51	2	0	1.7 100.0	73	43	30	0	0	0.0 100.0
POSTFLIGHT	362	315	41	1	1	0.3 99.7	115	98	17	0	0	0.0 100.0	73	68	5	0	0	0.0 100.0
ATR REFLG RCVR	2	2	1	0	0	0.0 100.0	1	1	0	0	0	0.0 100.0	4	3	1	0	0	0.0 100.0
NAVIGATION	361	314	85	0	0	0.0 100.0	120	104	16	0	0	0.0 100.0	76	57	7	0	0	0.0 100.0
ATR REFLG TNKR	367	287	78	2	0	0.5 100.0	103	77	26	0	0	0.0 100.0	69	55	7	0	0	0.0 100.0
EQUIPMENT OPS	358	268	96	2	5	0.8 98.8	118	78	36	2	2	1.7 98.3	76	54	16	0	2	0.0 97.3
JUDGEMENT/CONFLT	378	267	108	0	3	0.0 99.2	126	90	33	1	0	0.8 100.0	75	48	0	0	2	0.0 97.3

PREPARED BY: [illegible] OF
AIRCRAFT TYPE: KC-135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
NAVIGATOR

01 JUL 1979 - 31 DEC 1979
PCN UA0224-NOB

AREA CHECKED	CHKD	NO	UNIT NOTICE O	OT	U	% SAT	% QUAL	CHKD	NO	UNIT NO NOTICE O	OT	U	% SAT	% QUAL	CHKD	NO	AVG ALL CHECKS O	OT	U	% SAT	% QUAL
ENEMY PROCEDURES	617	440	56	0	2	0.0	99.4	559	493	53	0	4	0.0	99.3	120	118	2	0	0	0.0	100.0
FINAL EVAL	617	440	38	0	0	0.0	100.0	5	5	5	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0
MISSION PLANNING	613	343	131	15	4	2.9	99.2	128	66	64	2	5	1.4	94.1	100	87	15	7	0	6.8	100.0
PREFLIGHT	614	343	144	1	0	0.2	100.0	126	79	63	1	0	0.8	100.0	104	88	14	0	0	0.0	100.0
PRETAKEOFF	618	440	27	1	0	0.2	100.0	124	118	8	0	0	0.0	100.0	102	98	4	0	0	0.0	100.0
TAKEOFF	617	488	19	0	0	0.0	100.0	122	116	7	0	0	0.0	100.0	104	103	1	0	0	0.0	100.0
CLIMB	614	467	47	0	0	0.0	100.0	124	103	22	0	0	0.0	100.0	104	93	11	0	0	0.0	100.0
CRUISE	615	488	37	0	0	0.0	100.0	124	108	18	0	0	0.0	100.0	104	100	4	0	0	0.0	100.0
ENER PROCD (INFLT)	65	65	30	0	0	0.0	100.0	2	1	1	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0
COMMUNICATIONS	616	420	87	1	0	0.2	100.0	127	86	81	0	0	0.0	100.0	104	86	18	0	0	0.0	100.0
DEEP COVER	611	304	109	3	3	0.6	99.4	129	83	85	1	0	0.8	100.0	103	76	27	0	3	0.0	97.1
DESCENT & LDG	617	305	109	3	0	0.6	100.0	128	81	88	3	0	2.3	100.0	103	66	37	0	0	0.0	100.0
POSTFLIGHT	614	418	90	0	0	0.0	100.0	128	97	31	0	0	0.0	100.0	103	93	31	0	0	0.0	100.0
ATR FELG REVS	16	10	2	0	0	0.0	100.0	2	2	0	0	0	0.0	100.0	5	2	3	0	0	0.0	100.0
NAVIGATION	632	363	154	14	9	2.6	98.3	124	70	36	7	8	5.6	93.5	104	71	24	3	4	2.9	96.2
ATR FELG TASK	615	309	178	7	2	1.4	99.4	118	65	44	1	0	0.9	100.0	88	64	21	1	0	1.1	100.0
EQUIPMENT OPS	611	303	96	7	6	1.4	98.8	123	75	43	4	1	3.3	96.2	104	77	23	3	1	2.9	99.0
JUDGEMENT/CAPABLT	617	443	130	0	5	0.0	99.1	123	78	43	1	2	0.8	98.5	100	78	21	1	1	0.9	99.1

PREPARED TO ALT OF
AIRCRAFT TYPE FY-135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
FOCN OPERATIONS

01 JUL 1979 - 31 DEC 1979
PCN LABORATORY

AREA CHECKED	CHKD	NO	UNIT NO NOTICE G	CT	U	% QUAL	CHKD	NO	UNIT AD NOTICE G	CT	U	% QUAL	CHKD	NO	CEVG ALL CHECKS G	CT	U	% QUAL
ENERG PROCD EXAM	617	387	123	0	7	0.0	98.9	493	468	168	0	17	0.0	96.3	112	108	4	0	0	0.0	100.0
FINAL EXAM	376	469	31	0	3	0.0	99.4	9	9	0	0	0	0.0	100.0	-	-	-	-	-	-	-
MISSION PLANNING	612	302	95	14	0	3.2	100.0	179	121	83	8	3	0.6	96.3	104	99	12	2	0	1.0	100.0
REFLIGHT	616	202	200	14	4	2.7	99.2	176	44	97	7	6	0.0	96.6	98	80	37	1	0	1.0	100.0
REFTANKERS	615	426	76	1	1	0.2	99.8	174	131	40	0	3	0.0	98.3	98	93	5	0	0	0.0	100.0
RIMF	610	472	98	0	0	0.0	100.0	176	167	10	0	0	0.0	100.0	98	98	0	0	0	0.0	100.0
ROUTES	667	498	8	0	0	0.0	100.0	173	166	7	0	0	0.0	100.0	98	98	0	0	0	0.0	100.0
SAFE PROCD (LEAFLT)	58	85	7	0	0	0.0	100.0	6	5	0	0	1	0.0	83.3	-	-	-	-	-	-	-
SIMULATCATTJAS	612	481	21	0	0	0.0	100.0	178	168	12	0	0	0.0	100.0	98	94	2	0	0	0.0	100.0
SREW COORD	615	445	38	1	1	0.2	99.8	178	160	18	3	1	1.7	96.6	98	97	1	0	0	0.0	100.0
RESCENT & LWS	610	471	20	0	0	0.0	100.0	172	167	23	1	1	0.6	99.4	97	96	2	0	0	0.0	100.0
RESTFLIGHT	699	492	76	2	0	0.4	100.0	171	125	83	1	2	0.6	98.8	97	88	10	1	0	1.0	100.0
RSPILOT EXAM	2	0	2	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STR REFLG RCVR	7	7	0	0	0	0.0	100.0	1	1	0	0	0	0.0	100.0	3	3	0	0	0	0.0	100.0
NAVIGATION	616	486	20	1	0	0.2	100.0	183	101	2	0	0	0.0	100.0	70	60	0	1	0	1.4	100.0
STR REFLG TNKR	650	200	228	9	18	1.4	98.7	143	83	48	8	12	5.6	93.0	84	64	38	0	8	0.0	95.2
JUDGMENT/CHKFLT	644	460	92	4	7	0.7	98.8	182	131	37	2	12	1.1	93.4	104	98	4	2	8	1.9	96.2


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A-5-5

HEADQUARTERS
1st COMBAT EVALUATION GROUP

STANDARDIZATION/EVALUATION ANALYSIS

1 JULY - 31 DECEMBER 1980

1CEVG/AN

BARKSDALE AIR FORCE BASE, LOUISIANA

IRIS WORK SHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 00006381 31,000201

SECURITY WARNING/ADMIN MARKINGS

RD FR CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

PROPRIETARY INFO

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501 U

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REVIEW ON

CLASSIFICATION AND DOWNGRADING INSTRUCTIONS FOR

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INSERT TO _____ DUP OF _____

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STANDARDIZATION/EVALUATION RESULTS

July - December 1980

SUMMARY

1. OVERALL SAC: SAC Standardization/Evaluation activity totaled 14,640 checks and reflects a decrease of 519 checks from the previous period; however, this is a 1.0% increase in total number of checks administered compared with Jul - Dec 1979. Areas where these rates changed are covered in paragraph 2 and 3. The overall command qualified rates, by aircraft type for unit and 1CEVG inflight and exams are represented in the following chart.

	UNIT INFLIGHT %	UNIT EP EXAM %	1CEVG INFLIGHT %	1CEVG EP EXAM %
B-52	89.7	98.6	91.5	98.0
FB-111	97.2	100.0	87.0	100.0
KC/EC-135	93.3	98.6	95.0	98.7
Combat Support Aircraft (CSA)	100.0	100.0	90.5	94.7

2. UNIT: Unit activity including notice, no-notice, and spot checks totaled 13,224 evaluations with a 95.0% overall qualified rate. Unit activity decreased by 532 and the overall qualified status decreased by 0.3 percent. When compared with the Jul - Dec 1979 report, unit activity increased by 121 and overall qualified status decreased by 0.4 percent. Inflight activity totaled 7,174 evaluations with a 92.3% inflight qualified rate and a 4.6% qualification level two rate. Emergency procedure examinations administered by the units totaled 8,460 checks resulting in a 98.6% qualified rate.

3. 1CEVG: 1CEVG Standardization/Evaluation activity totaled 1,416 checks, an increase of 13 evaluations from the last period and an increase of 335 over one year. Personnel evaluated by 1CEVG achieved a 95.0% overall qualified rate including a 2.8% qualified with training. Of the 884 inflight evaluations, a 94.1% qualified rate was achieved which includes a 4.6% qualified with training rate. Emergency procedure examinations administered by 1CEVG totaled 1,336 checks with a 98.9% qualified rate.

4. QUALIFICATION LEVEL TWO: Areas discussed in the Unit Qual Level Two Analysis include crew coordination, mission planning, bombing, preflight, judgement/compliance, air refueling, equipment operation, AGM-69, cruise, communications, electronic warfare, FCS operation, and navigation.

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STANDARDIZATION/EVALUATION ANALYSIS

1 JULY - 1 DECEMBER 1980

PURPOSE: The report is prepared at the conclusion of each six month training period to provide the command a consolidated summary of unit and 1st Combat Evaluation Group administered standardization checks.

SCOPE: This report presents results of unit and 1CEVG Standardization/Evaluation Checks administered during 1 Jul - 31 Dec 1980. Graded areas pertaining to individual crew positions, by type aircraft, are covered in this report. Problem areas and trends are identified with recommendations for corrective actions where applicable.

SOURCE: Data contained in this report was extracted from the RCS: SAC-DOT (M) 7109 Part I, Statistical Data Section (SAC Form 111), and Part II, Reasons for Unqualified Status, and results of 1CEVG evaluations.

DISCUSSION: This report discusses all standardization/evaluation checks administered throughout the Strategic Air Command and is divided by overall SAC, Unit Evaluations and 1CEVG administered checks.

SECTION A

SAC STANDARDIZATION/EVALUATION RECAP

During the period Jul-Dec 1980 SAC aircrews were administered 14,640 standardization/evaluation checks. Of these, 13,224 were unit administered with the remaining 1416 checks given on 1CEVG visits. The total number of checks administered this period shows an increase in total evaluations of 456 from a year ago. However, during the past six months, there were 532 less unit checks and 13 more 1CEVG evaluations than the Jan-Jun semester.

Aircrew members evaluated by unit Stan/Eval achieved a 95.0 percent overall qualified rating while those evaluated by 1CEVG also received a qualified rating of 95.0 percent. Overall, the combined qualified rating decreased by 0.3% for this period.

The following eight charts depict overall SAC evaluations by type aircraft for ARF, 3AD, 8AF, 15AF and SAC totals. Unit and 1CEVG statistics are separated by type aircraft and crew positions. Included in these figures are all spot checks and inflight evaluations as well as emergency procedures exams and flight simulator checks administered as a separate check.

PREPARED BY FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
ARF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN UA028-NAO

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	CEVG	UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
KC-135	170	1272	0.0	0.0	95.3	92.4	1.8	3.6	97.1	96.0
TOTAL	170	1272	0.0	0.0	95.3	92.4	1.8	3.6	97.1	96.0

*** REPRESENTS OVERALL QUALIFICATION (Q AND QT)

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
3AD CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN U4028-N10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT NOT QUALIFIED CEVG	PERCENT NOT QUALIFIED UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
B-52	62	272	0.0	0.0	88.7	91.9	0.0	2.2	88.7	94.1
KC-135	52	174	0.0	0.0	96.2	93.1	3.8	3.4	100.0	96.6
TOTAL	114	446	0.0	0.0	92.1	92.4	1.8	2.7	93.9	95.1

*** REPRESENTS OVERALL QUALIFICATION (Q AND QT)

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
MAF CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN 11A026-N10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT UNQUALIFIED CEVG	PERCENT UNQUALIFIED UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
B-52	225	2269	0.0	0.0	86.7	90.4	5.3	3.4	92.0	93.8
FB-111	39	336	0.0	0.0	89.7	95.0	2.6	2.9	92.3	97.9
KC-135	247	2405	0.0	0.0	93.1	93.1	2.8	2.2	96.0	95.3
EC-135	20	40	0.0	0.0	90.0	97.5	0.0	0.0	90.0	97.5
TOTAL	531	5053	0.0	0.0	90.0	92.1	3.8	2.8	93.8	94.8

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*** REPRESENTS OVERALL QUALIFICATION (Q AND QT)

PREPARED 01 FEB 1A STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
154F CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) RCN HAQ2A-N10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	CEVG	UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG REQ CEVG	PERCENT QUAL/TRNG REQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
B-52	266	2735	0.0	0.0	92.0	91.9	3.1	2.6	95.1	94.5
KC-135	157	3056	0.0	0.0	93.6	93.0	1.9	2.1	95.5	95.0
EC-135	73	230	0.0	0.0	95.9	92.6	1.4	1.3	97.3	93.9
E-4		39		0.0		100.0		0.0		100.0
RC-135M	5	21	0.0	0.0	80.0	95.2	0.0	4.8	80.0	100.0
RC-135S	21	50	0.0	0.0	90.5	86.0	9.5	8.0	100.0	94.0
RC-135U	3	15	0.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0
RC-135V	35	188	0.0	0.0	100.0	94.1	0.0	0.5	100.0	94.7
SR-71		11		0.0		100.0		0.0		100.0
U-2		35		0.0		88.6		5.7		94.3
T-38		33		0.0		100.0		0.0		100.0
OTHER	21	40	0.0	0.0	90.5	100.0	0.0	0.0	90.5	100.0
TOTAL	541	6453	0.0	0.0	93.2	92.6	2.5	2.2	95.7	94.9

*** REPRESENTS OVERALL QUALIFICATION (Q AND QT)

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
SAC CEVG AND UNIT SUMMARY(QUALIFICATION LEVEL) PCN UA026-N10

AIRCRAFT	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	PERCENT QUALIFIED CEVG	PERCENT QUALIFIED UNIT	PERCENT QUAL/TRNG RFQ CEVG	PERCENT QUAL/TRNG RFQ UNIT	PERCENT QUALIFIED*** CEVG	PERCENT QUALIFIED*** UNIT
B-52	573	5276	0.0	0.0	89.5	91.2	3.7	2.9	93.2	94.2
FB-111	34	339	0.0	0.0	89.7	95.0	2.6	2.9	92.3	97.9
KC-135	466	6907	0.0	0.0	94.1	92.9	2.4	2.4	96.5	95.3
EC-135	53	270	0.0	0.0	94.6	93.3	1.1	1.1	95.7	94.4
E-4		39		0.0		100.0		0.0		100.0
RC-135M	5	21	0.0	0.0	80.0	95.2	0.0	4.8	80.0	100.0
RC-135S	21	50	0.0	0.0	90.5	86.0	9.5	8.0	100.0	94.0
RC-135U	3	15	0.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0
RC-135V	35	188	0.0	0.0	100.0	94.1	0.0	0.5	100.0	94.7
SR-71		11		0.0		100.0		0.0		100.0
U-2		35		0.0		88.6		5.7		94.3
T-38		33		0.0		100.0		0.0		100.0
OTHER	21	40	0.0	0.0	90.5	100.0	0.0	0.0	90.5	100.0
TOTAL	14.6	13224	0.0	0.0	92.2	92.4	2.8	2.6	95.0	95.0

*** REPRESENTS OVERALL QUALIFICATION (Q AND QT)

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) PCN UA026-N07
01 JUL 1980 - 31 DEC 1980

B-52

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	119	13	10.9	89.1	1362	67	4.9	95.1
COPILOT *	3	1	33.3	66.7	11	2	18.2	81.8
COPILOT	65	5	7.7	92.3	810	59	7.3	92.7
RADAR NAVIGATOR	111	8	7.2	92.8	856	53	6.2	93.8
NAVIGATOR	72	8	11.1	88.9	737	52	7.1	92.9
EWO	99	3	3.0	97.0	765	30	3.9	96.1
GUNNER	104	1	1.0	99.0	735	45	6.1	93.9
TOTAL	573	39	6.8	93.2	5276	308	5.8	94.2

FB-111

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	19	0	0.0	100.0	173	5	2.9	97.1
RADAR NAVIGATOR	20	3	15.0	85.0	166	2	1.2	98.8
TOTAL	39	3	7.7	92.3	339	7	2.1	97.9

K/E/RC/135

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	243	12	4.9	95.1	2790	114	4.1	95.9
COPILOT *	11	2	18.2	81.8	51	4	7.8	92.2
COPILOT	122	7	5.7	94.3	1453	72	5.0	95.0
RC-135 NAV 1	12	0	0.0	100.0	36	3	8.3	91.7
NAVIGATOR	174	2	1.1	98.9	1513	79	5.2	94.8
TACTICAL CMDR	4	0	0.0	100.0	13	0	0.0	100.0
MANUAL TRACKER	2	0	0.0	100.0	5	1	20.0	80.0
R-1	13	0	0.0	100.0	30	0	0.0	100.0

(NOTE: (*) DENOTES QUALIFIED PILOT)

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) PCN UA02A-N07
01 JUL 1980 - 31 DEC 1980

K/F/RC/135

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
R-3	6	0	0.0	100.0	27	1	3.7	96.3
R-3	3	0	0.0	100.0	22	0	0.0	100.0
R-4	2	0	0.0	100.0	8	0	0.0	100.0
BOOM OPERATOR	189	4	2.1	97.9	1498	76	5.1	94.9
SCANNR/FLT-STRL	2	0	0.0	100.0	5	0	0.0	100.0
TOTAL	783	27	3.4	96.6	7451	350	4.7	95.3

F-4

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	0	0			20	0	0.0	100.0
NAVIGATOR	0	0			10	0	0.0	100.0
FLT ENGR/FMT/AL	0	0			9	0	0.0	100.0
TOTAL	0	0			39	0	0.0	100.0

SR-71

POSITION	ICEVG EVALUATIONS CHECKED	NR U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR U	%U	%QUAL
AIRCRAFT CMDR	0	0			6	0	0.0	100.0
RSO	0	0			5	0	0.0	100.0
TOTAL	0	0			11	0	0.0	100.0

TOTAL INDIVIDUAL STATUS (QUALIFICATION LEVEL) PCN UA02A-N07
01 JUL 1980 - 31 DEC 1980

U-2

POSITION	ICEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	0	0				35	2	2	5.7	94.3
TOTAL	0	0				35	2	2	5.7	94.3

T-38

POSITION	ICEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	0	0				33	0	0	0.0	100.0
TOTAL	0	0				33	0	0	0.0	100.0

OTHER

POSITION	ICEVG EVALUATIONS CHECKED	NR	U	%U	%QUAL	UNIT OVERALL EVALUATIONS CHECKED	NR	U	%U	%QUAL
AIRCRAFT CMDR	10	1		10.0	90.0	30	0	0	0.0	100.0
COPILOT	2	1		50.0	50.0	0	0			
RADAR NAVIGATOR	1	0		0.0	100.0	0	0			
NAVIGATOR	5	0		0.0	100.0	8	0	0	0.0	100.0
R-3	1	0		0.0	100.0	0	0			
BOOM OPERATOR	2	0		0.0	100.0	2	0	0	0.0	100.0
TOTAL	21	2		9.5	90.5	40	0	0	0.0	100.0

SECTION B

STANDARDIZATION/EVALUATION RECAP

A total of 7174 unit inflight evaluations were administered for a 92.3% inflight qualified rate. This includes a QL 2 rate of 4.6 percent. A breakout by type of aircraft follows: (Percent QL2/QL3) B-52 - 5.7/10.3, FB-111 - 4.0/2.8, KC-135 - 4.3/6.7, EC-135 - 2.8/5.7, E-4 - 100% Qualified. This section discusses all inflight areas where a minimum of fifty (50) evaluations were administered and a qualified rate of less than 97% was received on unit notice, no-notice, or 1CEVG evaluations. The 97% is an arbitrarily selected reference point used over a period of time as a means of providing continuity to trend analysis. Nine aircrew positions, encompassing 28 graded areas, failed to attain the 97% qualified for unit notice, no-notice, or 1CEVG evaluations. The positions and areas by aircraft type are listed in tabular format on the next two charts.

1. QUALIFICATION LEVEL 3 RESULTS:

AREA	POSITION	UNIT NOTICE #CK/U/%Q	UNIT NO-NOTICE #CK/U/%Q	1CEVG #CK/U/%Q
B-52				
**Emergency Procd (Exam)	Pilot	415/4/99.0	309/1/99.7	107/4/96.3
Instruments	Pilot	503/7/98.6	80/4/95.0	68/2/97.1
Air Refueling	Pilot	398/5/98.7	69/4/94.2	55/1/98.2
Navigation	Pilot	432/4/99.1	78/5/93.6	68/2/97.1
Judgement/Compliance	Pilot	456/8/98.2	84/4/95.2	70/0/100
Emergency Procd (Exam)	Copilot	187/2/98.9	284/13/95.4	55/0/100
Instruments	Copilot	189/16/91.5	62/1/98.4	51/0/100
*Crew Coordination	Copilot	172/8/95.3	64/6/90.6	53/2/96.2
Air Refueling	Copilot	159/0/100	51/3/94.1	42/0/100
Navigation	Copilot	167/3/98.2	58/4/93.1	52/0/100
*Equipment Operation	Copilot	152/4/97.4	56/2/96.4	52/2/96.2
*Bombing	Radar Navigator	303/12/96.0	58/8/86.2	63/4/93.7
Navigation	Radar Navigator	303/6/98.0	69/5/92.8	63/1/98.4
*Equipment Operation	Radar Navigator	282/7/97.5	63/2/96.8	63/2/96.8
Judgement/Compliance	Radar Navigator	321/3/99.1	68/3/95.6	64/1/98.5
**Emergency Procd (Exam)	Navigator	196/3/98.5	278/5/98.2	68/3/95.8
Crew Coordination	Navigator	180/3/98.3	56/5/91.1	56/0/100
**Bombing	Navigator	174/3/98.3	49/3/93.9	53/2/96.2
*Navigation	Navigator	201/11/94.5	54/4/92.6	54/3/94.4
Electronic Warfare	EWO	260/15/94.2	64/5/92.2	33/0/100
Emergency Procd (Exam)	Gunner	257/3/98.8	295/10/96.6	104/0/100
FCS Ops/Procedure	Gunner	271/19/93.0	73/10/86.3	33/0/100

AREA	POSITION	UNIT NOTICE #CK/U/%Q	UNIT NO-NOTICE #CK/U/%Q	1CEVG #CK/U/%Q
KC-135				
**Crew Coordination	Copilot	409/4/99.0	116/2/98.3	81/3/96.3
**Descent & Landing	Copilot	428/6/98.6	103/0/100	79/3/96.2
Mission Planning	Navigator	603/7/98.8	168/10/94.0	105/0/100
Navigation	Navigator	619/28/95.5	155/5/96.8	102/0/100
Equipment Operation	Navigator	581/11/98.1	160/5/96.9	104/2/98.1
Air Refueling	Boom Operator	577/17/97.1	200/10/95.0	91/0/100

*Below 97% on 1CEVG evaluations as well as unit evaluations.

**Below 97% on 1CEVG evaluations but not below in the unit program. These items are covered in Section C.

The remainder of this section discusses the areas above identified by the unit programs. The double asterisk items are covered in Section C. The format is as follows: a general paragraph highlights the reasons the area was identified; a chart follows that summarizes the reasons for all U's and QT's for unit notice and no-notice evaluations, and for single asterisk items, 1CEVG Q's and T's; the last chart shows results of the last few periods compared to this period.

2. B-52 QUALIFICATION LEVEL 3 RESULTS:

a. PILOT:

(1) INSTRUMENTS: B-52 pilots achieved a 95.0% qualified rate in the unit no-notice program. There were a total of eleven unqualified pilots this period which is down six from last period. Four pilots were qualification level 2 which is up three from last period. Airspeed/Altitude control was again at the top of the list of problems. Holding procedure problems are still showing an unfavorable trend. In instruments, this period the pilots were below the 97% criteria, and the copilots were also, even though possibly more instrument work is being flown by copilots in the ACE program. In a related area, copilot write-up in crew coordination increased. If the pilot emphasizes crew coordination in a more positive manner, the copilot can back him up, especially in the area of airspeed/altitude control. This could eliminate many of the unqualified grades for both the pilot and copilot positions.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
Airspeed/Altitude Control	5	1
Penetration	2	0
ATC Clearance	2	0
Holding	1	3
Precision Approach	1	0
	11	4

INSTRUMENT QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	473/98.5	101/100	65/100
Jan-Jun 79	510/98.0	95/97.9	61/100
Jul-Dec 79	487/97.5	77/96.1	47/95.7
Jan-Jun 80	501/97.2	80/96.3	62/96.8
Jul-Dec 80	503/98.6	80/95.0	68/97.1

NOTE: Total Checks/% qualified.

(2) AIR REFUELING: The unit no-notice qualification rate for B-52 pilots was 94.2%. Overall, nine pilots were unqualified and six were qualified with training. This area is a repeat from a year ago, with incorrect power and control movements causing most of the problems. One pilot failed to use the A/R feature of the autopilot when no malfunction existed. During rendezvous one pilot leveled at the wrong initial altitude. Although most of the probems related to a need for more hands-on practice, a discussion with an IP of all the aerodynamic forces involved in refueling could help many pilots by allowing them to anticipate what they have to do, rather than just react to what appears to be happening during rendezvous and contact.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
Multiple Disconnects	4	0
Exceeding System Limits	2	0
Slow Pitch/Power Corrections	1	2
Rendezvous	1	0
Incorrect Procedure	1	0
Rough/Excessive Inputs	0	4
Total	9	6

AIR REFUELING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	357/99.4	86/100.0	59/96.6
Jan-Jun 79	381/99.5	74/100.0	51/100.0
Jul-Dec 79	375/97.9	55/96.4	32/100.0
Jan-Jun 80	383/100.0	68/100.0	46/97.8
Jul-Dec 80	398/98.7	69/94.2	55/98.2

NOTE: Total Checks/% qualified.

(3) NAVIGATION: B-52 pilots had a 93.6% qualified rate for unit no-notice evaluations. A total of nine pilots were unqualified. Three pilots exceeded corridor width. Examples of inattention by pilots during enroute navigation were airspeed being 25 KIAS low, off heading by 25 degrees, off altitude by 2000 feet, and passing a filed turn point by 65 miles. One pilot team failed to tune and identify the navigation aid, and others did not center the CDI when this was needed. Applying the wrong correction for drift caused an error in excess of 60 miles.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
Corridor Violation	3	0
Enroute Airspeed	2	0
Enroute Heading	2	0
Altitude Clearance	2	0
Total	9	0

NAVIGATION QUALIFED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	ICEVG
Jul-Dec 78	383/99.7	96/97.9	65/98.5
Jan-Jun 79	419/99.5	89/97.8	61/100.0
Jul-Dec 79	397/99.7	72/100.0	46/97.8
Jan-Jun 80	424/99.1	77/100.0	59/100.0
Jul-Dec 80	432/99.1	78/93.6	68/97.1

NOTE: Total Checks/% qualified.

(4) JUDGEMENT/COMPLIANCE: A varied list of deficiencies led to pilots getting a 95.2% qualified rate in the unit no-notice program. Overall, twelve pilots were unqualified and four were qualified with training. Failing to use oxygen when required by regulation or have it available as required led to some failures. Failing to plan ahead led to being unable to meet timing requirements or led to unacceptable activity. Accomplishing a six engine landing with a seven engine takeoff, or doing a seven engine takeoff during the hours of darkness were among the examples of violating procedural restrictions. One pilot exceeded gear down limiting airspeed and another exceeded 250 KIAS below 10,000 feet. Not knowing the limitations caused some of the problems. A little extra study time could solve many of these failures.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
Oxygen Discipline	3	2
Violated Procedural Restrictions	3	0
Poor Inflight Planning	3	0
Incomplete Required Checks	1	2
Non-Compliance with FLIP	1	0
Aircraft Limitation	1	0
Total	12	4

JUDGEMENT/COMPLIANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	414/99.0	102/99.0	65/100.0
Jan-Jun 79	459/99.3	95/96.8	63/95.2
Jul-Dec 79	425/99.1	74/97.3	47/97.9
Jan-Jun 80	472/98.3	84/97.6	61/98.4
Jul-Dec 80	456/98.2	84/95.2	70/100.0

NOTE: Total Checks/% qualified.

6. COPILOT:

(1) EMERGENCY PROCEDURES (EXAM): B-52 copilots received a 95.4% qualified rate for unit no-notice evaluations. There were 15 failures this period which is only one more than last period. Two of these were students from Castle AFB. Individual study of flight manuals would solve this as a problem area.

B-52 COPILOT DEFICIENCIES

REASON	#U
General Knowledge	13
Critical Action	2
Total	15

EMERGENCY PROCD (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	207/97.1	537/95.7	97/100.0
Jan-Jun 79	211/99.1	357/97.2	28/100.0
Jul-Dec 79	172/95.3	335/94.9	14/100.0
Jan-Jun 80	210/96.2	315/98.1	15/100.0
Jul-Dec 80	187/98.9	284/95.4	55/100.0

NOTE: Total Checks/% qualified

(2) INSTRUMENTS: B-52 copilots had a 91.5% qualified rate in the unit notice program. Overall, seventeen were unqualified and two were qualified with training. Last period they were 93.4%, and a year ago they were 95.9% qualified. This area has been identified since the January - June 1978 period. Among the write-ups are the following: descended through a restricted altitude; initiated descent on glide slope with fall scale CDI deflection; failed to set proper course in course window; pitch and lateral control movements rough causing airspeed and altitude to be off; flew ILS course with warning flags present. Study of AFM 51-37, Instrument Flying and more work in the CPT is needed.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Poor Altitude/Airspeed Control	8	0
Precision Approach	6	1
Penetration	2	0
ATC Clearance	1	0
Holding	0	1
Total	17	2

INSTRUMENTS QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	216/95.8	96/99.0	55/100.0
Jan-Jun 79	234/96.6	82/98.8	54/100.0
Jul-Dec 79	196/95.9	61/98.4	32/96.9
Jan-Jun 80	229/93.4	65/95.4	46/100.0
Jul-Dec 80	189/91.5	64/98.4	51/100.0

NOTE: Total Checks/% qualified.

(3) CREW COORDINATION: The unit notice qualification rate for copilots was 95.3%. It was 90.6% for unit no-notice evaluations and 96.2% for 1CEVG evaluations. A total of 16 copilots were unqualified and 12 were qualified with training. Some copilots allowed their pilots to be off airspeed/altitude or miss turn points. There were misunderstandings of the anti-icing system, of crew duties during takeoff, and of how to run a checklist. The 1CEVG write-ups follow: failure to inform the pilot when descending below glideslope, failure to insure the 70 knot call was made at the proper airspeed, demonstrating a lack of knowledge of the rudder/elevator system, and failure to advise the pilot of crossing mandatory altitude points 1,000 feet high. Many crews do not discuss problems that they encounter repeatedly during missions. A little time spent discussing what is expected by each member of the crew during mission planning could pay great dividends.

B-52 COPILOT DEFICIENCIES

REASON	UNIT EVALUATIONS #U	UNIT EVALUATIONS #QT	1CEVG EVALUATIONS #U	1CEVG EVALUATIONS #QT
Airspeed/Altitude/Navigation Deviations	5	3	1	1
Instruments	3	1	0	0
Aircraft Limitations/Equipment Operation	2	2	0	1
Low Level Coordination	2	1	0	0
General Confusion	1	3	0	0
Takeoff	1	0	1	0
Total	14	10	2	2

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	191/97.4	95/95.8	55/98.2
Jan-Jun 79	217/98.2	82/96.3	54/96.3
Jul-Dec 79	177/97.2	61/93.4	32/96.9
Jan-Jun 80	208/98.1	65/95.4	46/97.8
Jul-Dec 80	172/95.3	64/90.6	53/96.2

NOTE: Total Checks/% qualified.

(4) AIR REFUELING: B-52 copilots had a 94.1% qualified rate for unit no-notice evaluations. Three were unqualified and one was qualified with training. On rendezvous, one crew leveled at the wrong altitude. One copilot did not complete the AR checklist. Another copilot left the slipway doors open and allowed the pilot to accelerate beyond the limitation airspeed. Wrong fuel switch position caused the other write-up.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Rendezvous	2	1
Aircraft Limitation	1	0
Fuel Panel	0	1
Total	3	1

AIR REFUELING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	188/100.0	75/100.0	49/100.0
Jan-Jun 79	209/100.0	62/100.0	46/100.0
Jul-Dec 79	171/100.0	45/100.0	18/100.0
Jan-Jun 80	207/100.0	52/100.0	31/100.0
Jul-Dec 80	159/100.0	51/94.1	42/100.0

NOTE: Total Checks/% qualified

(5) NAVIGATION: B-52 copilots received a 93.1% qualified rate on unit no-notice evaluations. This is the second succeeding period for this area to be identified. Seven copilots were unqualified. This is up four over last period. Again, violating corridor restrictions during low level was the biggest problem.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Corridor Violation	4	0
Airspeed/Altitude	1	0
Wrong Nav Aid Selected	1	0
Passed Turn Point	1	0
Total	7	0

NAVIGATION QUALIFIED RATE

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	190/98.4	91/98.9	55/100.0
Jan-Jun 79	215/99.1	80/98.8	53/100.0
Jul-Dec 79	179/100.0	61/98.4	31/100.0
Jan-Jun 80	208/99.5	64/96.9	44/100.0
Jul-Dec 80	167/98.2	58/93.1	52/100.0

NOTE: Total Checks/% qualified.

(6) EQUIPMENT OPERATION: The unit no-notice qualified rate for B-52 copilots was 96.4% and 96.2% for 1CEVG checks. Six were unqualified and three were qualified with training. For the third period in a row, the fuel system has been a problem area for copilots. Again, Section VII of the Dash-1 needs more study.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Fuel System	4	3
Anti-ice	1	0
Ejection Seat Procedures	1	0
Total	6	3

EQUIPMENT OPERATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	171/97.7	87/97.7	55/100.0
Jan-Jun 79	195/100.0	62/100.0	54/98.1
Jul-Dec 79	164/96.3	53/98.1	31/90.3
Jan-Jun 80	196/96.9	54/96.3	46/100.0
Jul-Dec 80	152/97.4	56/96.4	52/96.2

NOTE: Total Checks/% qualified.

c. RADAR NAVIGATOR:

(1) BOMBING: The unit notice qualified rate in bombing for B-52 RNs was 96.0% while the unit no-notice rate was 86.2 percent. Overall, twenty were unqualified and eight were qualified with training. The total number of U's and T's increased from 23 last period to 28 this period. This is almost double the number of 15 from a year ago. Checklist completion and OAP/Target identification are still the major problems. The 1CEVG qualification rate was 93.7%. Among the 1CEVG write-ups were: failure to accomplish the WPR check correctly; failure to detect in illuminated bomb door control value light; failure to complete AOU target verification; and confusion with target destinations and AOU target numbers. Unit T-10 trainer instructors should be used to increase emphasis on checklist discipline. Target study officers can be used to help younger RNs with their RSI techniques during target study, rather than just quickly skimming over the standard material that is acceptable for more experienced crew members.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	UNIT EVALUATIONS #U	UNIT EVALUATIONS #QT	1CEVG EVALUATIONS #U	1CEVG EVALUATIONS #QT
OAP/Target ID	7	0	0	0
Checklist Completion	6	5	2	2
Bombing Procedures/Planning	5	3	1	1
Equipment Malfunction Analysis	2	0	1	0
Total	20	8	4	3

BOMBING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	307/93.8	83/83.1	63/98.4
Jan-Jun 79	343/96.8	74/79.7	50/92.0
Jul-Dec 79	301/97.0	52/94.2	41/95.1
Jan-Jun 80	315/95.6	60/88.3	48/91.7
Jul-Dec 80	303/96.0	58/86.2	63/93.7

NOTE: Total Checks/% qualified.

(2) NAVIGATION: B-52 Radar Navigators received a 92.8% qualification rate for unit no-notice evaluations. Overall, eleven were unqualified and three were qualified with training, almost the same figures of eleven U's and two QT's from last period. By far the most failures are for low level corridor violations. More complete low route study and practice of low level navigational techniques in the T-10 trainer could improve this area. One of the biggest problems may be with crew coordination. The navigator team many times may be distracted and forget who is primary for navigation. Also when the navigator gives the ETA to the next turn point, other crew members are not backing him making sure the turn is made. This needs to be discussed and worked out for crews that are having similar problems.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Corridor Violation	8	0
Off Course Enroute	1	3
Celestial	1	0
Failed to Meet Force Timing	1	0
Total	11	3

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	300/97.3	83/96.4	67/98.5
Jan-Jun 79	342/96.2	74/89.2	58/100.0
Jul-Dec 79	310/97.7	59/97.9	45/100.0
Jan-Jun 80	328/97.3	61/96.7	55/98.2
Jul-Dec 80	303/98.0	69/92.8	63/98.4

NOTE: Total Checks/% qualified.

(4) EQUIPMENT OPERATION: This is the third consecutive period that this area has been identified for B-52 radar navigators. This time they made 96.8% in the unit no-notice programs. Last year they had 4 U's and 4 T's. Last period they had 5 U's and 12 T's. This jumped to 9 U's and 20 T's this period. The number of systems mentioned in the write-ups also increased. The 1CEVG qualification rate was 96.8%. Among the 1CEVG write-ups were failures to analyze or take corrective action for BNS malfunctions such as crosshair malfunctions and failure to follow correct AOU checklist procedures. Part of the problem appears to be integrating the knowledge of the equipment with the needs of the mission. It is one thing to be able to pass academic tests sitting at a desk in a classroom, and an entirely different situation to be using the equipment during a bomb run or navigation leg. This idea of putting it all together needs to be brought out by instructors in the classroom and during mission planning.

B-52 RADAR NAVIGATOR DEFICIENCIES

	UNIT EVALUATIONS		1CEVG EVALUATIONS	
REASON	#U	#QT	#U	#QT
BNS Systems	4	15	2	1
Doppler	2	1	0	0
Scope Interpretation	1	0	0	0
Checklist	1	1	0	0
AJA-1	1	0	0	0
TA Equipment	0	1	0	0
AOU	0	1	0	0
MD-1	0	1	0	0
Total	9	20	2	2

EQUIPMENT OPERATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	256/99.2	77/100	67/100
Jan-Jun 79	293/99.0	64/98.4	57/100
Jul-Dec 79	293/99.7	59/94.9	45/100
Jan-Jun 80	288/99.3	57/94.7	56/98.2
Jul-Dec 80	282/97.5	63/96.8	63/96.8

NOTE: Total Checks/% qualified.

(5) JUDGEMENT/COMPLIANCE: B-52 radar navigators had a 95.6% qualification rate for unit no-notice evaluations. Six radar navigators were unqualified. Most of the writeups related to AFR 60-16 and the associated SAC supplement.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Oxygen Discipline	3	0
Survival Equipment	1	0
Thunderstorm Avoidance	1	0
Using Unauthorized Assistance	1	0
Total	6	0

JUDGEMENT/COMPLIANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	304/99.7	86/100.0	67/100.0
Jan-Jun 79	348/99.4	76/100.0	58/100.0
Jul-Dec 79	319/99.1	68/100.0	45/100.0
Jan-Jun 80	345/100.0	61/98.4	57/100.0
Jul-Dec 80	321/99.1	68/95.6	64/98.5

NOTE: Total Checks/% qualified.

d. NAVIGATOR:

(1) CREW COORDINATION: B-52 navigators received a 91.1% qualified rate in unit no-notice evaluations. Eight were unqualified and three were qualified with training. Not making required altitude calls or making an effort to notify the crew of being off altitude or airspeed, made up the majority of the write-ups. Better air discipline could resolve some of the problems.

B-52 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Airspeed/Altitude	4	1
TA Calibration	2	0
Low Level Coordination	1	1
AOU	1	0
Rendezvous	0	1
Total	8	3

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	165/99.4	90/96.7	52/100.0
Jan-Jun 79	198/98.5	81/93.8	57/100.0
Jul-Dec 79	187/97.9	56/100.0	30/96.7
Jan-Jun 80	186/98.4	60/96.7	48/100.0
Jul-Dec 80	180/98.3	56/91.1	56/100.0

NOTE: Total Checks/% qualified.

(2) NAVIGATION: Since 1972, B-52 navigators have been below the 97% qualified rate for both notice and no-notice evaluation. This period their qualified rates were 94.5% in the notice program and 92.6% in the unit no-notice program. For unit programs fifteen were unqualified and five were qualified with training. Three navigators were found unqualified by 1CEVG, and one was qualified with training. One write-up was for exceeding corridor limits, and the other three were for exceeding the error points for celestial navigation. The number of celestial navigation errors has more than double since the same period last year. Some fixes were plotted in error, drift was put down with the wrong sign, and extraction and adjustment errors were made. Much of this was due to carelessness. Exceeding corridor limits relates to the same reasons as given for radar navigators previously.

B-52 NAVIGATOR DEFICIENCIES

	UNIT EVALUATIONS		1CEVG EVALUATIONS	
REASON	#U	#QT	#U	#QT
Celestial Navigation Errors	5	4	3	1
Corridor Violation	4	0	0	0
Mission Data Recording	3	0	0	0
High Altitude Deviations	1	1	0	0
Force Timing	1	0	0	0
Rendezvous	1	0	0	0
Total	15	5	3	1

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	192/92.2	90/96.7	51/98.0
Jan-Jun 79	217/96.8	79/86.3	57/98.2
Jul-Dec 79	208/96.2	54/92.6	30/90.0
Jan-Jun 80	216/93.1	58/94.8	47/97.9
Jul-Dec 80	201/94.5	54/92.6	54/94.4

NOTE: Total Checks/% qualified.

e. ELECTRONIC WARFARE OFFICER:

(1) ELECTRONIC WARFARE: Electronic Warfare Officers received a qualified rate of 94.2% for unit notice checks and 92.2% for unit no-notice checks. A total of 20 were unqualified, which is 9 more than last period; and 27 were qualified with training, which is the same number as last period. The QT write-ups are covered in Section D. Many of the unqualified grades resulted from not following SAC Tactical Doctrine. Threat calls were not announced to the crew as required. Some EWOs failed to counter AAA threat. Others jammed restricted frequency bands. More study of tactical doctrine with practice in the T4 would be beneficial.

B-52 EWO DEFICIENCIES

REASON	#U	#QT
Threat Area Tactics	13	6
Failed to Counter Threat	4	0
Jammed Restricted Band	2	2
IFM Procedures	1	1
Signal Recognition	0	5
Equipment Operation	[illegible]	4
Penetration	0	3
Withdrawal	0	3
Equipment Check	0	2
Formation Montoring	0	1
Total	20	27

ELECTRONIC WARFARE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	292/95.2	96/96.7	33/100.0
Jan-Jun 79	310/96.5	80/92.5	32/96.6
Jul-Dec 79	271/94.1	61/98.4	24/95.8
Jan-Jun 80	262/96.6	69/97.1	26/96.2
Jul-Dec 80	260/94.2	64/92.2	33/100.0

NOTE: Total Checks/% qualified.

f. GUNNER:

(1) EMERGENCY PROCD (EXAM): There were 13 unqualified gunners for exams this period, which is down 3 from last period. They received a 96.6% qualified rate in the unit no-notice program. This is the fourth consecutive period that the FCSOs were identified in the same area. Wing Gunners could asist in group study or give guidance for more individual study of the Dash-1.

B-52 GUNNER DEFICIENCIES

REASON	#U
General Knowledge	12
Critical Action	1
Total	13

EMERGENCY PROCEDURE (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	227/99.6	531/97.6	117/100.0
Jan-Jun 79	273/99.3	347/96.3	27/100.0
Jul-Dec 79	232/98.7	348/96.8	35/100.0
Jan-Jun 80	320/99.4	356/96.1	69/100.0
Jul-Dec 80	257/98.8	295/96.6	104/100.0

NOTE: Total Checks/% qualified.

(2) FCS OPERATION/PROCEDURE: B-52 Fire Control Operators received a 93.0% qualified rate for unit notice evaluations and a 86.3% for unit no-notice evaluations. This area has been identified for the last six periods. The QT write-ups are discussed in Section D. Many of the unqualified grades resulted from failure to configure system for optimum combat capability. Many gunners failed to recognize a malfunction, or else did nothing about it if they saw a malfunction. On the other hand, one gunner removed the whole FCS control assembly in an attempt to overcome a minor azimuth coverage deficiency. Some gunners crossed the PCTAP in the wrong mode of operation. More hanger flying type meetings for gunners could be beneficial.

B-52 GUNNER DEFICIENCIES

REASON	#U	#QT
Improper Procedures	15	6
Equipment Operation/Malfunction Analysis	11	4
DCE	1	1
FEO	1	1
IFM	1	0
Total	29	12

FCS OPS/PROCEDURE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	279/93.9	102/95.1	30/100.0
Jan-Jan 79	353/95.2	83/89.2	29/93.1
Jul-Dec 79	302/95.0	91/93.4	19/94.7
Jan-Jun 80	350/95.7	69/92.8	26/100.0
Jul-Dec 80	271/93.0	73/86.3	33/100.0

NOTE: Total Checks/% qualified.

3. KC-135 QUALIFICATION LEVEL 3 RESULTS:

a. NAVIGATOR:

(1) MISSION PLANNING: KC-135 Navigators received a 94.0% qualified rate for unit no-notice evaluations. A total of 17 were unqualified and 23 were qualified with training. The QT write-ups are covered in Section D. The two publication write-ups related to missing pages. The flight plan write-ups included the following: course errors; reciprocals; distance measuring errors; omissions of required items; planning to an unauthorized ARCP; math errors; and planning through restricted air space. Thorough mission planning with crew members reviewing each others work would solve many of these problems.

KC-135 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Flight Plans	15	3
Publications	2	13
Chart Annotations	0	5
Cruise Altitude Planning	0	2
Total	17	23

MISSION PLANNING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	518/99.6	196/97.4	147/99.3
Jan-Jun 79	483/99.0	248/98.8	109/100.0
Jul-Dec 79	513/99.2	128/96.1	109/100.0
Jan-Jun 80	488/100.0	189/97.9	133/100.0
Jul-Dec 80	603/98.8	168/94.0	105/100.0

NOTE: Total Checks/% qualified.

(2) NAVIGATION: The unit no-notice qualified rate for KC-135 navigators in navigation was 96.8%, and the unit notice rate was 95.5%. They have been below the 97% criteria since the first period of 1976. Overall, 33 navigators were unqualified which is up 6 from last period. Qualified with training grades were 36 which is up six from last period. There were seven more celestial write-ups than last time. The number of track deviations remained the same. The North Star computer should be used to the maximum extent possible to pratice celestial navigation.

KC-135 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
Celestial Navigation	18	15
AR Track Deviation	11	1
AR Control Time	2	10
Mission Data Recording	1	7
INS Error	1	0
General Navigation	0	3
TOTAL	33	36

NAVIGATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	553/97.1	186/95.2	138/97.1
Jan-Jun 79	515/96.7	239/94.6	105/99.0
Jul-Dec 79	532/98.3	124/93.5	104/96.2
Jan-Jun 80	520/96.0	175/92.6	126/97.6
Jul-Dec 80	619/95.5	155/96.8	102/100.0

NOTE: Total Checks/% Qualified.

(3) EQUIPMENT OPERATION: In this area, KC-135 Navigators received a qualified rate of 96.9% for unit no-notice evaluations. Incorrect operation of the ASN-7 led the list of write-ups. Some navigators did not know to update or did not know how to up date their equipment when the doppler malfunctioned. The INS write-ups were for failure to follow the INS checklist procedures.

KC-135 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
ASN-7	5	8
Present Position Counters	4	6
APN-59	3	3
INS	2	4
APN-81	1	1
ASQ-15	1	0
1FF	0	1
HF Radio	0	1
N-1	0	1
Total	16	25

EQUIPMENT OPERATIONS QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	505/99.0	181/98.3	139/97.8
Jan-Jun 79	470/98.9	234/98.3	105/99.0
Jul-Dec 79	501/98.8	123/99.2	104/99.0
Jan-Jun 80	469/99.4	174/98.9	127/97.6
Jul-Dec 80	581/98.1	160/96.9	104/98.1

NOTE: Total Checks/% qualified.

b. BOOM OPERATOR:

(1) AIR REFUELING: The number of write-ups in this area decreased. Still the area is identified because the boom operators received a 95.0% qualified rate for unit no-notice evaluations. Striking the receiver outside the receptable was the biggest violation. Some boom operators used wrong terminology over the radio, and one did not give any corrections to the receiver to assist him into the envelope. One boom operator did not call a breakaway when if was required. Instructor boom operators should spend more time discussing the dynamics of boom control, e.g. comparing what happens with the boom and how to control it refueling the C-5 versus a fighter type aircraft.

KC-135 BOOM OPERATOR DEFICIENCIES

REASON	#U	#QT
Erractic Boom Control	15	5
Equipment and Procedural Knowledge	5	5
Allowed Boom Limits to be Exceeded	5	0
Radio Procedures	1	3
Breakaway Procedures	1	0
Checklist Deviation	0	2
Total	27	15

AIR REFUELING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	535/97.6	222/95.0	121/96.1
Jan-Jun 79	624/96.5	226/94.7	96/95.8
Jul-Dec 79	550/96.7	163/92.6	88/95.5
Jan-Jun 80	620/96.6	184/95.1	119/95.8
Jul-Dec 80	577/97.1	200/95.0	91/100.0

NOTE: Total Checks/% qualified.

4. The following series of charts show a summary of individual unit results for the previous six months. Units may use these charts to compare their unit stan/eval results with similiarly equipped units.

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN U4026-N11

ORG	CHKD	QUALIFICATION LEVEL Q	QT	U	% QUAL	CHKD	INDIVIDUAL INFLIGHT Q	QT	U	% QUAL	CHKD	INDIVIDUAL F.P.EXAMS Q	U	% QUAL
POMBERS (A-52)														
###	51	50	0	1	98.0	42	41	0	1	97.6	35	35	0	100.0
0009	152	136	4	12	92.1	84	70	4	10	88.1	107	107	0	100.0
0019	172	154	3	15	91.3	86	72	2	12	86.0	131	128	3	97.7
0020	131	122	2	7	94.7	77	69	2	6	92.2	85	84	1	98.8
0042	247	219	12	16	93.5	104	83	11	10	90.4	151	145	6	96.0
0052	116	100	6	10	91.4	76	61	6	9	88.2	59	57	2	96.6
0058	237	223	7	7	97.0	88	75	6	7	92.0	154	153	1	99.4
0097	167	147	10	10	94.0	104	85	10	9	91.3	116	115	1	99.1
0379	131	100	16	15	88.5	111	80	16	15	86.5	77	76	1	98.7
0410	471	443	5	23	95.1	137	112	4	21	84.7	348	346	2	99.4
0416	207	197	3	7	96.6	87	78	3	6	93.1	138	136	2	98.6
0596	111	96	5	10	91.0	82	70	4	8	90.2	60	58	2	96.7
6018	76	64	4	6	89.5	66	56	4	6	90.9	63	61	2	96.8
B&F	2269	2051	77	141	93.8	1144	952	72	120	89.5	1524	1501	23	98.5
0043	272	250	6	16	94.1	115	100	6	9	92.2	204	196	8	96.1
3AD	272	250	6	16	94.1	115	100	6	9	92.2	204	196	8	96.1
0005	372	352	5	15	96.0	128	111	5	12	90.6	212	209	3	98.6
0022	399	386	5	8	98.0	121	108	5	8	93.4	209	208	1	99.5
0037	198	169	6	23	88.4	104	79	5	20	80.8	116	115	1	99.1
0077	185	168	6	11	94.1	86	71	6	9	89.5	114	112	2	98.2
0092	286	270	3	13	95.5	99	84	4	11	88.9	209	207	2	99.0
0093	265	258	0	7	97.4	145	139	0	6	95.9	137	135	2	98.5
0096	202	189	6	7	96.5	114	104	6	4	96.5	136	133	3	97.8
0319	350	324	6	20	94.3	141	116	5	20	85.8	266	266	0	100.0
0320	129	114	9	6	95.3	92	80	6	6	93.5	70	70	0	100.0
0017	349	283	25	41	88.3	273	210	25	38	86.1	238	235	3	98.7
15AF	2735	2513	71	151	94.5	1303	1102	67	134	89.7	1707	1690	17	99.0
SAC	5276	4814	154	308	94.2	2562	2154	145	263	89.7	3435	3387	48	98.6
POMBERS (FB111)														
380	37	37	0	0	100.0	28	28	0	0	100.0	32	32	0	100.0

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN UA026-A11

ORG	QUALIFICATION LEVEL CHKD	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	Q	U	% QUAL
POMREHS (FR111)														
0393	90	87	1	2	97.8	57	54	1	2	96.5	50	50	0	100.0
0528	47	44	3	0	100.0	43	40	3	0	100.0	28	28	0	100.0
0529	45	42	3	0	100.0	33	30	3	0	100.0	33	33	0	100.0
0715	76	73	0	3	96.1	48	45	0	3	93.8	42	42	0	100.0
6007	44	39	3	2	95.5	44	39	3	2	95.5	42	42	0	100.0
BAF	339	322	10	7	97.9	253	236	10	7	97.2	227	227	0	100.0
SAC	339	322	10	7	97.9	253	236	10	7	97.2	227	227	0	100.0

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN UA026"N11

ORG TANKERS	QUALIFICATION LEVEL CHKD	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	Q	U	% QUAL
r072	64	61	1	2	96.9	56	54	1	1	98.2	55	54	1	98.2
r108	71	67	2	2	97.2	64	60	2	2	96.9	63	63	0	100.0
r116	102	94	2	6	94.1	65	61	2	2	96.9	81	77	4	95.1
r117	69	67	0	2	97.1	50	48	0	2	96.0	41	41	0	100.0
r126	77	76	1	0	100.0	56	55	1	0	100.0	53	53	0	100.0
r132	69	62	0	7	89.9	33	32	0	1	97.0	36	30	6	83.3
r133	93	92	1	0	100.0	63	62	1	0	100.0	75	75	0	100.0
r145	79	69	8	2	97.5	61	52	8	1	98.4	62	61	1	98.4
r147	74	63	8	3	95.9	59	49	8	2	96.6	55	54	1	98.2
r150	84	80	1	3	96.4	70	67	1	2	97.1	64	64	0	100.0
r151	67	65	2	0	100.0	53	51	2	0	100.0	49	49	0	100.0
r154	88	81	2	5	94.3	54	49	2	3	94.4	50	47	3	94.0
r191	74	63	10	1	98.6	58	47	10	1	98.3	53	53	0	100.0
r197	92	88	1	3	96.7	54	51	1	2	96.3	51	50	1	98.0
r314	87	78	3	6	93.1	64	56	3	5	92.2	50	49	1	98.0
r336	82	69	4	9	89.0	78	66	4	8	89.7	60	59	1	98.3
ARF	1272	1175	46	51	96.0	938	860	46	32	96.6	898	879	19	97.9
r007	196	186	7	3	98.5	78	72	5	1	98.7	100	98	2	98.0
r011	133	120	7	6	95.5	105	93	6	6	94.3	89	89	0	100.0
r041	146	132	3	11	92.5	69	58	4	7	89.9	110	107	3	97.3
r042	127	120	3	4	96.9	60	54	3	3	95.0	100	99	1	99.0
r046	231	225	0	6	97.4	98	92	0	6	93.9	125	125	0	100.0
r070	117	108	0	9	92.3	90	84	0	6	93.3	74	71	3	95.9
r071	54	51	1	2	96.3	40	38	1	1	97.5	27	26	1	96.3
r091	99	92	1	6	93.9	54	48	1	5	90.7	72	71	1	98.6
r097	136	130	1	5	96.3	78	72	1	5	93.6	108	108	0	100.0
r305	96	83	7	6	93.8	69	61	5	3	95.7	51	48	3	94.1
r310	119	113	1	5	95.8	63	57	1	5	92.1	87	87	0	100.0
r380	106	93	2	11	89.6	62	51	2	9	85.5	76	74	2	97.4
r384	131	121	3	7	94.7	54	47	3	4	92.6	89	86	3	96.6
r407	130	117	5	8	93.8	66	53	5	8	87.9	97	97	0	100.0
r509	131	124	1	6	95.4	73	68	1	4	94.5	89	88	1	98.9
r911	189	185	3	1	99.5	71	67	3	1	98.6	124	124	0	100.0

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
COMMAND UNIT OVERALL ANALYSIS SUMMARY PCN UA02A-N11

ORG	CHKD	QUALIFICATION LEVEL Q	QT	U	% QUAL	CHKD	INDIVIDUAL INFLIGHT Q	QT	U	% QUAL	CHKD	INDIVIDUAL F.P.EXAMS Q	U	% QUAL
TANKERS														
0912	129	119	2	8	93.8	54	45	2	7	87.0	101	100	1	99.0
0913	53	50	1	2	96.2	36	33	1	2	94.4	24	24	0	100.0
0920	97	85	4	8	91.8	80	68	4	8	90.0	66	65	1	98.5
6018	25	25	0	0	100.0	0	0	0	0		0	0	0	
HAF	2445	2279	52	114	95.3	1300	1161	48	91	93.0	1609	1587	22	98.6
0043	5	5	0	0	100.0	5	5	0	0	100.0	5	5	0	100.0
0909	169	157	6	6	96.4	114	102	6	6	94.7	114	114	0	100.0
3AD	174	162	6	6	96.6	119	107	6	6	95.0	119	119	0	100.0
0004	116	106	1	7	94.0	63	57	1	5	92.1	58	56	2	96.6
0006	11	11	0	0	100.0	11	11	0	0	100.0	4	4	0	100.0
0009	197	184	4	9	95.4	93	84	4	5	94.6	112	111	1	99.1
0022	276	263	3	10	96.4	80	67	3	10	87.5	136	136	0	100.0
0028	244	229	5	10	95.9	80	67	4	9	88.8	96	95	1	99.0
0043	188	174	3	11	94.1	75	62	3	10	86.7	138	137	1	99.3
0055	188	179	2	7	96.3	77	69	4	4	94.8	80	80	0	100.0
0092	171	161	5	5	97.1	53	43	5	5	90.6	129	129	0	100.0
0093	159	157	0	2	98.7	126	124	0	2	98.4	123	123	0	100.0
0349	186	179	3	4	97.8	82	76	3	3	96.3	106	105	1	99.1
0904	63	54	4	5	92.1	53	44	4	5	90.6	40	40	0	100.0
0905	226	214	6	6	97.3	96	85	6	5	94.8	169	168	1	99.4
0906	209	194	5	10	95.2	98	87	5	6	93.9	159	155	4	97.5
0916	168	157	6	5	97.0	107	98	6	3	97.2	115	113	2	98.3
0917	167	157	1	9	94.6	83	74	1	8	90.4	114	113	1	99.1
0924	225	217	1	7	96.9	80	54	1	5	91.7	147	145	2	98.6
6017	492	416	17	59	88.0	436	364	19	53	87.8	391	384	7	98.2
15AF	3286	3054	66	166	94.9	1673	1466	69	138	91.8	2117	2094	23	98.9
SAC	7177	6670	170	337	95.3	4030	3594	169	267	93.4	4743	4679	64	98.7

PREPARED 81 FEB 14

STANDARDIZATION EVALUATION ANALYSIS
COMMAND UNIT OVERALL ANALYSIS SUMMARY

01 JUL 1980 - 31 DEC 1980
PCN UA026-81-11

ORG	QUALIFICATION LEVEL CHKD	Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	Q	U	% QUAL
MISSION SUPPORT														
0009	33	33	0	0	100.0	32	32	0	0	100.0	24	24	0	100.0
0055	40	40	0	0	100.0	39	39	0	0	100.0	31	31	0	100.0
15AF	73	73	0	0	100.0	71	71	0	0	100.0	55	55	0	100.0
SAC	73	73	0	0	100.0	71	71	0	0	100.0	55	55	0	100.0

SECTION C

1CEVG STANDARDIZATION/EVALUATION RECAP

Nineteen units throughout the command were visited by 1CEVG this period. Overall aircrew results are depicted in this section. Areas evaluated were stan/eval program, unit training, fuel conservation, and staff support. A total of 884 1CEVG inflight evaluations were administered in the command for 94.1% inflight qualified rate. The 1CEVG inflight qualified with training rate was 4.6 percent. The 1CEVG breakout by aircraft follows: (percent QL2/3) B-52 - 3.7/8.5 KC/EC-135 - 3.2/5.0 FB-111 - 4.3/13.0.

This section will discuss the 1CEVG evaluations administered this period. Details on unqualified performance in the areas reported were provided by 1CEVG evaluators and from the 1CEVG/ST semiannual newsletter. The performance rates listed below represent overall 1CEVG percent qualified for all crew members by aircraft type.

	JAN - JUN 80		JUL - DEC 80	
	INFLIGHT	EP EXAM	INFLIGHT	EP EXAM
B-52	91.9	98.5	91.5	98.0
FB-111	94.3	100.0	87.0	100.0
EC/KC-135	94.7	99.3	95.0	99.7

1. B-52 PILOT:

a. EMERGENCY PROCEDURES (EXAM): B-52 pilots received a 96.3% qualification rate for 1CEVG evaluations. Five were unqualified in unit programs and four were found unqualified by 1CEVG. Emergency situations missed were the following; wheel brake system failure; crash landing immediately after takeoff; abort; and runaway stabilizer trim. The other failures were for making less than 85% on the general knowledge test.

B-52 PILOT DEFICIENCIES

REASON	UNIT EVALUATIONS #U	1CEVG EVALUATIONS #U
General Knowledge	3	2
Critical Action	2	2
Total	5	4

EMERGENCY PROCD (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 78	361/99.2	530/99.1	113/98.3
Jan - Jun 79	338/99.7	351/98.6	52/100.0
Jul - Dec 79	346/98.3	347/98.6	60/95.0
Jan - Jun 80	398/99.7	339/98.2	74/97.3
Jul - Dec 80	415/99.0	309/99.7	107/96.3

NOTE: Total Checks/% qualified.

2. B-52 NAVIGATOR:

a. EMERGENCY PROCEDURES (EXAM): B-52 navigators received a 95.8% qualification rate for 1CEVG evaluations. Eight were unqualified in unit programs and three were found unqualified by 1CEVG. All unqualified grades were for receiving less than 85% on the general knowledge test.

B-52 NAVIGATOR DEFIENCIES

REASON	UNIT EVALUATIONS #U	1CEVG EVALUATIONS #U
General Knowledge	8	3
Total	8	3

EMERGENCY PROCEDURE (EXAM) QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul - Dec 78	168/98.8	502/99.0	93/100.0
Jan - Jun 79	181/100.0	332/97.9	25/100.0
Jul - Dec 79	172/99.4	302/98.7	13/100.0
Jan - Jun 80	184/100.0	303/98.0	31/100.0
Jul - Dec 80	196/98.5	283/98.2	71/95.8

NOTE: Total Checks/% qualified.

(b) BOMBING: The qualification rate for B-52 navigators was 96.2% for 1CEVG evaluations. For unit programs, six were unqualified and six were qualified with training. Incomplete checklist accomplishment or deviation from the checklist caused the most failures. Other areas were ineffective fixed angle bombing procedures, allowing the radar navigator to operate bomb doors with bomb door valve light on, and failure to provide advice on crosshair placement and heading error. Among the 1CEVG write-ups were the following: failure to monitor and detect incorrect switch positions on the bomb run, failure to adequately pace and monitor a bomb run resulting in accomplishment of the release configuration checklist inside 20TTG, not detecting an OAP valve misset by 19,000 feet, and not recognizing a 30 second difference between TIP timing and TTG drive. Work in the T-10 to prevent checklist problems would be beneficial.

B-52 NAVIGATOR DEFICIENCIES

REASON	UNIT EVALUATIONS #U	UNIT EVALUATIONS #QT	1CEVG EVALUATIONS #U	1CEVG EVALUATIONS #QT
Checklist	3	2	2	2
Crosshair Placement	2	1	0	0
Alternate Bombing	1	0	0	1
Bomb Doors	0	3	0	0
Total	6	6	2	3

BOMBING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	180/97.8	86/98.8	67/95.5
Jan-Jun 79	202/99.0	80/91.3	32/97.9
Jul-Dec 79	184/100.0	49/100.0	27/100.0
Jan-Jun 80	186/97.3	58/94.8	41/100.0
Jul-Dec 80	174/98.3	49/93.9	53/96.2

NOTE: Total Checks/% qualified.

2. KC-135 COPILOT:

a. CREW COORDINATION: KC-135 copilots had a 96.3 qualification rate for 1CEVG evaluations. For unit programs six copilots were unqualified and eight were qualified with training. There were no QTs for 1CEVG evaluations, but there were three unqualified items. Instrument related write-ups included allowing the pilot to fly through the localizor course and maintain a divergent heading, allowing the pilot to make a wrong turn into holding, and allowing the pilot to try to fly a TACAN approach without selecting TACAN on the select switch. Missed altitude calls were missed for both climb and descent. One co-pilot allowed a climb above 10,000 feet even though the aircraft was not pressurized. The 1CEVG write-ups were for failure to advise the pilot that the airspeed was 18 knots low during a three engine approach, for allowing the pilot to use improper anti-ice procedures, and for allowing the airspeed to decrease below maneuvering airspeed during instrument work.

KC-135 COPILOT DEFICIENCIES

REASON	UNIT EVALUATIONS #U	UNIT EVALUATIONS #QT	1CEVG EVALUATIONS #U	1CEVG EVALUATIONS #QT
Instruments	3	3	1	0
Altitude	2	0	0	0
Three-Engine Approach	0	0	1	0
Anti-ice	0	0	1	0
Power Rudder	1	0	0	0
Air Refueling	0	3	0	0
Oxygen Requirements	0	1	0	0
Pitch Bar Commands	0	1	0	0
Total	6	8	3	0

CREW COORDINATION QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	460/97.2	170/98.8	121/95.9
Jan-Jun 79	464/98.3	183/97.8	102/98.0
Jul-Dec 79	374/98.1	123/96.7	76/93.4
Jan-Jun 80	399/97.0	144/96.5	116/97.4
Jul-Dec 80	409/99.0	116/98.3	81/96.3

NOTE: Total Checks/% qualified.

b. DESCENT & LANDING: KC-135 copilots received a 96.2% qualification rate for 1CEVG evaluations. High flares and landing too hard were among the biggest errors. For unit programs, six copilots were unqualified and seven were qualified with training. Three copilots were found unqualified by 1CEVG for the following reasons: improper crosswind techniques; steep, short approach resulting in a ballooned flare and go around; and improper landing attitude resulting in a hard landing.

KC-135 COPILOT DEFICIENCIES

REASON	UNIT EVALUATIONS #U	UNIT EVALUATIONS #QT	1CEVG EVALUATIONS #U	1CEVG EVALUATIONS #QT
Flared Too High	3	3	1	0
Landing Too Firm	3	0	1	0
Crosswind Landing	0	0	1	0
Trim and Power Problems	0	3	0	0
Runway Alignment	0	1	0	0
Total	6	7	3	0

DESCENT AND LANDING QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	455/98.5	164/98.8	121/99.2
Jan-Jun 79	472/98.9	176/98.9	101/100.0
Jul-Dec 79	378/98.4	118/100.0	73/100.0
Jan-Jun 80	401/98.8	133/100.0	115/98.3
Jul-Dec 80	428/98.6	103/100.0	79/96.2

NOTE: Total Checks/% qualified.

4. 1CEVG INSPECTION PROGRAM RESULTS:

UNIT	STAN/EVAL PROGRAM	UNIT TRAINING	FUEL CONSERVATION	*STAFF SUPPORT
2BMW	EXC		SAT	EXC
5BMW	SAT	SAT	EXC	
6SR	EXC		SAT	EXC
19BMW	EXC		MAR	EXC
28BMW	SAT	SAT	SAT	
43SW	EXC	SAT	SAT	
55SW	MAR	SAT	UNSAT	
101AREFW	EXC	EXC	EXC	
126AREFW	EXC	EXC	EXC	
151AREFG	EXC	SAT	EXC	
161AREFG	EXC		EXC	EXC
190AREFG	EXC	EXC	SAT	
305AREFW	EXC	EXC	EXC	
319BMW	SAT	SAT	EXC	
320BMW	SAT	SAT	EXC	
376SW	EXC	EXC	EXC	
410BMW	EXC	SAT	EXC	
509BMW	SAT	SAT	EXC	
940AREFG	EXC		OUT	EXC

*As of 20 Jul 80 "Unit Training" replaced "Staff Support" as a major area of evaluation.

5. 1CEVG STATISTICAL SUMMARY:

The next 5 charts compare the 1 Jul - 31 Dec 80 1CEVG and unit no-notice evaluations for B-52 and KC-135 aircraft. A second group of 3 charts compare 1CEVG visits this period with the previous period. It should be noted that these figures include all 1CEVG and no-notice checks given, including inflight, EP Exams, and flight simulator. The remaining 3 charts total 1CEVG results inflight, EP exams and overall by unit.

PREPARED BY FEB 14 — STANDARDIZATION EVALUATION ANALYSIS — 01 JUL 1980 - 31 DEC 1980
AIRCRAFT TYPE E-52 — CEVG VS UNAT NO-NOTICE(QUALIFICATION LEVEL) — PCN UA026-NIP

	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	CEVG	UNIT	NUMBER QUALIFIED CEVG	NUMBER QUALIFIED UNIT	NUMBER QUAL/TNG REQ CEVG	NUMBER QUAL/TNG REQ UNIT	NUMBER UNQUALIFIED CEVG	NUMBER UNQUALIFIED UNIT	% QUAL CEVG	% QUAL UNIT
***7	0	1	0	0	0	1	0	0	0	0		100.0
9	0	63	0	0	0	60	0	1	0	2		96.8
19	50	80	0	0	44	73	2	0	4	7	92.0	91.3
20	0	51	0	0	0	47	0	1	0	3		94.1
42	0	99	0	0	0	89	0	1	0	9		90.9
62	43	7	0	0	35	6	5	0	3	1	93.0	85.7
68	0	104	0	0	0	98	0	2	0	4		96.2
97	0	62	0	0	0	59	0	1	0	2		96.8
379	0	23	0	0	0	13	0	5	0	10		64.3
410	72	808	0	0	60	205	5	0	7	3	90.3	98.6
416	0	83	0	0	0	78	0	0	0	5		94.0
596	60	13	0	0	56	10	0	0	4	3	93.3	76.9
8AF TOTAL	225	799	0	0	195	739	12	11	18	49	92.0	93.9

PREPARED BY FEB 14 — STANDARDIZATION EVALUATION ANALYSIS — 01 JUL 1980 - 31 DEC 1980
AIRCRAFT TYPE B-52 — CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) — PCN UA02A-N12

	NUMBER CHECKED CEVG	NUMBER CHECKED UNIT	CEVG	UNIT	NUMBER QUALIFIED CEVG	NUMBER QUALIFIED UNIT	NUMBER QUAL/TNG REQ CEVG	NUMBER QUAL/TNG REQ UNIT	NUMBER UNQUALIFIED CEVG	NUMBER UNQUALIFIED UNIT	% QUAL CEVG	% QUAL UNIT
43	62	140	0	0	55	131	0	2	7	7	88.7	95.0
3AD TOTAL	62	140	0	0	55	131	0	2	7	7	88.7	95.0
5	45	145	0	0	39	138	1	1	5	6	88.9	95.9
22	0	153	0	0	0	151	0	0	0	2		98.7
37	53	73	0	0	41	60	0	1	2	12	96.8	83.6
77	67	66	0	0	59	60	6	0	2	6	97.0	90.9
92	0	127	0	0	0	123	0	0	0	4		96.9
93	0	28	0	0	0	27	0	0	0	1		96.4
96	0	83	0	0	0	80	0	0	0	3		96.4
319	56	195	0	0	54	185	0	2	2	8	96.4	95.9
320	55	25	0	0	50	21	2	3	3	1	94.5	96.0
15AF TOTAL	286	895	0	0	243	845	9	7	14	43	95.1	95.2
SAC TOTAL	573	1834	0	0	513	1715	21	20	39	99	93.2	94.6

PREPARED BY FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
AIRCRAFT TYPE KC-135 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UA026-N12

	NUMBER CHECKED		NUMBER QUALIFIED		NUMBER QUALIFYING REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
72	0	16	0	0	0	16	0	1	0	1		94.4
105	27	25	0	0	25	23	1	1	1	1	96.3	96.0
115	0	36	0	0	0	30	0	2	0	4		88.9
117	25	8	0	0	25	8	0	0	0	0	100.0	100.0
126	0	10	0	0	0	10	0	0	0	0		100.0
132	29	12	0	0	26	6	2	0	1	6	96.6	50.0
133	0	37	0	0	0	37	0	0	0	0		100.0
145	0	21	0	0	0	19	0	1	0	1		95.2
147	0	16	0	0	0	14	0	3	0	1		94.4
150	0	26	0	0	0	26	0	0	0	0		100.0
151	0	14	0	0	0	14	0	0	0	0		100.0
154	0	14	0	0	0	13	0	0	0	1		92.9
191	25	26	0	0	24	24	0	1	1	1	96.0	96.2
197	33	7	0	0	33	6	0	0	0	1	100.0	85.7
314	31	16	0	0	29	12	0	2	2	2	93.5	87.5
336	0	21	0	0	0	18	0	1	0	2		90.5
ARF TOTAL	170	309	0	0	162	276	3	12	5	21	97.1	93.2
7	0	56	0	0	0	53	0	1	0	2		96.4
11	0	36	0	0	0	38	0	1	0	0		100.0
41	0	71	0	0	0	67	0	1	0	3		95.8

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
AIRCRAFT TYPE AC-135 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UA026-N12

	NUMBER CHECKED		NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
42	0	62	0	0	0	60	0	1	0	1		98.4
45	48	116	0	0	46	108	0	0	2	2	95.8	98.2
70	27	16	0	0	27	12	0	0	0	4	100.0	75.0
71	26	4	0	0	22	3	2	0	2	1	92.3	75.0
91	0	42	0	0	0	40	0	0	0	2		95.2
97	0	64	0	0	0	64	0	0	0	0		100.0
305	48	20	0	0	41	12	3	4	4	4	91.7	80.0
310	0	44	0	0	0	42	0	1	0	1		97.7
380	0	40	0	0	0	38	0	0	0	2		95.0
384	0	56	0	0	0	52	0	1	0	3		94.6
407	0	60	0	0	0	58	0	1	0	1		98.3
509	38	46	0	0	35	45	1	0	2	1	94.7	97.8
911	2	83	0	0	2	81	0	1	0	1	100.0	98.8
912	35	60	0	0	35	57	0	0	0	3	100.0	95.0
913	23	0	0	0	22	0	1	0	0	0	100.0	
920	0	21	0	0	0	16	0	1	0	4		81.0
BAF TOTAL	247	694	0	0	230	846	7	13	10	35	96.0	96.1

PREPARED 01 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
AIRCRAFT TYPE KC-135 CEVG VS UNIT NO-NOTICE(QUALIFICATION LEVEL) PCN UA026-N12

	NUMBER CHECKED				NUMBER QUALIFIED		NUMBER QUAL/TNG REQ		NUMBER UNQUALIFIED		% QUAL	
	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT	CEVG	UNIT
909	52	35	0	0	50	33	2	2	0	0	100.0	100.0
3AD TOTAL	52	35	0	0	50	33	2	2	0	0	100.0	100.0
6	3	6	0	0	2	0	0	0	1	0	66.7	
9	0	59	0	0	0	54	0	2	0	3		94.9
22	0	106	0	0	0	99	0	2	0	5		95.3
28	27	54	0	0	27	49	0	2	0	3	100.0	94.4
43	0	102	0	0	0	98	0	0	0	4		96.1
55	0	2	0	0	0	2	0	0	0	0		100.0
92	0	110	0	0	0	106	0	1	0	3		97.3
93	0	18	0	0	0	17	0	0	0	1		94.4
349	0	65	0	0	0	61	0	2	0	2		96.9
904	36	8	0	0	34	6	0	0	2	2	94.4	75.0
905	48	103	0	0	48	102	0	0	0	1	100.0	99.0
906	42	114	0	0	36	106	3	3	3	5	92.9	95.6
916	0	58	0	0	0	49	0	2	0	5		91.1
917	0	80	0	0	0	77	0	1	0	2		97.5
924	0	110	0	0	0	107	0	0	0	3		97.3
4017	1	6	0	0	0	0	0	0	1	0	0.0	
15AF TOTAL	157	887	0	0	147	933	3	15	7	39	95.5	96.0
SAC TOTAL	626	2225	0	0	589	2088	15	42	22	95	96.5	95.7

PREPARED 81 FEB 14
H-52

STANDARDIZATION EVALUATION ANALYSIS
TREND ANALYSIS

1 JAN 1980 - 31 DEC 1980
PCN UA026-N13

CEVG VISITS 1 JAN 80 - 30 JUN 80						CEVG VISITS 1 JUL 80 - 31 DEC 80					
UNIT	NUMB CHKD	Q	QT	U	% QUAL	UNIT	NUMB CHKD	Q	QT	U	% QUAL
###7	40	38		2	96.7						
						5	45	39	1	5	88.9
9	54	49	4	1	98.1						
19	50	44	2	4	92.0	19	50	44	2	4	92.0
20	58	50	1	5	91.1						
22	50	50			100.0						
						37	63	61		2	96.8
42	49	41	2	6	87.8						
						43	62	55		7	88.7
62	43	35	5	3	93.0	62	43	35	5	3	93.0
						77	67	59	6	2	97.0
98	45	45			100.0						
97	44	42	1	1	97.7						
						319	56	54		2	96.4
						320	55	50	2	3	94.5
379	55	50	2	3	94.5						
						410	72	60	5	7	90.3
416	60	51	2	7	88.3						
596	59	55		4	93.2	596	60	56		4	93.3
4017	14	9	4	1	92.9						
TOTAL	634	579	23	37	94.2	TOTAL	573	513	21	39	93.2

PREPARED BY FSC 14
KC-135

STANDARDIZATION EVALUATION ANALYSIS
TREND ANALYSIS

1 JAN 1980 - 31 DEC 1980
PCN 11A026-N13

CEVG UNIT	VISITS NUMB CHKD	1 JAN 80 - 30 JUN 80 Q	QT	U	% QUAL	CEVG UNIT	VISITS NUMB CHKD	1 JUL 80 - 31 DEC 80 Q	QT	U	% QUAL
###7	5	5			100.0						
6	3	2		1	66.7	6	3	2		1	66.7
7	41	35	3	3	92.7						
9	44	41	2	1	97.7						
11	46	44	2		100.0						
22	40	31	5	4	90.0						
						28	27	27			100.0
41	37	35		2	94.6						
42	40	36	1	3	92.5						
						46	48	46		2	95.8
						70	27	27			100.0
71	25	22	2	1	96.0	71	26	22	2	2	92.3
91	37	35	1	1	97.3						
97	37	35	1	1	97.3						
						108	27	25	1	1	96.3
						117	25	25			100.0
						132	29	26	2	1	96.6
133	30	29	1		100.0						
145	26	25		1	96.2						
147	26	23	2	1	96.2						
150	32	32			100.0						
151	29	26		3	89.7						
154	26	26	1	1	96.4						
						191	25	24		1	96.0
197	33	33			100.0	197	33	33			100.0
						305	48	41	3	4	91.7
310	36	36		2	94.7						
314	31	29		2	93.5	314	31	29		2	93.5
336	25	28			100.0						
349	37	37			100.0						
390	41	40	1		100.0						
394	26	24		2	92.3						
407	45	44		1	97.8						
509	38	35	1	2	94.7	509	38	35	1	2	94.7
						904	36	34		2	94.4
905	1	1			100.0	905	48	48			100.0
						906	42	36	3	3	92.9

PREPARED BY FEE 14 STANDARDIZATION EVALUATION ANALYSIS 1 JAN 1980 - 31 DEC 1980
KC-135 TREND ANALYSIS PCN UA026-N13

CEVG UNIT	VISITS NUMB CHKD	1 JAN 80 - 30 JUN 80 Q	QT	U	% QUAL	CEVG UNIT	VISITS NUMB CHKD	1 JUL 80 - 31 DEC 80 Q	QT	U	% QUAL
						909	52	50	2		100.0
911	2	2			100.0	911	2	2			100.0
912	34	34			100.0	912	35	35			100.0
913	23	22	1		100.0	913	23	22	1		100.0
916	51	47	4		100.0						
917	43	39	1	3	93.0						
920	46	48		1	98.0						
						4017	1			1	0.0
TOTAL	1049	984	24	36	96.6	TOTAL	626	589	15	22	96.5

PREPARED 81 FEB 14

STANDARDIZATION EVALUATION ANALYSIS
COMMAND CEVG OVERALL ANALYSIS SUMMARY

01 JUL 1980 - 31 DEC 1980
PCN UA026-N11

ORG	CHKD	QUALIFICATION LEVEL Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	Q	U	% QUAL
BOMBERS (B-52)														
0019	50	44	2	4	92.0	31	25	3	3	90.3	50	49	1	98.0
0062	43	35	5	3	93.0	27	21	5	1	96.3	38	38	0	100.0
0410	72	60	5	7	90.3	39	29	5	5	87.2	71	69	2	97.2
0596	60	56	0	4	93.3	28	26	0	2	92.9	58	54	2	96.6
8AF	225	195	12	18	92.0	125	101	13	11	91.2	217	212	5	97.7
0043	62	55	0	7	88.7	34	27	0	7	79.4	52	52	0	100.0
3AD	62	55	0	7	88.7	34	27	0	7	79.4	52	52	0	100.0
0005	45	39	1	5	88.9	32	28	1	3	90.6	45	43	2	95.6
0037	63	61	0	2	96.8	30	29	0	1	96.7	59	58	1	98.3
0077	67	59	6	2	97.0	31	23	6	2	93.5	63	63	0	100.0
0319	56	54	0	2	96.4	33	31	0	2	93.9	56	56	0	100.0
0320	55	50	2	3	94.5	31	28	2	1	96.8	55	52	3	94.5
15AF	286	263	9	14	95.1	157	139	9	9	94.3	278	272	6	97.8
SAC	573	513	21	39	93.2	316	267	22	27	91.5	547	536	11	98.0
BOMBERS (FB111)														
0393	14	12	1	1	92.9	9	7	1	1	88.9	14	14	0	100.0
0509	1	1	0	0	100.0	1	1	0	0	100.0	1	1	0	100.0
0715	24	22	0	2	91.7	13	11	0	2	84.6	24	24	0	100.0
8AF	39	35	1	3	92.3	23	19	1	3	87.0	39	39	0	100.0
SAC	39	35	1	3	92.3	23	19	1	3	87.0	39	39	0	100.0

PREPARED 81 FEB 14 STANDARDIZATION EVALUATION ANALYSIS 01 JUL 1980 - 31 DEC 1980
COMMAND CEVG OVERALL ANALYSIS SUMMARY PCN UA026-N11

ORG	CHKD	QUALIFICATION LEVEL Q	QT	U	% QUAL	CHKD	INDIVIDUAL INFLIGHT Q	QT	U	% QUAL	CHKD	INDIVIDUAL E.P.EXAMS O	U	% QUAL
TANKERS														
0108	27	25	1	1	96.3	20	18	1	1	95.0	27	27	0	100.0
0117	25	25	0	0	100.0	20	20	0	0	100.0	24	24	0	100.0
0130	29	26	2	1	96.6	19	17	2	0	100.0	29	28	1	96.6
0191	25	24	0	1	96.0	20	19	0	1	95.0	25	25	0	100.0
0197	33	33	0	0	100.0	20	20	0	0	100.0	33	33	0	100.0
0314	31	29	0	2	93.5	20	18	0	2	90.0	31	31	0	100.0
ARF	170	162	3	5	97.1	119	112	3	4	96.6	169	168	1	99.4
0046	48	46	0	2	95.8	33	31	0	2	93.9	42	42	0	100.0
0070	47	45	0	2	95.7	32	30	0	2	93.8	44	44	0	100.0
0071	26	22	2	2	92.3	17	13	2	2	88.2	25	25	0	100.0
0305	48	41	3	4	91.7	32	25	3	4	87.5	41	41	0	100.0
0509	38	35	1	2	94.7	24	21	1	2	91.7	34	34	0	100.0
0911	2	2	0	0	100.0	0	0	0	0		0	0	0	
0912	35	35	0	0	100.0	27	27	0	0	100.0	31	31	0	100.0
0913	23	22	1	0	100.0	13	12	1	0	100.0	23	23	0	100.0
BAF	267	248	7	12	95.5	178	159	7	12	93.3	240	240	0	100.0
0909	52	50	2	0	100.0	32	30	2	0	100.0	47	47	0	100.0
3AD	52	50	2	0	100.0	32	30	2	0	100.0	47	47	0	100.0
0004	32	30	1	1	96.9	24	23	1	0	100.0	30	29	1	96.7
0006	3	2	0	1	66.7	3	2	0	1	66.7	3	3	0	100.0
0028	27	27	0	0	100.0	20	20	0	0	100.0	23	23	0	100.0
0055	41	40	0	1	97.6	25	24	0	1	96.0	35	35	0	100.0
0904	36	34	0	2	94.4	24	22	0	2	91.7	35	35	0	100.0
0905	48	48	0	0	100.0	31	31	0	0	100.0	46	46	0	100.0
0906	42	36	3	3	92.9	32	26	3	3	90.6	38	38	0	100.0
4017	1	0	0	1	0.0	1	0	0	1	0.0	1	1	0	100.0
15AF	230	217	4	9	96.1	160	148	4	8	95.0	211	210	1	99.5
SAC	717	677	16	26	96.4	489	449	16	24	95.1	667	665	2	99.7

PREPARED 81 FEB 14

STANDARDIZATION EVALUATION ANALYSIS
COMMAND CEVG OVERALL ANALYSIS SUMMARY

01 JUL 1980 - 31 DEC 1980
PCN UA026-N11

ORG	CHKD	QUALIFICATION LEVEL Q	QT	U	% QUAL	INDIVIDUAL INFLIGHT CHKD	Q	QT	U	% QUAL	INDIVIDUAL F.P.EXAMS CHKD	Q	U	% QUAL
MISSION SUPPORT														
CCSS	21	19	0	2	90.5	12	11	0	1	91.7	19	18	1	94.7
15AF	21	19	0	2	90.5	12	11	0	1	91.7	19	18	1	94.7
SAC	21	19	0	2	90.5	12	11	0	1	91.7	19	18	1	94.7

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SECTION D

SPECIAL TOPIC

This section will be used from time to time to highlight areas that would not normally meet established criteria for inclusion in this analysis.

Terrain avoidance has had extra emphasis in the past few months. Even though none of the crew positions met the criteria for discussion in other sections, there were enough write-ups to indicate a possible adverse trend. The following four pages give a breakout for B-52 pilots, copilots, radar navigators, and navigators.

1. B-52 PILOT: For unit no-notice evaluations, B-52 pilots made 95.0 percent. A total of eleven pilots were unqualified and eleven were qualified with training. Problems with TA calibration ranged from a lack of proficiency in running the checklist to selecting the wrong profile setting marginal familiarity with flat and rolling calibration and radar altimeter procedures, to general lack of knowledge about the whole system. In many instances, it would really help if the pilot team sat down with the navigator team to discuss what each is doing during the calibration rather than just what the checklist response should be.

B-52 PILOT DEFICIENCIES

REASON	#U	#QT
TA Calibration	5	6
Flew Well Below Planned Altitude	2	0
Incorrect Trace Interpretation	2	0
Equipment/System	1	3
Incorrect Clearance Plane Setting	1	1
Failed to Maintain TA Altitude	0	1
Total	11	11

TERRAIN AVOIDANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	344/98.5	43/97.7	29/100.0
Jan-Jun 79	364/98.9	48/100.0	34/94.1
Jul-Dec 79	351/98.9	42/100.0	30/93.3
Jan-Jun 80	363/99.7	48/97.9	27/88.9
Jul-Dec 80	391/97.7	40/95.0	40/95.0

NOTE: Total Checks/% qualified.

2. B-52 COPILOT: Like the pilots, B-52 copilots were identified as having problems with terrain avoidance. They received a 96.6% qualified rate in unit no-notice evaluations. Three were qualified and five were qualified with training. Those unqualified delayed initiating a climb to safely clear a ridge during low level or delayed updating radar altimeter and clearance plane settings.

B-52 COPILOT DEFICIENCIES

REASON	#U	#QT
Incorrect Flying Procedure	2	0
Flew Well Below Planned Altitude	1	0
Incorrect Trace Interpretation	0	1
TA Calibration	0	2
Incorrect Clearance Plane Setting	0	2
Total	3	5

TERRAIN AVOIDANCE QUALIFIED RATE

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	203/99.0	41/97.6	23/100.0
Jan-Jun 79	222/100.0	42/100.0	31/96.8
Jul-Dec 79	175/99.4	35/100.0	18/100.0
Jan-Jun 80	208/99.5	37/100.0	18/100.0
Jul-Dec 80	160/98.8	29/96.6	26/96.3

NOTE: Total Checks/% qualified.

3. B-52 RADAR NAVIGATOR: Three radar navigators were unqualified and three were qualified with training. The no-notice qualification rate was 95.6 percent. The following were among the errors: misplotted TA calibration information, failed to set proper BNS frequency, didn't properly fade points or clear turns, and improper terrain assessment.

B-52 RADAR NAVIGATOR DEFICIENCIES

REASON	#U	#QT
TA Calibration	1	3
Improper Terrain Assessment	1	0
Improper BNS Frequency	1	0
Total	3	3

TERRAIN AVOIDANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	ICEVG
Jul-Dec 78	282/99.3	50/100.0	34/100.0
Jan-Jun 79	320/99.7	41/100.0	32/100.0
Jul-Dec 79	276/100.0	39/100.0	30/100.0
Jan-Jun 80	288/100.0	46/100.0	26/100.0
Jul-Dec 80	276/99.6	45/95.6	50/100.0

NOTE: Total Checks/% qualified.

4. B-52 NAVIGATOR: B-52 navigators had a 94.3 percent qualified rate for unit no-notice evaluations. Three were unqualified and four were qualified with training. All the errors related to calibrating the system or keeping the TA system updated. Handouts with practice data could be developed by the local training flight to assist in eliminating some of the errors.

B-52 NAVIGATOR DEFICIENCIES

REASON	#U	#QT
TA Calibration Errors	3	4
Total	3	4

TERRAIN AVOIDANCE QUALIFIED RATES

PERIOD	UNIT NOTICE	UNIT NO-NOTICE	1CEVG
Jul-Dec 78	175/98.3	52/100.0	24/100.0
Jan-Jun 79	201/100.0	50/100.0	31/100.0
Jul-Dec 79	183/100.0	34/100.0	18/94.4
Jan-Jun 80	182/98.9	43/100.0	23/100.0
Jul-Dec 80	169/99.4	35/94.3	40/97.5

NOTE: Total Checks/% qualified.

SECTION E

QUALIFICATION LEVEL 2 ANALYSIS

Unit Evaluations: The following statistics have been extracted from the unit's SAC-DOT (M) 7109 Report and the Part II as a means of identifying areas that unit results indicate a need for additional emphasis. The following section breaks out unit and 1CEVG evaluations by aircraft type, area and crew position that have at least 50 checks and a T rate over 3.0 percent.

1: B-52

AREA	POSITION	NOTICE #CHKD/#T/%T	NO-NOTICE #CHKD/#T/%T	1CEVG #CHKD/#T/%T
Crew Coordination	Pilot	448/8/1.8	84/3/3.6	70/1/2.9
Mission Planning	Copilot	167/4/2.4	60/7/11.7	53/0/0
Crew Coordination	Copilot	172/5/2.9	64/5/7.8	53/2/3.8
Judgement/Compliance	Copilot	172/3/1.7	64/2/3.1	53/0/0
Crew Coordination	Radar Navigator	293/5/1.7	64/2/4.4	66/1/1.5
Bombing	Radar Navigator	303/7/2.3	49/1/1.7	56/3/4.8
Air Refueling	Radar Navigator	268/11/4.1	49/1/2.0	50/0/0
Equipment Operation	Radar Navigator	282/15/5.3	63/4/6.3	63/2/3.2
Equipment Operation	Navigator	163/6/3.7	49/1/2.0	54/0/0
Mission Planning	EWO	241/6/2.5	61/3/4.9	34/1/2.9
Cruise	EWO	242/1/0.4	63/2/3.2	34/0/0
Communications	EWO	244/6/2.5	63/4/6.3	34/0/0
Electronic Warfare	EWO	260/22/8.5	64/5/7.8	33/2/6.1
FCS Operations	Gunner	271/10/3.7	73/2/2.7	32/0/0

a. Pilot:

(1) CREW COORDINATION - Twelve pilots were qualified with training for the following reasons: over-flying planned turn points, not updating altimeter settings during low level, allowing copilots to remain off airspeed or altitude, and three cases of failure to insure correct fuel panel settings.

b. Copilot:

(1) MISSION PLANNING - Out of eleven QTs, there were five publications related discrepancies, two instances of incorrect take-off data, an incorrect Form 365F, two incorrect fuel logs, and one copilot used canned forms which were incorrect.

(2) CREW COORDINATION - Four copilots were written up for allowing the pilot to be off airspeed, altitude, and miss turn points. A copilot failed to back-up the pilot while entering holding. Another failed to back-up the 70 knot hack. One didn't advise the pilot to turn off the engine anti-icing after descending into dry air. Other copilots were written up as causing general confu_ion during the entire mission.

(3) JUDGEMENT/COMPLIANCE - One copilot failed to monitor appropriate air traffic control frequencies during low level. Another didn't suggest an optimum altitude and airspeed for celestial navigation. The other write-ups concerned AFR 60-16 and oxygen discipline.

c. Radar Navigator:

(1) CREW COORDINATION - Two radar navigators were qualified with training for SRAM problems; one failed to recognize an error in the manual launch procedures and another by-passed the warm up timer unnecessarily. Other areas included: not updating altimeter setting low level, failing to catch errors on TA computations, mission altitude calls, AOU errors, airspeed errors, and allowing navigator to cause an overrun during rendezvous.

(2) BOMBING - Among the qualified with training write-ups are the following: failed to re-enter bomb function on second half of a sync-sync release, procedures not in accordance with flight manual, checklist deviations from pre-IP checklist and post release checklist, and problems with recognizing and correcting sweep centering problems.

(3) AIR REFUELING - Five radar navigators had offset errors, two had scope tuning errors in that the tanker was not visible at times on the radar, two did not perform the point parallel procedures according to the T.O. 1-1C-1-15, and two were late in altering causing unsuccessful rendezvous.

(4) EQUIPMENT OPERATION - One radar navigator used poor AOU multi-target mode procedures during low level. Some radar navigators did not recognize obvious malfunctions such as faulty doppler operation and BNS terperatures at red line before any action was taken. Some did not detect or correct heading errors. Improper switch position and checklist deviations accounted for the rest of the write-ups.

d. Navigator:

(1) EQUIPMENT OPERATION - One navigator did the bombing system check after weapons preparation for simulated release had been completed. Inflight maintenance wasn't performed in accordance with the flight manual. Three navigators did not keep the counters updated. Two navigators constantly misset the N-1 compass giving erroneous heading information during bomb runs.

e. Electronic Warfare Officer:

(1) MISSION PLANNING - There were nine publications related write-ups. One error was noted on a SAC Form 76 showing minimum acceptable knowledge of contingency missions.

(2) CRUISE - The following three reasons were given for the QTs APR-25 not effectively utilized during AR overrun, ALR-46 turned off with deviations from the correct sequence, and oxygen panel set incorrectly.

(3) COMMUNICATIONS - Two EWOs failed to send low level hazardous weather reports when the crews aborted. One did not try to use the HF radio when it would still work even though it was degraded. One EWO did not follow site communications procedures as required in SACR 51-5, Vol II. The other write-ups were for failure to monitor the HF radio during alfa monitor periods, or for transmitting during these periods.

(4) ELECTRONIC WARFARE - Some EWOs used improper procedures to counter threats inside the TAT. Signal recognition was a prevalent problem with transmitter centering contributing to overall difficulties. Area penetration and withdrawal also contributed heavily to the qualified with training rate. Additionally, equipment calibration checks were not performed in accordance with the flight manual and jamming of restricted frequencies was cited.

f. Gunner:

(1) FCS OPERATION/PROCEDURES - Among the reasons that B-52 Fire Control Operators were qualified with training are: consistently failed to notify crew when turret was operated, errors noted in scope adjustments making target detection difficult, improper modes analysis, deviations in DCE procedures, incorrect crew calls during FEO, failed to properly clear aft area, FCS not configured in the optimum mode of operation, and failure to comply with flight manual cautions.

2. FB-111:

AREA	POSITION	NOTICE #CHKD/#T/%T	NO-NOTICE #CHKD/#T/%T	1CEVG #CHKD/#T/%T
Electronic Warfare	Pilot	63/3/4.8	0/0/0	2/0/0
Electronic Warfare	Radar Navigator	60/2/3.3	5/0/0	2/0/0

a. Pilot:

(1) ELECTRONIC WARFARE - The write-ups in this area all related to demonstrating marginal knowledge of threat symbology and defensive actions required by SACR 55-21, Vol II. More individual study would have prevented these write-ups.

b. Radar Navigator:

(1) ELECTRONIC WARFARE - This is the same as the paragraph above.

3. KC-135

POSITION	AREA	NOTICE #CHKD/#T%T	NOTICE #CHKD/#T/%T	1CEVG #CHKD/#T/%T
Navigator	Mission Planning	603/15/2.5	168/8/4.8	105/4/3.8
Navigator	Navigation	619/28/4.5	155/8/5.2	102/0/0
Navigator	Air Refueling	584/12/2.1	148/6/4.1	91/1/1.1
Navigator	Equipment Operation	581/19/3.3	160/6/3.8	104/4/3.8
Boom Operator	Preflight	566/15/2.7	222/6/2.7	103/5/4.9

a. Navigator:

(1) MISSION PLANNING - As was the case last period, the majority of the write-ups were publications related with either missing or outdated pages or annotations. Five QTs were awarded for not annotating charts with required information, i.e. special use air space, restricted areas, etc. Two navigators demonstrated marginal knowledge of hemispherical flight levels. Three navigators had errors in their flight plans related to restrictions established in FLIP.

(2) NAVIGATION - Fifteen QTs were awarded for celestial navigation, most of them for accumulating to many error points. There were ten errors relating to AR control time with many navigators not making enough effort to arrive at the ARCP at least fifteen minutes prior to the ARCT. Seven mission data recording errors related to failing to record a fix/MPP/position on time at each planned turn point or not putting down enough information to reconstruct the mission. The three general navigation and one AR track deviation were for course deviations.

(3) AIR REFUELING - Twelve navigators were qualified with training for problems during the rendezvous. Four of these were related to failing to identify the receiver's beacon or for failing to operate the APN-69 as required. The others rendezvous problems were for demonstrating marginal knowledge of procedures, i.e. failure to pass required AR info to the receiver, failure to attempt to correct for a wide offset, unfamiliarity with anchor refueling, or general lack of understanding of procedures. Two navigators did not understand their responsibilities during a breakaway, and one navigator cleared the receivers into the block prior to ARTCC release.

(4) EQUIPMENT OPERATION- Many pieces of equipment were not operated correctly. Most of the problems related to the ASN-7. Some navigators failed to insure a manual wind was inserted into the system after doppler radar failure. Other navigators did not keep their present position counters updated. Improper operation of the APN-59 radar especially when in weather avoidance conditions caused three QT grades. Failure to operate the INS in accordance with the checklist led to four QTs. One navigator did not turn on the IFF Mode 4 during the mission. One did not turn on the HF radio for the entire flight, and another misset the N-1 during grid entry.

b. Boom Operator:

(1) PREFLIGHT - Half the write-ups related to performance knowledge or knowledge of the 365F. Four boom operators did not correctly secure equipment. Two failed to properly ensure that the tail support strut was properly secured. Others did not properly preflight their life support equipment. One did not answer the crew report.

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STANDARDIZATION/EVALUATION RESULTS

SAC Totals by Aircraft Type and Crew Position

Atch 1

PREPARED 01 FEB 14
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CMDR

01 JUL 1980 - 31 DEC 1980
PCN UA03A-N0A

AREA CHECKED	UNIT NOTICE CHKD	Q	QT	U	%QT	% QUAL	UNIT NO NOTICE CHKD	Q	QT	U	%QT	% QUAL	CEVG ALL CHECKS CHKD	Q	QT	U	%QT	% QUAL
EMERG PROCD EXAM	415	411	0	4	0.0	99.0	309	308	0	1	0.0	99.7	107	103	0	4	0.0	96.3
PUBLICATIONS	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-
QUAL EXAM	407	407	0	0	0.0	100.0	6	6	0	0	0.0	100.0	1	1	0	0	0.0	100.0
FLT SIMULATOR	335	334	0	1	0.0	99.7	4	4	0	0	0.0	100.0	9	8	0	1	0.0	88.9
MISSION PLANNING	437	429	6	2	1.4	99.5	79	76	2	1	2.5	98.7	70	70	0	0	0.0	100.0
PREFLIGHT	442	441	1	0	0.2	100.0	81	80	0	1	0.0	98.8	70	70	0	0	0.0	100.0
PRETAKEOFF	441	439	1	1	0.2	99.8	82	81	1	0	1.2	100.0	70	70	0	0	0.0	100.0
TAKEOFF	444	439	2	3	0.5	99.3	76	75	0	1	0.0	98.7	69	68	0	1	0.0	98.6
CLIMB	438	437	0	1	0.0	99.8	77	75	1	1	1.3	98.7	69	69	0	0	0.0	100.0
LEVEL OFF	435	434	0	0	0.0	100.0	78	78	0	0	0.0	100.0	69	69	0	0	0.0	100.0
CRUISE	435	434	1	0	0.2	100.0	83	83	0	0	0.0	100.0	68	68	0	0	0.0	100.0
INSTRUMENTS	503	490	6	7	1.2	98.6	80	75	1	4	1.3	95.0	68	64	0	2	0.0	97.1
EMER PROCD (INFLT)	432	427	2	3	0.5	99.3	32	32	0	0	0.0	100.0	66	65	0	1	0.0	97.8
COMMUNICATIONS	439	438	1	0	0.2	100.0	83	82	0	1	0.0	98.8	70	70	0	0	0.0	100.0
CREW COORD	449	434	8	6	1.8	98.7	84	79	3	2	3.6	97.6	70	67	2	1	2.9	98.6
DESCENT & LDG	445	441	3	1	0.7	99.8	75	74	0	1	0.0	98.7	67	66	0	1	0.0	98.5
POSTFLIGHT	433	431	1	1	0.2	99.8	82	80	2	0	2.4	100.0	70	70	0	0	0.0	100.0
FORTLOT EXM	5	5	0	0	0.0	100.0	1	1	0	0	0.0	100.0	-	-	-	-	-	-
ATP RFLG RCVR	398	389	4	5	1.0	98.7	69	63	2	4	2.9	94.2	55	54	0	1	0.0	98.2
BOMBING	380	379	1	1	0.3	99.7	72	70	0	2	0.0	97.2	65	65	0	0	0.0	100.0
NAVIGATION	432	429	0	4	0.0	99.1	78	73	0	5	0.0	93.6	68	66	0	2	0.0	97.1
TERRAIN RADAR	391	373	10	9	2.6	97.7	40	37	1	2	2.5	95.0	40	34	2	2	5.0	95.0
EQUIPMENT OPS	402	398	2	2	0.5	97.8	75	73	1	1	1.3	98.7	69	67	1	1	1.4	98.6
JUDGEMENT/COMPLT	455	446	2	8	0.4	98.2	86	78	2	4	2.4	95.2	70	70	0	0	0.0	100.0

PREPARED BY FFR 14
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SEC TOTALS BY POSITIONS
COPILOT

01 JUL 1980 - 31 DEC 1980
DCS USAFSA-NOA

AREA CHECKED	UNIT NOTICE CHKD	Q	QT	U	%QT	% QUAL	UNIT NO NOTICE CHKD	Q	QT	U	%QT	% QUAL	CEVG ALL CHECKS CHKD	Q	QT	U	%QT	% QUAL
EMERG PROCD EXAM	187	184	1	2	1.5	98.9	284	271	0	13	0.0	95.4	55	55	0	0	0.0	100.0
QUAL EXAM	168	168	0	0	0.0	100.0	4	4	0	0	0.0	100.0	-	-	-	-	-	-
FLT SIMULATOR	156	156	0	0	0.0	100.0	5	5	0	0	0.0	100.0	9	8	0	1	0.0	88.9
MISSION PLANNING	167	163	2	1	2.4	99.4	60	53	7	0	11.7	100.0	53	53	0	0	0.0	100.0
PREFLIGHT	166	163	1	2	0.6	98.2	63	62	0	1	0.0	98.4	53	53	0	0	0.0	100.0
PRETAKEOFF	166	164	1	1	0.6	99.4	65	65	0	0	0.0	100.0	53	53	0	0	0.0	100.0
TAKEOFF	158	156	1	1	0.6	99.4	60	60	0	0	0.0	100.0	53	53	0	0	0.0	100.0
CLIMB	163	161	1	1	0.6	99.4	62	61	0	1	0.0	98.4	50	50	0	0	0.0	100.0
LEVEL OFF	162	162	0	0	0.0	100.0	60	60	0	0	0.0	100.0	51	51	0	0	0.0	100.0
CRUISE	162	162	0	0	0.0	100.0	61	61	0	0	0.0	100.0	52	52	0	0	0.0	100.0
INSTRUMENTS	189	173	1	15	0.5	91.5	64	62	1	1	1.6	98.4	51	51	0	0	0.0	100.0
EMER PROCD (INFLT)	156	156	0	0	0.0	100.0	25	24	0	1	0.0	96.0	29	29	0	0	0.0	100.0
COMMUNICATIONS	162	159	2	1	1.2	99.4	64	64	0	0	0.0	100.0	53	53	0	0	0.0	100.0
CREW COORD	172	159	5	8	2.9	95.3	64	53	5	6	7.8	90.6	53	49	2	2	3.8	96.2
DESCENT & LDG	172	167	1	4	0.6	97.7	52	51	1	0	1.9	100.0	45	44	0	1	0.0	97.8
POSTFLIGHT	161	160	1	0	0.6	100.0	62	62	0	0	0.0	100.0	53	53	0	0	0.0	100.0
AIR REFLG RCVR	159	159	0	0	0.0	100.0	51	47	1	3	2.0	94.1	42	42	0	0	0.0	100.0
ROMRING	163	162	0	1	0.0	99.4	56	56	0	0	0.0	100.0	48	48	0	0	0.0	100.0
NAVIGATION	167	164	0	3	0.0	98.2	58	54	0	4	0.0	93.1	52	52	0	0	0.0	100.0
TERRAIN RADAR	160	154	4	2	2.5	98.8	29	27	1	1	3.4	96.6	27	26	0	1	0.0	96.3
EQUIPMENT OPS	152	145	3	4	2.0	97.4	56	54	0	2	0.0	96.4	52	50	0	2	0.0	96.2
JUDGEMENT/CMPLT	172	167	3	2	1.7	98.8	64	61	2	1	3.1	98.4	53	53	0	0	0.0	100.0

PREPARED BY PER 1C
AIRCRAFT TYPE RMK2

STANEVAL EVALUATION RESULTS
SAC TOTALS BY POSITIONS
RADAR NAVIGATOR

01 JUL 1980 - 31 DEC 1980
PCN UA026-NOR

AREA CHECKED	CHKD	UNIT NOTICE O	QT	U	%QT	% QUAL	CHKD	UNIT NO NOTICE O	QT	U	%QT	% QUAL	CHKD	CEVG ALL CHECKS O	QT	U	%QT	% QUAL
EMERG PROCD EXAM	304	303	0	1	0.0	99.7	302	300	0	2	0.0	99.3	109	107	0	2	0.0	98.2
QUALIFICATIONS	1	1	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-
QUAL EXAM	302	302	0	0	0.0	100.0	6	6	0	0	0.0	100.0	-	-	-	-	-	-
MISSION PLANNING	287	283	3	1	1.0	99.7	69	68	1	0	1.4	100.0	66	66	0	0	0.0	100.0
PREFLIGHT	288	288	0	0	0.0	100.0	68	68	0	0	0.0	100.0	66	66	0	0	0.0	100.0
PRETAKEOFF	288	287	0	1	0.0	99.7	68	68	0	0	0.0	100.0	66	66	0	0	0.0	100.0
TAKEOFF	286	285	0	1	0.0	99.7	67	67	0	0	0.0	100.0	66	66	0	0	0.0	100.0
CLIMB	288	288	0	0	0.0	100.0	68	68	0	0	0.0	100.0	66	66	0	0	0.0	100.0
LEVEL OFF	288	288	0	0	0.0	100.0	68	68	0	0	0.0	100.0	66	66	0	0	0.0	100.0
CRUISE	285	285	0	0	0.0	100.0	68	68	0	0	0.0	100.0	66	66	0	0	0.0	100.0
EMER PROCD (INFLT)	15	15	0	0	0.0	100.0	2	2	0	0	0.0	100.0	-	-	-	-	-	-
COMMUNICATIONS	286	286	0	0	0.0	100.0	67	67	0	0	0.0	100.0	66	66	0	0	0.0	100.0
CREW COORD	293	284	5	4	1.7	98.6	68	63	3	2	4.4	97.1	66	64	1	1	1.5	98.5
DESCENT & LDG	285	283	2	0	0.7	100.0	67	67	0	0	0.0	100.0	66	66	0	0	0.0	100.0
POSTFLIGHT	285	282	2	1	0.7	99.6	66	66	0	0	0.0	100.0	66	66	0	0	0.0	100.0
AIR RFLG RCVR	268	256	11	1	4.1	99.6	49	47	1	1	2.0	98.0	50	48	0	2	0.0	96.0
BOMBING	303	284	7	12	2.3	96.0	58	49	1	8	1.7	86.2	63	56	3	4	4.8	93.7
NAVIGATION	303	294	3	6	1.0	98.0	69	64	0	5	0.0	92.8	63	62	0	1	0.0	98.4
AGM 69 QUAL	207	202	3	2	1.4	99.0	46	46	0	0	0.0	100.0	52	51	1	0	1.9	100.0
TERRAIN RADAR	276	273	2	1	0.7	99.6	45	42	1	2	2.2	95.6	50	50	0	0	0.0	100.0
EQUIPMENT OPS	282	260	15	7	5.3	97.5	63	57	4	2	6.3	96.8	63	59	2	2	3.2	96.8
JUDGEMENT/CMPLT	321	318	0	3	0.0	99.1	68	65	0	3	0.0	95.6	65	64	0	1	0.0	98.5

PROGRAM = PER 14
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
NAVIGATOR

01 JUL 1980 - 31 DEC 1980
PCN U4024-A08

AREA CHECKED	CHKD	UNIT NOTICE Q	QT	U	%QT	% QUAL	CHKD	UNIT NO NOTICE Q	QT	U	%QT	% QUAL	CHKD	CFVG ALL CHECKS Q	QT	U	%QT	% QUAL
FWPR PROG EXAM	106	103	0	3	0.0	98.5	283	278	0	5	0.0	98.2	71	68	0	3	0.0	95.8
QUAL EXAM	188	188	0	0	0.0	100.0	2	2	0	0	0.0	100.0	-	-	-	-	-	-
MISSION PLANNING	175	172	0	3	0.0	98.3	53	53	0	0	0.0	100.0	55	55	0	0	0.0	100.0
PREFLIGHT	177	176	1	0	0.6	100.0	56	55	1	0	1.8	100.0	56	55	1	0	1.8	100.0
PRETAKEOFF	173	173	0	0	0.0	100.0	55	55	0	0	0.0	100.0	56	56	0	0	0.0	100.0
TAKEOFF	165	165	0	0	0.0	100.0	54	54	0	0	0.0	100.0	56	56	0	0	0.0	100.0
CLIMB	173	173	0	0	0.0	100.0	55	55	0	0	0.0	100.0	56	56	0	0	0.0	100.0
LEVEL OFF	169	163	1	0	0.6	100.0	53	53	0	0	0.0	100.0	56	56	0	0	0.0	100.0
CRUISE	172	172	0	0	0.0	100.0	55	55	0	0	0.0	100.0	56	56	0	0	0.0	100.0
FWPR PROG (TNFLT)	8	8	0	0	0.0	100.0	1	1	0	0	0.0	100.0	-	-	-	-	-	-
COMMUNICATIONS	173	173	0	0	0.0	100.0	55	55	0	0	0.0	100.0	55	55	0	0	0.0	100.0
CREW COORD	180	175	2	3	1.1	98.3	56	50	1	5	1.8	91.1	56	55	1	0	1.8	100.0
DESCENT & LDG	173	172	1	0	0.6	100.0	55	55	0	0	0.0	100.0	56	55	0	1	0.0	98.2
POSTFLIGHT	170	168	2	0	1.2	100.0	54	54	0	0	0.0	100.0	56	56	0	0	0.0	100.0
AIR REFLG RCVR	141	140	1	0	0.6	100.0	36	35	0	1	0.0	97.2	39	39	0	0	0.0	100.0
BOMBING B-	174	166	5	3	2.9	98.3	49	45	1	3	2.0	93.9	53	49	3	2	5.7	96.2
NAVIGATION	201	185	5	11	2.5	96.5	54	50	0	4	0.0	92.6	54	50	1	3	1.9	94.8
AGM 69 QUAL	133	127	4	2	3.0	98.5	35	31	2	2	5.7	94.3	42	39	3	0	7.1	100.0
TERRAIN RADAR	169	164	4	1	2.4	99.4	35	33	0	2	0.0	94.3	40	39	1	1	2.5	97.5
EQUIPMENT OPS	163	156	6	3	3.7	98.2	89	86	1	2	2.0	95.9	54	54	0	0	0.0	100.0
JUDGEMENT/CMPLT	193	193	2	3	1.0	98.5	54	53	0	1	0.0	98.1	55	54	0	1	0.0	98.2

PREPARED 01 FEB 14
AIRCRAFT TYPE B-52

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
EWO

01 JUL 1980 - 31 DEC 1980
PCN UA02A-N0A

AREA CHECKED	UNIT NOTICE CHKD	Q	QT	U	%QT	% QUAL	UNIT NO NOTICE CHKD	Q	QT	U	%QT	% QUAL	CEVG ALL CHECKS CHKD	Q	QT	U	%QT	% QUAL
EMERG PROCD EXAM	267	265	0	2	0.0	99.3	298	296	0	2	0.0	99.3	99	97	0	2	0.0	98.0
QUAL EXAM	253	253	0	0	0.0	100.0	6	6	0	0	0.0	100.0	-	-	-	-	-	-
MISSION PLANNING	241	235	6	0	2.5	100.0	61	58	3	0	4.9	100.0	34	33	1	0	2.9	100.0
PREFLIGHT	240	240	0	0	0.0	100.0	64	64	0	0	0.0	100.0	34	34	0	0	0.0	100.0
PRETAKEOFF	240	240	0	0	0.0	100.0	63	63	0	0	0.0	100.0	34	34	0	0	0.0	100.0
CLIMB	239	239	0	0	0.0	100.0	62	62	0	0	0.0	100.0	34	34	0	0	0.0	100.0
CRUISE	242	240	1	1	0.4	99.6	63	61	2	0	3.2	100.0	34	34	0	0	0.0	100.0
EMER PROCD (INFLT)	4	4	0	0	0.0	100.0	2	2	0	0	0.0	100.0	-	-	-	-	-	-
COMMUNICATIONS	244	237	6	1	2.5	99.6	63	58	4	1	6.3	98.4	34	34	0	0	0.0	100.0
CREW COORD	241	238	3	0	1.2	100.0	64	63	1	0	1.6	100.0	34	34	0	0	0.0	100.0
DESCENT & LDG	241	241	0	0	0.0	100.0	64	62	1	1	1.6	98.4	34	34	0	0	0.0	100.0
POSTFLIGHT	241	240	1	0	0.4	100.0	64	63	1	0	1.6	100.0	34	34	0	0	0.0	100.0
NAVIGATION	232	231	1	0	0.4	100.0	29	29	0	0	0.0	100.0	25	25	0	0	0.0	100.0
ELEC WARFARE	260	223	22	15	8.5	94.2	64	54	5	5	7.8	92.2	33	31	2	0	6.1	100.0
JUDGEMENT/CMPLT	263	257	3	3	1.1	98.9	64	63	0	1	0.0	98.4	34	33	1	0	2.9	100.0

PREPARED BY FEB 14
AIRCRAFT TYPE B-52

STAN/EVALUATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
GUNNER

01 JUL 1980 - 31 DEC 1980
PCN UA09A-N0A

AREA CHECKED	CHKD	UNIT NOTICE 0	QT	U	%QT	% QUAL	CHKD	UNIT NO NOTICE 0	QT	U	%QT	% QUAL	CHKD	CEVG ALL CHECKS 0	QT	U	%QT	% QUAL
EMERG PROCD EXAM	267	258	0	3	0.0	98.8	285	285	0	10	0.0	96.6	104	104	0	0	0.0	100.0
QUAL EXAM	239	239	0	0	0.0	100.0	6	6	0	0	0.0	100.0	-	-	-	-	-	-
MISSION PLANNING	243	240	3	0	1.2	100.0	73	70	2	1	2.7	98.6	34	33	1	0	2.9	100.0
PREFLIGHT	245	241	4	1	1.6	99.6	75	75	0	0	0.0	100.0	34	34	0	0	0.0	100.0
PRETAKEOFF	245	245	0	1	0.0	99.6	75	75	0	0	0.0	100.0	33	33	0	0	0.0	100.0
TAKEOFF	245	245	0	0	0.0	100.0	75	75	0	0	0.0	100.0	33	33	0	0	0.0	100.0
CLIMB	244	242	1	1	0.8	99.6	75	75	0	0	0.0	100.0	33	33	0	0	0.0	100.0
CRUISE	244	243	0	1	0.0	99.6	72	72	0	0	0.0	100.0	33	33	0	1	0.0	97.0
EMER PROCD (INFLT)	2	2	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-
COMMUNICATIONS	248	243	2	3	0.8	98.8	77	74	1	2	1.3	97.4	33	33	1	0	3.0	100.0
CREW COORD	246	245	0	1	0.0	99.6	77	75	2	0	2.6	100.0	33	33	0	0	0.0	100.0
DESCENT & LDG	244	244	0	0	0.0	100.0	75	75	0	0	0.0	100.0	33	33	0	0	0.0	100.0
POSTFLIGHT	248	243	1	5	0.4	98.0	75	71	2	2	2.7	97.3	33	33	0	1	0.0	97.0
AIR RFLG RCVR	188	186	2	0	1.1	100.0	49	49	0	0	0.0	100.0	26	26	0	0	0.0	100.0
FCS OPS/PROCD	271	242	10	19	3.7	93.0	73	61	2	10	2.7	86.3	33	33	0	1	0.0	97.0
JUDGEMENT/CMPLT	251	246	2	3	0.8	98.8	79	76	1	2	1.3	97.5	32	31	1	0	3.1	100.0

PREPARED 01 FEB 84
AIRCRAFT TYPE FB-111

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CMDR

01 JUL 1980 - 31 DEC 1982
PCN UA0DA-N0R

AREA CHECKED	UNIT NOTICE CHKD	Q	QT	U	%QT	% QUAL	UNIT NO NOTICE CHKD	Q	QT	U	%QT	% QUAL	CFVG ALL CHECKS CHKD	Q	QT	U	%QT	% QUAL
EMERG PROCD EXAM	77	77	0	0	0.0	100.0	35	35	0	0	0.0	100.0	19	19	0	0	0.0	100.0
QUAL EXAM	73	73	0	0	0.0	100.0	1	1	0	0	0.0	100.0	3	3	0	0	0.0	100.0
MISSION PLANNING	95	95	0	0	0.0	100.0	6	6	0	0	0.0	100.0	7	7	0	0	0.0	100.0
PREFLIGHT	83	83	0	0	0.0	100.0	3	3	0	0	0.0	100.0	7	7	0	0	0.0	100.0
PRETAKEOFF	83	83	0	0	0.0	100.0	5	5	0	0	0.0	100.0	12	12	0	0	0.0	100.0
TAKEOFF	83	83	0	0	0.0	100.0	8	8	0	0	0.0	100.0	12	12	0	0	0.0	100.0
CLIMB	81	80	1	0	1.2	100.0	7	7	0	0	0.0	100.0	11	11	0	0	0.0	100.0
LEVEL OFF	81	80	1	0	1.2	100.0	7	7	0	0	0.0	100.0	11	11	0	0	0.0	100.0
CRUISE	81	81	0	0	0.0	100.0	5	5	0	0	0.0	100.0	10	10	0	0	0.0	100.0
INSTRUMENTS	91	89	0	2	0.0	97.8	8	7	0	1	0.0	87.5	12	12	0	0	0.0	100.0
EMER PROCD (INFLT)	79	78	1	0	1.3	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
COMMUNICATIONS	79	79	0	0	0.0	100.0	6	6	0	0	0.0	100.0	12	12	0	0	0.0	100.0
CREW COORD	79	78	1	0	1.3	100.0	7	7	0	0	0.0	100.0	12	12	0	0	0.0	100.0
DESCENT & LDG	89	89	0	1	0.0	98.8	7	7	0	0	0.0	100.0	12	12	0	0	0.0	100.0
POSTFLIGHT	77	77	0	0	0.0	100.0	8	8	0	0	0.0	100.0	11	11	0	0	0.0	100.0
AIR RFLG RCVR	75	75	0	0	0.0	100.0	1	1	0	0	0.0	100.0	7	7	0	0	0.0	100.0
BOMBING	71	71	0	0	0.0	100.0	-	-	-	-	-	-	6	6	0	0	0.0	100.0
NAVIGATION	77	77	0	0	0.0	100.0	-	-	-	-	-	-	10	10	0	0	0.0	100.0
ELEC WARFARE	63	60	3	0	4.8	100.0	-	-	-	-	-	-	2	2	0	0	0.0	100.0
FB-111 FORMATION	81	79	2	0	2.5	100.0	-	-	-	-	-	-	6	6	0	0	0.0	100.0
AGM 69 QUAL	63	62	0	1	0.0	98.4	-	-	-	-	-	-	4	4	0	0	0.0	100.0
TERRAIN RADAR	76	75	0	1	0.0	98.7	-	-	-	-	-	-	3	3	0	0	0.0	100.0
EQUIPMENT OPS	69	66	2	1	2.9	98.6	-	-	-	-	-	-	11	10	0	1	0.0	90.9
JUDGEMENT/CMPLT	100	97	1	2	1.0	98.0	9	9	0	0	0.0	100.0	13	13	0	0	0.0	100.0

PREPARED BY FEB 14
PROGRAM TYPE FB-111

STANDARDIZATION EVALUATION RESULTS
SRC TOTALS BY POSITIONS
RADAR NAVIGATOR

01 JUL 1980 - 31 DEC 1980
RCN UA0DA-NAR

AREA CHECKED	UNIT NOTICE CHKD	Q	QT	U	%QT	% QUAL	UNIT NO NOTICE CHKD	Q	QT	U	%QT	% QUAL	CEVG ALL CHECKS CHKD	Q	QT	U	%QT	% QUAL
WEPS PROCD EXAM	68	68	0	0	0.0	100.0	47	47	0	0	0.0	100.0	20	20	0	0	0.0	100.0
UAL EXAM	72	72	0	0	0.0	100.0	-	-	-	-	-	-	3	3	0	0	0.0	100.0
ISSION PLANNING	82	81	0	1	0.0	98.8	13	13	0	0	0.0	100.0	10	10	0	0	0.0	100.0
REFLIGHT	71	71	0	0	0.0	100.0	4	4	0	0	0.0	100.0	4	4	0	0	0.0	100.0
RETAKEOFF	68	68	0	0	0.0	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
AKEOFF	68	68	0	0	0.0	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
LTMR	68	67	1	0	1.5	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
EVEL OFF	68	68	0	0	0.0	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
ROUTE	68	68	0	0	0.0	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
WEP PROCD (INFLT)	68	68	0	0	0.0	100.0	7	7	0	0	0.0	100.0	10	10	0	0	0.0	100.0
OMMUNICATIONS	68	68	0	0	0.0	100.0	6	6	0	0	0.0	100.0	10	10	0	0	0.0	100.0
REW COORD	68	66	2	0	2.9	100.0	7	7	0	0	0.0	100.0	8	8	0	0	0.0	100.0
ESCENT & LDG	72	72	0	0	0.0	100.0	5	5	0	0	0.0	100.0	3	3	0	0	0.0	100.0
OSTFLIGHT	70	70	0	0	0.0	100.0	3	3	0	0	0.0	100.0	9	9	0	0	0.0	100.0
IR REFLG MOVR	68	68	0	0	0.0	100.0	6	6	0	0	0.0	100.0	7	6	0	1	0.0	85.7
OMBING	69	67	2	0	2.9	100.0	6	6	0	0	0.0	100.0	9	9	0	0	0.0	100.0
AVIGATION	67	67	0	0	0.0	100.0	7	7	0	0	0.0	100.0	2	2	0	0	0.0	100.0
LEC WARFARE	60	58	2	0	3.3	100.0	5	5	0	0	0.0	100.0	3	3	0	0	0.0	100.0
B-111 FORMATION	72	72	0	0	0.0	100.0	3	3	0	0	0.0	100.0	8	6	0	2	0.0	75.0
GM A9 QUAL	65	63	1	1	1.5	98.5	6	6	0	0	0.0	100.0	9	9	0	0	0.0	100.0
ERRAIN RADAR	68	67	0	1	0.0	98.5	6	6	0	0	0.0	100.0						
QUIPMENT OPS	71	69	1	1	1.8	98.6	6	5	1	0	16.7	100.0	10	10	0	0	0.0	100.0
UDGEMENT/CMPLT	81	81	0	0	0.0	100.0	14	14	0	0	0.0	100.0	10	10	0	0	0.0	100.0

PREPARED [illegible]
AIRCRAFT TYPE [illegible]

STANDARDIZATION / EVALUATION RESULTS
SAC TOTALS BY POSITIONS
AIRCRAFT CMDR

01 JUL 1980 - 31 DEC 1980
RCN UA026-NOR

AREA CHECKED	CHKD	UNIT NOTICE Q	QT	U	% QT	% QUAL	CHKD	UNIT NO NOTICE Q	QT	U	% QT	% QUAL	CHKD	CEVG ALL CHECKS Q	QT	U	% QT	% QUAL
EMERG PROCD EXAM	871	864	0	7	0.0	99.2	567	552	0	15	0.0	97.4	180	180	0	0	0.0	100.0
PUBLICATIONS	4	4	0	0	0.0	100.0	1	1	0	0	0.0	100.0	-	-	-	-	-	-
QUAL EXAM	845	845	0	0	0.0	100.0	11	11	0	0	0.0	100.0	1	1	0	0	0.0	100.0
FLT SIMULATOR	843	841	1	1	0.1	99.9	15	15	0	0	0.0	100.0	19	19	0	0	0.0	100.0
MISSION PLANNING	930	917	10	3	1.1	99.7	206	203	3	2	1.4	99.0	120	119	1	0	0.8	100.0
PREFLIGHT	934	931	2	1	0.2	99.9	205	204	0	1	0.0	99.5	120	119	1	0	0.8	100.0
PRETAKEOFF	939	927	5	7	0.5	99.3	205	201	2	2	1.0	99.0	120	116	1	3	0.8	97.5
TAKEOFF	937	930	4	3	0.4	99.7	194	191	2	1	1.0	99.5	120	117	2	1	1.7	99.2
CLIMB	929	926	2	1	0.2	99.9	188	186	1	1	0.5	99.5	120	120	0	0	0.0	100.0
LEVEL OFF	926	924	2	0	0.2	100.0	191	190	0	1	0.0	99.5	120	119	1	0	0.8	100.0
CRUISE	924	924	0	0	0.0	100.0	199	199	0	0	0.0	100.0	120	120	0	0	0.0	100.0
INSTRUMENTS	1050	1022	7	21	0.7	98.0	203	195	4	4	2.0	98.0	120	114	3	3	2.5	97.5
EMER PROCD (INFLT)	935	924	3	8	0.3	99.1	52	52	0	0	0.0	100.0	50	49	0	1	0.0	98.0
COMMUNICATIONS	930	930	0	0	0.0	100.0	209	209	0	0	0.0	100.0	120	120	0	0	0.0	100.0
CREW COORD	934	920	12	2	1.3	99.8	206	204	1	1	0.5	99.5	120	120	0	0	0.0	100.0
DESCENT & LDG	951	939	7	5	0.7	99.5	197	195	2	0	1.0	100.0	120	118	1	1	0.8	99.2
POSTFLIGHT	921	920	0	1	0.0	99.9	199	199	0	0	0.0	100.0	120	120	0	0	0.0	100.0
COPILOT FAM	38	38	0	0	0.0	100.0	3	3	0	0	0.0	100.0	-	-	-	-	-	-
NAVIGATION	904	901	3	0	0.3	100.0	192	192	0	0	0.0	100.0	113	113	0	0	0.0	100.0
AIR RFLG TNKR	904	892	1	11	0.1	98.8	184	183	1	0	0.5	100.0	104	104	0	0	0.0	100.0
EQUIPMENT OPS	912	899	4	9	0.4	99.0	196	192	3	1	1.5	99.5	120	117	2	1	1.7	99.2
JUDGEMENT/COMPLT	927	920	2	5	0.2	99.5	208	203	0	5	0.0	97.6	120	116	2	2	1.7	98.3

PREPARED [illegible] FEB [illegible]
AIRCRAFT TYPE KC-135

STANDARDIZATION EVALUATION RESULTS
SAC TOTALS BY POSITIONS
COPILOT

01 JUL 1980 - 31 DEC 1980
RCN [illegible]A026-N08

	NO NOTICE					%	UNIT NO NOTICE					%	CEVG ALL CHECKS					%
AREA CHECKED	CHKD	Q	QT	U	%QT	QUAL	CHKD	Q	QT	U	%QT	QUAL	CHKD	Q	QT	U	%QT	QUAL
EMERG PROCD EXAM	407	401	[illegible]	[illegible]	0.0	98.5	448	439	0	9	0.0	98.0	79	79	0	0	0.0	100.0
QUALIFICATIONS	1	1	[illegible]	0	0.0	100.0	2	2	0	0	0.0	100.0	-	-	-	-	-	-
QUAL EXAM	406	406	0	0	0.0	100.0	6	6	0	0	0.0	100.0	1	1	0	0	0.0	100.0
FLT SIMULATOR	391	391	0	0	0.0	100.0	21	21	0	0	0.0	100.0	19	19	0	0	0.0	100.0
MISSION PLANNING	405	399	5	1	1.2	99.8	116	112	2	2	1.7	98.3	81	81	0	0	0.0	100.0
PREFLIGHT	403	402	1	0	0.2	100.0	114	112	0	2	0.0	98.2	80	80	0	0	0.0	100.0
PRETAKEOFF	410	406	1	3	0.2	99.3	117	114	1	2	0.9	98.3	80	77	1	2	1.3	97.5
TAKEOFF	397	391	1	5	0.3	98.7	108	106	1	1	0.9	99.1	79	78	1	0	1.3	100.0
CLIMB	406	404	1	1	0.2	99.8	106	106	0	0	0.0	100.0	78	78	0	0	0.0	100.0
LEVEL OFF	399	399	0	0	0.0	100.0	102	102	0	0	0.0	100.0	78	77	0	1	0.0	98.7
CRUISE	398	397	1	0	0.3	100.0	112	112	0	0	0.0	100.0	80	80	0	0	0.0	100.0
INSTRUMENTS	444	422	9	13	2.0	97.1	116	114	1	1	0.9	99.1	81	80	1	0	1.2	100.0
EMER PROCD (INFLT)	197	196	0	1	0.0	99.5	18	18	0	0	0.0	100.0	30	30	0	0	0.0	100.0
COMMUNICATIONS	403	403	0	0	0.0	100.0	116	116	0	0	0.0	100.0	81	81	0	0	0.0	100.0
CREW COORD	409	399	6	4	1.5	99.0	116	112	2	2	1.7	98.3	81	78	0	3	0.0	96.3
DESCENT & LDG	428	415	7	6	1.6	98.6	103	103	0	0	0.0	100.0	79	76	0	3	0.0	96.2
POSTFLIGHT	404	403	1	0	0.2	100.0	112	111	0	1	0.0	99.1	81	81	0	0	0.0	100.0
NAVIGATION	387	387	0	0	0.0	100.0	109	109	0	0	0.0	100.0	76	76	0	0	0.0	100.0
AIR RFLG TNKR	407	407	0	0	0.0	100.0	106	106	0	0	0.0	100.0	68	68	0	0	0.0	100.0
EQUIPMENT OPS	396	387	0	9	0.0	97.7	111	109	1	1	0.9	99.1	81	80	1	0	1.2	100.0
JUDGEMENT/COMPLT	417	413	0	4	0.0	99.0	117	116	0	1	0.0	99.1	81	80	0	1	0.0	98.8

DEPARTMENT OF DEFENSE
STANDARDIZATION EVALUATION RESULTS
MAC TOTAL FLIGHT OPERATIONS
NAVSTA

01 JUL 1980 - 31 DEC 1980
PCN UA0CA-NAS

AREA CHECKED	UNIT NOTICE					UNIT NO NOTICE					CREW ALL CHECKS				
	CHKD	Q	QT	U	%QT	%QUAL	CHKD	Q	QT	U	%QT	%QUAL	CHKD	Q	QT	U	%QT	%QUAL
EMERG PROCD EVAL	EA1	579	0	3	0.0	99.8	513	508	0	5	0.0	99.0	150	150	0	0	0.0	100.0
PUBLICATIONS	*	*	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-
QUAL EVAL	EA2	583	0	0	0.0	100.0	5	5	0	0	0.0	100.0	2	2	0	0	0.0	100.0
MISSION PLANNING	AA3	581	15	7	2.5	98.8	144	150	5	10	4.8	94.0	105	101	4	0	3.8	100.0
PREFLIGHT	EA7	583	3	1	0.5	99.8	163	161	2	0	1.2	100.0	104	104	0	0	0.0	100.0
PRETAKEOFF	EA7	585	0	2	0.0	99.7	163	162	1	0	0.6	100.0	104	104	0	0	0.0	100.0
TAKEOFF	EA3	581	0	1	0.0	99.8	162	161	0	1	0.0	99.4	104	104	0	0	0.0	100.0
CLIMB	EA9	579	1	0	0.2	100.0	162	160	2	0	1.2	100.0	104	104	0	0	0.0	100.0
CRUISE	EA7	587	0	0	0.0	100.0	159	158	0	1	0.0	99.4	93	93	0	0	0.0	100.0
EMER PROCD (INFLT)	93	93	0	1	0.0	98.9	6	6	0	0	0.0	100.0	4	4	0	0	0.0	100.0
COMMUNICATIONS	EQ0	584	5	1	0.8	99.8	168	165	3	0	1.8	100.0	105	104	0	1	0.0	99.0
CREW COORD	EQ8	588	2	4	0.3	99.3	170	167	2	1	1.2	99.4	104	102	1	1	1.0	99.0
DESCENT & LDG	EA7	586	2	1	0.3	99.8	161	161	0	0	0.0	100.0	104	104	0	0	0.0	100.0
POSTFLIGHT	EA5	583	2	1	0.3	99.8	161	159	2	0	1.2	100.0	104	104	0	0	0.0	100.0
NAVIGATION	A19	563	28	26	4.5	95.5	155	142	8	5	5.2	96.8	102	102	0	0	0.0	100.0
AIR OPLG TNKR	EA4	579	12	0	2.1	100.0	148	142	6	0	4.1	100.0	91	90	1	0	1.1	100.0
EQUIPMENT DOS	EA1	551	19	11	3.3	98.1	180	149	6	5	3.8	96.9	104	98	4	2	3.8	98.1
JUDGEMENT/CMPLT	AA4	652	7	5	1.1	99.2	176	169	4	3	2.3	98.3	106	106	0	0	0.0	100.0

STANDARDIZATION EVALUATION RESULTS

01 JUL 1990 - 31 DEC 1990

PCN U4024-NOB

SAC TITLE IV POSITIONS

[illegible] OPERATOR

AREA CHECKED	CHKD	UNIT NOTICE 0	QT	U	% EQT	% QUAL	CHKD	UNIT NO NOTICE 0	QT	U	% EQT	% QUAL	CHKD	OEVR ALL CHECKS 0	QT	U	% EQT	% QUAL
EMERG PROCD EVAL	EA0	554	0	4	0.0	99.3	509	586	0	13	0.0	97.8	144	143	0	1	0.0	99.8
PUBLICATIONS	3	3	0	0	0.0	100.0	-	-	-	-	-	-	-	-	-	-	-	-
QUAL EVAL	E35	535	0	1	0.0	100.0	18	18	0	0	0.0	100.0	1	1	0	0	0.0	100.0
MISSION PLANNING	E6A	540	14	2	2.5	99.4	233	216	6	1	2.7	99.6	105	104	1	0	1.0	100.0
PREFLIGHT	E6B	547	15	4	2.7	99.3	232	213	6	3	2.7	98.6	103	98	5	0	4.9	100.0
PRETAKEOFF	E6D	557	2	0	0.4	100.0	218	214	3	1	1.4	99.5	103	101	1	1	1.0	99.0
FLTMB	E6A	555	0	1	0.0	99.8	217	217	0	0	0.0	100.0	103	103	0	0	0.0	100.0
CRUISE	E6E	555	0	0	0.0	100.0	221	221	0	0	0.0	100.0	103	103	0	0	0.0	100.0
EMER PROCD (INFLT)	68	68	0	0	0.0	100.0	7	7	0	0	0.0	100.0	1	1	0	0	0.0	100.0
COMMUNICATIONS	E61	550	1	0	0.2	100.0	219	219	0	0	0.0	100.0	104	104	0	0	0.0	100.0
CREW COORD	E65	558	2	0	0.4	100.0	223	223	0	0	0.0	100.0	104	104	0	0	0.0	100.0
DESCENT & LDG	E6A	555	1	0	0.2	100.0	218	217	0	1	0.0	99.5	103	103	0	0	0.0	100.0
POSTFLIGHT	E67	543	5	0	0.9	100.0	217	211	2	4	0.9	98.2	103	103	0	0	0.0	100.0
ADMIN/OTHER	2	2	0	0	0.0	100.0	1	1	0	0	0.0	100.0	-	-	-	-	-	-
NAVIGATION	E62	540	1	1	0.2	99.8	106	105	1	0	0.9	100.0	75	75	0	0	0.0	100.0
AIR REFUEL TANK	E77	549	11	17	1.9	97.1	200	186	4	10	2.0	95.0	93	91	2	0	2.2	100.0
JUDGEMENT/CAMBLT	A43	568	3	12	1.5	98.0	232	225	0	7	0.0	97.0	104	104	0	2	0.0	98.1


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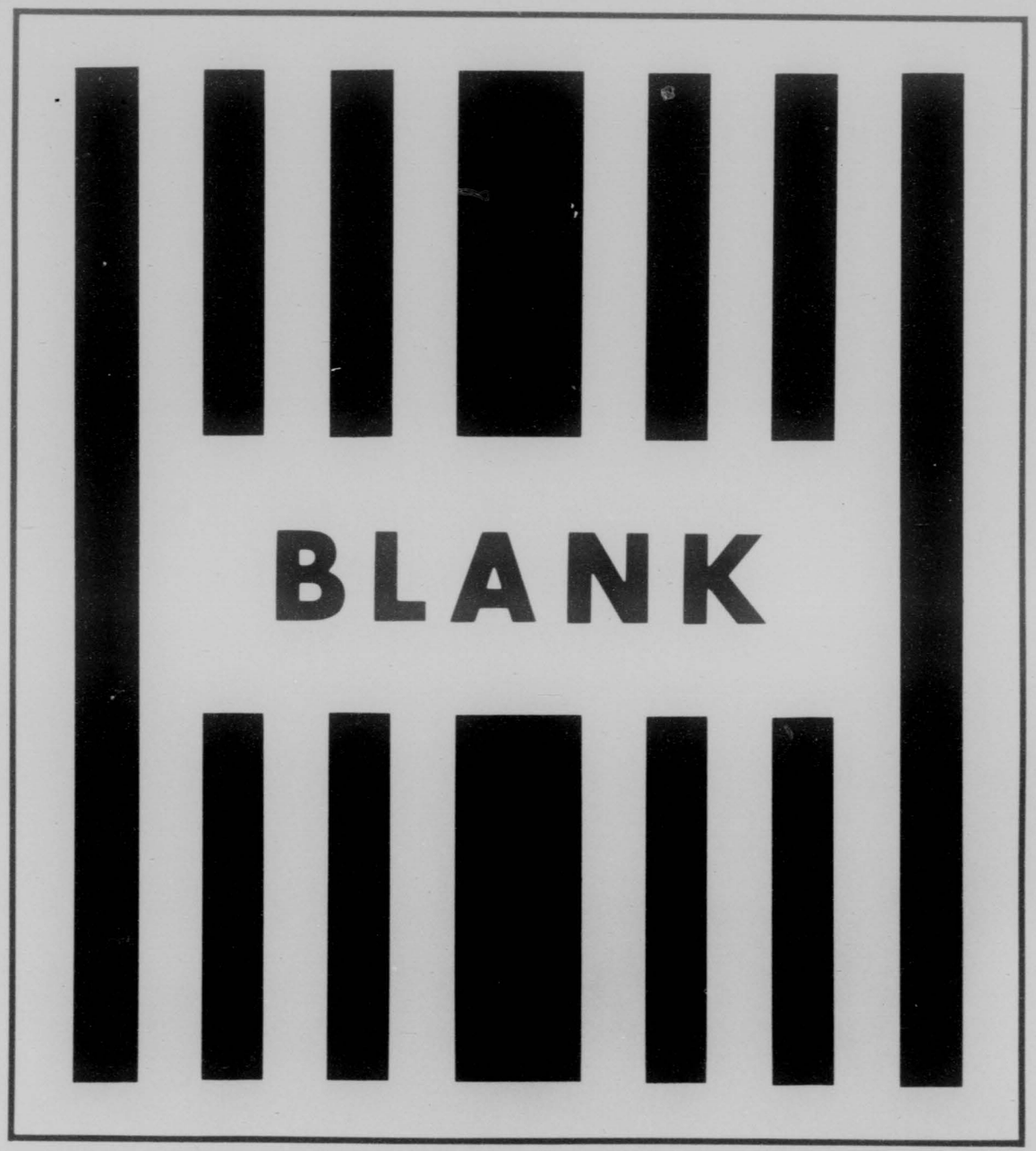
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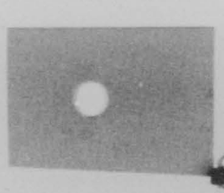

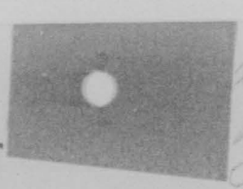

SECRET

CONFIDENTIAL

(Special Exercises)

(Mixed Units)

SECRET

IRIS WORK SHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)
01057305

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER
06009381 31,000296

SECURITY WARNING/ADMIN MARKINGS

RD FR CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

PROPRIETARY INFO

THIS DOCUMENT CONTAINS NATO _____ INFO

501 DOCUMENT SECURITY

501 U

DOWNGRADING INSTRUCTIONS

DECLASSIFY ON
OADR

REVIEW ON

CLASSIFICATION AND DOWNGRADING INSTRUCTIONS FOR

502 ____ / ____ / ____
TITLE ABSTRACT LISTINGS

028
REF _____ DEST DUP OF _____
INSERT TO _____ DUP OF _____

027 NUMBER IN AUDIO REEL SERIES

CATALOGING RECORD

MAIN ENTRY (Use one) (150AN)

100 - PERSONAL NAME

109 - ISSUING AGENCY

129 - TITLE AS MAIN ENTRY

TITLE (Use one) (DO NOT USE IF TITLE IS MAIN ENTRY) (150AN)

220 _____

OR CHECK:

☐ 2210 ORAL HISTORY

☐ 222E END OF TOUR REPORT

☐ 223H HISTORY (AND SUPPORTING DOCUMENTS)

☐ 224C CHECO MICROFILM

☐ 225Q CORRESPONDENCE

☐ 226Z PAPERS

☐ 227P CALENDAR

250 TITLE EXTENSION ENTER VOLUME NUMBER, PARTS, ETC. (20AN)

DATES ONLY 264 OR 265 MUST BE COMPLETED. SUPPLY BOTH IF KNOWN

264 INCLUSIVE DATE ____/____/____ TO ____/____/____ IF DATE ESTIMATED, CHECK HERE ☐
DD MM YY DD MM YY

265 DATE OF PUBLICATION ____/____/____
DD MM YY

300 TOTAL PAGES _____

AFSHRC FORM MAY 82 PREVIOUS EDITIONS ARE OBSOLETE

~~Bases (SAC) Overseas~~
~~Alaska~~
Special Exercises

SECRET

TAB A

ROUTING AND RECORD SHEET

Subj: Report on Trip to Alaska

28 Oct 46
Comment No. 1
Col Sutterlin

To: Chief of Staff

From: AC/S, A-1

1. Submitted herewith are comments and recommendations from the A-1 standpoint regarding the situation as pertains to SAC units in the Alaskan Department. Visit to the theater was made pursuant to authority contained in Letter Order, Subject "Temporary Duty Travel Orders," file SAC 210.453, dated 2 October 1946.

2. Details regarding times and dates of arrival and departure are omitted.

3. Items which are of specific interest to A-1 are as follows:

a. At Ladd Field the 46th Recon Squadron, the 46th Service Detachment, Provisional, the 46th Squadron overstrength (Nanook), the 7th Photo Tech Squadron, and the 2d Detachment Radio Service Section, totalling 158 officers and 790 E.M. are in most part supporting the base at Ladd Field. They are operating, for their own use, three messes. They have numerous personnel functioning in the 3d and 4th Echelon Maintenance, and they are required to maintain 40 men every day on building fire-guard detail. With this load, plus their operational load, the 46th was, at the time of our visit, preparing to request an additional 200 basics for assignment up there. The Theater Troop Basis for Ladd Field totals something over 1100 bodies. I was told at the Department Headquarters that only 300 odd bodies were actually available for assignment to Ladd from Theater resources. The problem evolves itself into one of two courses. Either we, SAC, obtain control and command of Ladd Field and place our own personnel on duty therat in order to support the work of the 46th, plus our fighter units; or we obtain somehow sufficient War Department support of the Theater requirements to enable the Theater to properly support these activities. RECOMMENDATION: I recommend that Strategic Air Command point toward actual command and operational responsibility for the base at Ladd Field; that the SAC commander be logistically supported by the theater but administered personnel-wise from this Headquarters direct, through Colonel Landon's wing. This would involve our leaving the equivalent of the present technical strength with the 46th set-up, plus an augmentation of between 200 and 300 basics, plus Colonel Landon's wing requirements.

b. It was stated that the personnel of the 46th are making or attempting to make their own special instruments. Wright Field projects in the same or parallel lines are unknown to the 46th. Likewise, there is no direct, or at least rapid, channel for presentation of the 46th problems to Wright Field. RECOMMENDATION: I feel that Wright Field should have a group of instrument technicians, to include radio, radar, and normal flight instruments, on duty with the 46th Squadron. Further, I feel that Wright Field should liaison and follow through closely on this problem.

c. They have GCA equipment at Ladd Field, but they have nobody to run it. It was understood, but never definitely committed, that a GCA team is being trained at Anchorage, for duty at Ladd. The SCS-51 glide path and approach equipment is in bad shape due to lack of maintenance. During the course of our meeting, it was pointed out that operation of GCA is a responsibility of the AACS, but that AACS responsibility is world-wide and that priority for other locations apparently precluded any real effort for Ladd Field. I maintain that there is no place else in the world which has a more immediate problem than does Ladd Field with regard to GCA. RECOMMENDATION: That a strong requirement be included in any negotiations with AAF regarding our operations in Alaska.

d. The Cold Weather Test Project (616 Base Unit), owned by the Air Proving Ground Command, is occupying space at Ladd Field which is out of all proportion to the benefits derived from their efforts. There are 44 officers and 232 E.M. presently on temporary duty at Ladd Field for this project. The unit seems to be authorized 65 officers and 307 E.M. The relative importance of the work being accomplished by the 46th Squadron, plus the additional scientific and operational problems which they are encountering (and in most cases solving) appears to me to far outweigh any projects which could be assigned to the Cold Weather Test Unit. RECOMMENDATION: That we endeavor to have the Cold Weather Test (616th Base Unit) withdrawn from the location and its function eliminated.

e. The problem of distance, as it pertains to radio reception, is an acute one. Various phenomena affecting electronics and radio, about which nobody knows much if anything, are continually being encountered. Existing airborne radios don't have the range required to be of any use in case of an emergency. When these airplanes leave the North Coast of Alaska, they are silent. It appears that big electronics outfits, like Westinghouse and some of the rest, could gain great benefit through participating and experimenting on this problem. It is pointed out that the peculiar phenomena in the area are assumed to affect radar reception, and it is known that they affect radio reception. It appears that the AAF guided missiles program must eventually take

cognizance. RECOMMENDATION: That Operational Analysis make arrangements to interest agencies concerned in the problem and that we send scientific individuals on the missions flown by the 46th to enable a serious study of the problem and to enhance its ultimate solution.

f. It is rumored that upon completion of the Nanook Project, the 46th will be moved by the Theater out on the Aleutian chain for patrol duty. RECOMMENDATION: That the ultimate turnover of control of the 46th to the Theater be changed; that we, SAC, retain this unit, or at least the personnel thereof, within Strategic Air Command; that AAF be advised to provide a different Reconnaissance Squadron for the apparent theater requirement or that a normal VHB Squadron be designated to fly the route patrol from the Aleutian chain.

g. Word has just been received that the 46th Recon Squadron (VH), Photo Weather, is now redesignated the 46th Recon Squadron VLR (Photo). This indicates that the Weather Flight has been withdrawn from the 46th Squadron. The loss in officers to the T/O strength is only three. However, during our visit it was agreed by all concerned that weather observers should accompany every flight by the 46th. To accomplish this we must either procure or train weather observers. RECOMMENDATION: That the AAF Weather Service be prevailed upon to make available Captain William LeRoy Conant and such other personnel as may be necessary to accomplish this weather observation. Captain Conant has worked with the 46th as much as he can during the past and has rendered invaluable assistance. A-1 is in the process of negotiating with the Weather Service regarding Captain Conant. Progress to date: nil.

h. Colonel Landon's staff will require Statistical Control personnel eventually, and Colonel Landon requests that he be furnished as soon as possible with an Adjutant/S-1, an S-4, and Ordnance Officer, Statistical Control Officer, Staff Navigator, and Staff Radar Officer. A-1 has taken steps to provide these officers, with Theater concurrence pending on the Adjutant and S-4 at the present time. Colonel Landon also needs right away an inspector, but on this point he is not too clear as to his responsibilities. Landon hadn't been briefed prior to his departure from the Z.I. to the effect that he would be the processing agency up there on administrative matters. When he left, he thought his function would be mostly training and inspection. RECOMMENDATION: That Colonel Landon's wing responsibilities be clarified, with particular regard to the direct reporting and administrative details connected therewith.

1. There are 23 Category II and "request release" officers now in the 46th. The Commanding Officer was informed that he must report the "request out" officers immediately for separation to the Theater. He was further advised that we, SAC, would provide replacements for these, as well as the Category II officers. No physical selections have been made by A-1 as yet, pending the outcome of the personnel responsibility to be in force as regards the 46th Squadron. We can furnish the replacements, and 15th Air Force is holding the required officers from forced separation, pending final solution.

2. Other items of interest which are not particularly A-1 business were revealed:

a. It seems that Cold Weather Test freight is arriving at Great Falls marked "Nanook" and is being shipped to Ladd Field on the Nanook air lift C-54.

b. ATC at Great Falls resists strenuously any attempt on the part of the 46th to have the Nanook C-54's pick up freight anywhere else. Considerable difficulty has arisen because of the shipping strike on the West Coast and much equipment for Nanook apparently comes from Seattle and Alameda. It appears that the C-54 lift should be instructed to pick up Nanook freight from wherever it may be, in accordance with priorities as set up by the Commanding Officer, 46th.

c. Another thing was the fact that the replacement C-54G's have apparently been designated and reported to the Commanding Officer at Great Falls, by number. The Commanding Officer at Great Falls has sent a teletype to ATC, Memphis, informing them that the present aircraft are satisfactory and apparently refusing the replacements. The 46th Commanding Officer tells me that one of the Nanook C-54's has been sitting at Great Falls out of commission so long that he is worried about the dust collapsing the wings. In this connection, it was reported that the only maintenance being provided at Great Falls is accomplished by the D. S. personnel furnished to ATC by SAC. Further, that this personnel is servicing seven runs a day out of Great Falls.

/s/ FREDERICK J. SUTTERLIN
Colonel, GSC
AC/S, A-1

[Taken frm Adj Gen Files, Hq SAC] CONFIDENTIAL

~~[illegible]~~ - ~~[illegible]~~
~~Alaska Arctic~~
Special Exercises

SECRET

ROUTING AND RECORD SHEET

Subj: Report on Temporary Duty to Alaska

28 Oct 1946
Col Macklin/hlp/749
Comment No. 1

To: Chief of Staff

From: AC/S, A-3

1. The following paragraphs comprise an A-3 report of trip to Alaska pursuant to letter Order, subject "Temporary Duty Travel Orders," file SAC 210.453, dated 2 October 1946.

2. All items reported on by individual members of the committee have some A-3 significance; however, in this brief those items reported on by other members are omitted unless additional information was discovered or diverse opinions exist as to recommendations.

3. The Arctic Training Directive was delivered to Colonel Landon, CO, 46th Service Detachment, Ladd Field, with copies to G-3 of Alaskan Department, A-3 of Alaskan Air Command, and CO of Advance Detachment, 28th VHB Group. Informal conference was held with above individuals concerning contents of the directive and although the authors had had no previous arctic experience no criticism was made; nor were there any signs of restraint.

a. Deputy CO, Alaskan Air Command, and CO, 46th Reconnaissance Squadron, stated that they are in a position to make available to SAC tactical units personnel who are expertly qualified to instruct in specialized phases of arctic operations. In fact, the Troop Carrier Squadron assigned to Alaskan Department is already conducting 15 pilots of the 28th VHB Group through the special instrument course for Aleutian chain flying.

b. A phased check-out for flying familiarization and indoctrination is extremely important in Alaska, not only because of physical characteristics of the country but because of presently inadequate communications, rescue and survival means. Electronic phenomena, polar precession, and icing are other factors which may contribute to a high accident rate if flying personnel are not properly oriented before being cleared for flying tactical training missions.

c. It is recommended that every effort be made by the SAC Alaskan Commander, Colonel Landon, to utilize the arctic talent already developed in the theater for training SAC rotational units.

~~SECRET~~
CONFIDENTIAL

Subj: Report on Temporary Duty to Alaska

4. The icing problem has not been satisfactorily solved. The 46th Squadron has experienced propeller ice which reduced air speed of the B-29 by 20 MPH. Although appreciating this, windshield ice is the greater hazard at the moment, especially in the vicinity of Elmendorf Field. Pilots have had to circle for two to three hours at low altitude before ice was sufficiently dissipated to permit safe landing. The approved emergency procedure of removing window panels or using a fire axe is not satisfactory, especially in arctic temperatures where the wind blast will cause frost bite in a few seconds. It is urgently recommended that, as an expedient pending development and proof testing by Eglin Field which takes several months, modification kits be made up immediately for installation on 28th Group aircraft of an anti-icing fluid and wiper system. The forward view nose window panels have a flat exterior surface and therefore it would not be difficult to adapt a standard wiper. It would be necessary to provide the system for three window panels on the pilot's side and possibly two for the co-pilot.

5. It is believed that the present communications equipment installed in the B-29 airplane is inadequate for arctic operations. As the result of discussion with various pilots experienced in Alaskan Flying, it appears advisable to have installed a type of radio compass (Bendix) having a precipitation loop which eliminates snow and rain static, also a standard Command Radio with radio range and traffic control frequency bands. It is recommended, however, that no action be taken to alter the standard communications installation until specific recommendations are received from our own operating units.

6. All instrument landing procedures now employed at Alaskan airdromes are based on aircraft of the C-47 and C-54 type whose flight characteristics differ greatly from that of the B-29. It is therefore imperative that flight or calibration checks be made at such locations as will insure safe landing on return from training flights by use of radio ranges, GCA and SCS-51 equipment. GCA ground operating crews must be given special indoctrination in order to become familiar with minimum instrument speeds, glide angles and maneuverability of the B-29 airplane.

7. From discussion with the 46th Reconnaissance Squadron, it is apparent that they are doing a superb job, not only a pertains to their assigned mission, but also in the field of scientific and technical research. To enhance the success of their mission and to continue work on supplementary projects several requirements were mentioned.

Subj: Report on Temporary Duty to Alaska

a. At present they are authorized a Weather Reconnaissance Flight but it is understood that through recommendations from the Department Commander the 46th Reconnaissance Squadron is about to lose this fight making the organization a straight reconnaissance outfit for eventual permanent assignment to duty on the Aleutian chain. Indications now point to the Squadron being retained to conduct similar missions in other areas after completion of the Alaskan mission. The Squadron believes there is much to be learned about weather phenomena if they are provided with weather observers to accompany all missions. This would also permit them to predict weather and eliminate abortive missions due to weather. Their present SOP is to dispatch missions every day that local weather permits. Although they have authorized a weather reconnaissance flight it has never been manned possibly due to the weather service controlling the assignment of all weather personnel. It is recommended that action to reorganize the 46th Reconnaissance Squadron be held in abeyance until Major White arrives to present his detailed recommendations. It is understood that he will arrive at SAC within ten days.

b. On polar flights the 46th Squadron normally employs three navigators, all working full-time. Even with three navigators they have found it necessary to develop certain short-cuts in celestial solutions and methods. Their principle problem is that of maintaining a course due to polar precession. They have encountered as much as 65° precession in the element of time between celestial fixes. Their specific requirement at present is the procurement of a clock-driven sun compass so that headings can be maintained without relying on a gyroscopic or magnetic instrument. It is recommended that action be taken to provide the 46th Squadron, on an experimental basis, fabricated copies of the so-called "Bumstead" compass.

c. Another requirement of the 46th Squadron, which if met can serve all SAC units, calls for more elaborate provisions for Air Rescue. Personnel of the 46th Squadron believe that the only possible means at present for saving a crew forced down on the ice is to land and snatch a glider. The only insurance they have now is to perform a 100 hour inspection prior to each mission. Gliders will be available at Ladd Field from the Winter Test Detachment during the coming winter. It is recommended that a special priority project be set up to provide Colonel Landon's Headquarters with one C-54 aircraft equipped with glider snatch gear.

d. Emergency survival doctrine and equipment for areas north of the Arctic Circle are in need of further development. The

Subj: Report on Temporary Duty to Alaska

46th Squadron has plans for initiating a training program for its crews by employing a local individual who is capable of taking a crew out of the ice fields and exist off the country with very meager supplies. Dr. Siple of the W.D. Research and Development Division has also taken some action to secure the assignment of an officer known by him to be well qualified to instruct in arctic survival. Recommend this headquarters support the organization of an Arctic Survival Training Team to operate out of Colonel Landon's Headquarters.

8. The 28th VHB Group is in need of a Personal Equipment Officer. There is none authorized in the Unit TO&E. Individuals have been selected from units in the past to attend a special school. The school was discontinued with the impact of the demobilization program, and thus personal equipment practices become historical unless similar training is again instituted. In view of the importance of proper arctic equipment and the mass to be used in a VHB unit, it is recommended that SAC be screened for a trained PEO for at least temporary assignment to set up a PE program and train an officer to take over. It is also recommended that AAF be requested to reinstitute a school for training PEO's.

9. It is <u>not</u> recommended that delivery of aircraft to the 28th VHB Group be delayed because of any recommendations made herein.

10. General Craig asked that the committee while on their tour of Alaska consider a location for a B-36 strip. It is understood that he has several million dollars to spend on such a project. The areas visited were Elmendorf, Nome, Lake Imuruk on the Seward Peninsula and Fairbanks. From the more or less casual observations made none of the sites were favorably considered, that is, from the engineering and supply standpoint. Principal objection was the tremendous volume of earth to be moved in clearing approaches and the almost non-existence of ports. One other possible site is Mile-Twenty-six Field which was not inspected by the party.

11. As a final comment, it is recommended that a copy of this report be forwarded to Colonel Landon as a means of informing him of the findings submitted together with the intended courses of action.

/s/ J. C. CROSTHWAITE
Colonel, GSC.
AC/S, A-3

Tng Div Macklin

~~Bases - Overseas~~
~~Alaska - Ladd~~.
TAB D Special Exercises

~~SECRET~~

ROUTING AND RECORD SHEET

Subj: Report on TDY to Alaska

7 Nov 1946
Comment No. 1
Col Grant/hlp/548

To: Chief of Staff

From: AC/S, A-6

The following observations and recommendations resulting from staff visit to Alaska are submitted for inclusion in the Committee Report:

1. Headquarters Alaskan Department.

a. Conferred with Major C. A. Green, C.O., 58th AACS Group, who outlined the communications and radio aides situation for the Alaskan Department. He seemed to be well informed on the local situation and very cooperative; however, instructions from higher headquarters regarding SAC activities were either tardy in reaching him or in some cases he was not informed at all. Advised him that we would see that he received information copies of communications instructions and pertinent correspondence through the SAC liaison staff in Alaska. He brought up the fact that point-to-point communications between Ladd Field and Crystal #2 were poor and ground-to-air communications to the far north in support of the flights of the 46th Recon Squadron were practically nil due to the lack of space for proper antennas at the present transmitter site. Approximately $50,000.00 was required to construct a new transmitter building on a suitable site which had been selected. Since these funds would come from the Alaskan Department, this matter was taken up with the Department Commander by General Smith and was assured that they would be made available without delay.

b. Conferred with Colonel B. A. Falk, Theater Signal Officer, who appeared to be most cooperative and quite interested in our mission. He expressed dissatisfaction with the general communications setup in Alaska, feeling that the Theater had outgrown the concept on which the Alaskan Communications System had been founded. This system has its headquarters in Seattle and does not come under the Theater Commander, but rather is an Empire within itself. This is a matter for theater action and I gathered that General Craig intended to do something about it.

2. Nome Army Air Base. This Field has the minimum communications and radio aids necessary for operations. Lack of qualified personnel prohibits the installation, maintenance and operation of either SCS-51 or GCA, although the equipment is available. If this field is to be retained in operations both systems should be installed since the weather in that area can deteriorate very rapidly without warning.

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3. Ladd Field.

a. At this Field communications and radio aids are inadequate for our operations. A standard HF radio range is installed and HF-VHF Direction Finding is available. There is, however, no VHF range or homer nor have plans been made for installation. SCS-51 is installed but is unreliable due to lack of maintenance. The hill at the approach end of the runway also makes this system hazardous to use since it permits very little deviation from the glide path at a very critical point in the landing pattern. GCA is not in operation due to lack of personnel.

b. The news that General Craig had approved the funds for the Beverage antenna project was received with rejoicing by the 46th Squadron. Their aircraft are at present beyond radio contact on their long flights after they leave the coast of Alaska.

c. The following points were discussed with Mr. Robert Davis, Operations Analyst, and appropriate members of the 46th Squadron:

(1) A maintenance shop for radio and radar testing and repairs had been set up with equipment borrowed from the Cold Weather Test Detachment. Supplies for this project had been on requisition for sometime.

(2) Radio wave propagation experimentation was not being pushed partly due to lack of adequate AACS facilities; however, aircraft logs of other stations monitored were not being sent in. I explained that propagation studies were being undertaken in this Headquarters and left a copy of a chart similar to the one we propose to construct based upon special "NANOOK" radio logs. I was assured thatthis would receive greater attention.

(3) The trailing wire antenna installation is a necessity on all Arctic B-29's; however, a satisfactory installation has yet to be made. The 46th Squadron will experiment on new installations and submit recommendations.

(4) The 46th Squadron's plan for a tactical radio station at ladd Field depends largely on the completion of the new transmitter building. A-6 will follow this project.

Subj: Report on TDY to Alaska

(5) I stated that the revision of SAC Training Standard 20-3 in connection with techniques of radar navigation on bombing in Arctic regions was being prepared. Mr. Davis agreed to bring with him on his next visit to SAC pertinent data for this revision.

(6) This Headquarters has gone on record in favor of AN/APQ-23 radar equipment in place of APQ-13 on all Arctic B-29's. The 46th Squadron concurs, so far as tactical aircraft are concerned, but prefer the APQ-13's for their type of work since they do not want the maintenance responsibility for the MX-344 computer.

(7) A radar with higher definition similar to the APQ-7, but with a 360° scan, is highly desirable for their explorations and A-6, in conjunction with the Operational Analysis Section, will investigate the possibilities of procuring larger antenna for the APQ-13's, securing pre-production models of the APQ-24 and investigate the status of a K-band radar.

(8) The Pulse Doppler Drift attachment is highly desirable and A-6 had previously stated a requirement for this installation to be retrofitted on all Arctic B-29's. This was disapproved. However, the matter has been reopened and A-6 will follow up on the matter.

(9) Proper installation of radar equipment is highly important and the 46th Squadron has suffered from lack of attention to this detail since some of the installations were made with no regard for the operation or employment of the equipment. A-6, through liaison with AMC, expects to correct this situation by having a project officer on the spot when future installations are made until such time as these fittings become standardized.

(10) In this connection, whenever an elaborate installation is to be made in the field, the equipment should be accompanied by an installation team since neither the facilities nor the personnel of the 46th Squadron of Ladd Field are able to cope with the task. In furtherance of this thought, and since this group is delving into basic research, it is believed that we could immeasurably

Subj: Report on TDY to Alaska

speed up our acquisition of Arctic knowledge by placing at the disposal of the 46th Squadron a small detachment of properly selected AMC representatives. These representatives would be able to modify equipment on the spot and with direct access to the experimental and research facilities of Wright Field would take up the slack between the initiation of a project and its fulfilment by AMC. Such a plan has been verbally suggested to General Streett and by his direction A-6 is preparing a study covering the composition of this detachment.

(11) The facilities at Point Barrow were discussed and it was learned that the 50 Watt ARN-11 radio range will continue in operation throughout the winter. The CAA, however, propose to install a 150 Watt MRL range in the spring. Operations "POLARIS" calls for a radar beacon at Point Barrow (i.e., AN/CPN-6), but it is doubtful if this equipment will be in place before spring. The requirement, however, has been made known to AACS.

(12) The 46th Squadron expressed a need for some method of relocating targets such as a self operating Racon which could be dropped by parachute. Preliminary investigation of such a device has been made at Watson Laboratories and A-6 will submit recommended characteristics and requirements.

(13) The need for a low frequency transmitter in aircraft flying in the Arctic is thoroughly recognized, but the 46th Squadron is loath to carry the BC-375, used for its extra power on low frequencies, due to the added weight. They would prefer an amplifier for the low frequency component of the ART-13, Collins Transmitter. They also want some form of safety switch developed to prevent the low frequency output from being fed into the fixed antenna since that nearly always incapacitates the transmitter. A-6 had previously initiated a project along these lines and will follow up in order to step up the priority for development.

(14) In a conversation with Mr. Davis and Dr. Siple it was agreed that a clock-driven sun compass would be extremely useful for the type of navigation being conducted by the 46th Squadron. Further, Dr. Siple believed that one

of the instruments used by Admiral Byrd might be available, or if not, that the Pioneer Instrument Company, who made the Byrd instrument, might still have the drawings and be able to turn several out in a short time. The Operations Analysis Section, through its contacts, have agreed to explore this possibility.

(15) Dr. Zimmerman's questionnaire was discussed with Mr. Davis and the answers were verbally relayed to the Operations Analysis Section upon my return. I further pointed out that the members of the 46th Squadron are extremely anxious to have the results of the analysis being made here at SAC, and I believe that when they are shown the results of some of their work that the quality of their reports will be greatly increased.

4. Edmonton Army Air Base. Conferred with Capt Griffin, C.O. of the Watson Laboratories Electronics Flight, with reference to the suggestion made by General Smith that they replace their B-29's with F-13's having a tri-met camera installation. It was understood that the LF Loran monitoring equipment and the magnetometers would be transferred to the F-13's and that photography would not interfere with their primary mission. He was most agreeable to take on this added project provided all arrangements were made by us with AMC and presuming of course that clearance was obtained from the Canadian government. I was very favorably impressed by the work being done by this group, and many of their flights compare favorably with anything being done by the 46th Squadron. It seems a shame that all of the exploratory flights in the Arctic cannot be brought under one command in order that their purposes can be better coordinated.

/s/ HAROLD W. GRANT
Colonel, GSC
AC/S, A-6

[Taken frm Adj Gen Files, Hq SAC]

~~Bases~~ - ~~Overseas~~
~~Alaska~~ - ~~Ladd~~
Special Exercises

TAB C

Subj: Comments for Inclusion in the Alaskan Report — 5 Nov 1946
Comment No. 1
Col Callahan/hb/hlp/234

To: Chief of Staff

From: AC/S, A-4

1. The following comments are forwarded for inclusion in the Alaskan trip report covering period 14 - 21 October.

a. Questions raised at General Craig's staff meeting which should be basis of recommendations by this headquarters for location of two (2) B-36 runways. Information received from G-2, Alaskan Department, was that two (2) runways were to be initiated in fiscal year 1947 at Elmendorf and 26 Mile Fields.

b. Possible assumption of responsibilities for Cold Weather Test Detachment at Ladd Field under SAC Alaskan Wing. Heavy resistance from the Proving Ground and Air Materiel Commands can be expected. This activity is fundamentally not included in the SAC mission; however, due to the problems being encountered, and to be encountered this winter by SAC organizations based in Alaska, close cooperation and collaboration between the SAC Alaskan Wing and the Cold Weather Test Detachment are essential.

2. Action by this Headquarters:

a. Joint development by representatives of SAC Headquarters, SAC Alaskan Wing Headquarters, SAC Organizations in Alaska and the Headquarters Alaskan Air Command, of an organization to remain in Alaska on PCS and that which would be returned to the States under the SAC Rotational Training Plan. Primary studies made by A-4 and A-5 of this Headquarters were delivered to Colonel Landon for study.

b. Establishment of firm dates for movement of groups to and from the United States under SAC Rotational Plan. General Smith suggested 1 January and 1 July of each year. These dates should be made firm and the SAC Alaskan Wing officially advised so that the personnel of those elements which are to be returned to the U. S. will definitely know that their temporary duty in Alaska this winter will terminate 1 July 1947.

c. It was agreed that the War Department would be requested to place the 62nd Service Group on permanent change of station in the Alaskan Department pending determination of the exact organization of the 28th Bomb Group and 62nd Service Group to remain in the Alaskan Department.

3. Logistical Data:

a. Colonel Bogart, G-4, Alaskan Department, furnished four (4) copies of "Alaskan Department Logistical Data," which have been distributed to the Commanding General, A-3, A-4, and Staff Engineer. This booklet contains photographs as well as logistical and installations data.

b. Col. Bogard advised that the railroad from Anchorage to Fairbanks has a capacity of 720 tons per day. Since Anchorage closes as a port about 1 November due to ice, Port Whittier is considered the main theatre port as it is open the year round. It has a capacity of handling 2000 measurement tons or about 1500 short tons per day. The road is open from Anchorage to Fairbanks through the year. The pipeline from Skagway to Fairbanks has a capacity of 1000 bbls. per day. It is now closed but the Alaskan Department has requested that it be reopened. About ninety (90) days will be required to place it into operation. It is estimated that this will not occur prior to 1 February; consequently, no help from this source is expected this winter. The alternate plan for moving fuel into Ladd Field is by the railroad which is moving 15,000 to 20,000 bbls. per month. The Department is getting forty (40) more tank cars in order to increase rail capacity. The railhead at Port Whittier is supplied fuel by barge from the Naval station at Kodiak.

4. Maintenance.

a. A better means of preventing and removing ice from B-29 windshields is required. This problem is being attacked by the Maintenance Division, A-4, in collaboration with Headquarters Air Materiel Command.

5. Elmendorf Field.

a. Officers contacted - Lt. Col. Best, Commanding Officer, Service Detachment, 28th Bomb Group and Lt. Col. Holstrom, Commanding Officer, 62nd Service Group.

b. These two organizations have been furnished a housing area, made up of Quonset huts, which is seven (7) miles from their hangar at Elmendorf Field; however, housing for the 62nd Service Group has been promised in the main base area which will greatly reduce their transportation problem and should be a means of solving the problem of feeding 28th Bomb Group personnel their noon meal within walking distance of the hangar. Since buses are not available to provide transportation for the 28th Bomb Group personnel between the housing and hangar areas, a rail spur is to be extended and utilized for this purpose. It is anticipated that one (1) additional hangar will be made available giving a total capacity of housing six (6) B-29's in the two (2) hangars. Assistance and support regarding local arrangements at Elmendorf Field will be rendered by Colonel

Landon. Concern regarding delivery of unit aircraft to the 28th Bomb Group and arrangements for bombs and ammunition required in the training program was expressed. These matters are being followed up by A-4 and the Ordnance Officer at Headquarters SAC.

6. SAC Wing, Iadd Field, Fairbanks.

a. Colonel Landon, Commanding Officer, SAC Alaskan Training Wing, was contacted and remained with the party until departure from Elmendorf Field. The proper designation, authorized manning and directive regarding channels of communication were his immediate requirements. It is understood that AC/S, A-1 and AC/S, A-3 are taking the necessary action.

7. 46th Recon Squadron, Iadd Field.

a. Major White, Commanding Officer, Mr. Davis, Operations Analyst, and Captain Simms, Acting S-4, were contacted. The 46th Recon Sq is well situated in a Quonset hut area and has three (3) hangars, each of which are capable of housing two (2) B-29's. Hangar lean-to's provide adequate and generally well equipped shop areas. The machine, propeller, and paint shops are in separate buildings. The installation is generally satisfactory and the only real problem is that the Base establishment does not have the personnel to man Base facilities. This requirement is being met to a major degree by the 46th Recon Sq and its Service Detachment.

b. Aircraft Requirements. Major White was advised that two long range C-54G's were being requested to meet the requirements which had previously required modification of two NANOOK B-29's for long range missions. He requested, in addition, one (1) C-54, equipped with glider snatch and tow equipment for rescue purposes. Six (6) CG-15 Gliders are assigned to the Cold Weather Test Detachment at Iadd Field and Colonel Shanahan, Detachment Co, stated that they could be used for rescue purposes. Request for this C-54 aircraft has also been made to Headquarters AAF. Major White further requested two (2) C-54 type aircraft to be assigned to the 46th Recon Sq for cargo purposes. These aircraft would replace the four (4) C-54D's being operated by ATC between Great Falls and Iadd Field under the NANOOK Project. Arrangements have been made since the parties returned to Washington for ATC to carry 35 tons per month from Great Falls to Alaska, thus eliminating this requirement for two (2) cargo C-54's. ATC further agreed to turn back the fifteen (15) SAC mechanics loaned to assist in the maintenance of the NANOOK C-54's. It was also agreed that SAC requirements for crews to operate the two (2) long range C-54G's and the rescue C-54 will be met.

c. Navigation Equipment. Dr. Siple and Mr. Davis emphasized the need for a clock-driven sun compass as a means of meeting the problem of gyro precession and magnetic compass needle swinging. Dr. Siple stated that a Bumstead clock-driven sun compass had been made by the Pioneer Instrument Company for, and was used successfully by, Admiral Byrd in his Polar flights. Another suggestion was to place a clock drive into the Astro Compass. This matter is being followed up.

d. Organizational Equipment. There is a need for a Table of Equipment for a Service Detachment similar to that placed on TDY with the 46th Recon Squadron. At present no equipment is prescribed. This has been made a special project for study by the Logistics Division, A-4. As long as the 46th Recon Squadron stays at Ladd Field with its ample facilities there is no pressing requirement.

e. Personnel Manning of the Service Detachment. Satisfactory except for fuel-servicing and other transportation requirements which it had been anticipated that the Base would man. Major White requested a cadre of basic soldiers to meet this requirement.

f. Technical Representatives. Boeing Aircraft, Wright Aeronautical, Bendix Stromberg, Minneapolis-Honeywell and Curtiss Propeller technical representatives are presently at Ladd Field and are working with the 46th Recon Squadron, 28th Bomb Group and the Cold Weather Test Detachment this winter.

/s/ DAN F. CALLAHAN
Colonel, GSC
AC/S, A-4, Supply & Maintenance.

~~Front End Ops Errors~~
Special Exercises

CONFIDENTIAL

Subject: Report of Staff Visit

TO: Commanding General
THRU: Coordination and Compliance Officer 5 August 1946
FROM: Deputy, A-4, Supply & Maintenance

1. Name of traveler: Colonel Robert F. Fulton, O-18484.

2. Points visited and dates:
Great Falls Army Air Base, Montana - 29 July 1946
Edmonton, Canada, Army Air Base - 29 July 1946
Ft Richardson, Anchorage, Alaska - 30 July to 31 July 1946
Ladd Field, Fairbanks, Alaska - 1 August 1946

3. Findings:

a. The purpose of this visit was to investigate the adequacy of Logistical Support activities pertaining to Nanook Project.

b. Great Falls: The ATC Freight Traffic Office was contacted relative to the backlog of supplies Nanook. On 29 July there existed 125,000 pounds approximately, which was being reduced at the rate of 12,000 to 15,000 pounds per C-54 plane load. Three C-54s were due to load out in the next three days. It appeared that the air lift of priority supplies was proceeding as well as could be expected for the moment considering the difficulties in keeping the C-54s properly maintained and in commission. Every effort is being made by ATC to expedite the move of this air lift which had backlogged at Great Falls.

c. Edmonton Army Air Base: The Commanding Officer was contacted and questioned regarding any special problems relating to the movement of Nanook ships through his Base and the report was made that no unusual problems existed and that all Nanook planes were being expedited through Edmonton.

d. Elmendorf Army Air Field, Ft. Richardson, Anchorage, Alaska:

(1) A meeting was held with Major General H. A. Craig, Alaskan Department Commander and Brigadier General Joseph H. Atkinson, Deputy Commander. Headquarters, Strategic Air Command was represented by Colonel T. J. DuBose and Colonel R. R. Rowland of A-3, Colonel R. F. Fulton of A-4. Lt Colonel W. F. Coleman, Theaters Branch AC/AS-3 represented Hq, AAF. Over-all problems relating to the Air Force units of the Alaskan Department were discussed and preliminary plans were outlined for their reception in the Department and their subsequent training. General Craig stated that full logistical support would be given all Army Air Force units received in the Theater.

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(2) A meeting was held with Colonel L. G. Mulzer, AC, Commanding Officer of the Alaskan Air Depot and of Elmendorf Field. Colonel Mulzer stated that two B-29s were presently assigned to the Field and had been used in training Depot personnel in supply and maintenance. He stated that adequate Fourth Echelon maintenance would be provided to any Air Corps units in the Alaskan Department. Table II Supplies for 30 days for the 46th Recon Sqdn had been put on requisition by the AMC and would be received in the Department as a routine procedure. The present channel for obtaining parts for airplanes out of commission is for the Air Corps Supply Officer at a Base to call the Alaskan Depot which will supply the parts if available. If the parts are not available in the Department the Air Corps Supply Officer at the Base in question, TWXs a requisition to the Pacific Overseas Depot at Oakland, California for the parts. Such channels require approximately ten days for the parts to be secured and to make delivery to Great Falls for ATC air lift to Ladd Field. In view of the high priority of the Nanook Project and the need for high utilization of aircraft in the 46th Recon Squadron to accomplish its assigned mission before the cessation of day light flying hours, Colonel Mulzer recommended that a special "Blue Streak" method be established with the AMC for the procurement of such parts. Under such a plan as he suggested, if the parts were not available within the Department, the Air Corps Supply Officer would TWX directly to the B-29 Specialized Depot at Topeka, Kansas, which would procure the parts and ship them to Great Falls plainly marked NANOOK PROJECT, where they would be air lifted to Ladd Field. Colonel Mulzer felt that this method would cut the time in half in the procurement of parts. Inasmuch as the 46th Recon Sqdn planes are equipped with the latest Radar and communications equipment he also felt that a similar channel for procurement of these parts should be established direct to Ladd Field, instead of through the Pacific Overseas Depot.

(3) A meeting was held with G-4, of the Alaskan Department, Colonel Robinson, in regard to general purpose vehicles and Class 1, 2 and 3 supplies. Colonel Robinson stated that general purpose vehicles were in excess within the Department and that a total of about 700 were presently on Adak Island but that in order to get them to the place where they could be used, it would be a matter of months, and further, that they were in a very poor state of repair, inasmuch as they had been in storage for almost two years. Excess vehicles that were located in the Department have been turned over to the Engineers for construction projects where they were urgently needed. He pointed out that any units sent to Alaska should have all special and general purpose vehicles accompany the unit from Seattle. Certain items in the T.O & E. are unnecessary in the Theater and such lists should be screened to eliminate the unnecessary items. He gave as an example that tentage was unnecessary in the Department but if needed it could be filled from local stocks. All other equipment necessary for the logistical support of Air Force units is available from

Department Stocks or the War Department will be so notified. Colonel Robinson further stated, that Special Service items and supplies such as Ordnance, Quartermaster, Signal and Engineer items which are controlled by the Alaskan Department are shipped directly from the Depots in the States and require about four months in the pipeline in order to deliver to any Base. Due to the transportation problems within the Department very little or no interchange of items is made within the Department but they are shipped directly to the Base from the United States.

e. A meeting was held at Ladd Field, Fairbanks with the Base Commander, Colonel Louis Merrick. Colonel Merrick stated that his available manpower was at a low point and that his assistance to the 46th Recon Sqdn was at a minimum as a result. He requested that the 46th Recon Sqdn place on temporary duty with his different Departments sufficient numbers of personnel to take care of the increased work effort. Major White, Commanding Officer of the 46th Recon Squadron had agreed that this be accomplished and was doing so as rapidly as his personnel arrived and could be made available. A large amount of airplane parts, photographic equipment and other supplies had arrived but were awaiting unpacking and binning in the Base Air Corps Supply. No attempt will be made by the 46th Recon Sqdn to establish a separate Supply but all will be turned over to the Base Supply Officer. Housing within the Ladd Field Area is adequate for the number of personnel which the 46th Recon Sqdn will have at the Base. Additional housing for 385 men is located at 26 Mile Base, a satellite base of Ladd Field. This Base is presently inactivated and is prepared for winter storage which would mean that approximately 30 days would be required to connect the water pipes and place the Field in operation. All supplies have been removed which would have to be replaced in order to operate. Another satellite Field called "Big Delta", approximately 70 miles from Ladd Field, has the capacity of approximately 800 personnel. It is in the same state of inactivation as 26 Mile Base. In order to use either Base it would be necessary to allocate additional money to Ladd Field for the hiring of civilian personnel. Maintenance facilities at Ladd Field consist of 3 birchwood hangers which will take two B-29s each. In addition there is a large Cold Weather Test Hanger of which the 46th Recon Sqdn would like to use half for engine buildup and change. Colonel Merrick stated that every aid and assistance would be given to the 46th Recon Sqdn within his power. The Photographic Laboratory located in one hangar is completely equipped and adequate in every respect to develop and print all exposed films. Major White stated that it was more complete than the Laboratory at MacDill Field. Motor transportation for the 46th Recon Sqdn is very limited and will be until the T.E. vehicles arrive by boat from Seattle.

4. Recommendations: It is recommended that:

a. All Army Air Forces units ordered to the Alaskan Department be fully equipped with special and general purpose vehicles, unless the Department states that certain special vehicles are available on the Base.

b. That the AMC be contacted with a view of establishing the Blue Streak method of procuring supplies for ACCP.

c. That personnel for the 46th Recon Sqdn be given sufficient priority to air lift them to Ladd Field without delay in order to alleviate the personnel shortage.

d. That all supplies for this Project be plainly marked NANOOK and that all orders on personnel be marked NANOOK which will establish the priority necessary to expedite their movement.

e. That the utilization of the F-13s be confined to photographic missions out of Ladd Field and that they not be used to transport film or prints to Washington except in unusual circumstances.

5. Action taken subsequent to return:

a. Supply Division, A-4, has been directed to check movement orders to see that vehicles accompany units although this matter will actually be a decision of G-4, War Department.

b. The Supply Division, A-4, SAC, has been directed to contact AMC regarding accelerated procedure for securing parts for AOCP.

c. The Transportation Division of A-4, and A-3, Strategic Air Command have been contacted and air movement of personnel is being expedited with daily movements being accomplished from Grand Island to Great Falls and thence to Ladd Field.

d. The Supply Division, A-4, and A-1, of Strategic Air Command are being requested to accomplish the proper marking of all supplies and personnel orders.

e. A-3 of Strategic Air Command is being requested to direct the utilization of the aircraft in such a manner as to accomplish the mission with the least diverted flying time.

f. The Supply Division of A-4 will screen supplies at Great Falls in order to eliminate, if possible, the air lifting of supplies which are available in the Alaskan Department or for supplies for which no priority should exist.

6. Copy of this report is being forwarded to Commanding General, Alaskan Department.

DAN F. CALLAHAN
Colonel, GSC
AC/S, A-4, Supply & Maintenance

ROBERT F. FULTON
Colonel, GSC
Deputy, A-4

~~Communications Networks~~
~~Routes~~
Special Exercises

ARMY AIR FORCES
HEADQUARTERS ARMY AIRWAYS COMMUNICATIONS SYSTEM
Langley Field, Va.

AACS 360.4 19 March 1946

SUBJECT: Proposed Arctic Air Route

TO: Commanding General
Army Air Forces
Washington 25, D. C.

ATTN: Field Services Branch
Office/Air Communications Officer

1. Information received at this headquarters indicates that Headquarters Army Air Forces contemplates establishing an air route across the Arctic between Alaska and Iceland or some other point in the North Atlantic.

2. In the event the above information is correct, and the Army Airways Communications System will be responsible for providing communication and navigational aid facilities along the proposed route, it is requested that the following information be furnished this headquarters:

a. Route to be followed together with the locations at which aircraft will land and take-off.

b. Approximate date the route will be commissioned together with information as to whether it will be of a permanent or temporary nature.

c. Pertinent information relative to the types of communication and navigational aid facilities desired.

3. The above information is required in order that this headquarters can accomplish necessary advanced planning accordingly.

FOR THE COMMANDING GENERAL:

RUSSELL A. PARVIANCE, Major AC
for HASKELL E. NEAL
Colonel, AC
Asst Chief Of Staff
Operations, Training &
Requirements

[redacted]

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Basic ltr fr AACS, Langley Field, Va, dtd 17 Mar 46 subj: Proposed Arctic Air Route

AFACO-F/Al 1st Ind 29 Mar 1946

Hq Army Air Forces, Washington 25, D. C.

TO: Commanding General, Air Transport Command, Washington 25, D. C.
ATT: Air Communications System Liaison Office

1. Since project "Polaris" is a responsibility of Air Transport Command, the basic correspondence is transmitted for your action.

2. It is understood that the original plan for establishment of this route provided only minimum facilities and would require augmentation. It is requested that this office be kept advised of the status of this project.

BY COMMAND OF GENERAL SPAATZ:

CARL SWYTER
Colonel, Air Corps
Chief, AACS Section
Air Communications Office

2d Ind AFATC/OPS/M-E/RRH/bgj
Hq, AAF, Air Transport Command, Washington, 25, D. C. 8 April 1946

TO: Commanding General, Air Communications Services, Langley Field, Va.

1. Reference paragraph 2-a basic communication, the route to be followed under proposed Arctic Air Route would be from Ladd Field, Fairbanks, Alaska to Meeks Field, Reykjavik, Iceland.

2. Reference paragraph 2-b, approximate date the route is to be commissioned is 1 May 1946. Commission is to be of a permanent nature.

3. Following are the communications requirements necessary at each station to effectively serve aircraft with operational control and navigational aids:

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a. Fairbanks and Meeks Field

(1) Radio Range
(2) Ground Control Approach
(3) Instrument Landing System (SCS-51)
(4) Air/Ground - high and low frequency
(5) Point-to-point - high and low frequency
(6) Control Tower

b. Herschel Island, Prince Patrick Island, Lougheed Island, Baanes Peninsula, Thule or Etah in Greenland and Kongerdlugssaq, or vicinity.

(1) Radio Beacon
(2) Air/Ground - high and low frequency
(3) Point-to-point - high and low frequency

c. Churchill, Southampton, Crystal I and II and BW - 3 and 8.

(1) Radio Range or Beacon
(2) Air/Ground - high frequency
(3) Point-to-point - existing circuits

4. Stations listed under paragraphs a and b above will be equipped for guarding 500 and 8280 Kcs. when aircraft are known to be flying the new route.

5. Stations listed under paragraph b above will be manned by ACS and Weather personnel only; therefore, provisions should be made for housekeeping responsibilities.

6. The airports and radio stations at Churchill and Southampton Island, which are understood to be operated by the Canadians, will serve as alternates for aircraft flying the new route. This Headquarters will make request to Headquarters, Army Air Forces to effect appropriate arrangements with the Canadian Government to use these facilities.

7. Provisions for utilizing low frequency radio for both point-to-point and air-ground communications, with high frequency as an alternate, has been chosen in view of information available to this Headquarters with respect to the ineffectiveness of high frequency radio in the area to be flown. The assignment of two (2) low frequencies; one for point-to-point and one for air-ground, to be used on the entire route from Fairbanks to Meeks Field, is desired, however, if difficulty is experienced in procuring frequency assignments, one frequency for both purposes may suffice in view of the limited number of flights involved. Low frequency assignments for the radio ranges

[redacted]

and homing beacons on the route should not be duplicated except at facilities separated by at least 1500 miles.

8. Air/ground frequencies in the high frequency range for use on the route should, if possible, be the same as those presently assigned the North Atlantic route, namely 3452.5 and 6355 Kcs. If this arrangement is not feasible, an attempt should be made to extend the Alaskan frequencies to all stations on the route, or as many as possible.

9. As indicated above, all stations on the regular route from Fairbanks to Meeks Field, should, if possible, be assigned common high and low air-ground frequencies. The alternate stations will continue operation on the presently assigned air-ground frequencies and aircraft personnel of this project will be properly briefed as to correct frequencies to be used when alternate stations are contacted. The use of airborne Collins Automatic Tune Transmitters (AN/ART-13) will greatly facilitate communications with these stations.

10. Necessary action must be taken to assure point-to-point communications between all alternate airports and the terminal stations of Fairbanks and Meeks Field. Such communications may be established by means of radio or landline circuits operating through relay stations.

11. Based upon facts as stated above, it is requested that your Headquarters submit the following information to this Command in order to provide Headquarters AAF with full details of communications requirements for the project:

a. Total operating personnel required.
b. Equipment required over and above that already installed.
c. Weight and cubic feet of equipment.

12. In the event the communications plan is approved by higher Headquarters, all facilities must be installed and in operation by 1 October 1946. Your Headquarters will be promptly advised upon receipt of a decision.

BY COMMAND OF LIEUTENANT GENERAL GEORGE:

/s/ KARL VRUESCHELL, JR.
Colonel, G.S.C.
Assistant Chief of Staff
Operations

[redacted]

SUBJECT: Proposed Arctic Air Route

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ACS 360.4 3d Ind

Hq Air Communications Service, AAF, Langley Field, Virginia, 24 May 1946

To: Commanding General, Air Transport Command, Washington 25, D. C.

1. Reference paragraph 11, preceding indorsement, the operating personnel required for subject project are listed in inclosure #1, attached. This list does not include installation teams. The equipment requirements for the subject project, including weights and cubes, are listed in inclosure #2. No equipment requirements are listed for Crystal I, II, BW-3 and BW-8, inasmuch as adequate facilities are now installed at these locations. This headquarters is at present checking on the availability of the equipment required for this project.

2. The frequency plan for the subject project is as follows:

a. Air/ground

(1) One CW frequency in the 150-350 kc band.

(2) Two CW frequencies in the 3 and 6 mc band. It is proposed that the A/G frequencies 3452.5 and 6355 kc, now in use in the North Atlantic area be extended over the Polaris route.

b. Point-to-point

(1) One CW frequency in the 150-350 kc band. 199 kc is now in use at Fairbanks for P/P; it is proposed to extend this frequency over the Polaris route as the low frequency.

(2) Two CW high frequencies will be required. Frequencies in the 5 mc and 11 mc bands are proposed for this route.

c. Beacons

(1) All beacons projected for installation at Herschel, Prince Patrick, Lougheed, Raanes, Etah and Scoresby Sound are to be assigned separate frequencies in the 200-400 kcs band.

3. For informational purposes, the following facts are submitted:

a. Weather conditions are such that any plans for construction or reconversion of points above Sondrestromfjord on the West Coast and any point on the East Coast of Greenland, other

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than Ikatek, must be completed not latter than 15 September 1946, or the possibility is great that installation groups may be caught in the ice and compelled to remain there for the entire winter.

b. In the area under consideration, the land approaches rise sharply out of the sea, and there are no beaches; therefore, the possibilities of landing equipment by running a naval ship (such as an LST) aground with all equipment installed is not deemed practicable.

4. No provisions have been made for housekeeping facilities, buildings, heating, sanitation, special services, etc., in the studies conducted by this headquarters. It is assumed that such facilities will be considered by your headquarters after consolidation of the requirements of the Air Weather Services and this organization.

5. It is understood that the locations in paragraph 3b, 2d indorsement, are at present only tentatively planned. It is requested that this headquarters be advised of the specific locations decided upon for communications facilities, and of the decision concerning the communications plan submitted above, at the earliest possible date in view of the extensive procurement problem and logistics planning required.

FOR THE COMMANDING GENERAL:

/s/ HASKELL B. NEAL
Colonel, AC
Asst Chief of Staff
Operations, Training &
Requirements

2 Incls:
1. Communications Personnel Requirements
2. Communications Equipment Requirements

[redacted]

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SUBJECT: Proposed Arctic Air Route

4th Ind. 29 May 1946

Hq, AAF, Air Transport Command, Washington 25, D. C.

TO: Commanding General, Strategic Air Command, Bolling Field, D. C.
ATTN: Brig, Gen. F. H. Smith

Forwarded for your information and any action deemed necessary are the plans of Air Communications Service for the support of operation Polaris.

FOR THE COMMANDING GENERAL:

2 Incls:
n/c

/s/ JAMES C. OCHS
Captain, Air Corps
Asst. Executive
Operations

[redacted]

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COMMUNICATIONS PERSONNEL REQUIREMENTS

FOR OPERATION "POLARIS"

	760	778	013	060	Total
Fairbanks		1	1		2
Herschel	4	2	2	1	9
Prince Patrick	4	2	2	1	9
Lougheed	4	2	2	1	9
Raanes	4	2	2	1	9
Scoresby Sound	4	2	2	1	9
Etah	4	2	2	1	9
Meeks	—	1	1	—	2
	24	14	14	6	58

It is considered unnecessary to supplement operating personnel at Fairbanks, Meeks, BW-3, BW-8, Crystal I and Crystal II as presently assigned personnel should be capable of handling this additional traffic.

Incl #1

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COMMUNICATIONS EQUIPMENT REQUIREMENTS, WEIGHTS, AND CUBES FOR OPERATION "POLARIS"

1. Basic Facility	Fairbanks	Herschel Island	Prince Patrick	Lougheed Island	Raanes Penisula	Etah	Scoresby Sound	Meeks	Total Required
A. Radio Xmtg Sta 5 KW, MF, CW, MCW (w/2 ea 50 KW Pow.Plant*)	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	2 ea 44500# 2300cuft	16 ea 44500#
B. Radio Xmtg Sta 3 KW, HF, CW (w/2 ea 50 KW Pow.Plant*)	1 ea 14200# 450cuft	1 ea 14200# 450cuft	1 ea 14200# 450cuft	1 ea 14200# 450cuft	1 ea 14200# 450cuft	1 ea 14200# 450cuft	1 ea 14200# 450cuft	1 ea 14200# 450cuft	8 ea
C. Manual Operating Position (w/1 ea 8 KW Pow.Plant*)	2 ea 8600# 350cuft	2 ea 8600# 350cuft	2 ea 8600# 350cuft	2 ea 8600# 350cuft	2 ea 8600# 350cuft	2 ea 8600# 350cuft	2 ea 8600# 350cuft	2 ea 8600# 350cuft	16 ea

(*Note: All Power Plants to use Diesel Fuel.)

2. Spare Items									
A. Bunnell 6 KW Amplifier (2C466)		1 ea 10400# 95 cuft	1 ea 10400# 95cuft	1 ea 10400# 95cuft	1 ea 10400# 95cuft	1 ea 10400# 95cuft	1 ea 10400# 95cuft		6 ea
B. T-5/RFC Xmtr (2C6900-5)		1 ea 1240# 105cuft	1 ea 1240# 105cuft	1 ea 1240# 105cuft	1 ea 1240# 105cuft	1 ea 1240# 105cuft	1 ea 1240# 105cuft		6ea
C. P-1/FRC Rectifier (3H4698-1)		1 ea 620# 30cuft	1 ea 620# 30cuft	1 ea 620# 30cuft	1 ea 620# 30cuft	1 ea 620# 30cuft	1 ea 620# 30cuft		6 ea
D. MD-1/FRC Modulator (2C2537-1)		1 ea 530# 30cuft	1 ea 530# 30cuft	1 ea 530# 30cuft	1 ea 530# 30cuft	1 ea 530# 30cuft	1 ea 530# 30cuft		6 ea
E. 96-C-3 Xmtr (2C6840C-3) (Single RF Channel)		2 ea 900# 40cuft	2 ea 900# 40cuft	2 ea 900# 40cuft	2 ea 900# 40cuft	2 ea 900# 40cuft	2 ea 900# 40cuft		12 ea

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COMMUNICATIONS EQUIPMENT REQUIREMENTS, WEIGHTS, AND CUBES FOR OPERATION "POLARIS"

2. Spare Items(cont'd)	Fairbanks	Herschel Island	Prince Patrick	Lougheed Island	Raanes Peninsula	Etah	Scoresby Sound	Meeks	Total Required
F. 36-A Rectifier (3H4956E)		1 ea 2200# 100cuft	1 ea 2200# 100cuft	1 ea 2200# 100cuft	1 ea 2200# 100cuft	1 ea 2200# 100cuft	1 ea 2200# 100cuft		6 ea
G. BC-779 Receiver (2C4779.1)		2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft		12 ea
H. R-129/U Receiver (2C4180-84)	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	2 ea 200# 12cuft	16 ea
I. RA-84 Rectifier (3H4496-84)	2ea 200# 12cuft	4 ea 400# 24cuft	4 ea 400# 24cuft	4 ea 400# 24cuft	4 ea 400# 24cuft	4 ea 400# 24cuft	4 ea 400# 24cuft	4 ea 400# 12cuft	28 ea
J. CY-161 Control Unit (2C7603-161)		1 ea 592# 45 cuft	1 ea 592# 45cuft	1 ea 592# 45cuft	1 ea 592# 45cuft	1 ea 592# 45cuft	1 ea 592# 45cuft		6 ea
K. Keyer Wilson #22 (2Z5700)		2 ea 80# 4cuft	2 ea 80# 4cuft	2 ea 80# 4cuft	2 ea 80# 4cuft	2 ea 80# 4cuft	2 ea 80# 4cuft		12 ea
Total Weight	67700#	84662#	84662#	84662#	84662#	84662#	84662#	67700#	
Total Cube	3124cuft	3597cuft	3597cuft	3597cuft	3597cuft	3597cuft	3579cuft (3597)	3124cuft	

In addition to each of the above weights and cubes add:

1. Diesel Fuel (For continuous operation, 2 ea. 50KW Power Plant and 1 ea. 8 KW Power Plant)*, 689000 lbs, 16400 cuft.

   Motor Oil (25 ea. 55 gal. drums)*, 11500 lbs, 300 cuft.

*Estimated one (1) year's supply.

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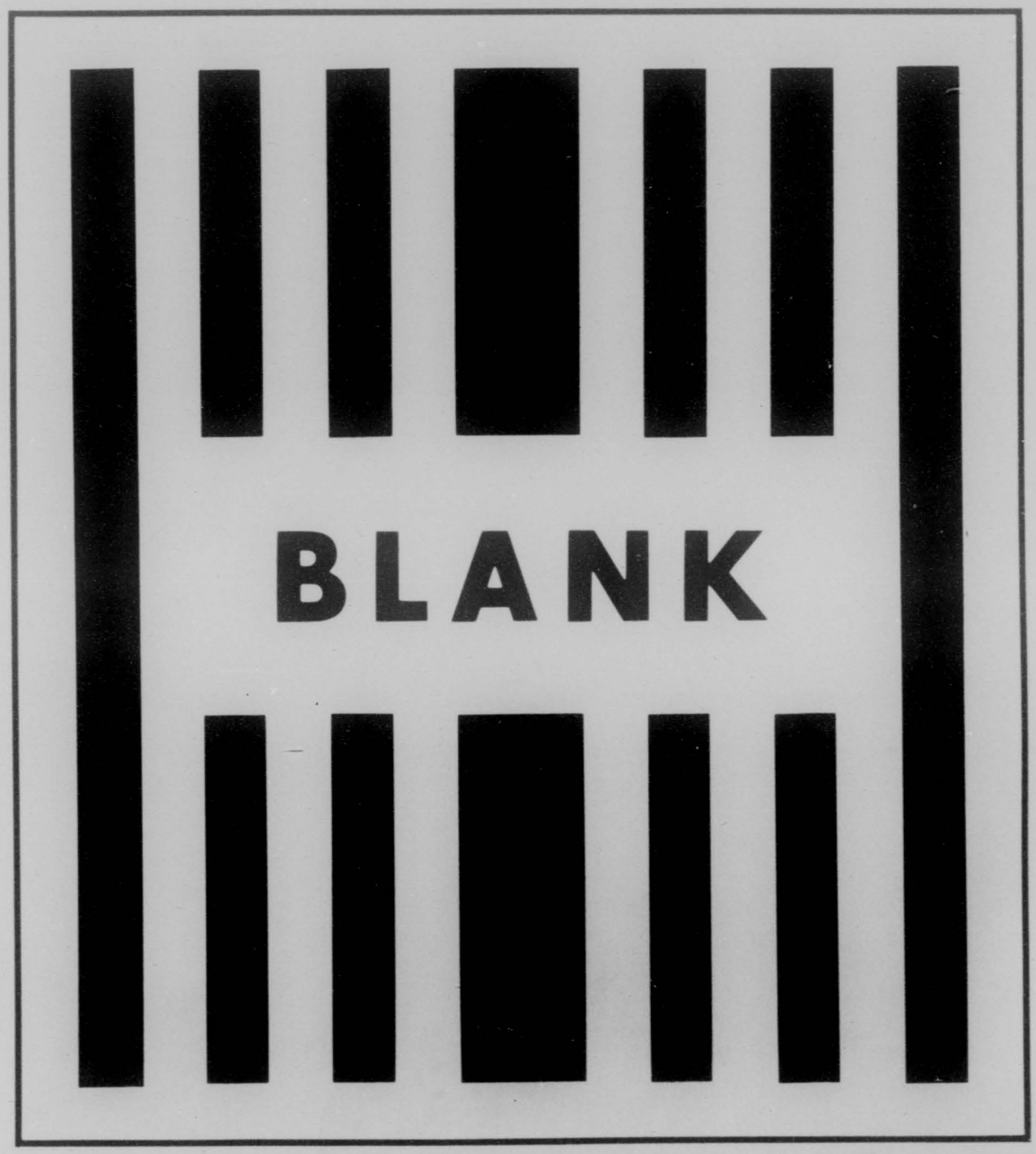
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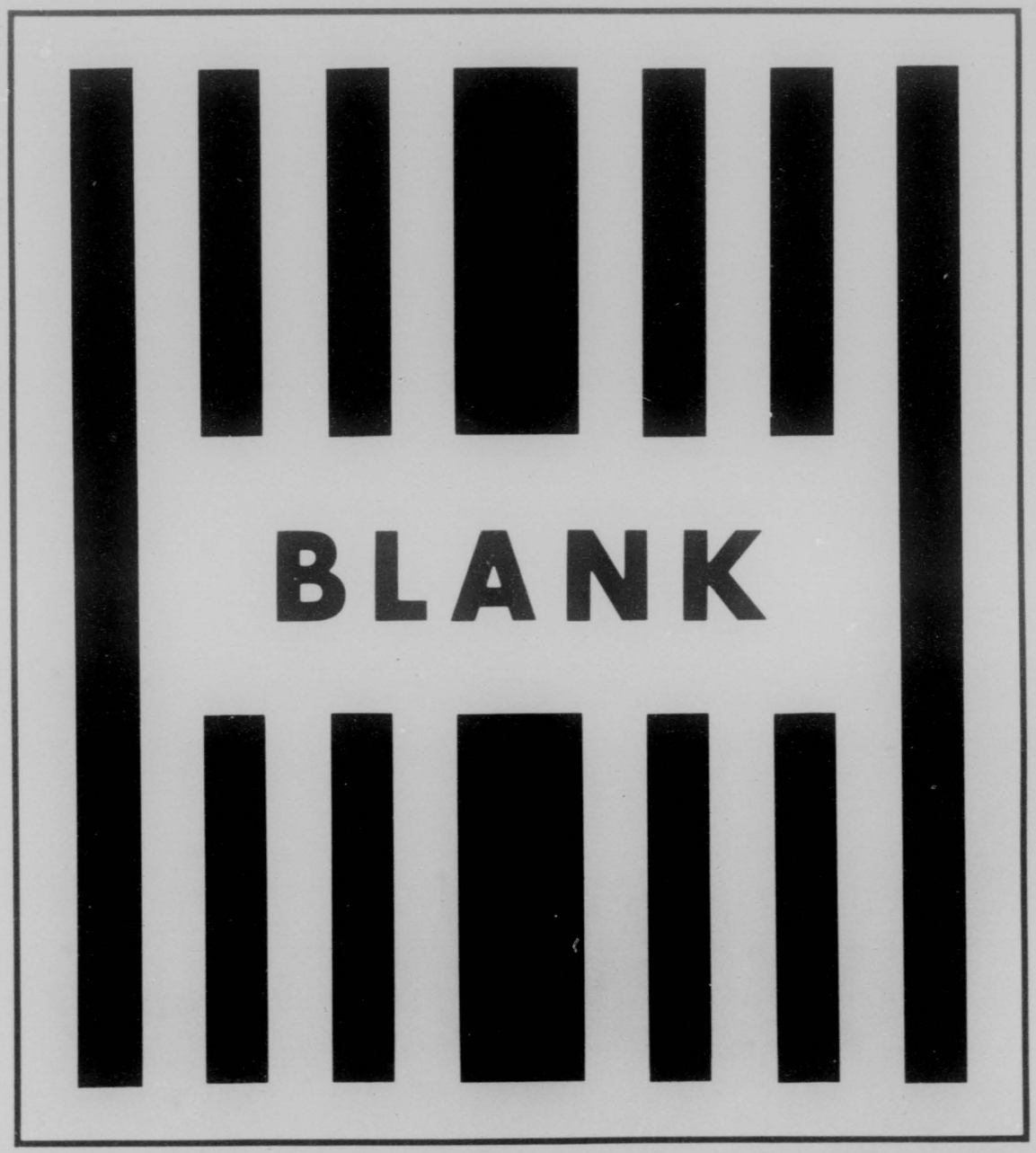
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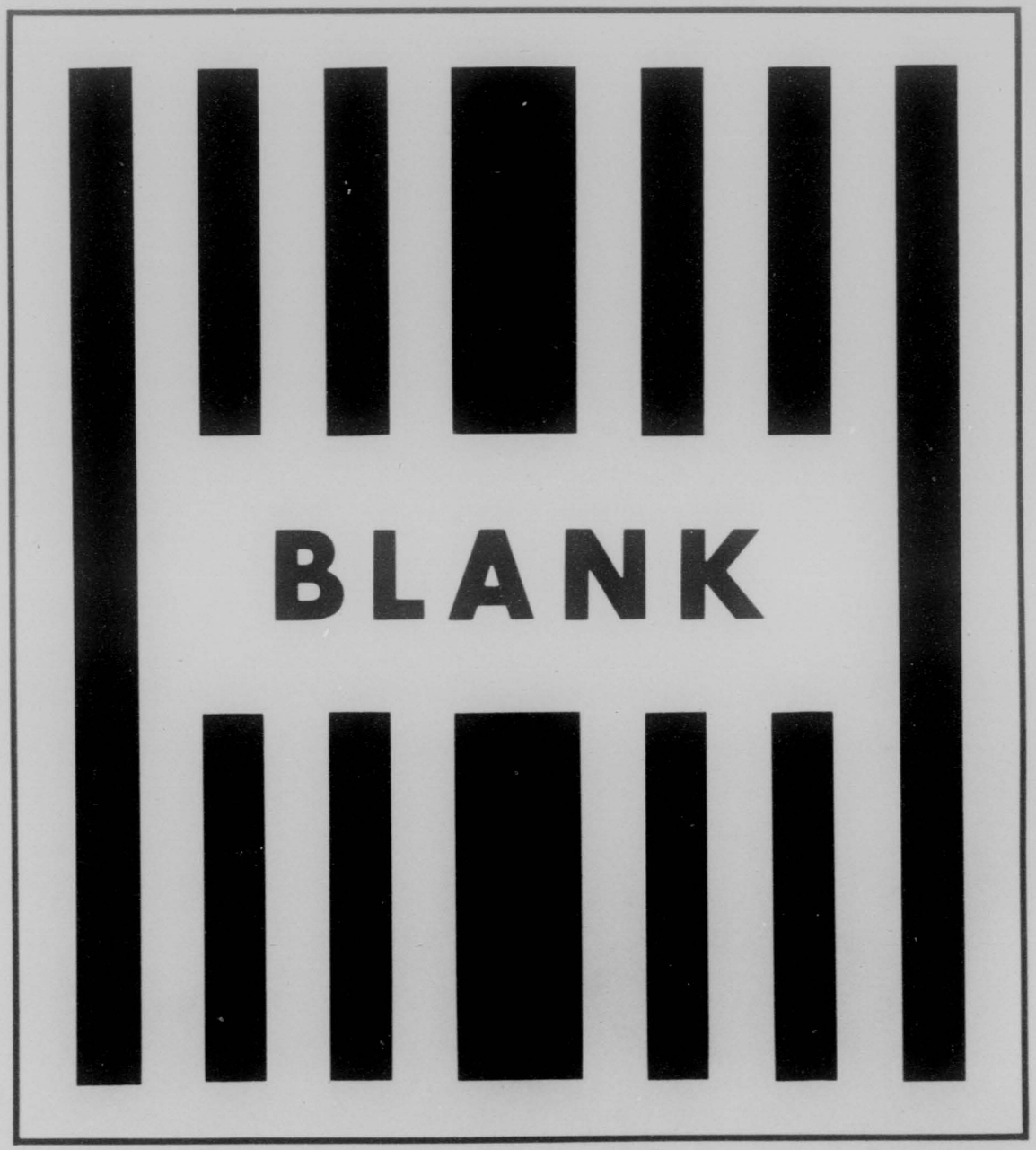
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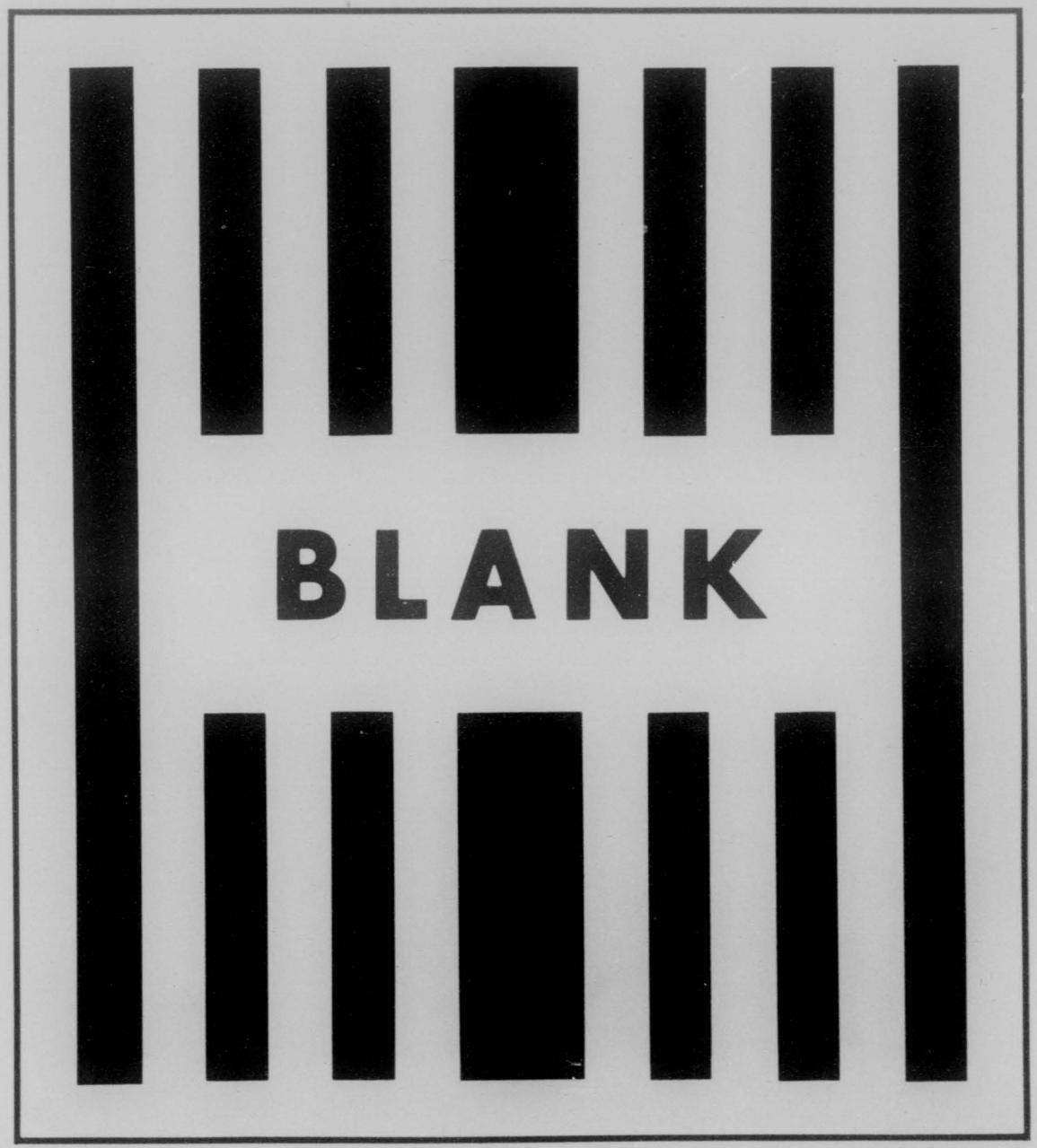
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REPORT

7TH BOMBARDMENT GROUP (VH)

MANEUVERS

WENDOVER, UTAH

21 JUNE 1947 TO 6 JULY 1947

COL. HEWITT T. WHELESS
COMMANDING

IRIS WORK SHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN) 01057306

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 00000381 21,000334

SECURITY WARNING/ADMIN MARKINGS

RD FR CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

PROPRIETARY INFO

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501 U

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DECLASSIFY ON

REVIEW ON

CLASSIFICATION AND DOWNGRADING INSTRUCTIONS FOR

502 _____ / _____ / _____
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INDEX

Sc Cy 1 Sta file 373 (12 Aug 41) (P)
Subj: Mission Rpts of Bombardment
Maneuvers, 7th Bomb Group (VH)

Original Cy 1 Rpts

CHRONOLOGY

5 May 1947: Group received maneuvers at Wendover, Headquarters, 8th Air Force

17 June 1947: [illegible] received Field Order 21, Headquarters, 8th Air Force

18 June 1947: Group received Field Order 23, Headquarters, 8th Air Force

19 June 1947: Group received Field Order 21, ammendment which called for the 492nd Bomb Squadron's participation in maneuvers in the Far East - Field Order 23.

16 June 1947: Advanced party left Fort Worth Army Air Field for Wendover Army Air Field.

18 June 1947: Advanced echelon left Fort Worth Army Air Field for Wendover Army Air Field - 49 Officers and (1) EM of Inactive Reserve flew to Wendover.

19 June 1947: Ammendment to Field Order 23 received.

21 June 1947: Main echelon departed Fort Worth Army Air Field for Wendover Army Air Field.

22 June 1947: First group level mission conducted out of maneuver area; Radar Bombing of San Diego, California.

23 June 1947: Formal training program launched at maneuver area, with emphasis on bombing and gunnery.

27 June 1947: Inactive Reserve returned to Fort Worth Army Air Field.

28 June 1947: Field Order 24, calling for 7th Bomb group participation in Seattle maneuvers.

30 June 1947: Ammendment to Field Order 24.

1 July 1947: Second group level mission to San Diego, California, conducted.

3 July 1947: B-29s from 43rd Bomb Group arrive at Wendover to participate in flight to Seattle.

4 July 1947: Formation flight to Seattle, Washington in conjunction with Independence Day ceremonies.

6 July 1947: Participation in airport dedication ceremonies at Denton, Texas, and return to home station ending maneuver.

HISTORY

On receipt of the basic communication, Maneuvers at Wendover Field, Headquarters Eighth Air Force, 5 May 1947, plans were launched by the 7th Bomb Group (VH) for a two week maneuver at Wendover Field, Wendover, Utah.

To utilize to the maximum the two week maneuver period, it was felt that a training program should be devised prior to the group's arrival at Wendover Field. For, by predetermining the training standards, the S-4 Section could better determine the group's supply problems. On 8 June 1947, a flight was scheduled to Wendover, Utah for the Station S-3 and Station S-4 Officers and their respective staffs, in order that they could observe their counterparts in the 509th Bomb Group in operation at the maneuver area. On returning to Fort Worth, a considerable amount of time was devoted to the concurrent preparation of a mobility plan, for the movement of personnel and material to Wendover Field, and a comprehensive training program.

Field Order Number 21, Headquarters Eighth Air Force, 16 June 1947, which was received on the 16th was amended to delete the 492nd Bomb Squadron, in order that the latter squadron could participate in maneuvers in the Far East, in accordance with Field Order Number 23, Headquarters Eighth Air Force, 18 June 1947.

The Advanced Party, consisting of four (4) Officers and twenty-six (26) Enlisted Men from the Supply, Mess, Ordance and Armament Sections, departed Fort Worth at 0500 hours, 16 June 1947 in two (2) B-29s.

The Advanced Echelon, consisting of thirteen (13) Officers and seventy-nine (79) Enlisted Men from the Transportation, Medical, Mess, Photo, Military Police, Fire Fighter and Communications Sections left Fort Worth at approximately 0500 hours 18 June 1947 in one (1) B-29, four (4) C-47s, and two (2) B-25s. This party was charged with the responsibility of installing a Group Flight Control, establishing a telephone system, assembling bombs and ammunition, inspecting the bombing and gunnery ranges, and preparing for the billeting and feeding of the incoming main echelon, scheduled to arrive at Wendover Field on 21 June 1947.

On 21 June 1947, the 9th and 436th Bomb Squadrons (VH), constituting the 7th Bomb Group's total maneuver strength departed Fort Worth Army Air Field at 0800 hours for Wendover, Utah. Twenty B-29s were scheduled to participate in this movement; but, two (2) B-29s were forced to remain at Fort Worth for engine changes. B-29 #44-62079 arrived at the maneuver area 22 June 1947 and B-29 #44-62063 arrived on the 23rd.

Provisional Group Headquarters was established in building #1831 with the S-1, S-3 and S-4 Sections assigned to this building. The S-2 Section was assigned to building #833. The 9th and 436th Bomb Squadrons were located in building #1854. After the crews were housed and fed, they returned to their aircraft to unload supplies and ready the planes for the mission on 22 June 1947. A briefing was held in the S-2 building at 1600, 21 June 1947 for the first Field Order mission to San Diego, California. At this time, the Station Commander and the Station S-3 Officer oriented the crews on their role in the insuing maneuver.

Reserve Training: Forty-nine (49) Officers and one (1) Enlisted man of the Inactive reserve, residing in the Texas area, accompanied the 7th Bomb Group on this maneuver. These inactive reserve personnel were flown to the maneuver area in 7th Bomb Group C-47 type aircraft on 18 June 1947. While at Wendover Field, the flying personnel participated in bombing, navigation and gunnery missions in the maneuver area and flew to San Diego on the group's first Field Order mission. In addition to flying training, the inactive reserve personnel were thoroughly briefed on changes in operational procedures and techniques which had been effected since their last tour of duty. Ground personnel from the inactive reserve were assigned to the 7th Bomb Group's various ground sections, Armament, Radar Maintenance, Communications, Engineering, in accordance with their SSN. Under the supervision of the section heads, these inactive reserve personnel were oriented in the fundamentals and changes affecting their previous specialities. The inactive reserve group returned to Fort Worth Army Air Field, 27 June 1947.

On 23 June 1947, fourteen (14) B-29s from the 7th Bomb Group (VH) successfully attacked hangars on the North Island Naval Base, San Diego, California. The tactics employed on this mission were radar and visual bombing from an altitude of 21,000 feet.

Following the first group effort mission to San Diego, the Group was now free to concentrate on its gunnery and bombing training. It was felt by the S-3 Section that the main detriment to training would be inclement weather, and to offset this hinderance, it was decided that an "around the clock" schedule would be effected in order that advantage could be taken of the favorable long range weather forecast. Between 0800 hours, 23 June and 1600 hours, 26 June 1947, inclusive, it was planned that each Bombardier and each Radar Observer would drop twenty (20) practice bombs (M38A2) and each gunner would expend his ammunition. On 27 June and 28 June 1947 each Bombardier would drop fifteen (15) AN M 64 A1 500 pound demolition bombs. This schedule was meticulously adhered to with a minimum number of aborts attributed to engine trouble, rack malfunctions, radar and turret trouble. On 30 June 1947 between the hours of 0800 and 1800 a make-up schedule for Bombardiers and Gunners was inforced.

Crew members maintaining assigned aircraft: In keeping with the 7th Bomb Group's policy of charging flight crew members with the responsibility of aiding in the maintenance of their assigned aircraft, the flight crew members worked on their aircraft when they were not participating in aerial training. When the aircraft was on the ground, the crew chief was recognized as the supervisor of maintenance and the Airplane Commander was required to assemble his crew and place it at the Crew Chief's disposal during the period of maintenance. This cooperative policy, aside from [illegible] benefiting the hard-pressed ground crew, instilled in the flight crew a keen sense of responsibility and a better understanding of their aircraft.

The second group effort mission was flown on 1 July 1947, when fifteen (15) B-29s, compromising the Group's maximum effort, flew to San Diego, California, and bombed the large rectangular hangar at Municipal Airport with good results. The tactics employed on this mission were radar and visual bombing from an altitude of 20,000 feet. In an endeavor to alleviate the acute gasoline shortage at Wendover Field, all the B-29s participating on this mission on leaving the target area proceeded to either Merced, California or Mather Field, Sacramento, California to refuel.

On 2 July 1947, between 0800 hours and 1800 hours a make-up schedule was effected to enable Radar Observers to meet their required twenty (20) radar bombs per observer.

Field Order #24, Headquarters Eighth Air Force, 26 June 1947, which committed the 7th Bomb Group to a joint aerial review over Seattle with aircraft from the 43rd Bomb Group, was received and 3 July 1947 was devoted to preparing the aircraft for this mission. This mission was substituted for the sixteen sorties on the Fort Worth Bombplot called for in Field Order #21. Starting at 0653 hours 4 July 1947, eighteen (18) B-29s from the 7th Bomb Group and ten B-29s from the 43rd Bomb Group departed Wendover Field for the three squadron assembly points. Following the squadron assembly, the group rendezvoused over the Toledo Radio Range and proceded, squadrons in trail with the 9th Bomb Squadron leading, to Seattle. The Group made three passes over Seattle. B-29 #44-83953 was forced to leave the formation in the Seattle area, because of an exhaust valve failure in number one engine, and land at McChord Field, Tacoma, Washington. The flight proceded to Portland, Oregon and then broke formation with the 7th Bomb Group aircraft returning to Wendover Field, and the 43rd Bomb Group returning to its home station.

Saturday, 5 July 1947 was spent consolidating records, maintaining the aircraft, and general preparation for the Group's return to Fort Worth.

Eighteen (18) B-29s departed Wendover Field at one minute intervals starting at 0730 5 July 1947. Two B-29s were unable to make the flight; B-29 #44-83953 remaining at Tacoma, Washington and B-29 #44-87974 remaining at Wendover Field both awaiting engine changes.

Enroute home, the formation devisted from its course to participate in an aerial review over Denton, Texas in conjunction with an airport dedication ceremony at this city.

The formation arrived at Fort Worth Army Air Field at approximately 1430 hours and proceded to unload the aircraft and store equipment and supplies.

Analysis of Training: Background - The 7th Bomb Group's training program for crew and maintenance personnel has been long range in nature. In February of 1947 crew members were screened as to their ability and aptitude for this type of work, and then assigned to crews in each of the three squadrons. The training program was geared to a forty (40) hour flying month per aircraft an later this figure was raised to fifty (50) hours per month per aircraft. During the first month of training stress was placed on crew level training, where the crew perfected its coordination and cooperation within the aircraft. Crew members proficiency was checked both on the ground and in the air, and those found wanting were either replaced or given additional training. The crews progress to squadron level and group level missions during the month of March. At this time, emphasis was placed on tactical training, long range navigational missions, cruise control, controlled ground speed and perfecting assembly procedures. The following month witnessed a radical departure from the routine training program in that one squadron was ordered to the Far East for a thirty day maneuver to ascertain the mobility and ability of a VH Bomb Squadron to operate at a strange base on the squadron level.

During the month of April and May the group's training advanced to the extent where it participated in Eighth Air Force and SAC level missions. The group's training program was culminated in the two week maneuver. Here, it was felt would be an accurate means of determining the training level of the group; for the mission of the group on this maneuver would be concentrated flying without any outside distractions. Moreover, the facilities in the maneuver area included radar bombing and gunnery ranges, neither of which were available at Fort Worth.

Mobility: This maneuver enabled the 7th Bomb Group to determine the extent of its mobility. Following a six (6) month training program it was found that the group could dispatch a skeleton advance echelon of less than one hundred (100) Officers and Enlisted Men to the maneuver area and then travel a distance of 1000 miles and conduct a group level mission within twenty-four hours after arriving at the maneuver area.

Equipment: The maneuver subjected the 7th Bomb Group's aircraft and allied equipment, radar, gunnery, etc., to a gruelling test and the accuracy, limitations and shortcomings of these pieces of equipment was accurately determinde.

The 7th Bomb Group regarded this maneuver as a supplementation to the squadron level maneuver in the Far East. Whereas training in the Far East emphasized, in the main, long range navigation and cruise control missions; training at Tendover Field enabled the group to complement this training with a concentrated bombing, both visual and radar, and gunnery program.

In short, this maneuver ended the first phases of the 7th Bomb Group's formal training. The data and statistics gathered by this group on the two week maneuver will present a tangible indication of the group's readiness and training proficiency.

NOTE: All times mentioned in this section are local time.

S-1 SECTION

ADMINISTRATION

I. NARRATIVE

S-1 Section strength included one (1) officer and two (2) enlisted men. Captain Priggins, 9th Bomb Squadron, was acting group adjutant; M/Sgt. Lane, Squadron A, was acting sergeant-major and S/Sgt. Ash, Squadron A, had the duties of Group and orderly and message center clerk. These personnel came in the advanced party and set up a working plan on mail, mess, housing, details and recreation.

Service record and shot records on all personnel participating in the maneuvers were given preliminary processing at FWAAF. No records accompanied the men. Group provisional sick book was handled at dispensary staff and signed by the adjutant. Hospital and emergency cases were flown to FWAAF by military aircraft.

All curfew regulations were rescinded by order of Colonel Wheless and personnel were free to leave the base at any time that duties did not interfere.

Squadron M/R's were monitored by group sergeant-major and submitted to stat control section daily via courier plane. Report on attached service organizations were written up by this office. Two emergency leaves were approved upon recommendation of squadron commanders and Red Cross.

Three (3) class A Agents for Finance Officer, FWAAF flew to the maneuver area and paid Enlisted Men at 1900 hours, 30 June 1947.

Administrative supplies and equipment for group S-1 office were drawn from Headquarters Squadron, 7th Bomb Group.

An O.D. roster of company grade Group Staff Officers was in effect between 16 June 1947 and 5 July 1947 inclusive.

Special Order 113, par 24 included (after amendments) 25 men for the advanced party. The advanced echelon totaled 95 men on paragraph 1, SO 115, dated 16 June 47. Paragraphs 36 and 37 of SO 118 dated 19 June 1947 compromised the main body. The latter arrived 21 June. Men of the 492nd Bomb Squadron were replaced by additional off-loads from FWAAF, and returned to their Squadron.

II. STATISTICS

Personnel - Wendover Maneuver

Group Level:	Officers	Enlisted Men
Group Commander	1	
S-1 Section - Advanced Party	1	2
S-2 Section - Advanced Echelon	1	1
S-3 Section	7	3
S-4 Section	5	10

Group Level:

	Officers	Enlisted Men
Medical Section - Advanced Echelon	3	5
Communications Section - Advanced Echelon	1	7
Ordance Section - Advanced Party	2	12
Weather Section	1	
Transportation Section - Advanced Echelon	1	10
Photo Section - Advanced Echelon	1	9
Mess Section		46
Fire Fighters Section		20
Military Police Section		5
Air Inspection Section	1	1

S-4 Breakdown:
2 Sheet Metal Workers
2 Machinists
1 Dope and Fabric
1 Welder
1 AAF Supply Tech.
1 Clerk, Typist
2 Supply Clerks
10 - Total

Squadron Level:

Communications		5
Radar		4
Administrative		3
Armament		11
Bombsight		2
Personal Equipment		1
Tech Supply		1
Staff Officers	7	
Commanding Officer		
Operations Officer		
Bombardier Officer		
Navigator Officer		
Engineering Officer		
Communications or Radar Officer		
Armament or Gunnery Officer		
Engineering Section		55
Sheet Metal Worker		
Power Plant Mechanic		
Air Electrical Spec.		
Air Prop Spec.		
Air Instrument Spec.		
Engine Mech.		
Crew or Flight Chief		
Flight Crews		83
Total	7	110 Officers and Enlisted Men per squadron.

Total: 200 Officers and men per squadron.

Peak strength of the group at the maneuver area was 591 Officers and Enlisted Men. This figure included 49 Officers and 1 Enlisted man of the inactive reserve.

S-2 SECTION

INTELLIGENCE

I. NARRATIVE

The S-2 Section, consisting of one Officer and one Enlisted Man, arrived Wendover Field, Utah, June 18, 1947, with the advanced echelon. The 19th and 20th of June were utilized in the preparation of the briefing building for immediate operation when the Group arrived. This was completed on the 20 June 1947.

The 7th Bomb Group (Main Body) arrived Wendover Field the 21st June and was briefed at 1600 hours the same day. The briefing was to orient crews as to what was expected of them and also to acquaint them with the schedule for the rest of the week. This schedule included a maximum effort mission to San Diego on Sunday the 22nd and Bombing and Gunnery the rest of the week through Saturday noon 28th of June.

From 23rd June through 1200 hours, 28th June Bombing and Gunnery missions were flown. The necessary information for these flights, which were local, was supplied the crews at Squadron level.

On 1st July the briefing for the second San Diego mission was presented to the crews at 1600 hours, and followed by a special weather briefing before take-off the next morning.

July 3rd a briefing on a maximum effort mission to Seattle, Washington, was made by the Group Staff. This mission was an Air Show on the 4th of July.

The last briefing of the maneuver was presented on 5 July 1947. This was an Air Show, maximum effort mission to Denton, Texas, with the group landing at Fort Worth Army Air Field.

The briefings for the San Diego missions followed our combat briefing procedure. The crews were warned of exact flak position in the target area and any areas enroute that were to be avoided due to flak. The field order stated that there were no enemy fighters but again crews were notified to be alert for any enemy navy fighters. Observation of enemy activities or any new weapons was stressed. Men were cautioned about security measures in case of a crash landing, or in case they were taken prisoner by the enemy. On returning from the mission a regular interrogation was held for each crew, with each staff section interrogating its own speciality. The applicable parts of the interrogation forms were also filled out after each bombing and gunnery mission.

S/Sgts. Billie Smith and William Shalock were assigned the task of preparing the briefing room with maps, charts, and any information necessary to the mission such as target folders for bombardiers and radar operators.

II. STATISTICS

Negative.

III. CONCLUSIONS

The maneuver from the S-2 point of view was considered a very successful operation.

IV. RECOMMENDATIONS

Negative.

S-2 SECTION

PHOTO SECTION

I. NARRATIVE

There were nine (9) Enlisted Men and one (1) Officer assigned to the Photo Section on the maneuver. Three Enlisted Men were assigned to the operation, care and maintenance of the Aerial Cameras; six (6) Enlisted Men were assigned to the processing, lettering and printing of the film.

During part of the maneuver it was necessary for the Photo Section to function both day and night to get the film processed and finished.

The work on the film was normally completed within three hours after it was brought into the lab.

Before the photographic work started each camera was numbered so that the number would appear on each negative. This system of identification enable the process men to tape the film together, from as many as six or more cameras without worrying about their identity.

The only difficulty encountered on the maneuver in the Photographic Section was with night Aerial Photographs as explained in Section III of this report.

II. STATISTICS:

There were fourteen (14) Aerial Cameras used by the Photo Section on the maneuvers (One (1) K-17, Three (3) K-22, Ten (10) K-24.) Six (6) to twelve (12) of these cameras were mounted in aircraft each day.

The following useable aerial negatives and prints were made:

9" x 9" negatives - 400
5" x 5" negatives - 210

9" x 9" prints - 830
5" x 5" prints - 630

A total of one thousand (1000) feet of film was used.

5-1/2" film - 300 ft.
9-1/2" film - 700 ft.

Six gross of type 9 10" x 10" size paper was expended to make the prints.

The following amounts of chemicals were used on the maneuver.

Hypo - 300 pounds
Film Developer - 27 gallons
Paper Developer - 10 gallons

III. CONCLUSIONS

Difficulty was encountered when attempts were made to photograph bomb bursts at night with the equipment available.

Shortcomings of equipment were:

Improper film.
Improper intervalometer.
Improper target lights.
Improper spotting charges.

It is recommended that on missions of this nature proper equipment be obtained if time permits.

A method for obtaining scorable night bomb photographs was devised: The equipment available consisted of the following:

K-24 Cameras, with night curtains
Class L film
G-1-B Power Unit and 300 watt bulbs
White spotting charges

It was found that ordinary flare pots used as target lights offered insufficient illumination to register on Class L film. 300 watt lights were substituted and found quite satisfactory.

The lights were arranged in two groups of four bulbs. Bulbs were placed in a straight line in the direction of flight. Bulbs were pointed upward and slightly past vertical in direction of flight. This arrangement provided for maximum light at time of exposure which occurs after aircraft has passed over target.

One of the two banks of lights were located at the center of the target. The second was placed on the 200 foot circle at a point 90 degrees to the line of flight.

The K-24 night curtain operates on two impulses instead of the usual one. The shutter is opened on the first impulse and closed on the second. Bombardiers were instructed to open the shutter a few seconds before the elapsed time of fall and leave it open until they had observed the entire bomb burst, and then close the shutter.

The procedure gave results shown in accompaning photographs.

Photograph number one is scorable in the following manner:

Vibrations of the camera cause erratic wavy lines during the time of exposure. All of the lights photographed at the same time will record as lines with identical patterns. To obtain the equivalent of an instantaneous exposure, it is necessary merely to locate similar points on each light pattern.

Such a set of points are located on target light and bomb burst. A compass is used to draw in the 500 foot circle by using the center light (in this case to the right from direction of flight) and the distance to the 500 foot light as a radius. The bomb thus can be scored by computing its distance and direction from the target center. NOTE: Lines not marked were caused by shutter remaining open for successive passes over the target, and have no relation to the three labeled lines.

Photograph #2 is not scorable due to the use of a black spotting charge. Black spotting charges explode instantly and leave no trail to form the characteristic line pattern.

The method described above is an emergency measure and not recommended where proper equipment and standard procedues can be applied.

IV. RECOMMENDATIONS

It is believed that the training in the use of airborne equipment could be improved if such equipment were made available for use during training missions of this type. The Base Photo Lab at Wendover was used exclusibly during this operation and no equipment unfamiliar to men at the Fort Worth Base Lab was encountered. Men were familiar with procedures and operating techniques from experience gained at Fort Worth.

S-3 SECTION
OPERATIONAL STATISTICS

	9th Sqdn.	436th Sqdn.	Group Total
Total Hours Flown:	502:45	492:50	995:35
Average Hours Per Aircraft:	50.2	49.2	49.7
Total night time:	44:35	46:40	91:15
Instrument time:	75:00	52:30	127:30
Number of Sorties on (3) F. O. M.*:	24	23	47
Number of Aborts on F. O. M.* :	0	1	1
Average hours per Crew:	50.2	49.2	49.7
Average Scorable Bombs per Crew (Visual):	24.6	26.8	25.7
Average Scorable Bombs per Crew (Radar):	16.5	9.3	12.4
Average Amount of Ammo. expended per crew:	17,986	15,790	16888

* Field Order Missions

OPERATIONAL STATISTICS

BOMBING:

	96th	436th	Group
No. Demo's scored per squadron	160	156	316
CCEA	234'	256.5'	241'
No. Demo's not scored	3	5	8
No. Practice Bombs Scored	246	268	514
CCEA	240'	282'	262'
Practice Bombs not scored	22	34	56
No. Radar Bombs Scored	149	84	233
CCEA	905'	970'	930'
Radar Bombs not scored	26	50	76
Total Bombs Released	606	597	1203
Camera % Demo's	80%	72.5%	76.5%
Camera % Practice Bombs	57%	43.3%	50%
Camera % Radar Bombs	67%	24.3%	52.5%
Total Camera %	66.5%	49.5%	58.5%
Total High Demo's Scoreable	131	99	230
Total Low Demo's Scoreable	29	57	86
Total High Practice Bombs Scoreable	95	156	251
Total Low Practice Bombs Scoreable	151	112	263
Total High Radar Bombs Scoreable	60	18	78
Total Low Radar Bombs Scoreable	89	66	155
Total High Bombs Scoreable	286	273	559
Total Low Bombs Scoreable	269	235	504
Total Bombs Unscoreable	51	89	140
Total Bombs Scoreable	555	508	1063
Plus Unscoreable Bombs	606	597	1203

FLIGHT ENGINEER STATISTICS:

The total fuel and oil consumed during the period of 21 June to 6 July 1947 is broken down as follows:

100 Octane - 130 Grade Fuel Consumed:

7th Bomb Group B-29 Aircraft	429,699 gallons
7th Bomb Group Support Aircraft (C-47 and B-25)	17,345 gallons
43rd Bomb Group B-29 Aircraft (Servicing for Seattle	11,736 gallons
Total	458,780 gallons

Oil Consumed:

7th Bomb Group B-29 Aircraft	7556 gallons
7th Bomb Group Support Aircraft	231 gallons
Total	7787 gallons

The cruise control aspects of the four maximum effort missions are submitted herewith:

Mission #1 Wendover to San Diego and return:

	Predicted	Actual
T. O. Gross Weight	113,000#	112,878#
Fuel Required	3,024 gallons	2,900 gallons
Fuel Reserve	2,376 gallons	2,500 gallons
Distance Nautical Miles	1,083 N.M.	1,079 N.M.
Total Flying Time	5 hours 41 min.	5 hours 32 min.

Oil consumed 39 gallons average per aircraft
Average prediction error 4.1%

Mission #2 Wendover to San Diego to Merced and Mather Field

	Predicted	Actual
T. O. Gross Weight	113,000#	111,390#
Fuel Required	2,542 gallons	2,518 gallons
Fuel Reserve	2,858 gallons	2,882 gallons
Distance Nautical Miles	968 N.M.	1,045 N.M.
Total Flying Time	4 hours 38 min.	4 hours 44 min.

Oil consumed 37.2 gallons average per aircraft.
Average prediction error 1.4%.

Mission #3 Wendover - Seattle - Wendover.

	Predicted	Actual
T. O. Gross Weight	113,000#	113,903#
Fuel Required	3,426 gallons	3,289 gallons
Fuel Reserve	1,974 gallons	2,111 gallons
Distance Nautical Miles	1,237 N.M.	1,209 N.M.
Total Flying Time	7 hours 37 min.	7 hours 19 min.

Average oil consumed per aircraft 43.4 gallons.
Average prediction error 4.5%.

Mission #4 Newdover - Denton, Texas - Fort Worth, Texas

	Predicted	Actual
T. O. Gross Weight	117,050#	118,700#
Fuel Required	3,077 gallons	2,861 gallons
Fuel Reserve	2,323 gallons	2,539 gallons
Distance Nautical Miles	1,180 N.M.	1,105 N.M.
Total Flying Time	6 hours 03 min.	5 hours 45 min.

Average oil consumed per aircraft 32.8 gallons.

NOTE: Consumption and performance figures shown above are for the average B-29 type aircraft assigned to the 7th Bomb Group.

GUNNERY:

	9th	436th	Group
Number of gunnery missions flown	27	22	49
Amount of Ammunition expended	179,862	157,906	337,768
Amount ammunition authorized	200,000	200000	400,000
Malfunctions	13 Ruptured Gun Barrels	12 Ruptured Gun Barrels	

S-3 SECTION

BOMBING

I. NARRATIVE:

Personnel from the bombing section of S-3, 7th Bombardment Group (VH) were included in the preliminary survey party dispatched from Fort Worth Army Air Field to Wendover Army Air Field, on 8 June 1947.

All base facilities and tactical operations of the 509th Bomb Group (VH) relative to bombing were observed and inspected. Personnel of the 509th Bomb Group were most cooperative. Their advice and suggestions aided greatly the functioning of the S-3 Bombing Section of the 7th Bomb Group during the two week maneuver period 21 June 1947 to 6 July 1947.

After inspecting the range facilities of Wendover Army Air Field it was considered feasible to conduct a 24 hour radar and visual bombing schedule. The Station Supply Officer was acquainted with this schedule and promised full cooperation in obtaining suitable flare pots for night bombing.

5 June 1947 preliminary plans were laid for the forthcoming two-week training period at Wendover. The Station S-3 charged the bombing section with schedules and plans for all tactical operations other than group maximum efforts. It was directed that emphasis would be placed on the quality of training to be accomplished as well as quantity.

On return to Fort Worth plans and schedules were drafted to fly each crew a minimum of 3 bombing missions, with an expenditure of 1100 bombs in mind. 40 M38A2 practice bombs were to be divided equally between the Radar Operator and the Bombardier on each of the first two missions. 15 AN-M64A-1 500# Demolition Bombs were allotted to the Bombardier on the last bombing mission.

Schedules were planned to operate for 126 continuous hours plus 24 hours for makeup missions and accounted for 20 crews or two squadrons dropping a total of 1100 bombs (800 practice and 300 demolition). Schedules were approved by S-3, S-4, Squadron Commanders and Operations Officers before the Group left for Wendover.

Combat crews of the 7th Bomb Group (VH) arrived at Wendover Army Air Field 21 June 1947. Ordance Personnel of the advance party had already filled enough practice bombs to sustain two days operations and they augmented in the work by details from combat crew members.

22 June 1947, a maximum effort mission was dispatched to San Diego. In lieu of SCR-584 scoring, photographs were taken at zero indices in the lead ship of each squadron. Runs were radar coordinated. Results were as follows:

9th Bomb Squadron (VH) (lead) 339' CCEA (Visual)
436th Bomb Squadron (VH) (2nd Sq) 1448' CCEA (Radar)

At 0800, 23 June 1947, the bombing schedule was put in effect and continued until 1400 28 June 1947. Makeup missions were flown 30 June and 2 July. A second maximum effort mission was dispatched to San Diego 1 July 1947. In lieu of SCR-584 scoring, photographs were taken at zero indices. The run by the lead squadron was made visually. The run by the second squadron was radar coordinated. Results were as follows:

436th Bomb Squadron (VH) 320' CCEA (Visual)
9th Bomb Squadron (VH) 1050' CCEA (Radar)

Final bombing results at the conclusion of all make up missions 2 July 1947 are tabulated as shown under Bombing Statistics, Operational.

III. CONCLUSIONS:

General photographic results in bomb scoring and camera bombing were good, considering the equipment used. Generally the one K-17 and the four K-22 cameras produced excellent results. The K-24s proved inadequate for high altitude bomb scoring. No camera intervalometers were available and all pictures were taken manually. The use of 24 inch cones with K-22 cameras gave the best results in bomb spotting and scoring and when used were entirely reliable. Cameras were installed with 5° to 7° negative tilt for bomb spotting.

Night photography of bomb impacts produced inadequate results. Different combinations of high powered lights and lens settings were used before a reliable procedure was found. This operation was especially hampered by lack of camera intervalometers.

Approximately 200 flarepots were used per target for night bombing and gave excellent results from a visibility standpoint.

Combat crews helped to a large extent in filling and loading of bombs. The cooperation and efficiency of ordance and armament personnel were particularly appreciated by the bombing section.

IV. RECOMMENDATIONS:

Negative.

S-3 SECTION

COMMUNICATIONS

I. NARRATIVE:

The general communications requirements were:

A flight control capable of enabling immediate contact with airborne aircraft, plotting positions of aircraft, and coordinating the use of bombing and gunnery ranges.

Two high frequency radio nets - one air to ground net and one point to point net for communication with Fort Worth. (Base teletype facilities were considered only as an alternate means of transmitting traffic to Fort Worth.)

Adequate telephone facilities to insure immediate inter-communication among group and squadron sections.

Maintenance personnel and equipment adequate for the maintenance of airborne and ground communications equipment.

Operational communications briefing and controls for the execution of optimum training for radio operators simulating combat conditions.

M-3, 16 June 1947. The advance echelon was dispatched from Fort Worth. Personnel and equipment were loaded aboard one B-29 aircraft. A little difficulty was encountered in loading two Radio Transmitters, BC-610, aboard. The transmitters had to be disassembled into two parts before they could pass through the opening in the cargo platform in either bomb bay. The advanced echelon was dispatched for the purpose of setting up VHF communication for the operation of flight control, to set up the equipment for the operation of the two high frequency radio nets and to supplement the installed telephone facilities at Wendover with additional phones where required. The aforementioned facilities were to be operative at the time the main echelon arrived. The equipment filled the forward bomb bay and weighed approximately 2400 pounds.

b. The advanced echelon for communications consisted of:

1	Communications Officer	0200
2	Radio Mechanics	647 (One of these was returned to Fort Worth when radio equipment was installed.)
3	Radio Operators	766
1	Cryptographic Tech	605
2	Linemen	238
9	Total	

c. The equipment which accompanied the advanced echelon:

2 ea Radio Set, SCR-499 (essential components)
1 ea Radio Receiver, Hallicrafter, SX-28
1 ea Radio Set, SCR-624
1 ea Tool Equipment, TE-48

12 ea Telephone, EE-8-A
2 mi Wire, W-110-B
1 ea Tool Equipment, TE-
1 ea Reel Unit, RL-27-A

d. The equipment was unloaded and located after arrival at Dendover in the afternoon.

M -2, 19 June 1947. The two high frequency radio nets were installed and placed in operation. Remote keying lines and telephone lines were installed, antennas erected, etc. This took approximately 50 man-hours. Contact was established with Fort Worth's radio ground station and three messages were transmitted.

M -1, 20 June 1947. The VHF Radio Set, SCR-624, was installed and placed in operation. The flight control section was set up. It consisted of the SCR-624 operating on the group tactical frequency 133.58 mcs, a wall chart of bombing and gunnery ranges, a 1/1,000,000 scale map of the U.S., pins for each aircraft, weather report forms, flight control and position logs, etc.

The telephone directory was published. The base furnished the group with 18 telephones, which were extensions from the base switchboard. These were supplemented by 8 field telephones hooked up on a point to point basis.

The radio ground station at Dendover was incorporated into the Eighth Air Force point to point net operating on a frequency of 9040 kilocycles. All official messages were transmitted and received by this means. It handled the traffic very expeditiously and represented no additional expense to the government since teletype facilities were used only as an alternate means in the event the radio station could not get them through. During the stay at Dendover this was rare. Communications on this frequency was best in the early morning and late afternoon. In fact, a few days a complete fade-out was encountered for two or three hours at mid-day.

M Day, 21 June 1947. While the movement of B-29s and supporting aircraft was being accomplished communication was established and maintained on the HF air to ground frequency. Aircraft were plotted and notice of arrival given to the supply and transportation sections. Aircraft also checked in with flight control on arrival.

Communications flimsies were published for the San Diego mission. Crews were briefed for this mission and for the operation of flight control, "MILDRED CONTROL", during the ensuing bombing and gunnery schedule.

1st San Diego Mission, 22 June 1947. Radio operators transmitted position reports regularly every hour as briefed. All aircraft were plotted during this mission. Interplane communication on the group tactical frequency assisted rendezvous and formation. Tactical call signs were used, both voice and CW. Contact was established on the radar bomb scoring channel with the SCR-584 radar station at San Diego for purposes of scoring. No communications difficulties were encountered.

1 - 2, 3, 4, 5, 6, & 8; 23, 24, 25, 26, 27, & 28 June 1947.

During this period the around-the-clock bombing and gunnery schedule was operative. Group flight control was quite effective in coordinating the use of bombing and gunnery ranges, in passing weather and flight information to aircraft and in maintaining constant plots on all aircraft of the group. Flight control utilized two channels of communication to maintain contact with aircraft; one, VHF directo to pilot on the group tactical VHF frequency; and two, HF direct to radio operator on the group tactical HF frecuency. The latter proved to be a little slow in a number of instances, since messages had to be relayed through the HF received station which was located remote from flight control proper. A field telephone was used for this purpose.

S O P for the operation of flight control briefly:

1. All a/c check in with flight control when airborne giving pilot's name - destination (first target) - ETA.
2. Call flight control when entering and leaving pattern at bombing and gunnery ranges.
3. Call flight control when entering pattern for landing prior to calling control tower.
4. Current weather, altimeter settings, winds aloft available at all times.
5. If position reports are not transmitted by radio operators ground radio station will be instructed to call aircraft concerned.
6. Caution aircraft, as instructed by staff gunnery officer, on careful firing, short bursts, and cooling guns (pointed at 45 degrees after firing.)
7. Staff bombardier will be available at all times to answer questions on bombing.
8. Call the photo section when a/c are in pattern for landing.

HF Air to Ground Radio Net. The air-ground net was operative on a frequency of 9290 kilocycles whenever group aircraft were airborne. Contact was maintained on this channel and radio operators derived individual training as a direct result of its use. This net supplemented the VHF channel and was useful when aircraft were beyond VHF range. Such was the case when aircraft were using the ground gunnery range (40 miles from the field - aircraft flying 500' above the ground). Radio operators were required to transmit reports when entering and leaving bombing and gunnery ranges.

29 June 1947 - No activity.

30 June 1947 - Maintenance activity. Aircraft grounded for maximum effort for next day. Crews were briefed and flimsies published for the 2nd San Diego mission.

1 July 1947 - 2nd San Diego Mission. Communications for this mission were the same as for first mission on 22 Jun 1947. No difficulties were encountered.

2 July 1947. Make up period, for bombing and gunnery. Flight control operated as before.

3 July 1947. Aircraft grounded for maintenance prior to maximum effort. Crews of the 7th and 43rd Bomb Groups were briefed for the forthcoming Seattle mission.

4 July 1947. Seattle missions. The two lead aircraft of the 43d Bomb Group composite squadron were fitted with the 7th Bomb Group tactical VHF frequency. The deputy lead of this squadron was instructed to relay to his squadron on the 43rd Bomb Group tactical frequency all pertinent messages from the formation leader. Two HF channels were utilized - the 7th Bomb Group tactical HF frequency 9290 kcs and the Eighth Air Force tactical frequency, 10,150 kcs,. Position reports were received from all aircraft of both groups in this manner prior to rendezvous. Seattle weather was relayed to the aircraft on both frequencies every hour while aircraft were enroute to Seattle. Plots were maintained on all aircraft. No communications difficulties were encountered.

5 July 1947. Aircraft grounded for maintenance in preparation for Denton mission and return to Fort Worth. Radio equipment and telephones were dissassembled, packed, and returned to Fort Worth via C-47. No difficulties were encountered in loading the ground radio equipment in the C-47. Communications personnel which accompanied the advanced echelon were returned at this time.

6 July 1947. Radio operators worked the radio station at Fort Worth transmitting position reports and obtaining weather. Rendezvous was effected at the Wichita Radio Range. No communications difficulties were encountered.

Radio Maintenance. Most of the replacement components and spare parts for the execution of radio maintenance was brought by the squadron communications sections and was not included as a part of the mobility kits. There were not sufficient replacement components. This was evidenced by the fact that in a few instances components were taken from grounded airplanes to equip aircraft which were scheduled to fly missions. Although, this solved the immediate problem at Wendover it might not satisfy a condition where more failures might occur.

III. CONCLUSIONS:

The two high frequency radio nets were quite adequate for a mansuver of this type. The use of the high frequency point to point radio net precluded the use of the base teletype facilities at Wendover thereby saving time and expense. However, the assignment of a higher frequency would have eliminated the fade-out around the noon hour. In a few cases also it was found the supply messages which contained lists of stock and type numbers were sometimes garbled. The air to ground net operated very effectively.

Adequate telephone facilities were provided. No complaints were received from any sections on telephone service.

The group flight control system provided not only a means of coordinating the use of bombing and gunnery ranges and of passing intelligence to air crews but also an excellent means of checking the proficiency of radio operators through the medium of the HF air-ground net.

IV. RECOMMENDATIONS:

That in order to simulate more accurately combat conditions cryptographic procedures be set up on future maneuvers to handle classified radio and teletype traffic. Although, there was no classified material handled by the radio ground station or signal center at Wendover provision should be made for this expediency.

That radio maintenance equipment required for a maneuver of this type be based not according to normal attrition of spare parts and supplies as determined at the base level but rather on a bases to provide for complete 1st and 2nd echelon testing and replacement of major components. This is, each squadron with ten airplanes should have at least two spare parts for the major components of all installed radio equipment. Mock-ups are not absolutely essential, but testing major components without them is rather difficult with two of the sets, the AN/ARC-3 and the Radio Compass, AN/ARN-7.

That if possible, the group be equipped with two radio teletype channels for maneuvers of this nature. This would, to a considerable degree eliminate the possibility of garbled messages, and would enable the transmittal of more traffic.

S-3 SECTION

FLIGHT ENGINEERING

I. NARRATIVE:

The flight engineer personnel of the 7th Bomb Group benefited immeasurably as a result of the field maneuvers conducted at Wendover Field, Utah, from 21 June 1947 to 6 July 1947.

Simulated combat conditions enabled the flight engineers to place in practical application the information and knowledge they heretofore possessed in theory only.

Crew responsibility, pride, and competition was very much in evidence by the enthusiastic and diligent performance of the flight crews. This was especially true when an aircraft was grounded due to system or engine malfunction. The air and ground crews endeavored to place that aircraft in commission as soon as possible.

Constant emphasis was given to cruisecontrol pre-flight planning, in flight progress, in flight replanning, and post flight analysis. The three unit team of pilot, navigator and flight engineer are very conscious of the principles of cruise control and this was reflected by their operations during the Wendover maneuvers.

The procurement and receipt of SAC Manual 50-126-2, dated May 1947 (Pilots and Flight Engineer SOP for the Superfortress.) and SAC Regulation 766-8, dated 22 May 1947, (R-3350 Engine Conditioning) necessitated extensive re-indoctrination of air crew personnel since several features have been added to the standing operating procedures.

Four group maximum effort flights were flown in conunction with numerous bombing and gunnery missions.

Supply of 100/130 fuel became critical at Wendover Field. All aircraft participating in maximum effort #2 landed on return either at Castle Field Merced, California, or Mather Field, Sacramento, California and refueled to augment fuel shortage at Wendover Field.

II. STATISTICS:

See Operational Statistics.

III. CONCLUSIONS:

Wendover Field maneuvers permitted flight engineer personnel an excellent opportunity for practical application of their specialty under field conditions.

The maneuvers aided materially to the strengthening of crew coordination and responsibility.

Each flight engineer increased his repertoire of malfunction symptoms by instrument cross reference and instrument interpretation in addition to the free exchange of information on system and engine malfunction.

The continued use of high booster pump pressure as directed in SAC Manual 50-126-2, dated May 1947, page #3 and SAC Regulation 66-8, dated 22 May 1947, paragraph 4b is injurious to various units within the fuel system (injector pumps etc.).

IV. RECOMMENDATIONS:

That the maneuver field be guaranteed adequate and positive fuel supply so as to preclude the use of VHB aircraft as "Tankers", an extravagant and time consuming project.

That in future maneuvers greater emphasis should be placed on model tactical missions, (long range, high altitude, formation, fighter interception, bombing, radar and visual, precision navigation and cruise control operation.)

That the practical value of placing the fuel booster pump in the high position be ascertained and if found not justified, it should then be rectified by a prompt revision of SAC Manual 50-126-2 and SAC Regulation 66-8 being currently used as standing operating procedures for VHB flight personnel.

S-3 SECTION

GUNNERY

I. NARRATIVE:

A gunnery briefing for all combat crew gunners and bombardiers was held at 1800, Sunday 22 June in the Group Briefing Room (Bldg. 833). At this briefing gunners were given final instructions relative to the pre-flighting of equipment, the location of the range and type of targets, and the safety precautions to be observed while operating turrets and firing live ammunition. Particular stress was placed upon proper 45° stowage of turrets after firing, to minimize the danger from cook-offs. Gunners were briefed to stow upper turrets at 45° forward, and tail turrets 45° rear before landing at the completion of a gunnery mission.

Gunnery missions were flown in accordance with the master flying schedule outlined in the Bombing section of this report. Firing began on the air-to-ground range at 0800, 23 July and continued as cheduled throughout the week. Gunnery training was accomplished during the daylight hours only, with one airplane from each squadron occupying the range at the same time. Amunition loading was the maximum of 10,000 to 11,000 rounds per airplane, or approximately 1,000 rounds per installed gun. All firing on the air-to-ground range was towards the East on a South heading. Planes maintained an interval of no less than 2500 yards and fired at a range of 1,200 yards from an altitude of 500 feet. All ammunition was expended in controlled bursts of 6 to 8 rounds per burst. To prevent damage to the airplane from cook-offs, guns were stowed 45° forward after each pass had been completed. Targets were situated against the face of a low ridge; they were permanent in nature and totaled fourteen (14). The largest target measured 36 feet by 36 feet, and the additional thirteen (13) targets averaged eighteen feet in length by nine feet in width.

In addition to the ground range, the use of an air-to-air range was secured in order that crews might have additional training in altitude firing. This range, known as the Air Gunnery Range #2, begins at a point 13 nautical miles East of Wendover, and is entered by turning to a heading of 160° True. This heading is maintained for forty-two (42) Nautical miles, and firing is conducted between this range, as reservation limits were well beyond the extreme maximum range of the Cal. .50. On the air-to-air range as well as on the air-to-ground range, movements of participating aircraft were controlled by the Group Radio Control Station. Airplane Commanders were required to secure clearance from Group Control before entering either range, and before departing at the completion of firing. Clearances to the air-to-air range were spaced five minutes apart and as many as four aircraft were thus able to occupy the range at one time. Firing was conducted on a reciprocal heading after all aircraft had cleared the range on the initial run. Here again a spacing of five minutes between clearances was effected. Crews were individually briefed before take-off on the conduct of air-to-air firing on Gunnery Range #2. Gunners were briefed to fire controlled bursts of 6 to 8 rounds per burst. On both the ground and air firing ranges the schedule was sufficiently flexible to permit crews ample time to fire the maximum loading without loss of burst control. Average time per airplane on both ranges approximated one and one half (1-1/2) hours to two (2) hours per mission.

II. STATISTICS:

See Operational Statistics.

III. CONCLUSIONS:

The greater percentage of gunnery malfunctions were caused by ammunition feed chute jams, and link chute jams. The former could be prevented by the replacement of present flexible metal chutes with solid metal or plastic chutes. Since there is no necessity for flexibility in the chute, the conventional metal-linked type, with protruding tabs and easily bent or twisted connecting parts should be replaced with smooth, continuous chutes that offer the minimum resistance to the passage of ammuniton. In many instances guns fired less than fifty (50) rounds before "hanging-up" occurred in the ammunition chute. In addition it is recommended that the space between the end of the chute and the feedway of the gun, in lower forward and aft turrets, be eliminated. Chutes should be solid from the ammunition can to the booster motor at the lower end of the chute, and from that point to the feedway. Elimination of the open space between booster motor and gun, and of the open square in the terminal of the chute itself, would lend needed support to the ammunition and prevent jamming of the rounds. It is therefore recommended that Ammunition Chute Assembly, Part No. 800611861 be replaced with a chute of solid construction, and that a flexible type chte be designed to support the ammunition in the six inches between the booster motor and the feedway of the gun. Link chute jams occurred equally as often as feed stoppages. These malfunctions generally occurred in the neck of the link chutes, just at the point of curvature, and caused almost immediate gun stoppage. Link jams in the upper turrets could be prevented by removing the chute entirely and attaching a 45° downward baffle plate to the gun cover itself. Close proximity of the guns makes downward deflection necessary to prevent links from two adjacent guns jamming between the two feedways.

At the completion of the Wendover maneuver it was necessary to replace sixty-four (64) worn gun barrels in the 436th Bomb Squadron and fifty (50) in the 9th Bomb Squadron. Gun barrels used during the training period, were with few exceptions, those originally installed in the airplane. These barrels had been fired during the air-to-air firing at Alamogordo when that range was available to this Group, and also during the Japanese mission of the 436th Bomb Squadron. During the intensive gunnery training at Wendover an average of 1,500 rounds per gun was expended - and in some cases considerably more than that was fired through individual barrels. Barrels replaced at the end of the maneuver were of the following serial numbers: D-7161580, D-28272, D-33248A and D-7162079. A total of thirty-seven (37) replacement barrels were drawn from Ordnance Supply at Wendover Field during the maneuver period. These barrels were tagged "Barrel, Cal. .50, M2, #A3801-00030, w/chambers with modified bullet seat per drawing #064318, revision 3/2/43," and were stamped with serial numbers #D-7162079 and #D-7161580. This entire lot of replacement barrels are considered to be defective, since the majority of them ruptured before two-hundred (200) rounds had been fired. Four (4) of these new barrels were rejected without firing after inspection revealed that the liner retainer, which screws into the breech end of the barrel was loose and not properly brazed in position. In most cases the breech liner appeared to have excessive tolerance at the forward end; appearing as a large transversal groove approximately 12 inches from the breech end.

Airplane # 44-62060 of the 9th Bomb Squadron was equipped with ten (10) new barrels from this shipment, and four (4) of them ruptured on the first gunnery mission. One of these, installed in the left gun of the lower forward turret ruptured after less than twenty five (25) rounds had been fired. It is believed that weakness of the weld or braze which holds the retainer in the barrel permitted excessive clearance between the breech of the barrel and the face of the barrel liner retainer. Since a guage of the type necessary to determine proper clearances of these modified barrels is not available to using organizations, it is recommended that barrels with breech liner inserts not be used for air firing until guage inspected for excessive tolerances.

IV. RECOMMENDATIONS:

The air-to-ground gunnery range which was used during the first phase of gunnery training at Wendover Field, is not considered appropriate for B-29 crew training. B-29 gunnery equipment is not designed for employment at low altitudes, nor is the physical lay-out of the Wendover range adapted for firing from the Very-Heavy bomber. Remote turret guns do not receive sufficient cooling at five hundred (500) feet altitude to permit normal firing of the guns, and consequently normal cooling of the barrels. Moreover, the danger from cook-offs is far greater at low altitudes than is the case when firing is conducted at regular bombing altitudes. A protion of the Wendover air-to-ground gunnery range exposes rock surfaces to the fire of using aircraft, and resulting ricochets force airplane commanders to fly a greater target range than the desired one thousand to twelve hundred yards, as specified in the briefing. Targets, with the exception of one, 35 by 36 feet structure, are small and indistinct. Targets should be re-covered and enlarged. The advantage of scoring hits made by B-29 gunners on ground targets of this type is not considered to be a factor of any importance. Training officers can gain more definite and valuable information on the ability of individual gunners to score hits on aerial targets through proper use of the RCT sight, by analyzing the results of gun camera missions, than they can be counting the total number of hits scored by a crew on ground targets of this type. The best combination of training activities for B-29 gunners is believed to be Gun Camera used in conjunction with Blank Ammunition; regular firing of live ammunition at altitude and Frangible Bullet Project.

Although it is felt that our gunners received maximum gunnery training on this maneuver, some change in the sustained base-level gunnery program is urged as a result of our experience at Wendover. Due to the fact that there has been no air-to-air firing range available for the use of thi Group since the beginning of the calendar year, we began the Wendover operation with approximately 20% of our assigned gunners inexperienced in the firing of live ammunition. Although all of our gunners had had considerable training in the use of ground mock-ups and had fired an average of 150 feet of gun camera film per man, only a proximately 80% had actually fired live ammunition from a B-29. As a result three (3) airplanes received reparable tail surface damage due to cook-off's occurring when sights were allowed to cover surfaces normally protected by fire interrupters. Regular use of an air-to-air gunnery range is considered necessary in order to maintain the proficiency of our gunners.

Blank ammunition, though effective as a burst control, pre-flight and ammunition-loading training substitute, nevertheless cannot simulate the real danger to airplane and crew that exists when live ammunition is used in training. Blank ammunition, in effect, affords a sense of security from the danger of cook-off damage, and tends to develope careless attitudes toward proper protection of the airplane surfaces when firing during training. It is believed that actual firing facilities should be made available to this group as frequently as practical. In addition, it is urged that an air-to-air gunnery range be provided in order to insure proper maintenance of equipment. In the same sense that airplanes must be flown to be maintained in flyable condition, so must guns be fired regularly if gunnery equipment is to remain in a state of combat readiness. Although guns and ECT equipment may be given the best daily inspections possible, they cannot be relied upon to fire efficiently unless they receive regular firing tests. Hidden malfunctions and minor equipment failures caused a high incidence of malfunctions on the first two days of firing. By the end of the maneuver period, however, guns and equipment were functions at combat efficiency.

It is felt that this maneuver was of tremendous value in furthering the training of combat crews. Each crew fired an average of approximately 17,000 rounds of ammunition, during a group total of 29 gunnery missions. Gunners were required to make thorough pre-flight checks of guns and ECT equipment before each mission, in addition to loading bombs and ammunition and assisting the flight engineer in the maintenance of the airplane. The requirements of the training schedule were such that by the end of the maneuver period, every gunner had had thorough indoctrination in each phase of his crew assignment.

S-3 SECTION
NAVIGATION

I Narrative:

Four maximum effort missions were run on the Mendover Maneuvers which required the use of Navigation. Two were to San Diego, one to Seattle and one on the return trip Home with Denton, Texas used as a target. As these missions were all formation missions with specific target times to be met they required great skill in flying exact briefed air speeds and altitudes to rendezvous and correct timing from rendezvous to target.

Although all missions were run in daylight hours a maximum amount of celestial navigation was used. On the second San Diego mission the 436th Squadron navigators were briefed to return to base using a sun line land fall. This was accomplished with great success.

Due to a shortage of navigators it was necessary for Squadron Staff Navigators to fly as crew navigators.

II Statistics

Field Order #21 - San Diego Maximum Effort.

a. Date flown - 22 June 1947.

b. No aborts.

c. Average time for individual aircraft - 5 hours 37 minutes
Average time for individual aircraft at assembly - 22 minutes

d. Time over target 2000 Z

e. Route flown - Mendover - 3900N 11305W - 3605N 11449W (Assembly Point) - Escandido (IP) - Target - 3900N 11305W - Mendover.

f. Route altitude 15,000 feet pressure. Assembly altitude 15,000 feet pressure. Target altitude 20,000 feet pressure.

g. Assembly accomplished by leader flying box pattern with thirty minutes allowed for flight plan.

h. Lead navigator planning to use the dog leg method of making target time good left the assembly seven (7) minutes early. Although target time was only thirty (30) seconds off it was felt that seven minutes required the formation to veer too far from briefed I.P.

Field Order #21 - San Diego Maximum Effort.

a. Date flown - 1 July 1947.

b. This was an exact duplicate of above mentioned mission.

c. Number of aircraft participating - 15.

d. Number of aborts - 1.

e. Average time per individual aircraft at assembly - 20 minutes.

f. Time over target 1957Z.

g. See attached.

Field Order #24 - Seattle Maximum Effort.

a. Date flown - 4 July 1947.

b. Number of aircraft participating - 27.

c. Number of aborts - 0.

d/ First take-off - 1330Z.

e. First landing 2118 Z.

f. Average time per individual aircraft - 7 hours 41 minutes
Average time per individual aircraft Sq. at assembly - 26 min.
Average time per individual aircraft Gp. at assembly - 14 min.

g. Time over target 1751.5Z.

h. Route flown - Wendover - Squadron assembly point (436th Bomb Squadron - 2617N 12403W; 9th Bomb Squadron - 2629N 12244W. 43rd Bomb Group - 4609N 12405W) - Group assembly point (4629 N 12244W) - Seattle Portland - Wendover.

i. Route altitude 10,000 feet pressure. Assembly altitude 5000 feet pressure. Review altitude 1400 Pressure.

j. Both goup and squadron assemblies were accomplished by using box pattern with thirty (30) minutes allowed for squadron assembly and fifteen (15) minutes allowed for group assembly.

Denton Maximum Effort

a. Date flown 6 July 1947.

b. Number of aircraft participating - 16.

c. No aborts.

d. First take-off- 1452 Z.

e. First landing - 2025Z.

f. Average time per individual aircraft - 5 hours 27 minutes.

g. Average time per individual aircraft Squadron assembly-19 min.
Average time per individual aircraft Group assembly - 14 min.

h. Time over target 20000-3/4A.

i. Route flown - Tendover - Squadron assembly (436th Bomb Squadron 33500 98337; 9th Bomb Squadron - 3407N 98268) - Group assembly (33500 98337) - Denton - Fort Worth.

j. Route altitude - 15,000 feet pressure. Assembly altitude - 5000 feet pressure. Review altitude 1700 feet pressure.

k. Assembly was accomplished by flying a box pattern with thirty (30) minutes allowed for squadron assembly and fifeen (15) minutes at group ass.

III Conclusions:

Although navigation was not a primary objective in maneuvers it is felt that a fair amount of good navigation was accomplished. All critical target and assembly times were met with reasonalbe accuracy.

It is felt that by the staff navigators flying on crews they did not have sufficient time to properly supervise and analyze individual navigators work before and after each mission.

IV Recommendations:

It is recommended that squadron staff navigators accompany such maneuvers in staff status rather than as crew navigators.

S-3 SECTION

RADAR

I. NARRATIVE:

Strength. On arriving at Wendover, Utah, on 21 June 1947, a survey of radar personnel, conducted by the Group Radar Observer, revealed that the 5th and 43rd Bomb Squadron possessed a total of thirteen (13) radar observers (SCN 0142), one skilled Enlisted Radar Operator and four semi-skilled enlisted Radar Operators, whose aptitude and previous training qualified them to fill the vacant crew positions in each of the two squadrons. Radar maintenance, which was conducted at the squadron level, was under the supervision of the Squadron Electronics Officer (0141) and five Radar Maintenance men (AOS 867).

Requirements. In addition to the SCR-584 bombing requirements set forth in F. O. Number 21, Headquarters Eighth Air Force, 16 June 1947, it was planned that each Radar Operator would drop a total of twenty (20) M38A 2 bombs or a group total of three hundred and sixty (360) M38A 2 bombs.

Beacon Installation. On Able Day plus two, representatives from the 263 AAFBU supervised the installation of an A/APN-1 Beacon in B-29 #44-86076 which would enable a formation of B-29s to bomb on an SCR-584 Scoring Site and be scored by this unit. This Beacon was installed and tested by the 263rd personnel approximately sixteen (16) hours prior to departure for maneuvers. Because of the delay in installation this equipment it was impossible to assemble the Radar Operator and Bombardier, and orient them on operating procedures and in flight maintenance. In lieu of an indoctrination lecture, it was decided that a representative from the 263rd AAFBU would accompany the B-29 equipped with this Beacon in order to (1) Supervise the crew members operating procedures and (2) perform necessary in flight maintenance. Unfortunately, this representative was unable to accompany the formation to Wendover. On pre-flighting the A/APN-1 equipment prior to take off for San Diego on 23 June 1947 it was discovered that when the Beacon and R.P.I. were turned on, fuse 1104 in Junction Box 40 blew, and this rendered the radar set AN/APQ-13 inoperative. The Beacon was disconnected and this condition ceased. Maintenance personnel were called to repair the Beacon's wiring, but, due to their unfamiliarity with this equipment and the absence of Technical Orders, they were unable to repair the Beacon and its wiring. The mission was flown as briefed, but it was scored by camera.

F.O. Mission #1. On 22 June 1947, fourteen (14) B-29s representing the Group's maximum effort, radar bombed RBS-1 at San Diego, California with good results. The lead Radar Operator in the first squadron had a radar malfunction on the bomb run and was forced to turn the run over to the Bombardier at the 60° sighting angel. This combined effort resulted in a circular error of 440 feet. The radar operator in the second squadron successfully bombed the target with radar. The circular error on this run was 1446 feet (converted to 12000).

Radar Bombing Ranges. The Radar Bombing Range, located approximately ten miles South of Wendover Field and three and one half miles east of and abandoned railroad which runs north and south on the western extremity of Wendover Field, was inspected by the Group Radar Observer on 23 June 1947. The target consisted of three (3) pyramidal type reflectors, ten feet by ten feet, and six (6) smaller reflectors four feet by fourt feet by five feet. These reflectors were tilted approximately 20° downward toward the south. It was decided that it would be necessary to construct a 500 foot circle around the target for camera scoring purposes and reinforce the target with additional reflectors. It was evident, that due to the reflectors being tilted toward the south, it would be feasible to fly on an axis of attack of 345° True.

Antenna Tilt. During the first day of radar bombing, 23 June 1947, the Radar Operators experienced difficulty in picking up the target on their scopes. Finally, it was discovered that at altitudes of 20,000 feet or over, it was necessary to depress the antenna tilt as much as thirty degrees in order to retain the target. A circle was constructed at a distance of 500 feet from the center of the radar target in order that pictures of the bomb impact might be scored.

Construction. On 24 June 1947, members of the S-3 staff constructed three reflectors to reinforce the target on the Radar Range. These reflectors, constructed in the Base Sheet Metal Shop, were triangular shaped, three feet by three feet by ten feet. On completion, these reflectors were placed in the target are facing south. Subsequent flights reported that the target became more readily discernable following the addition of these three reflectors.

Coordinated Bombing. The small island, north of Carrington Island, in the Great Salt Lake, used by sister groups for a radar target, was not available to the 7th Bomb Group and all radar bombing was confined to a small, inadequate range south of the field. This range was judged inadequate in that the target gave a return of varying intensity which had a penchant for disputing into a cloud-like return when the aircraft was in the immediate vicinity of the target. Consequently, on many bombing runs the Radar Operator followed the target return down to 55° sighting angle and then lost it, or the Radar Operator was unable to pick up the target from twelve miles out and would enlist the aid of the Bombardier in aligning the aircraft on the axis of attack and then the Radar Operator would assume responsibility for the run when the target appeared on the scope. In short, successful radar bombing on a target such as this required a near perfect radar set. Unfortunately this was not always possible and when the set could not pick up or retain the target the Bombardier aided the Radar Operator. Despite the fact that many fine runs were made on the target strictly by radar, it is felt by the S-3 Section that the radar bombing conducted during this maneuver should be regarded as a coordinated effort between the Radar Operator and the Bombardier.

Cloud Coverage in Target Area. During late afternoon and night flights the target area was covered by cumulus clouds based at approximately 16,000 MSL. In order to substantiate the bombing results with pictures it was necessary at times to bomb at altitudes as low as 15,000 feet.

F. O. Mission #2. On 1 July 1947, fifteen B-29s successfully attacked Hangar Installations at the Municipal Airport, San Diego, California. The Radar Operator in the lead aircraft experienced difficulty in retaining the target on his scope and the Bombardier took over the run at the 60° sighting angle. The circular error for this run was 320 feet (converted to 12,000 feet). The Radar Operator leading the second squadron successfully bombed the target with radar. The circular error for this run was 1040 feet (converted to 12,000 feet).

F. O. Mission #3. Field Order #24. On 4 July 1947, eighteen B-29s from the 7th Bomb Group and ten B-29s from the 43rd Bomb Group participated in an aerial review over Seattle. Radar was used as navigational aid.

Mission to Denton. On 6 July 1947, eighteen B-29s participated in Airport dedication ceremonies over Denton, Texas. Radar was employed as a navigational aid.

Radar Maintenance. The two most prominent malfunctions confronted by the Radar Sections during the maneuver period were: (1) Sweep sticking, and (2) Heading Marker out of phase. It is felt by the maintenance section that these malfunctions were attributed to the gyro in the Fluxgate compass over-hanging on a turn, which would introduce a strain and overcome the rectifier tubes in the Torque Amplifier.

II. STATISTICS:

	9th	43rd	Group
Radar Camera Attacks	1	1	2

All SCR-584 missions scored by camera.

See Operational Statistics.

Radar Maintenance Statistics:

Equipment drawn from supply:
- 3 ea AB-19 Torque Amplifier
- 3 ea ID-41A Indicators
- 2 ea CN-6 Phasing Units
- Tubes
  - 3 ea 6AK5
  - 1 ea 6SL7
  - 1 ea 717A

Equipment used brought from out own shop:
- 2 ea SM7-C Synchronizer
  - 9 synchronizers replaced in aircraft but in each case the removed unit was repaired and used as replacements later.
- 1 ea CP-6 Range Unit.
  - 3 ea range units replaced, each removed was repaired.
- 1 ea MC-38 Modulator.
  - 2 replaced, 1 repaired, 1 inoperative.
- RC-1276B Radio Frequency Unit.
  - 4 removed, 2 replaced after repair, 1 still inoperative.
- 1 ea RA-88A Low voltage rectifier.
  - Replaced and repaired five, 1 still available for replacement.

2 ea PE-218-11
Two replaced and repaired, two still available for replacement.
Tubes
5 ea 6 SN7
4 ea 6H6
1 ea 6SL7
3 ea 6AK5
2 ea 1N23
1 ea 5Y4
3 ea VR 150-30
2 ea 6AC7
1 ea 6AG7
1 ea 5Z3

Equipment not used brought from out own shop:
1 ea TF-12 Transtat
1 ea AZ Control Box C-72.
1 ea PA-90 High voltage rectifier.

Test equipment used:
TS-33 Frequency Meter
TS-34 Oscilloscope
TS-35 Power meter

III. CONCLUSIONS:

Both Radar Operations and Radar Maintenance men benefited immeasurably from this maneuver. The maneuver was beneficial to the Operations in that it was the first opportunity many had to drop bombs in over a year. The experience level for maintenance personnel was low on arriving at Mendover, but, due to a shortage of maintenance personnel, considerable responsibility was placed on these men and, under the guidance of the Squadron Electronics Officers, they responded in a highly satisfactory manner.

The present radar target is totally inadequate for radar bombing with AN/APQ-13 equipment. The present triangular shaped target gives a marked return on its western extremity and then produces a resolution effect, not unlike a cloud return. In addition, in this area are several undetermined signals which could be mistaken for the target.

The present target can be picked up by narrow beam width equipment such as APQ-7 and presumably APQ-23, with the 60" dish; but, APQ-13 equipment, and all but three 7th Bomb Group aircraft were equipped with this type of radar, was designed for area targets such as small islands, industrial plants etc., and cannot be used with any degree of accuracy in picking up and retaining small target signals.

The 7th Bomb Group's S-3 Section is conscious of the value of AN/APW-1 equipment as a means of scoring formation attacks on SCR-584 targets; but, it felt that the Beacon installed in B-29 #44-66076 was improperly installed and the using personnel improperly briefed as to their duties.

It is felt that one (1) Electronics Officer (SSN 0141) and five (5) Radar Maintenance Men (SSN 867) per squadron are sufficient to maintain radar equipment during a two week maneuver; but, for effective sustained operations, the radar maintenance section should be up to T.O. strength.

The Radar Maintenance Section would not have been able to function adequately if it did not have exclusive use of the Power Unit 143. This unit was schedule to be used by the Squadron Radar, Radio and Armament sections and if these other sections required this unit for any time, Radar Maintenance would have suffered.

The repair, replacement and testing equipment allotted to the squadrons maintenance sections for a two week period was inadequate and if Radar personnel had not included radar equipment in their personal luggage it is believed that radar maintenance would have been less effective.

17. RECOMMENDATIONS:

The present radar target is not satisfactory and, if it cannot be replaced by an island target, it should contain not less than fifty (50) large pyramidal shaped reflectors ten feet by ten feet by ten feet. Rather than a triangular shaped target as is now erected on the range, it would be more effective if the target were circular shaped.

To utilize AN/APN-1 Beacon equipment to the maximum, it is felt that, if time does not permit a complete and accurate briefing for crew members using this equipment, on Beacon and RPI Operations and maintenance a competent representative from the 203rd AAFBU should participate in the initial mission using this equipment.

It is strongly recommended that a radar bombing range be made available to the 7th Bomb Group within a reasonable radius of the Fort Worth area in order that this group can meet the requirements set forth in existing training directives.

S-4 SECTION

The S-4 Section of this report covers the complete history pertaining to the logistical support which was furnished during the period of maneuvers.

The amounts entered in Column 3 indicates the number of items that were either procured from Fort Worth Army Air Field, utilizing radio note service and daily C-47 or B-25 shuttle trips, or from the base supply at Wendover. These amounts which seem excessive was the result of the 492nd Bomb Squadron departing for Japan which was not planned, resulting in their taking the majority of items that were assembled for the Wendover mission.

Maintenance was excellent which was the result of the method by which S-3 scheduled the missions.

FWAAFld Form #43 CONSUMPTION REPORT 13 July 1947 DATE

HOURS FLOWN ~~995:35~~

NUMBER OF ACFT 20

NUMBER OF LANDINGS 232

7th Bomb Group (VH) Less 492nd Bomb Sq
(Organization)

Fort Worth Army Air Field, Texas
(Home Station)

From 21 Jun 1947 6 July 1947 Wendover Field, Utah
(Pirod Cover (Name of Advanced Base or Maneuver Area)

1	2	3	4		
Ref. No.	Quantity taken from this station	Amount procured from other sources	Amount Consumed	Complet Stock Number & Part Number	Complet Nomenclature of Items Consolidated by Property Class
					Class 01-F
1	1	0	1	0108-2-1430	Inboard Pipe Assy, Waste Exit
2	2	0	1	0108-9-5732	Booster, R.H. Valve Assy Brake De
3	1	0	0	0108-14-3377-70	Hood Assy, Outboard L. H.
4	2	0	0	0108-14-3377-68	Hood Assy, Inboard R. H. Valve Fuel Selector
5	9	0	7	0108-12-655-106	L. H. Dome Assy, Side Sighting
6	8	0	4	0108-12-655-117	R. H. Dome Assy, In-
7	7	0	1	0108-LA088	Exhuast, Front Collector Ring (TO 01-20EJ-178) B. H.
8	2	0	0	0108-14-2273-5	Valve Assy, Cabin Pressure Release
9	1	0	0	0108-2-1430-4	Pipe Assy, Waste Exit Outboard

1	2	3	4	5	6
10	1	0	0	0108-2-1430-5	Pipe Assy, Waste Exit Outboard
11	1	0	0	0108-14-3377-71	Hood Assy, Outboard R. H.
12	1	0	0	0108-14-3377-69	Hood Assy, Inboard L. H.
13	2	0	2	0108-14-3242-65	Dome Assy, Upper Sight (Interchangeable w/part No. 0108-14-3242-65
14	1	0	1	0108-15-12482-106	Collector Assy-Rear Exhaust
15	0	1	1	0108-6-15806	Clamp Assy-Exhaust Collector
16	1	0	1	0108-A08803	Collector Assy-Lower Center Forward
17	1	0	1	0108-A08804	Collector Assy-Lower Left Forward
18	1	0	1	0108-A08805	Collector Assy-Upper Left Forward
19	0	1	1	0108-3-25958	Universal-Trim Tab
20	0	2	2	0108-14-3263-34	Door Assy-Gunners Emergency
21	0	1	1	0108-15-7229-29	Door Assy-Pressure Bulkhead
22	0	1	1	0108-6-9880	Window-Bombardier
23	2	0	2	0108-A08802	Collector Assy-Lower Right Forward
24	2	0	2	0108-A08801	Collector Assy-Upper Right Forward
25	0	1	1	0108-15-1071[illegible]-9	Elevator Assy-Right Hand
26	0	1	1	0108-3-16561-1	Housing Assy-Bearing
27	0	1	1	0108-10841	Socket Assy-Interconnector

1	2	3	4	5	6
					Class 02-B
28	1	0	1	0230-V32-22	Aux Power Plant
					Class 02-D
29	2	0	2	0232-890749	Cylinder Assy Complete with R ngs and Piston Rear
30	2	0	1	0232-890748	Cylinder And Piston Assy Complete Front
31	10	0	0	0232-63684	Gasket, Magneto Drive Oil Seal
32	10	0	0	0232-113366	Gasket, Generator Drive Seal
33	9	3	12	0232-117812	Gasket, Oil Strainer
34	15	0	0	0232-120319	Gasket, Distributor Drive Shaft Oil Seal
35	15	0	0	0232-127776	Gasket, Torque Incl Distributor and governor drive
36	15	0	0	0232-127777	Gasket, Torque Incl Distributor and governor drive
37	5	0	0	0232-65557	Gasket Starter
38	5	0	0	0232-65618	Gasket Distributor Drive Housing
39	10	0	1	0232-65708	Gasket, Magneto
38	10	0	6	0232-66779	Gasket Rear Oil Sump
39	15	0	0	0232-67410	Gasket Supercharger Rear Cover
40	15	0	0	0232-113558	Gasket, Starter Adapter
41	15	0	1	0232-114344	Gasket Carburator
42	15	0	1	0232-114345	Gasket, Carburetor Air Intake Screen

Class 02-D Cont'd

1	2	3	4	5	6
43	15	0	0	0232-114344	Gasket Rear Oil Sump
44	15	0	0	0232-113913	Cover Gasket, Fuel Injection Gear
45	10	0	0	0232-117371	(Front) Stud Cylinder to Rocker Box
46	400	0	0	0232-2D3	Nut Rocker Box Cover
47	138	0	0	0232-34D16	Bracket
48	30	0	0	0232-127741	To Adapter Ring, -375 1 B Packing Fuel
49	40	0	0	0232-2136785	Stud Cylinder to Rocker Box Cover
50	36	0	0	0232-404007	Nut, Eng Mounting Bracket
51	10	6	16	0232-20583-113	Nose Push Rod Cover Lower
52	65	0	0	0232-21823-1	Ring-375 1 B Packing Fuel Injection Nozzle screw
53	1080	0	78	0232-117954	Gasket, Rocker Box cover
54	15	0	0	0232-4040D7	Nut, elastic stop, Hex
55	0	1	1	0232-418576	Cover & Bushing Assy-Rocker Box
56	0	20	20	0232-27D231	Washer-Oil Strainer
57	0	2	2	0232-2136H65	Stud-Rocker Box Cover to Cylinder
58	0	1	1	0232-205D55	Hose-Oil Sump Elbow
59	0	47	47	0232-27D243	Wahser-Fuel Injection Pump
60	0	84	84	0232-2182D1	Ring-.375 ID Packing Fuel Injection Nozzle Screw
61	0	18	18	0232-127742	Gasket-Fuel Injection Pump

1	2	3	4	5	Class 02-D Cont'd 6
62	0	1	1	0232-127751	Seal-Intake Pipe Connection
63	0	4	4	0232-2083D57	Ring-Packing .555 ID
64	0	8	8	0232-68816	Ring-Governor Adapter
65	0	1	1	0232-114345	Gasket-Fuel Injection Master Control Air Inlet
66	0	1	1	0232-117757	Pipe-Intake Front Cylinder
67	0	4	4	0232-2058D112	Hose-Push Housing Upper
68	0	12	12	0232-127741	Screw-Fuel Injection Nozzle
69	0	1	1	0232-421690N1	Deflector Assy-Rear Cylinder Air
70	0	10	10	0232-130469	Washer-Rocker Lubricating Tube
71	1	0	0	0232-64130	Gasket, Fual Accessory
72	0	1	1	0232-67575	Gasket, fuel pump
					Class 03-A
73	2	0	0	4007-98468	Gasket Governor Head
74	1	0	1	4013-NL-24F60-73-B6521A-6	Propeller Assy
75	5	0	1	4013-63137	Seal Dome & Barrel
76	2	6	8	4013-308-055M	Governor, Propeller
77	0	5	5	4013-57354D	Gasket-Governor Mounting
78	0	1	1	4013-52180	Gasket-Piston
79	0	1	1	4013-52312	Seal-Dome Breather Hole

1	2	3	4	5	Class 03-A Cont'd 6
80	0	1	1	4013-52192	Seal-Spider & Shaft
[illegible]					Class 03-B
81	4	0	0	4111-623-78	Tube Assy Expender
82	2	0	0	4111-E3-10121	Wheel Assy. 56" Main
83	2	0	1	4111-2-258-1	Brake Assy
84	1	0	0	4111-2-259-1	Brake Assy
85	2	1	1	4111-E3-101M1	Wheel Assy-56" SC Landing
					Class 03-C
86	3	0	1	4223-25251	Inverter Assy, Rotary Type M3149H, 24V, 750 Amp.
87	2	0	2	4213-914-13A	Generator Assy P-2
88	1	0	0	4213-1061-4A	Motor Retraction Main Loading Gear
89	2	0	0	4227-158A	Actuator Assy Cowl Flaps
90	1	0	1	4213-1064-2C	Actuator Assy, Wing Flap Operator 24V
91	2	0	0	4202-43A8304-15	Breaker Circuit 15 Amp
92	2	0	0	4202-AW3150-25	Breaker Circuit Toggle SWSPST
93	2	0	0	4202-AW3160-15-L	Breaker Circuit Toggle SWSPST
94	2	0	0	4221-1560-24	Lamp Assy, Retractable Landing 1/W 2450-4095-2-24
95	18	0	0	4202-AN3040-1	Cover Circular Formation Lamp Lower white 1/W 4221-20948 & 4250-42393
96	2	0	0	4223-25258	Inverter Assy Rotary Type M3149 24V 750 amp

1	2	3	4	5	Class 03-C Cont'd 6
97	6	0	0	4270-VJB24B-57	Viberator Starting
98	6	0	0	4202-AN3022-7 or 7B	Switch Prop Gov.
99	1	0	0	4224-2140412	Starter Assy. C-20
100	1	0	0	4213-1065-3A	Motor, Retraction Nose Gear
101	2	0	0	4224-2000	Generator Assy Engine Driven 21
102	20	0	10	4209-1118404	Regulator Assy Generator Control 200 Amp
103	3	0	0	4221-3001-24	Lamp Assy Retractable Landing
104	3	0	0	4227-7104-50	Shaft Assy Flex (oe-C-1*)
105	3	0	0	4227-7108-125	Shaft Assy Flex (03-C-1*)
106	0	1	1	4202-AN3030-5	Lamp Assy - Type C-1
106	0	1	1	4262-26024	Lamp Assy - Cabin Type
107	0	2	2	4220-30TH72E4A	Switch Assy-Reverse Current Relay
108	0	1	1	4202-AN3037	Lamp Assy-Wing Tip Green
109	1	0	1	4270-VJR24B5X	Coil Assy-Induction Vibrator
110	0	1	1		Actuator Assy-Oil Cooler Flap
98					Class 03-D
111	15	0	0	4305-39446	Gasket, Fuel Connection
112	1	0	1	4305-135878	Link Assy Cont.
113	1	2	2	4305-135063-7	Control Assy Master

1	2	3	4	5	Class 03-D Con't 6
114	0	6	6	4305-135087-7	Pump Assy-Fuel Injection L.H.
115	0	4	4	4305-135088-7	Pump Assy-Fuel Injection R.H.
					Class 03-E
116	6	4	8	4400-0403A1	Amplifier Turbo Control
117	2	0	0	4400-846152	Waste Pipe Assy
118	2	0	0	4400-8464883-2	Leak L.H. Valve Assy Turbo Anti-
119	1	0	1	4400-0303AY2	Motor Assy Waste Gate
120	1	1	2	4400-G1056A4	TBS Selector
121	0	5	5	4400-G1683	Pressuretrol-Induction System
122	0	2	1	4400-G1057A4	Governor-Turbo Supercharger
					Class 03-F
123	5	0	0	4504-1E663	Valve-Cabin Pressure Regulating
124	0	1	1	4517-93138	Extinguisher-Fire CO2 Portable 4TB
125	0	1	1	4502-AN5845-1	Dome Assy-Navigator
~~126~~					Class 03-H
126	1106	0	326	4708-LS-88	Plug-Spark Type LS-88
127	80	0	0	4708-755225	Sleeve-Spark Plug
128	1	0	0	4708-10-31056	Finger Assy-
129	2	0	1	4704-10-30625-2	Magneto Assy-

1	2	3	4	5	Class 03-H Con't 6
130	6	0	4	4704-10-21417	Contact Assy-Magneto
131	0	38	3	4704-10-25683	Contact Assy-Magneto
132	0	3	3	4716-AN3104-2	Elbow Assy-110°
133	0	10	10	4716-41B6831	End Assy-Spark Plug Terminal Sleeve
					Class 03-L
134	7	0	3	4832-2E763-A	Pump Assy, Booster B-7B
135	2	0	2	4805-6E10281	Valve Assy, Oil Temperature Regulator
136	1	0	0	4801-13381	Valve Assy, 4 Way Bombay Door
137	1	0	0	4846-57B-140	Valve Assy, Relief High Pressure
138	1	0	0	4846-58B-140	Valve Assy Relief Low Pressure
139	4	0	0	4831-11-844-1	Valve Assy, Fuel Shut off
140	2	0	0	4808-405031	Accumulator Assy Air
141	2	2	4	4805-2E16002	Oil Cooler Assy
142	2	0	0	4851-27314	Filter Assy Hyd Oil
143	6	0	0	4846-21-125C	Valve Assy Fuel Shut Off
144	0	2	2	4838-2700	Valve Assy-Vacum Regulating
145	0	20	20	4851-30868	Element-Filter
146	0	1	1	4842-135-00240	Valve Assy-Air Shut Off
147	0	2	2	4832-3P211J	Pump Assy-Vacum Engine Driven

1	2	3	4	5	Class C3-I Con't 6
148	0	10	10	4851-30873	Gasket-Case
149	0	1	1	4805-6B10067	Gasket-Valve to Cooler
					Class 03-K
150	1	0	0	5500-453500	Gage, Oxygen Pressure Type K-1
151	1	0	0	5500-721275	Regulator, Oxygen Type A-13 for Portable Walk Around Bottle
152	0	5	5	5509-42D7261	Recharger Assy-Portable Oxygen 24"
153	0	1	1	5509-44D22201	Regulator & Cylinder Assy-Oxygen
					Class 04-A
154	25	0	0	6500-012086-6 AN744	61 Bolt A/C Drilled Head
155	35	0	0	6500-014030 AN3-6	Bolt A/C
156	35	0	0	6500-014170 AN-3-24	Bolt A/C
157	35	0	0	6500-015180 AN4-14	Bolt A/C
158	25	0	0	6500-015270 AN4-24	Bolt A/C
159	30	0	0	6500-016280 AN5-14	Bolt A/C
160	20	0	0	6500-016360 AN5-24	Bolt A/C
161	15	0	0	6500-017230 AN6-10	Bolt A/C
162	15	0	0	6500-017310 AN6-20	Bolt A/C
163	20	0	5	6500-293714-8 AN748	-34 Clamp, Hose
164	50	0	0	6500-293527-242 AN748	-66 Clamp, Hose

1	2	3	4	5	Class 04-A Con't 6
165	20	0	0	6500-293716 AN748-82	Clamp, Hose
166	20	0	0	6500-342292 An809-1	Air Valve Core, Hi-Pressure
167	150	0	4	6500-468300 An320-3	Nut
168	150	0	0	6500-468500 AM320-4	Nut
169	150	0	0	6500-468600 AN320-5	Nut
170	150	0	0	6500-468700 AN320-6	Nut
171	100	0	0	6500-513500 365-632	Nut
172	50	0	0	6500-513700 365-832	Nut
173	100	0	0	6500-514000 365-1032	Nut
174	100	0	0	6500-514400 365-624	Nut
175	100	0	0	6500-981700 AN960D10	Washer
176	100	0	0	6500-981800 AN960D416	Washer
177	100	0	0	6500-981900 AN960D516	Washer
178	100	0	0	6500-982000 AN960D616	Washer
179	20	0	0	6500-014050 AN-3-10	Bolt
180	15	0	0	6500-293714-6 AN748-26	Clamp, Hose
181	100	0	0	6500-472100 AN310-3	Nut
182	0	1	1	6500-293713-15	Clamp-Hose screw
183	0	18	18	6500-032430	Bolt-Aircraft Plain Steel

1	2	3	4	5	Class 04-A Cont'd 6
184	0	2	2	6500-059600	Bolt A/C Plain Steel
185	0	10	10	6500-293715-65	Clamp-Hose
186	0	21	21	6500-014010	Bolt A/C Plain Steel
187	0	18	18	6500-015260	Bolt A/C Drilled Steel
188	0	7	7	6500-327820	Clip-Tube Loop Type
189	0	36	36	6500-466200	Nut-Castle Aircraft
190	42	0	0	6500-472300	Nut-Aircraft
191	100	0	0	6500-472400	Nut-Aircraft
192	100	0	0	6500-427500	Nut-Aircraft
193	75	0	0	6500-514300	Nut-Aircraft
[illegible]					Class 04-B
194	10 ft	0	0	6600-380821	Hose, Fuel Aromatic 1 $\frac{1}{4}$" ID
195	2 pt	0	0	6600-117000	Rubber to Metal Cement
196	0	6 ft	6 ft	6600-415000	Hose Assy-Flexible $\frac{1}{4}$" ID x 14" Long
[illegible]					Class 04-C
197	2	0	0	3900-330000	Casing 36" 10 Ply Rayon Non Skid
198	2	4	4	3900-344500	Casing 56" 16 Ply Rayon Non Skid
199	2	2	4	3900-758000	Tube, Inner, 56"

1	2	3	4	5	Class 05-A Con't 6
30	0	1	1	6234-12005-1D-A1	Indicator-Master Gyro Fluxgate Compass
31	0	2	2	6234-12002-1B	Transmitter-Master Gyro Fluxgate Compass
					Class 05-C
32	2	0	0	6025-671BK010	Altimeter
33	1	0	1	6034-1636-6A-B1	Indicator Rate of Climb
34	2	2	4	6042-T95090	Indicator Gyro Horizon Flight
35	1	0	1	6034-1722-2AF-B2	Indicator Bank & Turn AN5820-1
36	0	3	3	6034-1432-2ZB-A-A1	Indicator Air Speed 50-700 MPH
37	0	3	3	6040-646050	Indicator-Gyro Horizon Flight
38	0	1	1	6054-23500	Indicator-Bank & Turn
39					Class 05-D
39	9	0	0	6137-215001	Transmitter, Oil Pressure
40	6	0	0	6136-31854-12	Gage, Manifold Pressure, AN5770-2 384
41	4	0	0	6145-112639	Bulb Resistance Spec AN5525-1
42	7	0	0	6136-31855-12	Fuel Pressure Gage Spec AN5772-1
43	1	0	1	6124-326002PL	Transmitter Fuel or oil Pressure
44	2	0	0	6110-208852AL	Tachometer, Generator B-7A
45	1	0	0	6126-1221-5	Lead, Thermocouple, 607272
46	2	0	1	6145-112638	Bulb, Resistance Spec AN5525-2
47					

1	2	3	4	5	Class 05-D Con't 6
217	2	0	0	6136-31855-12	Gage, Fuel Pressure Spec AN5772-1
218	0	3	3	6119-8DJ19AAW	Indicator Assy-Tachometer
219	0	2	2	6119-8DJ19AAX	Indicator Assy-Tachometer
220	0	6	6	6119-2CM5AC2	Generator Tachometer
221	0	1	1	6114-10284-A	Indicator-Resistance Thermometer
222	0	1	1	6111-222-22	Indicator-Thermocouple Thermometer
223	0	1	1	6137-AN5765-2	Transmitter Assy-Fuel & Oil
224	0	1	1	6103-AN5540-2	Thermocouple-Gasket Type
					Class 05-G
225	0	1	1	2327-EA48-17T	Indicator-Electric Fuel Gage
226	0	1	1	2327-AAF364955	Tank-Unit Electric Fuel Gage
227	0	1	1	2330-6930-280	Gage-Pressure Air
					Class 06-A
228			458415 gal.	NL.	Fuel, A/C Engine Grade 100/130 Spec AN-F-28
229			7787 gal.	NL.	Oil, Lubricating, A/C Engine, Grade 1120 Spec ANDUO-446
					Class 06-B
230	60 gal.	0	15 gal	7500-625000	Oil Lubricating Low Temperature Spec 3606
231	1 gal	0	1 Qt	7500-403500	Fluid Compass
232	3 gal	0	0	7500-140800	Fluid Hydraulic Spec 3580

1	2	3	4	5	6
					Class 06-B Cont'd
233	12 qt	0	4	7500-617000	Oil Lubricating Spec An-O-6
234	5 gal	0	0	7500-054300	Compound Corrosion Preventative
235	10gal	1 gal	11 gal	7500-140800	Fluid-Hydraulic Spec AN-VV-O-366B
236	0	17568 cu ft.	17568 cu ft	7500-826000	Oxygen-Breathing
					Class 08-B
237	20	0	0	8800-340600	Fuse, Cartridge Inclosed, 100 Amp, Spec 32084
238	50	0	12	8800-359600	Fuse, 15 Amp
239	50	0	6	8800-359800	Fuse, 20 Amp
240	50	0	0	8800-360000	Fuse, 30 Amp
241	100	0	7	8800-359000	Fuse, 3 Amp "Little"
242	70	0	0	8800-359400	Fuse, 10 Amp "Little"
243	10 rls	0	4	8800-873200	Tape Rubber
244	10	0	3	8800-52003	Lamp MP-12 Bulb
245	55	0	20	8800-465850	Lamp T Bulb Miniature Bayonet
246	45	0	3	8800-467150	Lamp GG-10 Bulb Silvered SC Index
247	30	0	9	8800-466950	Lamp 5 Bulb SC Bayonet
248	30	0	0	8800-467580	Lamp Double Contact Base 28 V
249	16	0	0	8800-470795	Lamp Neon Glow

1	2	3	4	5	Class 08-B Cont'd 6
250	20	0	0	8800-361210	Fuse, 2 Amp.
					Class ~~11-A~~
251	2	0	1	6400-009400	Amplifier-Automatic Pilot 26 V
252	20	0	0	6400-091675	Box-Bomb Auxiliary Switch Mark 1
253	4	0	0	6400-148845	Cable Assy Bombsight 6 wire
254	2	0	0	6400-151480	Cable-Bombsight Take-up Drum
255	2	0	0	6400-195000	Clutch Assy Bombsight Directional
256	4	0	0	6400-195400	Clutch Assy Bombsight Secondary
257	2	0	2	6400-212600	Container AFCE Metal Shipping
258	3	0	1	6400-212605	Container Bombsight Metal Shipping
259	2	0	2	6400-381760	Inverter Assy Automatic Pilot Rotary 26VDC
260	2	0	1	6400-304650	Gyro Assy Automatic Pilot Flight C-1
261	6	0	1	6400-395265	Lead Bombsight Flexible
262	6	0	6	6400-395345	Lead Bombsight Flexible
263	6	0	0	6400-395390	Lead Bombsight Flexible
264	6	0	0	6400-395400	Lead Bombsight Flexible
265	6	0	0	6400-395554	Lead Flexible Flight Gyro
266	6	0	0	6400-395556	Lead Flexible Flight Gyro
267	6	0	0	6400-395558	Lead Flexible Flight Gyro

1	2	3	4	5	Class 11-A Cont'd 6
268	6	0	0	6400-395554	Lead Flexible Flight gyro
269	6	0	0	6400-395563	Lead Flexible Terminal Block
270	3	1	4	6400-464500	Motor Assy Automatic Pilot Serve C-1
271	4	0	0	6400-508820	Pin Assy Bombsight Stabilizer Directional Gatch
272	12	0	2	6400-635000	Release Assy bomb rack A-4 L. H.
273	12	0	0	6400-635500	Release Assy Bomb Rack A-4 R. H.
274	3	0	0	6400-689715	Sector Assy Bombsight Stabilizer Gardan Contact
275	4	0	0	6400-691500	Selector Bomb Rack P R Mallory Type RS-2
276	6	0	4	6400-694500	Shackle Assy Bomb Type B-7
277	3	0	1	6400-963750	Unit Bombsight Stabilizer Type M-9
278	1	0	1	6400-964565	Unit Bombsight Upper Type M-9B
279	4	0	0	6400-125200	Brush Bombsight Stab Gyro Motor
280	1	0	0	6400-374425	Indicator Bombsight Pilot Director 2 pole
~~281~~	~~0~~	~~11~~	~~2~~	~~6400-151525~~	~~Cable Bombsight Telescope~~
~~282~~	~~1~~	~~1~~	~~2~~	~~6400-635900~~	~~Resistance Assy, Bombsight Tabalizer PD I~~
					Class 11-E
283	4			5901-2CV1C1	Servo Amplifier
284	2			5901-2J1F1	Selsyn Generator 1-S
285	11	0	5	5901-5.M31NJ9A	Amplidyne Motor Generator Turret

1	2	3	4	5	Class 11-E Cont'd 6
286	4			5901-5AM61NJ1C	Amplidyne CSFC Tail
287	6			5901-5BA50LJ2	Motor Turret Complete
288	6			5901-5D21NJ3A	Dynamotor Assy
289	1			5901-800546502	Dome Assy Lower Turret
290	2	1	3	5901-800546602	Dome Assy Upper Turret
291	2				L. H. Upper Forward Box Assy Blister Auxiliary
292	1			5901-867719601	Control Box Assy CSFC Blister System
293	1			5901-8677197G1	Control Box Assy CSFC Nose System
294	1			5901-867216268	Gyro and Support Assy Pedestal Sighting Sta Assy
295	12			5918-SP5265	Knob Target Ring Sighting
296	1			5901-825424003	Relay Assy Complete
297	5			5901-2J1H1	Selsyn, AZ and El Output Computer
298	1			5901-3C205A1	Regulator Voltage Computer
299	5	1	6	5901-1825283301	Charger Gun Automatic
300	2			5901-825891381	Booster Assy CSFS Turret R.H. Upper Forward
301	0	2	2	5915-32R400	Compressor-air Bomb Bay Door
302	0	3	3	5915-32R200	Compressor-Air Bomb Bay Door
303	0	1	1	5915-32R300	Compressor-Air Bomb Bay Door
304	0	5	5	8800-358900	Fuse-Self Indicating Glass Tube 2AMP

1	2	3	4	5	Class 11-E Cont'd 6
305	0	3	3	8800-359200	Fuse-Self Indicating Glass Tube 5 Amp
306	0	2 rls	2 rls	8800-871400	Tape-Friction 3/4" Wide Grade A
307	0	6 ft.	6 ft	8800-050200	Braid-Tinned Copper Strand 1/2" Wide
					Class 16-A
308	2	0	1	1600-212996500	2C2259 Jack Box BC-1366
309	1	0	•	1600-223881636	2CK7870-7C Synchronizer SN7-C/APQ-13
310	2	0	2	1600-211304964	2C449-26A Interphone Amp
311	1	0	•	1600-223129922	2C6900-47 TX Radio T-47A/ART-13
312	1	•	0	1600-214349250	Compass Radio S-5 ARM-7
313	2	0	1	1600-216786000	2C4373B Radio Receiver BC-453B
314	3	0	0	1600-337837400	Dynamotor DY-17/ART-13
315	4	0	•	1600-347541000	Junction Box J-68
316	1	•	0	1600-218962570	2C5066-1333 Radio Receiver BC-1333
317	1	0	1	1600-265216000	28522.1 Compensate SCB-522
318	2	0	0	1600-215257932	2C4180-89 Rad Rec R-89/ARN
319	2	0	1	1600-327148150	3F933-36 Test Set TS-36
320	1	0	0	1600-32782002D	3F4139A.1 Test Set 1-139A
321	2	0	0	1600-337837500	3N1535-21 Dynamotor DY-21
322	1	0	1	1600-337837600	3N1535-22 Dynamotor DY-22

1	2	3	4	5	
323	20	0	1	1600-207600000	28833 Headset HS-33
324	6	0	0	1600-297810000	281617 Microphone T-17
325	1	0	0	1600-341094000	3B1894C Dynamotor PE-94C
326	2	1	3	1600-212604680	Indicator ID-41/APQ-13
327	2	0	0	1600-297775567	2410006-98 RF Trans Line
328	2	0	0	1600-287274010	Computer, Cp-76/APQ-13
329	1	0	0	1600-21168673D	Control Box, C-71B/APQ-13
330	4	0	3	1600-211304880	2CK449-19 Torque Amplifier AM-19 APQ-14
331	2	0	1	1600-21364166D	Selsyn Phasing Unit CN6/APQ-13
332	2	0	0	1600-219548700	Radio Receiver & TS BC-788-C
333	4	0	0	1600-219484100	Indicator I-152-C
334	2	0	2	1600-224564921	Radio receiver
335	0	3	3	1600-206900-67	Radio Transmitter T/67-ARC-3
336	0	1	1	1600-203710020	Loop-LP-21AM
337	0	2	2	1600-214955980	Radio-Freq. Unit BC-1276-B
338	0	1	1	1600-223609416	Range Unit-CP-6/APQ13
339	0	1	1	1600-294906160	Regulator-Voltage TF12A
340	0	1	1	1600-211686740	Asimuth-Control Box C-72/APQ13
341	0	3	3	1600-211304960	Amplifier-interphone AN-26/AIC

1	2	3	4	5	6
					Class 16-A Cont'd
342	0	3	3	1600-321438000	Card, CD508
343	0	2	2	1600-21515	Receiver, VHF R77/ARC-3
344	0	1	1	1600-338624000	Dynamoter DM-32A
					Class 16-E
345	10	0	7	3300-234450000	Jan2J6AK5 Tube for AN/ARC-3
346	4	0	0	3300-235480050	Jan-2J832-A Tube for AN/ARC-3
347	1	0	1	3300-234990000	Jan-2J12SG7 Tube for AN/ARC-3
348	8	0	0	3300-234900	Jan-2J12A6 Tube for AN/ARC-3
349	1	0	0	3300-235025000	2J12SN7GT Jan- Tube for AN-ARC-3
350	7	0	0	3300-235400000	Jan-2J717-A Tube for RC-103
351	11	0	0	3300-234800000	6V6GT Tube
352	11	0	6	3300-234890000	7F7 Tube
353	11	0	3	3300-234920000	7Y4 Tube
354	6	0	1	3300-234621000	Jan-2J616GA Tube
355	2	0	0	3300-235020000	Jan-2J12SL7GT Tube
356	3	0	0	3300-234945000	Jan-2J12C8 Tube
357	4	0	0	3300-235440000	Jan-2-J811 Tube
358	2	0	0	3300-235450000	Jan 2J813 Tube
359	1	0	1	3300-235750000	Jan-2J2031 Tube for AN-ARN-5

1	2	3	4	5	Class 16 6
360	2	0	0	3300-235170000 Jan-2J41	Tube ~~3~~er BS-248
361	2	0	0	3300-234525000 Jan 2J677	Tube
362	2	0	0	3300-234565000 Jan 2J6J7	Tube
363	16	0	7	3300-234435000 Jan 2JAC7	Tube
364	8	0	0	3300-234445000 Jan2JAC7	Tube
365	20	0	0	~~3300-234137300 J-~~ ~~JIN23A~~	~~Tube~~
366	4	0	3	3300-234630000 Jan 2J6SL7GT	Tube
367	40	0	0	3300-387956000	382602.7 Fuse, 2A, 4AG
368	100	0	0	3300-387692000	381924 Fuse, 15A, 4AG
369	12	0	0	3300-696737451	6ZN4042-5 Gasket, Coprene
370	12	0	0	3300-696737454	6Z4042-C Gasket, Coprene
371	0	1	1	3300-234920000	Tube-7Y7a
372	0	3	3	3300-234940000	Tube-JAN2J12AH7GT
373	0	2	2	3300-234635000	~~Tube-J.N2J6SL7~~
374	0	4	4	3300-234540000	~~Tube-2J6H6~~
375	3	3	6	3300-23490000	Tube-7N7
376		4	4	3300-234137225	Cystal, IN-23
377		1	1	3300-292444700	Lamp, Calibration
378		1	1	2100-2X4-7420	Cystal 7420VC

Page_____

1	2	3	4	5	6
					Class 16-E Cont'd
379		14	1	3300-390628740	Resistor, 300 ohm voltage dividingfor PE218 inverter
380		1	1	3300-23433050	Tube, cathode ray
381		430 ft	430 ft	3300-106360006	Wire Antenna
382		1	1	3300-23495000	Tube, 12H6
383		1	1	3300-235400700	Tube, 723 A/B. HFO
					Class 21
384		300 ft	300 ft	7100-725025	Rpe-Sisal 3/8" Dia
					Class 22
385	20			7200-030000	Case, Shipping, AF Organizational Equip. Spec. 40340
					Class 23-A
386	6 lbs	0	2	6800-785000	Steel, Soft, Zinc Coated .020", Spec AN-QQ-W-435
387	3 ft	0	0	6800-153035	Tubing, Alum Alloy, Concl, T, 1/4" OD x .035 wall
388	3	0	0	6800-153317	Tubing, Alum Alloy, Concl. T, 11/4" OD x .049 Wall
389	2		0	6800-153003	Tubing, Alum, Alloy N 1/8" OD
390	0	3 rls	3 rls	6800-785800	Steel-Wire Soft Zinc Coated .0317
391	0	10 SQRT	10 SQ FT	6800-140300	Alum Alloy-Sheet .032 in
392	0	2 lb	2 lb	6800-388000	Solder-Rosin Core
393		1 lb	1 lb	6800-296200	Copper-Wire Annealed .032

1	2	3	4	5	6 Class 29
394	1	9	1	6700-394950	Pin, Cotter
395	1	0	1	6700-395150	Pin, Cotter
396	1	0	1	6700-395300	Pin, Cotter
397	1 lb	0	0	6700-482755	Rivet 5/32 x ½ Alum
398	36 in	0	0	6700-378287	Packing Mettalic 3/16
399	36 in	0	0	6700-378290	Packing Mettalic ¼
400	66	0	0	6700-747950	Screw
401	0	6SHT	6SHT	6700-192000	Cloth-Crocus 9 x 11 Sheet
402	0	6	6	6700-059700	Bolt-Aircraft Plain Steel
403	0	24	24	6700-785555-38	Screw-Truss Head Steel
404	0	12	12	6700-748150	Screw-Sheet Metal R. H.
405	0	4	4	6700-265100	Gasket-Annular Copper
406	0	120 in	120 in	6700-378285	Packing-Metallic 1/8" sq
407	0	1 lb	1 lb	6700-489368	Rivet-Alum Alloy CSK HD
408	0	1 lb	1 lb	6700-482110	Rivet-Brz HD Alum Alloy
409	0	1 lb	1 lb	6700-482500	Rivet-Alum Alloy BRZ HD
410	0	1 lb	1 lb	6700-482850	Rivet-Alum Alloy BRZ HD
					QUARTERMASTER
411	0	212 Gl	212 gl	14-K-245	Kerosene

Page

1	2	3	4	5	6
					QUARTERMASTER Cont'd
412	0	206	206	NL	Gasoline-73 Octane (APU)
413	0	10 qt	10 qt	[illegible] (APU)	OIL-SAE 30 (APU)
414		1500	1500	NL	Gasoline, 72 Octane (Vehicles)
415		26 qt	26 qt	NL	Oil-SAE 30 (Vehicles)
					ORDNANCE
					SNL A-38
416	15	75	247	A-3801-00030	Barrel-Caliber .50 M1
					SNL-s-1
417		327	327	S1HTA	Bomb, GP, TNT 500 lb, AN-M64A1
418		956	956	S1NLA	Bomb, practice M38A2, 100 lb.
419		275	275	S2GGA	Charge, spotting M1A1
420		681	681	S2GHA	Charge, spotting M-3
					SNL-S2
421		327	327	S2NRA	Fuze, Bomb, AN-M103A1
422		327	327	S2FSA	Fuze, bomb, AN-M101A2
423		327	327	S3JVA	Fin Assy, M109A1
424		327	327	S3B0B	~~Arming Wire Assy, (82-y-234M3)~~
					SNL-T1
425		79800	79800	T11BB	~~Cartridge, AP, Cal.50 M2~~
426		226320	226320	T11CW	~~Cartridge AP Cal .50 M2~~
		14700	14700	T1	Cartridge APST. Cal. 50
427		20448	20448	T11PB	~~Cartridge Tracer, Cal .50 M1~~
428		79000	79000	T5AJA	~~Link, Metallic belt, cal .50 M-2~~
429		21500	21500	T5AJC	Link, Metallic belt cal.50 M2

Page

1	2	3	4	5	ORDNANCE (SNL A-38) Cont'd[6]
430	5	3	8	A037-7310080	Pin, firing
431	3	2	5	A037-01-00500	Extension, firing pin
432	2	0	2	A037-01-01030	Pin, belt holding
433	2	0	15	A038-01-00190	Jacket, gun barrel
434	2	0	12	A001-0021668	Gun, machine cal .50, M-2, A/C Basic
435	1	0	1	A037-01-00270	Buffer, oil assy.
436	5	0	3	A037-01-00520	Extractor, Assy
437	6	0	4	A037-01-00160	Bolt, alternate feed
438	5	0	2	A037-01-01809	Spring, driving, inner & outer, group assy.
439	3	0	1	A037-01-01701	Slide, belt, feed
440	8	0	5	A037-01-01843	Spring, seat
441	4	0	1	A037-01-00741	Lever, belt feed
442					//////last Item //////

APPENDIX

HEADQUARTERS EIGHTH AIR FORCE
Fort Worth Army Air Field
Fort Worth, Texas
2100, 16 June 1947

FO No. 21

MAPS: As required.

1. a. Annex 1, Int.

   b. Omitted

2. 7th Bomb Group conducts sustained operations.

3. a. 7th Bomb Group

   (1) MOVE TO WENDOVER, UTAH, A + 2.

   (2) FROM WENDOVER FIELD, CONDUCT GROUP MANEUVERS FOR FIFTEEN DAYS.

   (3) THE FOLLOWING THREE MISSION'S WILL BE ACCOMPLISHED IN ADDITION TO NORMAL TRAINING MISSIONS:

	MISSION	EFFORT	TARGET	TARGET TIME
(a)	SAN DIEGO	GP MAX	Prim. RBS Targ. #1 Secd. RBS Targ. #2	2000 Zebra
(b)	SAN DIEGO	GP MAX	Prim. RBS Targ. #2 Secd. RBS Targ. #3	2000 Zebra
(c)	FT WORTH	SQDN REDUCED (6 ACFT)	Prim. RBS Targ. #3 Secd. RBS Targ. #1	0230 Zebra

   (4) INITIAL MISSION SAN DIEGO WILL BE ACCOMPLISHED A + 3.

   (5) ACCOMPLISHMENT DATES FOR REMAINING SCHEDULED MISSIONS WILL BE DETERMINED BY COMMANDING OFFICER, 7TH BOMB GROUP.

   (6) FORT WORTH MISSION WILL BE ACCOMPLISHED FOUR TIMES.

   (7) AIRCRAFT WILL ATTACK TARGET AT FORT WORTH AT FIFTEEN MINUTE INTERVALS.

   (8) RADAR BOMB, SCORING DET. AT SAN DIEGO AND FORT WORTH WILL BE NOTIFIED TIMES AND DATES TARGETS ARE TO BE ATTACKED AND THE NUMBER OF AIRCRAFT PARTICIPATING, TWENTY-FOUR HOURS PRIOR TO MISSION.

   (9) RETURN FORT WORTH A + 18.

   (10) ABLE DAY IS 19 JUNE 1947.

4. Administrative Order 2, 14 May 1947.

5. Communications, operating instructions, Eighth Air Force.

BY COMMAND OF BRIGADIER GENERAL RAMEY:

T. J. DuBOSE
Colonel, AC
Chief of Staff

ANNEXES

1. Int
2. Adm O 2

S I M U L A T E D

Headquarters Eighth Air Force
Fort Worth, Texas
1800Z 16 June 1947

ANNEX 1, INT to accompany FO 21

1. Summary of Enemy Situation:

a. (1) Following the successful landing effected in the San Diego area, enemy forces have fanned out through the area establishing a circular forward line of approximately fourteen miles radius from North Island. The hangers of the North Island Air Base are being used for storage of supplies and equipment. Unloading activity is in progress from ships docked at the northern shore of the island. The oil storage tanks directly west of North Island, having been captured intact, are being utilized to refuel enemy vessels. Latest intelligence indicates that additional troops of approximately division strength are disembarking near Municipal Airport and from the quays of San Diego port.

(2) Considerable enemy carrier borne aircraft have been encountered during the hours of daylight. As yet the naval air base on North Island and the Municipal Airport have not been repaired sufficiently for use.

b. (1) Friendly ground forces are rallying in the Los Angeles area and San Bernadino area; but as yet no decisive ground action has begun.

(2) No friendly supporting aircraft will be in the objective area.

2. Essential Elements of Information:

Refer to Radar target chart San Diego 1:28,800 and target chart San Diego 32.49-816, 1:28,800; Corps Headquarters and equipment storage located in hangers of Municipal Airport (Target #2). The destruction of hangers (Target#1) and of the oil storage tanks (Target #3) would effect much confusion and disrupt present enemy supply and re-equipment procedures.

3. Reconnaissance Missions:

At discretion of unit.

4. Prisoners and Captured Documents:

SOP

5. Maps and Photographs:

Necessary additional data will be supplied upon request.

6. Security:

Each organization is to be responsible for the security of its own aircraft and installations at the forward base.

7. Reports:

Photographs will be taken by a vertical camera and by a radar scope camera in each aircraft performing a sighting operation. Three prints

of each target bombed will be forwarded this Headquarters within three days following the completion of each mission. One of each of the prints from the vertical cameras will be annotated to include aiming point and estimated point of impact whether the sighting operation is performed visually or by radar. Only those radar scope photographs in which the sighting operation was performed by radar will be annoted to include aiming point and estimated point of impact.

BY COMMAND OF BRIGADIER GENERAL RAMEY:

T. J. DuBOSE
Colonel, Air Corps
Chief of Staff

HEADQUARTERS EIGHTH AIR FORCE
Fort Worth Army Air Field
Fort Worth, Texas
2100, 16 June 1947

ANNEX 2, to Administrative Order 2.

1. 7th Bomb Group will be substituted wherever 509th Bomb Group appears in this document.

2. Additional fire fighting personnel will be made availabe in accordance with Headquarters Eighth Air Force Letter AAS 220.3 x 354, 7 May 1947.

a.	Davis-Monthan Field	- 5
b.	Ft. Worth AAFld	20
c.	Roswell AAFld	5

3. Adm. O 2 to Accompany FO 16 is amended to read Adm O 2 to Accompany FO 21.

BY COMMAND OF BRIGADIER GENERAL RAMEY:

T. J. DuBOSE
Colonel, AC
Chief of Staff

HEADQUARTERS EIGHTH AIR FORCE
Fort Worth Army Air Field
Fort Worth, Texas
1500, 14 May 1947

Adm O 2 To Accompany FO 16

1. Supply:

a. AF Installations:

(1) WENDOVER FIELD, UTAH, 41°08'N - 114°W

Active Fifteenth Air Force Base.

(2) OGDEN, UTAH, 41°08'N - 111°58'W

AAF Depot for States of Utah, Idaho, Wyoming, South Dakota. North Dakota, and Colorado.

b. Supplies:

(1) CLASS I. Class I supplies will be requisitioned upon and drawn from the AAF Base Unit, Wendover Field, Utah. This includes perishable as well as non-perishable rations. Ration breakdown and mess personnel will be provided by the 509th Bomb Group. The Commanding Officer of the 509th Bomb Group will maintain a record of daily ration consumption which will serve as a basis for normal requirements requisitioned from the AAF Base Unit, Wendover Field, Utah.

(2) CLASS II.

(a) AAF Items will be requisitioned upon and drawn from AAF Base Unit, Wendover Field, Utah.

(b) Common items will be requisitioned upon and drawn from AAF Base Unit, Wendover Field, Utah.

(3) CLASS III. Motor vehicle fuels and lubricants will be requisitioned as required from station stocks on the AAF Base Unit, Wendover Field, Utah.

(4) CLASS III (A). Aviation fuels and lubricants will be requisitioned as required from station stocks on the AAF Base Unit, Wendover Field, Utah.

(5) CLASS IV

(1) All items except aircraft and aircraft supplies will be requisitioned as required from station stocks on AAF Base Unit, Wendover Field, Utah.

(2) Common items will be requisitioned as required from station stocks on AAF Base Unit, Wendover Field, Utah

(6) CLASS IV B

(a) Replacement aircraft as required will be procured through regularly established Eighth Air Force Supply channels.

(b) AAF Technical Supplies to maintain aircraft and airborne equipment for the duration of the maneuver will be furnished by the home station of the 509th Bomb Group. Replenishment requisitions for AAF supplies will be processed through the home station of the 509th Bomb Group. Reparable items removed from unit aircraft and unused AAF technical supplies will be returned to the home station for disposition upon completion of the maneuver.

(7) CLASS V.

(1) AAF ammunition will be requisitioned as required from station stocks on AAF Base Unit, Wendover Field, Utah.

(2) Common ammunition: Not required.

2. Evacuation.

a. Casualties.

(1) a. Personnel: Commanding Officer, 509th Bomb Group will furnish medical personnel to man Wendover Field, Utah dispensary and provide evacuation service.

b. Hospitals and Rest Camps:

(1) Wendover Field, Utah dispensary.

(2) Tooele Ordnance Depot, 30 beds

(3) Dugway Desert Command, 25 beds

(4) Fort Douglas, Salt Lake City, 75 beds

(2) Materiel, salvage.

a. Salvage of damaged aircraft will be in accordance with AAF Reg. 65-1 and T.O. 00-25-53.

b. Burials and Grave Registrations:

(1) Grave registration services and burial arrangements will be made through the AAF Base Unit at Wendover Field, Utah.

3. Traffic and Transportation.

a. (1) Air: Movement of personnel and equipment will be by air and will be accomplished with cargo and combat type aircraft assigned to the 509th Bomb Group (VHB). Any additional cargo type planes required will be made available by Headquarters, Eighth Air Force.

(2) Motor transport: Special and general purpose vehicles as is required for operation will be furnished by the AAF Base Unit at Wendover Field, Utah.

b. Mail: Mail for all personnel on manouvers will be transported by Unit aircraft from parent base to manouver base.

c. Shelter: Adequate facilities available at base.

d. Strength report: Manouver units will maintain Morning Reports in accordance with Par 4B(2), AR 220-5, dated 16 Dec 1944. Unit while on manouvers will submit actual Morning Report daily via air mail to their home station.

e. Replacements: Replacements required will be requisitioned in accordance with SOP of Eighth Air Force through parent base.

f. Personnel records and reports: No separate strength reports will be required by Headquarters, Eighth Air Force for those units. Account ability for personnel is the responsibility of the parent organization.

4. Services.

a. Construction: All requests for new construction and all requests for repairs of utilities will be submitted to Commanding Officer, Wendover Field, Utah for necessary action.

b. Maintenance.

(1) Airdromes: Omitted.

(2) Equipment: It will be the responsibility of the 509th Bomb Group to perform all echelons of maintenance on tactical and air lift aircraft. The AAF Base Unit Wendover Field, Utah will be responsible for all motor vehicle maintenance. The 509th Bomb Group will, after a survey of existing aircraft maintenance equipment, be responsible for the procurement of any further equipment needed. Complete and accurate records will be kept of all parts, kits and spare parts consumption on form as inclosed. 509th Bomb Group accountabl officer will be responsible for the reproduction and consolidation of the consumption data. Tactical aircraft will be completely serviced by oxygen immediately prior to departure.

(3) Annex #1.

(4) Rear echelon will remain Wendover Field, Utah sufficient time to properly restore equipment and facilities to the same condition as was received.

(1) The 509th Bomb Group will proceed as ordered for maneuver. Units of the 509th Bomb Group not deemed necessary for maneuver will remain at parent base. Maneuver units will maintain Morning Reports in accordance with Par 4B(2) AR 220-5, dated 16 December 1944. Units while on maneuver will submit actual Morning Report daily via airmail to their home station.

6. Miscellaneous.

a. Funds. Per Diem shall be paid while in travel status only from SFE Funds, but will be limited so as not to exceed the amount already made available to your station for Fourth Quarter Fiscal Year 1947, in accordance with Paragraph 23, AR 35-4820, dated 5 February 1947.

BY COMMAND OF BRIGADIER GENERAL RIDEY:

T. J. DUBOSE
Colonel, Air Corps
Chief of Staff

Annex 1:
Supply Accounting Procedures.

INSTRUCTION TO AIRPLANE COMMANDER OF B29/054 #_____

REGARDING SUPPLY AND EQUIPMENT ACCOUNTING PROCEDURES.

1. The following instructions will be strictly adhered to in regard to supplies and equipment aboard this airplane:

2. Attached hereto is a loading list of this airplane. Column 1 lists the amount of each item in Column 5 that was loaded aboard. It has been checked and verified by the Project Officer. Column 2 is very important. In case the quantities in Column 1 are insufficient or the item required is not on your loading list and it is procured from another base, either enroute, at destination or enroute to home station, list the quantity, full stock number and nomenclature of the item procured. The list of supplies and equipment that are required for a flight such as this was arrived at from consumption at FWLAF, but does not mean that is what you will require. This is a service test of the attached lists. Column 3. The quantity of every item used on your airplane will be listed regardless of whether it is a cotter pin, nut or a generator. Please do this in order that correct consumption data may be obtained for future flights.

3. Space is available on the last page to enter the amounts and nomenclature of items procured and not listed on your loading list or other airplane loading lists. This is also very important.

4. This folder contains, not only of what is aboard this airplane, but what is aberd every airplane in the flight. If a part is required and it is not listed on your loading list, check the loading lists of the other airplanes, and draw it from the Airplane Commander of the airplane that has the part aboard. The airplane that uses the part borrowed will enter in the CONSUMED column the amount borrowed and used. The loaing airplane commander will enter the amount loaned and indicate the amount and serial number of the airplane that required the part in the REMARKS COLUMN.

5. Airplane commanders must cooperate in the loaning of parts to another aerplane. One can never anticipate the need of a part for a particular airplane. Upon the return of this airplane at FWLAF, the consumption, parts carried and picked up columns will be checked by the airplane commander and crew and verified that the information contained herein is correct and turn in the loading list to Group S-4. Each loading list on this flight will be sent as an inclosure to the official report of the flight to higher headquarters and other interested commands.

AIRPLANE LOADING LIST & CONSUMPTION DATA

LOAD#_____ WEIGHT#_______ B29/654#_______, PILOT_______________, BOMB SQ _____, BOMB GP ______

1	2	3	4	5	6
Amt. taken fr. home station	Amt. picked up fr. other bases	Amount consumed	Complete Stock Number & Part Number	COMPLETE NOMENCLATURE	REMARKS

COPY COPY COPY

FROM CG 8AF FWAAF FT WORTH TEX 191430Z

TO CO FWAAFLD FT WORTH TEX

GRNC

A30 1913 PD REF 8AF FLD ORDER NUMBER TWENTY ONE CMA AMENDMENT NUMBER ONE PD CHANGE PARTHREE PAREN THREE PAREN PAREN CHARLIE PAREN CMA EFFOPT CMA TO READ QUOTE SC REDUCED PAREN FOURACFT PAREN UNQUOTE END

15287

SENT 191343Z

EXTRACT

FROM CG 8TH AF FWAAF FT WORTH TEXAS 181515Z
TO CO ROSWELL AAFLD ROSWELL N. MEX
INFO CG SAC ANDREWS FLD C.MP SPGS MD

CRNC

A3 1898
FIELD ORDER NUMBER 23 PD

***** ******

3 A 7TH BOMB GROUP
/1/ SELECT AND PREPARE ONE FLIGHT OF EIGHT B-29 ACFT FOR 30 DAYS TDY WITH FAR EASTERN AIR FORCE PD
/2/ UPON SELECTION FLIGHT TO BE DESIGNATED TRAINING DETACHMENT PRECEDED BY APPROPRIATE SQUADRON NUMBER PD
/3/ MOVE FLIGHT TO ARRIVE GUAM 28 JUNE 47 PD REMAIN GUAM UNTIL NOTIFIED BY CG TWENTIETH AIR FORCE THAT SAC FETF B AT YOKOTA HAS DEPARTED FOR ZI PD PROVIDED SAC FETF B HAS DEPARTED YOKOTA FOR ZI CMA MOVE FLIGHT TO ARRIVE YOKOTA 1 JULY 47 PD
/4/ MOVE FLIGHT TO YOKOTA CMA JPAN PD
/5/ UPON ARRIVAL YOKOTA CMA FLIGHT COMES UNDER OPERATIONAL CONTROL OF FAR EASTERN AIR FORCE PD
/6/ FLIGHT RETURNS ZI UPON COMPLETION 30 DAYS TDY CMA ARRIVING IN FORMATION OVER WASH CMA D C AT 01 1600 ZEBRA AUG 47 PD
/7/ REPORTS CLN
/A/ 48 HOURS PRIOR DEPARTURE ZI ADVISE COMMANDS LISTED BELOW OF ETA AND ETD STATIONS THEIR COMMAND CMA NUMBER AND TYPE ACFT INVOLVED CMA NUMBERS OFFICERS AND ENLISTED MEN CMA REQMTS FOR MESSING CMA HOUSING AND SERVICING PD
1 CG CMA SEVENTH AIR FORCE CMA HICKAM FLD CMA T.H.
2 CG CMA TWENTIETH AIR FORCE CMA GUAM
3 CG CMA FAR EASTERN AIR FORCE CMA TOKYO CMA JAPAN PD
A INFO TO CLN CINCFE CMA TOKYO CMA JAPAN
HQ AAF
HQ STRATAIRCOMD
/B/ 48 HOURS PRIOR TO DEPARTURE JAPAN ADVISE CG CMA ALASKAN AIR COMD OF ETA AND ETD ELMENDORF FLD CMA NUMBER AND TYPE ACFT INVOLVED CMA NUMBER OF OFFICERS AND ENLISTED MEN INVOLVED CAM REQMTS FOR MESSING CMA HOUSING AND SERVICING PD
/C/ DEPARTURE AND ARRIVAL OF EACH ACFT EACH LEG PD
1 HQ STRATAIRCOMD
2 HQ EIGHTH AIR FORCE
/D/ DETAILED RPT COMPLETION OF MISSION PD
/E/ RPT THRU CO YOKOTA AND CG TWENTIETH AIR ROVCE GUAM TO CO SUCCEEDING FLIGHT CMA DATE AND TIME FOF DEPARTURE YOKOTA FOR RETURN TO ZI PD

B FIRST AIR TRANSPORT UNIT
/1/ PROVIDE FOUR C-54 ACFT AND CREWS IN SUPPORT OF THIS MISSION PD
/2/ ACFT TO REPORT TO CO CMA SEVENTH BOMB GP CMA FT WORTH AAFID 23 JUNE 47 PD
/3/ ACFT AND CREWS RETURN ZI IMMEDIATELY AFTER DISCHARGING CARGO YOKOTA PD

X /1/ ALL ACFT WILL LAND BARBERS POINT CMA HAWAII EXCEPT THOSE RE-

QUIRING DEPOT REPAIR PD SUCH ACFT WILL LAND JOHN ROGERS FLD PD

4 A 7TH BOMB GP

/1/ CARRY SUFFICIENT MECHANICS CMA TOOLS CMA AND SPARE PARTS TO SUPPORT MISSION FOR 30 DAYS OPERATIONS PD

/2/ FLIGHT WILL CONSIST OF EIGHT COMBAT CREWS AND SUPPORTING MAINTENTENACE PERSONNEL PD TOTAL PERSONS SHOULD NOT RPT NOT EXCEED TWO ZERO ZERO PD

/3/ 20 PERSONS WILL BE CARRIED ON EACH B-29 ACFT PD THE REMAINDER OF THE TOTAL WILL BE CARRIED IN SUPPORTING TRANSPORT ACFT PD

/4/ THIS IS A FIELD EXERCISE PD PER DIEM UNDER SFE 440 IS AUTHORIZED WHILE ENROUTE TO AND FROM MANEUVER AREA PD

/5/ SHOULD CLASSIFIED ACFT BE SELECTED CMA GUARDS WILL BE PROVIDED IN ALL CASES BY THE TRAINING DETACHMENT PD

B FIRST AIR TRANSPROT UNIT

/1/ A MAXIMUM OF THREE MAINTENANCE PERSONNEL MAY BE CARRIED FOR EACH C-54 ACFT PD

5 A COMMUNICATIONS FACILITIES USED WILL BE NORMAL AACS OPERATED ATC ROUTE FACILITIES PD ALL CREWS WILL BE BRIEFED AND FURNISHED NECESSARY FLIMSIES ON THESE FACILITIES PRIOR TO TAKEOFF FROM HOME STATION PD

B COMMAND POSITION LOCATIONS CLN

/1/ CG CMA STRATAIRCOMD CMA ANDREWS FLD CMA MD

/2/ CG CMA EIGHTH AIR FORCE CMA FORT WORTH AAFLD TEXAS

1635Z

SENT AT 18267

PLS ACK OF MSG NR 35
R NR 35 OC 1827"Z

COPY COPY

FROM CG EIGHTH AIR FORCE FWAAFLD FT WORTH TEX 192145Z
TO CO FWAAFLD FT WORTH TEX /C OURIER/

INFO STRATAIR COMD ANDREWS FLD WASHINGTON DC
GRNC

A30 1958 PD AMENDMENT NO ONE CMA FLD ORDER NO TWENTY THREE PD
AMEND PAR TWO TO READ AS FOLS CLN
ROUTE OUT CLN FT WORTH AAFLD
DAVIS MONTHAN OR FAIRFIELD CMA SUISUN
BARBERS POINT NAVAL AIR STATION CMA T.H.
KWAJALEIN
NORTH FIELD CMA GUAM
YOKOTA AIR FLD CMA JAPAN
ROUTE BACK CLN YOKOTA AIR FLD CMA JAPAN
ELMENDORF AAFLD CMA ALASKA
ANDREWS FLD CAM MD
FT WORTH AAFLD
ADD UNDER PAR 3. AS /7/ /A/ CLN
4. CO CMA DAVIS MONTHAN FLD
5. CO CMA FAIRFIELD CMA SUISUN

END

2203Z

MFM R NR 52 OP
TNX

COPY

FROM CG 8TH AIR FORCE FWAAF FT WORTH TEXAS 272130Z
TO CO FWAAF FT WORTH TEXAS /COURIER/
GRNC
A30 2151 PD
FIELD ORDER NO 24
MAPS AS NECESSARY TO COMPLETE MISSION
1. A OMITTED
B MC CHORD FLD WASHINGTON FURNISHES NECESSARY SERVICING AND FACILITIES FOR ACFT REQUIRING SAME
2 THE 8TH AF REPRESENTED BY 27 ACFT OF THE 7TH AND 43RD BOMB GOUPS WILL CONDUCT AN AERIAL REVIEW OVER SEATTLE WASHINGTON 4 JULY 19447 IN CONJUNCTION WITH INDEPENDENCE DAY DEMONSTRATION

ROUTE BASE
SQDN ASSEMBLY POINT
GROUP ASSEMBLY POINT
SEATTLE WASHINGTON
WHIDBEY ISLAND RADIO STATION
SEATTLE WASHINGTON
MC CHORD FLD WASHINGTON
BASE

REVIEW ALTITUDE 1000' ABOVE TERRAIN
FORMATION TO BE FLOWN SQDN VEES IN TRAIL JAVELINED UP MINIMUM SAFE INTERVAL

3 A 7TH BOMB GROUP
/1/ EFFORT MAXIMUM
/2/ POSITION IN COMPOSITE GROUP 1ST AND 2ND SQDNS
3 1ST SQDN ASSEMBLY POINT AND ALTITUDE TOLEDO RADIO RANGE 4000(
4 2ND SQDN ASSEMBLY POINT AND ALTITUDE NORTHWEST QUADRANT ASTORIA RADIO RANGE 4500' ACFT WILL ASSEMBLE IN COUNTER CLOCKWISE DIRECTION
B 43RD BOMB GROUP
/1/ EFFORT 9 ACFT PLUS 2 SPARES
/2/ POSITION IN COMPOSITE GROUP 3RD SQDN
/3/ 3RD SQDN ASSEMBLY POINT AND ALTITUDE SOUTHWEST QUADRANT ASTORIA RADIO RANGE 5000 ACFT WILL ASSEMBLE IN CLOCKWISE DIRECTION
/4/ SPARES WILL CORCLE GROUP ASSEMBLY POINT AT 5000 AND WILL JOIN FORMATION OR RETURN TO HOME STATION WHEN SO INSTRUCTED BY COMPOSITE GROUP COMMANDER

X 1 GROUP ASSEMBLY POINT AND ALTITUDE TOLEDO RADIO RANGE 4000
2 SQDN ASSEMBLY TIMES SO AS TO BE IN FORMATION OVER TOLEDO RADIO RANGE BY 1710 ZEBRA
3 COMPOSITE GROUP ASSEMBLY TIMES SO AS TO BE IN GROUP FORMATION AND READY TO DEPART TOLEDO ADIO AT 1730 ZEBRA
4 FORMATION WILL EFFECT 3 PASSES OVER CENTER OF SEATTLE BETWEEN 1750 ZEBRA AND 1830 ZEBRA EFFECTING THE THIRD PASS ON GENERAL HEADING OF 180 DEGREES AT 1830 ZEBRA
4 FORMATION WILL DESPERSE OVER MC CHORD FLD AND ACFT WILL RETURN TO BASE INDIVIDUALLY
5 DIRECT COMMUNICATION BETWEEN 7TH AND 43RD BOMB GROUPS AUTHORISED FOR THIS MISSION

6 ONLY THOSE ACFT UNABLE TO RETURN TO HOME STATION WILL LAND MC CHORD FLD

7 200 MPH CIAS WILL BE MAINTAINED BY COMPOSITE GROUP LEADER FROM GROUP ASSEMBLY POINT THROUGHOUT REVIEW TO MC CHORD FLD

8 TURNS IN VICINITY OF SEATTLE WILL BE MADE TO THE LEFT

4 A SOP

B THIS IS A FIELD EXERCISE PERDIEM UNDER SFE 440 IS AUTHORIZED

5 COMMUNICATIONS

A 8AF COI IS EFFECTIVE

B SECTION VIII 8AF TACTICAL DOCTRINE IS EFFECTIVE

C POSITION REPORTS

/1/ INDIVIDUAL ACFT WILL TRANSMIT HOURLY POSITION REPORTS TO THE HOME BASE RADIO STATION ON THE GROUP ASSIGNED FREQUENCY

/2/ SQDN LEADERS AND THE COMPOSITE GROUP LEADER WILL TRANSMIT HALF HOUR POSITION REPORTS TO THE 8 AF RADIO STATION ON 10150 KC

D INTERPLANE COMMUNICATIONS

/1/ SQDN INTERPLANE COMMUNICATIONS WILL BE CARRIED OUT ON FREQUENCIES ASSIGNED IN 8 AF COI 7-1

/2/ AFTER ASSEMBLY OF ACFT OF THE 7TH BOMB GROUP AND 43RD BOMB BROUP INTERPLANE COMMUNCIATIONS WILL BE CONDUCTED ON 143.10 MC AIR FORCE INTERPLANE FREQUENCY

/3/ CHANNEL SETTINGS WILL BE IN ACCORDANCE WITH 8AF COI 7-7

FD END

2345Z

CORR FOURTH LINE LAST WORD UNDER 43RD BOMB GROUP SHOULD READ CLOCKWISE
RPT CLOCKWISE

COPY

FROM CG 8TH AF FT WORTH TEX 302130Z
TO CO FT WORTH AAFLD TEX /COURIER/
GRNC
A30 2209 PD
AMENDMENT NO ONE CMA FIELD ORDER NO TWO FOUR PD
FIELD ORDER NBR 24 AMENDED AS FOLLOWS:
2. THE 8AF CMA REPRESENTED BY 27 ACFT OF THE 7th AND 43RD BOMB GPS WILL CONDUCT AN AERIAL REVIEW OVER SEATTLE CMA WASHINGTON CMA 4 JULY 47 IN CONJUNCTION WITH INDEPENDENCE DAY DEMONSTRATION PD
3. A. 7TH BOMB GP PD
(1) EFFORT: MAXIMUM PD
B. 43RD BOMB GP PD
(1) EFFORT / 9 ACT CMA PLUS 2 SPARES PD
(2) ACFT AND CREWS TO REPORT TO CO 7TH BOMB GP AT WENDOVER FLD UTAH NOT LATER THAN 1900 ZEBRA CMA 3 JULY 47 PD
X. (1) ALL ACT OPERATION CONTROL 7TH BOMB GP PD
(2) FORMATION WILL FLY IN VICINITY OF SEATTLE BETWEEN 1750 ZEBRA AND 1830 ZEBRA CMA PASSING IN REVIEW OVER CENTER OF SEATTLE ON GENERAL HEADING OF 180 DEGREES AT ~~1830~~ ZEBRA PD
(3) PERTINENT AAF AND CAA REGULATIONS WILL BE COMPLIED WITH PD
(4) ACAT WILL LAND AT BASES AS FOLLOWS:
(A) 7TH BOMB GP - WENDOVER FLD PD
(B) 43RD BOMB GP - DAVIS MONTHAN FLD PD
(5) DIRECT COMMUNICATION BETWEEN 7TH AND 43RD GPS AUTHORIZED FOR THIS MISSION PD
(6) ONLY THOSE ACFT UNABLE TO LAND DESIGNATED STATIONS WILL LAND MC CHORD FLD PD
(7) TRAFFIC IN SEATTLE VICINITY WILL BE COUNTER-CLOCKWISE PD
(8) INFO COPIES PLANS WILL BE SUBMITTED 12 HRS PRIOR TAKE OFF BY OPERATIONAL PRIORITY TWX TO FOLLOWING:
(A) CG SAC
(B) CG 4AF
(C) CG 8AF

END

CORR IN 9TH AND 12TH LINE SUBSTITUTE THE GP ACFT FOR ACT RPT ACFT IN 5TH LINE FROM END OF MSG LAST GP FOLLOWING
2225Z

MESSAGEFORM

MESSAGE CENTER No.	TRANSMITTING MEANS	CRYPTOGRAPH OR CLEAR TEXT

CALLS	STA. SER. No.	PRECEDENCE	TRANSMISSION INSTRUCTIONS	ORIGINATOR	DATE-TIME GROUP
V	NR				

ACTION	INFORMATION	EXEMPT	OPERATING SIGNALS	GROUP COUNT
				GR

SPACE ABOVE FOR SIGNAL CENTER ONLY

FROM: (Originator)
CO 7TH BOMB GP, FWAAF, FORT WORTH, TEXAS

SECURITY CLASSIFICATION
NONE

ACTION TO:
HQ 7TH BOMB GP
WENDOVER FIELD, UTAH
ATTN: CAPT MULLANEY

PRECEDENCE FOR
ACTION | INFORMATION

☐ ORIGINAL MESSAGE

REFERS TO ANOTHER MESSAGE
IDENTIFICATION | CLASSIFICATION

INFORMATION TO:

MULLANEY FROM CAPT MINNEAR PD UNABLE TO MAKE BOMBING MISSION TO SAN DIEGO SUNDAY PD REQUEST YOU HAVE BEACON THRNED ON ONE HOUR BEFORE REACHING IP PD HAVE BOMBADEER LEAVE PLANE CHECK INTER-VOLOMETER WATTS PD END

RCD: 212325Z

DTG: 212305Z

SECURITY CLASSIFICATION — AUTHORIZATION

SIGNATURE

ORIGINATING AGENCY

SYMBOL | DATE-TIME GROUP | OFFICIAL TITLE | PAGE OF

WD AGO FORM 11-168
15 JUN 1945

This form supersedes WD AGO Form 11-168, 23 Aug 44, and WD AGO Form 801, 12 Mar 43, which are obsolete.

16—45801-1 ☆ U. S. GOVERNMENT PRINTING OFFICE

RESTRICTED

SPECIAL ORDERS)
:
NUMBER 113)

HEADQUARTERS
FORT WORTH ARMY AIR FIELD bjj
Fort Worth, Texas 12 Jun 47

EXTRACT

24. The fol named Off and EM AC Sq indicated are placed on TDY for approx fifteen (15) days at Wendover Field, Utah eff o/a 16 Jun 47 reptg thereat for purpose of Maneuvers (Advanced Party), upon compl of which to ret to proper sta. Auth: Eighth Air Force Ltr A 4-345, 5 May 47. Subj: Maneuvers at Wendover Fld, Utah. WP TDN TRMIA 702-7155 P 440-02 .2170310 S 41-191. QQ & Mess fac are avail. Fin Off will furn Budget and Fiscal Off this sta copy of pd vou covering pmt for this TDY. Upon ret to perm sta vou will be submitted for payment of per diem within ten (10) days. No per diem auth while at TDY destination. EM auth mon alws in accord with AR 35-4510 while in Air Tvl status.

GRADE,	P MOS	NAME, ASN	COST CODE	SHIP SGN	ORGN
MAJOR	4902	GRIMM, JOHN W. 0888186	300.01	4902	578AM
WOJG	4823	ARNETT, ROBERT J. "-2124664	300.14	4823	9BS
T/Sgt	826	Deardoroff, Gordon F. R.6917384	100.05	826	Hq 7BG
T/Sgt	821	Goodman, Paige A. R.20323165	200.07	821	9BS
Pfc	405	Esser, Richard W. R.14088278	300.14	405	492BS
M/Sgt	821	Summerhauser, James E. R.37225940	300.03	821	436BS
1ST LT	4532	HANSON, ROY G. 01554006	400.02	4532	578AM
S/Sgt	505	Fersch, George R. R.6935182	300.18	505	436BS
Cpl	901	Wright, D. L. R.18217726	300.18	901	do
Pfc	505	Spurr, Samuel P. RA45043881	do	505	do
Pfc	505	Frakes, Phillip B. R.18385937	do	do	do
S/Sgt	505	Andres, Victor V. RA15253879	300.17	do	492BS
S/Sgt	505	Massey, James L. R.14224137	do	do	do
Cpl	505	McClintock, Marvin L. R.38765111	do	do	do
Pfc	505	Willitts, George H. R.12274418	300.18	do	do
S/Sgt	505	McNutt, Jay E. R.37752697	300.17	do	9BS
S/Sgt	505	Tiffany, Donald P. R.6939798	do	do	do
Pfc	505	Dugan, John W. RA12105171	300.14	do	do
Pfc	505	Knight, Warren E. RA14209668	300.17	do	do
T/Sgt	824	Riley, Floyd B. R.18021094	200.07	824	436BS
S/Sgt	824	Mayfield, James W. RA14039695	do	do	9BS
S/Sgt	060	Cota, Frank RA31117767	do	060	492BS
Sgt	060	Mishinski, Freddie R.38411685	do	do	436BS
Pfc	747	Inman , Guy A. R.14234891	300.18	590	492BS
Pvt	590	LaDuke, Richard C. R.17200094	200.07	590	9BS
Cpl	911	Clark, William A. R.6287280	300.17	590	436BS
1ST LT	4805	HUSTON, ROBERT W. 0801597	300.16	4805	35AES
CAPT	2120	PRIGGINS, JOHN 0566463	300.06	2120	9BS
Sgt	667	Ash, Melvin S. R.20701644	100.06	667	Sq A
M/Sgt	566	Lane, David T. R.36674390	200.06	405	do
S/Sgt	932	Higgins, Otto J. R.17000898	300.16	932	25BSS

25. The fol EM (T) AC (Casuals) having enl in the R. for a pd of three (3) years, fr a civ status at this sta on dates indicated, under the prov of WD CIR 31, 1947, are trfd in gr to orgn as indicated, this sta. No T invlved (S.C). Duty as Primary MOS.

RESTRICTED

GRADE, P MOS, NAME, ASN	ENLMT DATE	ASGD ORGN
M/Sgt (502) Howell, Clarence E. RA6292915	12 Jun 47	Hq 7BG
M/Sgt (542) Morris, Alfred R. RA6282804	11 Jun 47	18th Comm Sq
S/Sgt (683) Yantis, Billy D. RA20813906	11 Jun 47	492BS
T/4 (060) Easley, Charles F. RA6951292	11 Jun 47	9BS
Pvt (677) Whitefead, James C. RA38437239	10 June 47	25BSS
Pvt (590) Earl, Elmo RA39858157	11 Jun 47	492BS

26. T/4 (060) Whitehead, James C. RA38437239 AC 25th BS 7th BG (VH) is promoted to the gr of Sgt (Perm) under the provisions of AAF Ltr 35-249.

27. The VOCO 9 Jun 47 placing the fol named Off and EM AC 9th BS 7th BG (VH) (cc 400.02 unless otherwise indicated) on TDY at Kelly Field, Texas for approx one (1) day rptg thereat to Commanding Officer for purpose Ferrying Aircraft (Weighing) upon compl of which to ret to proper sta is confirmed. The exigencies of the sv were such as to preclude issuance of competent orders in adv of the tvl. Auth: 8AF Reg 35-7 Citing AAF Reg 35-59. WP TDN TBMAA 702-7205 P 432-02 A2170425 S 41-191. GQ & mess fac are avail. Fin Off will furn Budget and Fiscal Off this sta copy of pd vou covering pmt for this TDY. Upon ret to perm sta v ou will be submitted for payment of per diem within ten (10) days. EM auth mon alws in accord with AR 35-4810 while in air tvl status. Tvl by mil acft is directed.

CAPT (1093) ADAMSON, NORMAN F. 0731915
1ST LT (4823) OPIT , CARL W. 0889309 AC
1ST LT (1035) MAXEY, JOHN E. 0745626
M/Sgt (737) Benefield, Ernest O. RA18056222
S/Sgt (2756) Gregory, Donald F. RA19059182
S/Sgt (938) Brayton, William A. RA37430267
Sgt (1685) Riley, Oran C. RA38632292
T/Sgt (612) Parker, Charles E. RA14083524
M/Sgt (2750) Homyk, Nick RA 6489606 (cc 300.14)

28. So much par 32 SO 33 this Hq cs pertaining to EM TDY to School as pertains to Pfc (521) Kelly, Harry J. RA46079532 35th AES 7th BG (VH) TDY at Chanute Fld, Ill as reads: "(21) Wks" is amended to read: "(25) Wks".

* * * * *

BY ORDER OF COLONEL RADER:

T. F. MANION JR.
Major, Air Corps
Adjutant

OFFICIAL:

Stanley P. Mitchell

STANLEY P. MITCHELL
Capt, Air Corps
Asst Adjutant

DISTRIBUTION A plus 80-Retch
5-CO ea sta concerned
2-PO ea sta
5-Eighth AF (Attn: A-3)
5-Commandant of Schools, Chanute Field, Ill

GRADE	P MOS	NAME, ASN	COST CODE	SHIP SSN	ORGN
Pfc	352	Knight, Edgar J. RA18127678	300.16	932	25th BSS
S/Sgt	766	Harrison, James T. RA34030733	200.11	766	25th BSS
S/Sgt	766	Boggus, Albert A. RA34399305	300.05	766	25th BSS
Sgt	932	Schroeder, Marvin (NMI) RA38784114	300.16	932	25th BSS
Sgt	805	Killen, Carrol W. RA15222830	200.11	805	25th BSS
MAJOR	0200	NEIL, DENNIS, V. O-47385	200.01	0200	Hq 7th BG
S/Sgt	777	Lutz, Herbert A. RA16076859	300.16	766	25th BSS
1st Lt	3100	HOFFMAN, ROBERT V. JR. O-1744784	200.04	3100	25th BSS
1st Lt	3100	BROWN, ARTHUR M. JR. 01775856	200.04	3100	Sq "M"
1st Lt	3170	GREEN, PAUL M. O-1775279	200.04	3170	Sq "M"
Pfc	657	Harper, Lester R. RA37416076	200.04	345	9th Sq
Pfc	657	Smith, Sammy J. RA18119598	200.04	345	25th BSS
Cpl	657	Cather, Edward R. RA19087434	200.04	409	25th BSS
S/Sgt	409	Hurst, Little G. RA[illegible]63789	200.04	409	Sq. "M"
S/Sgt	409	Teddlie, Maurice A. RA18038359	200.04	861	25th BSS
Sgt	409	Wilson, Woodrow (NMI) RA38537945	200.04	861	Sq "M"
Capt	9301	O'DONNELL, JOHN R. O-1046917	200.05	9301	Hq 7th BG
S/Sgt	631	Smith, Billie M. RA[illegible]295049	200.05	631	Hq 7th BG
Sgt	060	Burchett, Jack (NMI) RA15203391	200.07	060	492nd Sq
Sgt	060	Jonnson, Howard C. RA37071880	200.07	060	436th Sq
Sgt	060	Lee, Virgil R. RA18040800	200.07	060	9th Sq
Sgt	060	Zarate, Lupe (NMI) RA38204259	200.07	060	492nd Sq
Cpl	060	Arnett, John W. RA15210664	200.07	060	9th Sq
Cpl	060	Bush, Clarence (NMI) RA13198779	200.07	060	492nd Sq
Pfc	060	Harrell, Milton (NMI) RA14211600	200.07	060	9th Sq
Pfc	060	Longoria, Fred (NMI) RA38764716	200.07	060	436th Sq
Cpl	747	Ciburk, John A. RA17195316	300.14	590	436th Sq
Cpl	573	Denson, Arnold R. RA43006065	300.4	590	9th Sq
Cpl	055	Giordano, Anthoy J. RA43015163	200.06	590	436th Sq
Pfc	747	Adams, Frank C. RA12105748	300.14	59	436th Sq
Pfc	747	Goodson, Ted V. RA19255660	300.14	590	492nd Sq
Pfc	747	Hatfield, Lester (NMI) RA38626369	300.14	590	492nd Sq
Pfc	748	Lawrence, Donald A. RA13157389	300.17	590	436th Sq
Pfc	960	McLeod, Kenneth F. RA6531603	300.17	590	492nd Sq
Pfc	747	Parker, Richard R. RA13217870	300.14	590	492nd Sq
Pfc	747	Pendleton, Hone H. RA11149709	300.14	590	9th Sq
Pfc	911	Sandy, Lewis X. RA46036988	300.14	590	9th Sq
Pfc	747	Tena, Ambiosio M. RA18309565	300.14	590	9th Sq
Cpl	821	White, Willion G. RA18252550	300.0[illegible]	590	9th Sq
1st Lt	4822	OTTO, OSWIN R. O-857719	300.17	4822	Hq 7th BG
Capt	4532	BURGEMIER, WILLIAM, D. O-155487	300.04	4532	Hq 7th BG
Cpl	932	Shelton, John W. RA18060404	300.16	932	25th BSS
Cpl	345	Touchette, John S. RA18210991	300.16	345	25th BSS
Cpl	932	Worthington, John B. RA38244107	300.16	932	25th BSS
Cpl	931	Kembel, Billy R. RA38646679	300.16	931	25th BSS
Cpl	932	Gonzalez, Willie C. RA38206265	300.16	932	25th BSS
Cpl	932	Landrum, Gene A. RA37863405	300.16	932	25th BSS
Cpl	932	Herring, Vernon E. RA38372515	300.16	932	25th BSS
Capt	4823	BRITT, CHARLES F. O-515151	300.14	4823	492nd Sq
1st Lt	4822	CONSTANT, DANIEL (NMI) O-2001186	300.17	4822	"
[illegible]t	502	Kuttler, Ralph D. RA19010708	200.06	502	"

RESTRICTED

SPECIAL ORDERS)
: HEADQUARTERS
NUMBER 115) FORT WORTH ARMY AIR FIELD rmc
Fort Worth, Texas 16 June 1947

EXTRACT

1. The fol named Off and EM AC So indicated are placed on TDY for approx fifteen (15) days at Wendover Field, Utah eff o/a 18 Jun 47 reptg thereat for purpose of Maneuvers (Advanced Echelon), upon compl of which to ret to proper sta. Auth: Eighth Air Force Ltr A 4-345, 5 May 47. Subj: Maneuvers at Wendover Fld, Utah. WP 1DN TPMA 702-7155 P 440-02 A2170310 S 41-191. GQ & Mess fac are avail. Fin Off will furn Budget and Fiscal Off this sta copy of pd vou covering pmt for this TDY. Upon ret to perm sta vou will be submitted for payment of per diem within ten (10) days. No per diem auth while at TDY destination. EM auth mon alws in accord with AR 35-4810 while in Air tvl status.

GRADE	P MOS	NAME ASN	COST CODE	SHIP SSN	ORGN
Cpl	1383	Simmons, Gloy R RA15236762	300.15	1383	35th AES
Cpl	1383	Metoxen, I. S. RA36801264	300.15	1383	"
Pfc	521	Goodin, Andrew J. RA18091431	300.15	1383	"
Pfc	383	Favata, Salvatore (NMI) RA42276153	300.15	1383	"
Pfc	521	Nadler, Ned N. RA19283702	300.15	1382	"
Pvt	521	Olivarez, Raymond A. RA19239901	300.15	1383	"
Pvt	1383	Garza, Gregorio A. RA18272050	300.15	1383	"
Pfc	1383	Martinez, Floyd S. RA19245644	300.15	1383	"
Pfc	383	Illies, Leonard (NMI) RA17171024	300.15	1383	"
Pfc	383	Martinez, Arthur (NMI) RA18147189	300.15	1383	"
Pfc	1383	Courchend, E. D. RA11148486	300.15	1383	"
Pvt	1383	LaPorte, J. E. RA31510983	300.24	1383	"
Pfc	555	Consiglio, Victor V. RA12252288	300.4	1383	"
Pfc	383	Dobbs, William E. RA43056834	300.24	1383	"
Pfc	383	Blair, Robert W. RA46066938	300.15	383	"
Pfc	383	Chamberlain, Howard E. RA16203036	300.15	383	"
Pfc	383	Gerlach, Kenneth E. RA17170641	300.24	383	"
Pfc	383	Quinlan, Ralph J. RA11150259	300.24	383	"
Pvt	383	Cicet, Jerry M. RA18300060	300.24	383	"
Cpl	383	Dykes, James A. RA18098771	300.24	383	"
S/Sgt	055	Little, Lester W. RA38347391	200.05	522	25th BSS
Cpl	965	Palmer, William J. RA19017947	200.05	522	"
Cpl	522	Dyson, Charles F. RA20809068	200.05	522	"
Cpl	037	Jones, Lester W. RA42196445	200.05	522	"
Cpl	521	Ortiz, Leo I. RA18248489	200.05	522	"
2d Lt	1051	GERLACH, ROBERT E. O-935234	200.16	8503	Hq 7th B. Gp
T/Sgt	945	Heaghty, Roy W. RA6994838	200.16	945	1st P. Lab
S/Sgt	945	Crandall, Howard G. RA6136388	200.16	945	"
Cpl	945	Siik, Alfred E. RA42273642	200.16	945	"
Cpl	945	Slemp, Robert C. RA13230643	200.16	945	"
Cpl	945	Sidmon, Bobby O. RA37820744	200.16	945	35th AES
Pfc	941	Hite, Donald R. RA13236399	200.16	941	"
M/Sgt	941	Aksamit, Leaman (NMI) RA17002763	200.16	941	436th Sq
Sgt	941	Harness, Thomas (NMI) RA18168133	200.16	941	492nd Sq
Cpl	945	Palamar, Jerome (NMI) RA42717111	200.16	945	492nd Sq
S/Sgt	238	Cooley, Willard W. RA34136047	200.11	238	25th BSS

RESTRICTED

GRADE	P MOS	NAME, ASN	COST CODE	SHIP SSN	ORGN
M/Sgt	791	Bone, Richard C. RA6663992	400.02	791	492nd Sq
M/Sgt	750	Wilson, Clyde (NMI) RA6970974	300.14	750	"
T/Sgt	754	Laws, John F. RA6913678	300.18	754	"
T/Sgt	911	Stone, Charles A. RA11013613	300.14	911	"
S/Sgt	960	Light, Cecil E. RA35502123	300.17	960	"
S/Sgt	826	Monzingo, Asa W. RA18029628	300.02	826	"
S/Sgt	683	Remmaker, Irving A. RA35358556	300.17	683	"
Sgt	405	Gibbs, Hail M. RA37866789	200.06	405	"
Pfc	620	Ingram, George (NMI) RA20822424	300.13	620	"
1st Lt	2554	FOX, FRANCIS J. O-1540488	400.02	2554	9th Sq
Capt	1035	CAHELO, GEORGE JR. O-37731	400.02	1035	"
T/Sgt	960	Webster, Sam T. RA34637570	300.17	960	"
S/Sgt	960	Eichel, Frederick (NMI) RA14033899	300.17	960	"
Sgt	611	Slingluff, Donald L. RA33683082	400.02	611	"
Cpl	960	White, Allan G. RA19189687	300.17	960	"
M/Sgt	791	Clendenen, David F. RA19077719	400.02	791	"
Pfc	620	Murray, Harry L. RA14237158	300.13	620	"
Capt	4823	JERBIE, STEVEN J. O-1698855	300.14	4823	430th Sq
1st Lt	0141	GRAY, CHARLES D. O-864811	300.18	0141	"
S/Sgt	826	Keenan, George P. RA30153837	300.02	826	"
1st Lt	4822	McMURTREY, ANSON E. O-519207	300.17	4822	"
S/Sgt	791	Hulett, Jack R. RA6922516	400.02	791	"
Sgt	620	Morris, Don E. RA38465235	300.02	620	"
T/Sgt	502	Glenn, James C. RA18048487	200.06	502	"
S/Sgt	932	Higgins, Otto J. RA17000898	300.16	932	25th BSS
1st Sgt	502	Carberry, William E. RA6269532	200.06	502	9th B Sq
S/Sgt	826	Buck, Robert D. RA19004175	300.14	826	9th B Sq

BY ORDER OF COLONEL WHELESS:

T. F. MAHON, JR.
Major, Air Corps,
Adjutant.

OFFICIAL:

STANLEY P. MITCHELL
Capt, Air Corps
Asst Adjutant

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M/Sgt	750	Burchell, William D.	RA6966488	300.14	750
M/Sgt	684	Milstead, Elvin E.	RA6988482	"	684
S/Sgt	747	Peavey, George L.	RA6142346	"	747
Sgt	685	Allen, James R. Jr.	RA6271983	"	685
M/Sgt	750	Slonia, Bernard	RA6885228	"	750
MAJOR	1093	WOOLWINE, CHARLES C.	0428544	400.02	1093
S/Sgt	911	Morris, Raymond H.	RA6288554	300.17	911
LT COL	2161	THOMPSON, JAMES H. (Hq 7BG)	033521	400.01	2161
		B-29 #782	Crew #3		
CAPT	1093	SEALY, RAYMOND J.	0665127	400.02	1093
2D LT	1093	POITRESS, EARL F.	027900	"	1093
1ST LT	1034	ROHE, WILLIAM D. JR.	02077949	"	1034
M/Sgt	867	Emfinger, Thurman C.	RA18176954	"	867
1ST LT	1035	KUTHER, LEONARD A.	0701538	"	1035
M/Sgt	737	Stokum, Russell L.	RA13038759	"	737
Sgt	580	Parks, Russel A.	RA37709564	"	580
Sgt	1685	Hall, Charles L.	RA42 099291	"	1685
S/Sgt	612	Freed, Quentin E.	RA15233401	300.18	612
Sgt	611	Ham, George R.	RA18228384	400.02	611
M/Sgt	750	Velasquez, Toney J.	RA18018366	300.14	750
M/Sgt	684	Dempsey, Lavert G.	RA6922519	300.14	684
Sgt	684	Downing, Robert B.	RA35548685	"	684
T/Sgt	685	Cain, L. T.	RA6950811	"	685
S/Sgt	911	Golen, Gailen L.	RA37558833	300.17	911
Cpl	754	Wood, Crafton M.	RA13228283	300.18	754
Cpl	685	Cordova, Henry D.	RA38714834	300.14	685
T/Sgt	747	Novotny, Louis	RA6967502	"	747
		B-29 #080	Crew #4		
CAPT	1093	ADAMSON, NORMAN F.	0731915	400.03	1093
1ST LT	1093	COLLINS, CLYDE V.	0685106	400.02	1093
CAPT	1034	DVORAK, EDWARD A.	0719836	"	1034
S/Sgt	867	Kornafel, Andrew	RA13670317	400.02	867
1ST LT	1035	MILXEY, JOHN E.	0745826	400.02	1035
M/Sgt	1028	Benefield, Ernest O.	RA18054222	"	1028
Sgt	756	Brimberry, Marion E.	RA36612045	300.18	2756
S/Sgt	580	Brayton, William A.	RA37430267	400.02	580
Sgt	1685	Riley, Oran C.	RA38632292	"	1685
S/Sgt	612	Stewart, Stanley R.	RA36483178	"	612
MAJOR	2161	HARVEY, JOHN F. (Hq 7BG)	040999	400.01	2161
MAJOR	1035	CONWAY, VICTOR C. (Hq 7BG)	040770	400.02	1035
M/Sgt	750	Rodgers, Allen R.	RA16061219	300.14	750
T/Sgt	684	Perez, Paul	RA37086535	"	684
S/Sgt	747	Ross, William E.	RA34055374	"	747
Sgt	684	Norcross, Howard E.	RA33599958	"	684
M/Sgt	750	Himel, Alton J.	RA6394515	"	750
S/Sgt	911	Stephens, Homer	RA34635908	300.17	911
Pfc	747	Hutchinson, Femos S.	RA42223322	300.14	747
		B-29 #953	Crew #5		
MAJOR	1093	EIGENMANN, JOHN C.	0039141	400.02	1093
CAPT	1093	CASAGRANDE, JOE J.	0675986	"	1093
CAPT	1034	McFANN, MILES H.	0801488	"	1034
M/Sgt	867	Reid, Hubert D.	RA15080654	300.18	867

SPECIAL ORDERS)
:
NUMBER 118)

HEADQUARTERS
FORT WORTH ARMY AIR FIELD rmc
Fort Worth, Texas 19 Jun 47

EXTRACT

36. The fol named Off's and EM (AC) (W), 9th Bombardment Squadron, 7th Bombardment Gp (VH) are placed on TDY as a detachment of the 7th BG (VH) for approx fifteen (15) days, eff o/a 21 June 47 at Wendover Fld, Utah, for purpose of participating in Gp Maneuvers upon completion of which to return to proper sta. No Per Diem auth. Auth: Eighth Air Force Field Order No. 21, dtd 18 Jun 47. WP TDN TDNLA.

RANK	P MOS	NAME	ASN	COST CODE	SHIPPING SSN
		9TH BOMBARDMENT SQ (unless otherwise indicated)			
		B-29 #079 Crew #1			
CAPT	1093	CARPENTER, DUSTIN E.	037089	400.02	1093
1ST LT	1093	WILLIAMS, HENRY B.	0755484	"	1093
CAPT	1034	CAPPERLLETTI, FRANCIS R.	0430054	"	1034
CAPT	0142	KIEL, KENNETH J.	01103731	"	0142
CAPT	1035	LANDRY, ALCIDE W. J.	0726046	"	1035
2D LT	1028	KILPATRICK , WOODROW W.	02101419	"	1028
T/Sgt	2756	Holloway, H.	RA6950014	300.18	2756
Sgt	580	Mathews, William W.	RA13200937	400.02	580
S/Sgt	1685	Courhey, Philip J.	RA36337625	400.02	1685
Cpl	911	Rangle, Carlos D.	RA36467148	"	911
S/Sgt	611	Summers, James B.	RA16049471	"	611
MAJOR	2554	McKELVEY, WILLIAM R.(Hq 7BG)	0854269	400.03	2554
M/Sgt	750	Venski, Alexander	RA6889357	300.14	750
M/Sgt	684	Stone, Gaston B.	RA6271402	"	684
S/Sgt	747	Boling, Shuble A.	RA14165525	"	747
S/Sgt	747	Hays, Berry	RA15043641	"	747
T/Sgt	911	Garwyck, Sigmund D.	RA17040954	300.17	911
Sgt	754	McCoy, Wayne C.	RA18063822	300.18	754
S/Sgt	686	Golas, Edward F.	RA19101230	300.14	686
M/Sgt	750	Cogins, Herbert H.	RA6383442	"	750
		B-29 912 Crew #2			
1ST LT	1093	ERVIN, DAVIS F., JR.	039086	400.02	1093
1ST LT	1093	OPITZ, CARL W.	0889903	"	1093
1ST LT	1034	STOBIE, WILLIAM H.	037887	"	1034
1ST LT	0142	LAUSTRUP, CHARLES A.	0-208072[illegible]	"	0142
1ST LT	1035	MacCONNELL, WILLIAM W.	0-558643	"	1035
M/Sgt	737	Rowden, Richard A. Jr.	RA6960190	"	737
S/Sgt	2756	Zajac, John A.	RA61411256	300.18	2756
S/Sgt	580	Clapsaddle, Don D.	RA19163605	400.02	580
S/Sgt	1685	Smith, Oscar J.	RA18231809	"	1685
Sgt	938	Callahan, Walton W. (Hq 7BG)	RA19106155	"	612
Sgt	611	Adams, Victor P.	RA6296371	300.17	611
CAPT	0200	GLOECKLER, JOHN T.	0861663	200.19	0200

T/Sgt	686	Fuchs, Arthur J.	RA19016679	400.02	686
Sgt	911	Moxley, Wayne C.	RA19063951	300.17	911
S/Sgt	867	Sowers, Doyglas R.	RA15339396	400.02	867
CAPT	1028	PATTERSON, JOHN V. (Hq 7BG)	037369	"	1028
Pvt	756	Vumbaco, John J. (Sq "A")	RA1152715	300.18	2756
		B-29 #060	Crew #8		
CAPT	1093	HABBEN, ROBERT L.	0697633	400.02	1093
1ST LT	1093	PARADIS, JAMES L.	0251027	"	1093
2D LT	1034	KIRBY; VERNON V.	02098536	"	1034
S/Sgt	867	Housteau, James M.	RA15323104	300.18	867
1ST LT	1035	KLEIN, MAX	0783346	400.02	1035
M/Sgt	737	Stanko, John C.	RA13011147	400.02	737
M/Sgt	2756	Green, Smith L.	RA6259356	400.02	2756
S/Sgt	580	Buck, Leslie	RA36557613	"	580
T/Sgt	1685	Bohannon, William R.	RA18065342	"	1685
Sgt	612	Burnett, Ralph C.	RA1060112h	"	612
Sgt	611	Stallings, Lester R.	RA13181021	"	611
MAJOR	1028	LAWS, CHESTER R.	0445386	"	1028
M/Sgt	750	Sarich, Matt J.	RA39385810	300.14	750
M/Sgt	684	Martin, Charles E.	RA6915957	"	684
Cpl	747	Strange, Eugene,S.	RA38428600	300.14	747
Cpl	747	Hennelta, Ray	RA18284579	"	747
S/Sgt	747	Carroll, Jim B.	RA18040337	"	747
Pfc	867	Wasco, John F.	RA10733108	300.18	867
CAPT	0142	MULLANEY, JOHN F. (Hq 7BG)	0434998	400.02	0142
MAJOR	1034	LARSON, HAROLD B.	035824	"	1034
		B-29 #385	Crew #9		
CAPT	1093	BENEDICT, GEORGE J.	0540870	400.02	1093
1ST LT	1093	SEELY, JAMES H.	0771551	"	1093
1ST LT	1034	HENTON, THOMAS A.	02068277	"	1034
1ST LT	0142	WOLCOTT, DEAN W.	0289527	"	0142
1ST LT	1035	ROWE, ROBERT A.	027336	"	1035
T/Sgt	737	Harvey, Floyd T.	RA20813013	"	737
M/Sgt	2756	Surrett, Clarence D.	RA6956646	"	2756
S/Sgt	580	Ward, Joe B.	RA18020463	"	580
S/Sgt	1685	Hawkins, Terry G.	RA6256472	"	1685
T/Sgt	612	Shumate, James R.	RA38135729	"	612
Cpl	611	Towe, Hyman	RA15364682	"	611
M/Sgt	750	Garner, Murice W.	RA48046763	300.14	750
S/Sgt	750	Thompson, John T.	RA18034760	400.02	750
S/Sgt	747	Miller, A. D.	RA18118255	"	747
Pfc	747	Herrin, Lonnie D.	RA18304628	300.14	747
T/Sgt	683	Estell, Ellis M.	RA6262280	"	683
T/Sgt	683	Perkins, Emmett R.	RA18071453	"	683
Cpl	960	Swanquist, Donald R.	RA11153039	"	960
		B-29 #894	Crew #10		
CAPT	1093	HEINZEL, JACK H.	0416299	400.02	1093
1ST LT	1093	BARRETT, EDWARD C.	0824359	"	1093
1ST LT	1034	DUNCAN, CHARLES F.	0685767	"	1034
1st LT	0142	GOVER, CHARLES H.	0783056	"	0142
1ST LT	1035	HANSEN, HAROLD M.	02084703	"	1035
2D LT	1028	HYATT, EDWARD D.	0843198	"	1028
T/Sgt	2756	Perciballi, Guy	RA11007078	"	2756

1ST LT	1035	BURNEY, STANLEY T.	02077580	400.02	1035
2D LT	1028	SPARKS, CLINTON W.	02099716	"	1028
Sgt	2756	Romar, Stanley R.	RA12014663	300.18	2756
S/Sgt	580	Bloomfield, Clifford A.	RA19163651	400.02	580
Sgt	1685	Pike, James H.	RA14166339	"	1685
Sgt	612	Miller, Leroy	RA18090338	300.14	612
Sgt	611	Rogers, Lloyd E.	RA17035148	400.02	611
LT COL	1093	WILSON, WILLARD W.	032989	200.06	1093
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
M/Sgt	750	Fullerton, Cleatus W.	RA6269883	300.14	750
S/Sgt	555	Mitchell, Victor J.	RA6265044	"	555
Sgt	853	Jones, Edwin L.	RA18083285	300.18	754
M/Sgt	750	Alexander, Julius R.	RA18083295	"	750
Sgt	747	Griffin, Guy T., Jr.	RA12243766	300.14	747
S/Sgt	585	Alexander, Lee S.	RA38267614	400.14	747
M/Sgt	925	Blackstock, Herbert	RA6299193	"	925

B-29 #974 Crew #6

MAJOR	1093	CHILDS, JOHN E.	042407	400.02	1093
2D LT	1093	WRIGHT, WILLIAM M.	028573	"	1093
1ST LT	1034	HOLTKE, EUGENE J.	0752548	"	1034
1ST LT	0142	NELSON, BILLY A.	02090813	"	0142
1ST LT	1035	SNODGRASS, WILBER A.	0375185	"	1035
T/Sgt	737	Fuchs, Jesse E.	RA35378540	300.14	737
Sgt	2756	McGough, Rudie M.	RA6286920	400.02	2756
T/Sgt	580	Martin, J. D.	RA18066038	"	580
S/Sgt	1685	Adams, George A.	RA18168170	"	1685
Cpl	612	Ferrel, Hershill	RA18040744	"	612
Sgt	611	Lunsford, Gail C.	RA18192206	300.17	611
M/Sgt	750	Pearson, Everett E. Jr.	RA16010058	300.14	750
S/Sgt	747	Stump, George R.	RA15041038	300.14	747
Pvt	747	Favit, Lewis E.	RA16166392	"	747
S/Sgt	747	Schwarz, Calvin F.	RA17215653	"	747
Sgt	687	Biggie, James H.	RA16188331	"	687
Cpl	747	Webb, Paul L.	RA19196527	"	[illegible]
Cpl	911	Robie, William J.	RA6139065	300.17	911
Pfc	867	Korra, Earnest B.	RA11146825	300.18	867
MAJOR	1034	METZ, CECIL C. (Hq 7TG)	042957	400.02	1034

B-29 #954 Crew #7

CAPT	1093	COOPER, JAMES R.	0790631	400.02	1093
1ST LT	1093	HUDELSON, WESLEY L.(492 BS)	0711527	400.02	1093
1ST LT	1034	ORDLHEIDE, HAROLD W.	02078625	400.02	1034
1ST LT	0142	POPE, JAMES H.	02065616	400.02	0142
1ST LT	1035	MARINKOVICH, OBRAD	0208915	"	1035
2d LT	1028	ROTH, HAROLD A.	02099897	"	1028
Sgt	580	Shrader, Don J.	RA3589243	"	580
S/Sgt	1685	Wangler, George A.	RA14070752	"	1685
T/Sgt	612	Walker, Leon C.	RA20807392	"	612
Sgt	611	Paul, Theadore R.	RA13152718	"	611
M/Sgt	750	Quilling, Lowell E.	RA15018186	300.14	750
M/Sgt	684	Burnett, James P.	RA6272828	400.02	684
S/Sgt	684	Richards, Fred D.	RA39394089	"	684
S/Sgt	747	Humen, Edward F.	RA20641078	300.14	747
M/Sgt	750	Brady, Lester M.	RA624504	"	750

S-3

par 36, SO 118 FWAAF (Cont) R E S T R I C T E D (19 Jun 47)

Sgt	580	Yohn, Coburn	RA17136794	400.02	580
S/Sgt	1685	Straley, Neal A.	RA2C920991	"	1685
Cpl	612	Harrington, Thomas V.	RA11140978	"	612
Sgt	611	Hamilton, Donald B.	RA38606271	"	611
M/Sgt	750	Fritz, John	RA6559740	300.14	750
M/Sgt	684	McMurry, Carland	RA6936493	"	684
Pfc	747	Davis, Berthal E.	RA19178921	"	747
Pfc	747	Cauthran, Harold D.	RA18174972	"	747
T/Sgt	685	Grace, Arthur K.	RA19080541	400.02	685
Pfc	747	Early, Bobby E.	RA14228883	300.14	747
Cpl	687	Renner, Edward J.	RA12223847	400.02	867

* * * * *

BY ORDER OF COLONEL WHELESS:

T. F. MANION, JR.,
Major, Air Corps,
Adjutant.

OFFICIAL:

Stanley F. Mitchell

STANLEY F. MITCHELL,
Captain, Air Corps,
Ass't Adjutant.

DISTRIBUTION: "A" plus 25-S-3 this sta.
5-CO Wendover Fld, Utah

R E S T R I C T E D

SPECIAL ORDER)
:
NUMBER 118)

HEADQUARTERS
FORT WORTH ARMY AIR FIELD
Fort Worth, Texas

EXTRACT

37. The fol named Off's and EM (AC) (W) 436th Bomb Sq, 7th Bomb Gp (VH) are placed on TDY as a detachment of the 7th BG (VH) for approx fifteen (15) days, eff o/a 21 Jun 47 at Wendover Field, Utah, for the purpose of participating in Gp Maneuvers upon completion of which to return to proper D/ sta. No per diem authorized. Auth: Eighth Air Force Field Order No. 21, dtd 16 Jun 47. WP TDN TBMAA.

RANK	PMOS	NAME	ASN	COST CODE	SHIPPING SSN
		436th BOMBARDMENT SQ (unless otherwise indicated)			
		B-29 120 CREW # 1			
1LtJ	1093	Desportes, John A.	O-351043	400.02	1093
Capt	1024	Trewitt, Harvey S	O-421785	400.02	1093
2d Lt	1034	Watkins, Archibald L	O-20822553	400.02	1034
1stLt	1035	Majeski, Edward S	O-716739	400.02	1035
1stLt	0142	Poulos, Thomas (NMI)	O-2079468	400.02	0142
M/Sgt	737	Putnam, Troy L	RA18040876	300.02	737
S/Sgt	580	Davis, Billy T	RA39179671	300.02	580
Sgt	1685	Paxton, Lloyd F	RA16027078	300.02	1685
S/Sgt	748	Coble, Ray P	RA18131743	300.14A	612
Sgt	611	Long, L. V. Jr.	RA38397438	300.02	611
M/Sgt	750	Hause, Walter G	RA6942468	300.14A	750
M/Sgt	747	Rudy, Mark G	RA16153308	300.14A	684
S/Sgt	750	Halcomb, William N	RA18200434	300.14A	684
T/Sgt	750	Reed, Aruld F	RA18063254	300.14A	684
1stLt	9301	Covert, William M	O-2015452	200.05	Staff
Sgt	867	Lee, Donald C	RA11136492	300.18	542
M/Sgt	542	Hoechstetter, Herman J	RA6576427	300.18	542
Pfc	867	Wright, James E	RA11143182	300.18	867
		B-29 972 CREW # 2			
Capt	1093	Allen, Kenneth L	O-755493	400.02	1093
1stLt	1051	Kruse, Billy L	O-826210	400.02	1093
1stLt	1034	Kimble, Robert C	O-805238	400.02	1034
Sgt	867	Marnon, William H	RA32830446	300.18	514
1stLt	1028	Beldin, Bernard E	O-871678	400.02	1028
Pvt	776	Hooten, Howell E	RA38065453	400.02	2756
S/Sgt	580	Beaird, Olie L	RA18042868	400.02	580
S/Sgt	1685	Bates, Billy B	RA18052516	400.02	1685
Sgt	612	Downey, Osborne E	RA38630354	400.02	612
Cpl	611	McCarthy, Charles E	RA13181330	400.02	611
M/Sgt	750	Park, Floyd F	RA6288961	300.14A	750
T/Sgt	750	Slaughter, Capers B	RA6271908	300.14A	747

R E S T R I C T E D

T/Sgt	750	Helvey, Kenneth J.	RA18021173	300.14A	684
Cpl	684	Paetsch, Will D.	RA10253020	"	684
Pfc	747	Brunelle, Leo E.	RA11150282	300.14A	747
Cpl	876	Hoffman, Clayton D.	RA19196944	300.18	867
Cpl	867	Kalmback, Winfred A.	RA38766148	300.18	867
Cpl	867	Wechter, Jerome E.	RA15238049	300.18	867
Cpl	754	Estil, Milo J.	RA16208089	300.18	754

B-29 076 CREW # 3

Capt	1093	Underwood, William S.	O-803315	400.02	1093
2d Lt	1051	Zeh, Theodore G. Jr.	O-29363	400.02	1093
1stLt	1034	Adkins, Harold F.	O-692250	400.02	1034
Capt	1035	Schierholz, Charles C.	O-515408	400.02	1035
1stLt	0142	Vohland, Marion G.	O-2085054	400.02	0142
T/Sgt	737	Mauel, Don L.	RA17012018	400.02	737
S/Sgt	542	McJunken, Leon C.	RA18053701	400.02	2756
S/Sgt	580	Lower, Frederick E.	RA35928854	400.02	580
S/Sgt	1685	Garner, James E.	RA19066045	400.02	1685
S/Sgt	612	Messer, David C.	RA14165959	400.02	612
Sgt	611	Crum, Allen (NMI)	RA16195909	400.02	611
T/Sgt	750	Myers, Arthur E.	RA20229792	300.14A	750
S/Sgt	750	Dragoo, John E.	RA18046227	300.14A	684
S/Sgt	747	Fox, Francis W.	RA11141144	300.14A	747
Sgt	784	Ruschnyer, Harold W.	RA16018619	300.14A	747
Pfc	747	Stark, Wilton C.	RA16213505	300.14A	747
Lt Col	1093	White, Joseph D.	034214	200.06	Staff
Pfc	754	Barmore, Pat D.	RA38727496	300.18	754
Cpl	754	James, Robert E.	RA14211027	"	754
Cpl	754	Tungland, James C.	RA17186378	300.18	754

B-29 772 CREW # 4

Capt	1093	Harrington, John A.	O-660750	400.02	1093
2d Lt	1024	Cole, Frank E.	O-28016	400.02	1093
1stLt	1034	Odom, Olin C. Jr.	O-699233	400.02	1034
1stLt	1035	Fryde, Stash J.	O-698503	400.02	1035
1stLt	0142	Hathaway, Raymond H.	O-716434	400.02	0142
M/Sgt	737	Dungan, Joseph R.	RA17000140	400.02	737
Pfc	756	Guthrie, Udell J.	RA18287540	400.02	2756
S/Sgt	938	Colton, William A. Jr.	RA33197724	400.02	580
Sgt	960	Welter, William F.	RA17152070	300.17	1685
S/Sgt	612	Shafer, William H.	RA6291890	400.02	612
Sgt	611	Burja, Edward O.	RA17124619	400.02	611
M/Sgt	750	Moore, E. A.	RA38132446	300.14A	750
M/Sgt	737	Gray, Lloyd D.	RA6968600	300.14A	747
S/Sgt	750	Gregory, George M.	RA18036889	300.14A	747
S/Sgt	747	Curtis, Dale F.	RA35258046	300.14A	684
Capt	4823	Pozniak, Francis L.	O-581102	300.14A	4823
Cpl	405	Williamson, Donald K.	RA13212677	300.14A	405
Cpl	747	Bastow, Courtley L.	RA19246274	300.14A	747

1stLt	1028	Weldon, Hershell D.	0-2100471	400.02	1028
M/Sgt	2756	Bushman, Carl E.	RA6572018	400.02	2756
T/Sgt	580	Fine, Marshall F.	RA39135549	400.02	580
S/Sgt	1685	Camp, Carl D.	RA18010896	400.02	1685
S/Sgt	612	Pollard, Elbert W.	RA18004918	400.02	612
Sgt	611	Brown, Dean S.	RA37580053	400.02	611
T/Sgt	750	Poules, Glenn E.	RA15017920	300.14A	750
S/Sgt	685	Brookshire, Marvin E.	RA38022092	300.14A	684
Pfc	747	Hendricks, Thereal L.	RA14197201	300.14A	747
Pvt	747	Hamblin, William J.	RA6574116	300.14A	747
Pfc	747	Cowan, Jeff (NMI)	RA14235919	300.14A	747
*Capt	2166	McKee, Eustis E. Jr.	0-728095	400.02	2166 (Hq7BG)
M/Sgt	750	Hogue, Herschel (NMI)	RA6292454	300.14A	750
M/Sgt	750	Ozment, Warren C.	RA6917175	300.14A	750
Sgt	060	Varner, Prem (NMI)	RA34140089	200.07	060

B-29 258 CREW # 10

Capt	1093	Sensenbrenner, Ralph D.	0-681278	400.02	1093
1stLt	2161	Meuse, George A.	0-820799	400.02	1093
2d Lt	1034	Haluska, Fred F.	0-936853	400.02	1034
1stLt	1035	Manicum, William C.	0-677230	400.02	1035
T/Sgt	867	Graves, George W.	RA20606981	300.18	514
1stLt	1028	McKim, John W.	0-2101560	400.02	1028
Sgt	2756	McBride, James L.	RA15010070	400.02	2756
S/Sgt	911	Baxter, Richard N.	RA20815475	300.14A	580
S/Sgt	612	Chisholm, Robert E.	RA31123470	400.02	1685
S/Sgt	938	Ponder, Truly S.	RA6556863	400.02	612
Sgt	611	Haley, Truman W.	RA6292819	400.02	611
	747	Wilmot, Gerome F.	RA13196850	300.14A	684
T/Sgt	750	Hickey, Wayne E.	RA18005157	300.14A	684
Pfc	747	Nieman, Glen R.	RA19243706	300.14A	684
S/Sgt	750	Petesch, Joseph N.	RA17003843	300.14A	684
Sgt	685	Klaeger, Leo E.	RA38554199	300.14A	685
M/Sgt	750	Grimes, Bahnert H.	RA6955174	300.14A	750
M/Sgt	750	Howard, Lester M.	RA6123448	300.14A	750
Pvt	060	Gladwell, Woodrow (NMI)	RA15088503	200.07	060
Cpl	060	Hayse, Edward S.	RA35701393	200.07	060

* * * * *

BY ORDER OF COLONEL WHELESS:

T. F. MANION JR.
Major, Air Corps
Adjutant

OFFICIAL:

Stanley P. Mitchell

STANLEY P. MITCHELL
Captain, Air Corps
Asst Adjutant

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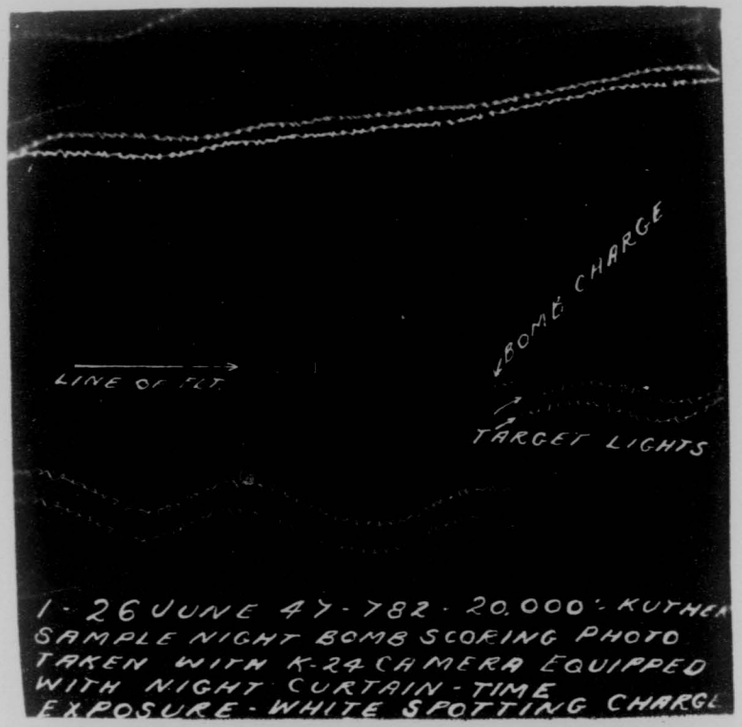
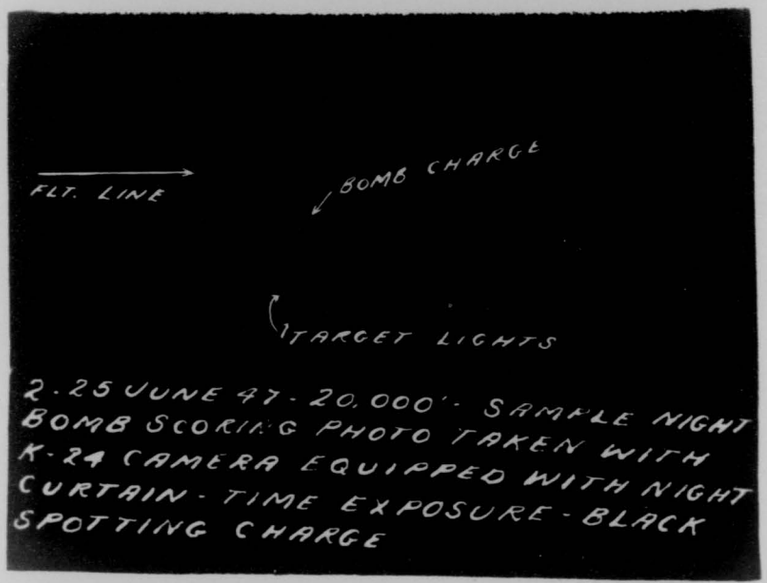


1-26 JUNE 47-782-20,000'-KUTHER
SAMPLE NIGHT BOMB SCORING PHOTO
TAKEN WITH K-24 CAMERA EQUIPPED
WITH NIGHT CURTAIN-TIME
EXPOSURE-WHITE SPOTTING CHARGE



2-25 JUNE 47-20,000'-SAMPLE NIGHT
BOMB SCORING PHOTO TAKEN WITH
K-24 CAMERA EQUIPPED WITH NIGHT
CURTAIN-TIME EXPOSURE-BLACK
SPOTTING CHARGE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016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 00000381 31.000439

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HEADQUARTERS 28TH BOMBARDMENT GROUP (M)
Rapid City Air Force Base
Weaver, South Dakota

28BGA-319.1

23 October 1948

SUBJECT: TDY Mission Report

TO: Commanding General
Strategic Air Command
Andrews Air Force Base
Washington 20, D.C.

Category Operations
Subdivision Organizational Reports

Enclosed herewith narrative report on TDY Mission to the United Kingdom; reference, SAC Letter 354, dated 27 April 1948.

FOR THE COMMANDING OFFICER:

WALLACE K MYERS
1st Lt., USAF
Adjutant

1 Incl:
1-Mission Report (Secret)
1 Original 2 Duplicates

cc- CG, 15th AF
CG, 3rd Air Div

SAC-373 (3 Oct 48)

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NO ACTION NECESSARY
Maj

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NARRATIVE REPORT

OF

28TH BOMBARDMENT GROUP S-1

90 DAYS TDY - ENGLAND

FROM

17 July 1948

to

19 October 1948

HQ 28TH BOMBARDMENT GROUP (M)
Rapid City Air Force Base
Weaver, South Dakota

REPORT ON NINETY DAY TDY MISSION TO SCAMPTON, RAF STATION,
LINCOLN, LINCOLNSHIRE, ENGLAND

ADMINISTRATION AND PERSONNEL SECTION (S-1)

1. Accomplishments

The Administration and Personnel section of the 28th Bombardment Group (M) managed adequately all of it's designated functions during the unit's TDY in the United Kingdom. An office was set up and working two (2) days after landing at RAF Station Scampton. Personnel administrating this section consisted of one Adjutant, one Sergeant Major (502), one Classification Specialist (275) and one Clerk (405). Contact was made with the Third Air Division (Rear) at Marham, Norfolk, by direct line and an intrastation telephone system was arranged. The Commanding Officer's office, adjacent to the Group Adjutant's office, was set up on the second floor, in the 'lean-to', airfield side of Hangar No. 2. The Commanding Officer's office, covering an area of twelve (12) by twelve (12), the Adjutant's office fourteen (14) by fourteen (14). The Group Sergeant Major and classification man were situated in the Adjutant's office.

All men were billeted comfortably by English standards, and messing was started in the British dining halls.

The Squadrons immediately set up their orderly rooms in their Squadron billeting areas, in barracks huts, and for a short period of TDY were entirely adequate.

Assignments to the Squadrons of available office space was monitored in a Staff meeting, and keys obtained from American Liaison Officer. All during the stay at Scampton, the S-1 section acted as liaison medium between the RAF and the USAF with a reasonable amount of success.

The British rations were found to be inadequate for American personnel and the British allowance was increased by fifty cents ($.50) for enlisted men and forty cents ($.40) for officers. Various mess meetings of the British were attended by the Adjutant, and finally a workable scheme was found for the spending of this additional grant. The S-1 section, in conjunction with the Group Medical Officers, instituted a necessary clean-up of both Enlisted and Officers' messes, and the low morale of the personnel was raised by the accomplished cleanliness. More will be said of this in the problems section.

Daily mail runs to Marham, fifty (50) miles distant, were started and provisions for handling of mail were drawn up. The Unit was given APO 633A, c/o Postmaster, New York, New York, as an address rather than that APO designated by SAC Mobility Plan. All mail for the APO was gathered at Group Headquarters each night from the Squadrons, and it left each morning at 0700 hours. All in all, the postal setup has proven satisfactory.

An SOP was drawn up for an Officer of the Day and for a Staff Duty Officer, and rosters for the same written. It was felt that an officer should be available in Headquarters at all times after duty hours to handle any incoming messages or phone calls of importance. A bed was provided for this officer and his presence has since been justified.

It fell upon the S-1 section on arrival to set up a workable scheme of guarding each aircraft after duty hours. Third Air Division ordered that each aircraft would have one guard posted on it at all times. This proved to be a serious drain on our available personnel, and a health as well as a morale factor. Rosters were made up by Squadron orderly rooms and the Officer of the Day mounted and dismounted this guard.

The conduct of personnel in town was handled by a Provost Marshal appointed by the S-1 section. The Provost Marshal was a pilot from one of the Squadrons. Five (5) men were assigned to him for permanent duty, and temporary military police warrants were given. Arm bands and night sticks were obtained from Germany as none had been brought along on the movement. A town patrol of the City of Lincoln, six (6) miles distant, was started and functioned satisfactorily throughout the TDY period. Through memorandums put out by the S-1 section, the Airmen were fairly well briefed as to the conduct expected of them, and they were made familiar with existing RAF regulations and customs. This bulletin board system proved quite worthy of the consideration given it.

Many men expressed a desire to notify their families of safe arrival, and the Group Adjutant negotiated with Commercial Cable and Western Union for service. The Group Adjutant's office became a cablegram sending station, and over three hundred (300) messages were relayed back.

The need for supplying the men with some recreation equipment was noted, and a Special Service section was instituted. A rated officer from one of the Squadrons was appointed, and a requisition was put in for baseball equipment and so forth. Two (2) softball diamonds were layed out, and they received much use during the sparse good weather. Several tours around the countryside were arranged and were well received by the personnel. Books were given this section by the Red Cross and a library started. It is well to note here that the allocation of

books contained several books of subversive content, or at least were by subversive authors. This fact was discovered by the Group Adjutant and Group Intelligence Officer. An investigation is under way at present. Any future shipment should be closely monitored. Hardship cases of the airmen and officers were handled jointly by the Red Cross and Adjutant's section. Many cases arose due to hasty departure from the home base and from the urgency of mission demand.

An index card file of all personnel was started shortly after arrival, and has been of great help.

All TDY's were signed by the Group Adjutant to facilitate control. The control was successful and many superfluous messages were turned back. The communication wires were heavily loaded with traffic, and such control tended to channel a lot of communications into postal channels. Security was very good, and the monitoring of messages is partially responsible.

As no records were brought with the initial movement, it was deemed advisable to pay throughout the TDY by partial payments. The results of this policy have not yet been calculated, but it is felt that it will prove satisfactory. A Class 'A' Finance Officer was appointed from one of the squadron officers and that officer has handled all finance matters. The pickup of money from London Finance Office, the changing of American dollars to Pound sterling, and checking of pay vouchers has been his duties. A very serious complaint has to the currency exchange will be discussed in the 'difficulties' encountered section of this report.

Upon arrival at this station, the British turned over a portion of their transportation for exclusive American use. A Transportation Officer was appointed; however, due to the officer's combat crew status, all transportation outside of regular runs was monitored by the Adjutant's office. A signed authorization was necessary to obtain transportation, and thoughtless use of critical transportation was held to a minimum.

Master Sergeants were billeted in the RAF Sergeant's Mess, so it was necessary that they should be represented on all committees of that organization. Three (3) master sergeants, one from each Bombardment Squadron, were appointed and have functioned in that capacity. The British proved to be a little stubborn at times when the policies of the Sergeants' Mess were concerned.

No Chaplains were brought with our organization and no one was assigned during the TDY period. The RAF's two (2) Chaplains administered to our personnel. During a leave of the Protestant Chaplain, arrangements were made with an American educated vicar at a village three (3) miles distant to provide services. Transportation was provided and attendance was good. A memorial service for ten (10) men killed at home base (Rapid City Air Force Base) was arranged by a Captain from the squadron that lost the most men, and two hundred (200) men participated. On the whole, the spiritual requirements were well handled.

Dignataries arrived on numerous occassions, and details of their visits were coordinated through the Adjutant's section. Honor guards were provided, transportation, meals, and so forth. A "standard tour" was S.O.P. for most of these and the itinerary is somewhat as follows: Inspection of Honor Guard; inspection of aircraft and crew; inspection of airman's mess; inspection of living quarters; a meal at the officer's mess; inspection of a flyaway kit; and return to aircraft. Visitors included Sir Alan Henderson, British Secretary of State for Air; Mr. Symington, Secretary of Air Force; General Vandenberg, USAF Chief of Staff; Lt. Gen. LeMay, Commanding General, United States Air Force Europe; Major General Johnson, Commanding General, Third Air Division; Lt. Gen. Norstad, Chief of Plans and Operations United States Air Force; Senator Gurney, Head of Military Appropriations Committee U.S.A. and Lord Tedder, Chief Air Marshall RAF and many others. At times V.I.P. desired to speak to troops. A rostrum and Public Address System was provided in Hangar No. 1. These men were always met by the Commanding Officer and Staff of the 28th Bombardment Group and A.O.C. and partial Staff of the RAF station. All facilities at our disposal were used to make visits pleasant and profitable.

When it became necessary to arrange for men to be returned to the Zone of Interior, details were handled by this section. All movements had to be coordinated through Third Air Division and this Headquarters had to rely on their arrangements with shipping agencies in Germany. The daily mail carrier was utilized to get men to Warham, England, which was a clearing port for air lift to Germany. Men who were eligible for discharge who did not extend their enlistment (almost nil) were promised a return date to Zone of Interior thirty (30) days prior to ETS; however, due to backlog of passengers at Bremerhaven, Germany, a drain of "Vittles" on airlift, very few returned in time.

As this organization was on a TDY status, it could not write Special Orders; therefore, we relied solely on Letter Orders to accomplish our mission. All shipments to Zone of Interior were started with Letter Orders; all orders for trips away from Scampton, appointment of Crypto Officer, boards and so forth, any assignment of patients to RAF hospital for hospitalization and numerous other functions have been covered.

As normal, the distribution was handled in the S-1 section. Definite times and runs were designated, and there were very few instances of misrouted messages. The organizations were commendable in their adherance to anything written and received. Acting as their own runners more or less alleviated any complaint of "we did not receive that". All TWX's to the various Staff sections were disseminated and copies retained at Headquarters. All TWX's that were classified and other classified instruments of communication have been logged according to AF Regulations.

This section was fortunate in taking along a mimeograph machine and a fair amount of paper and stencils. Original supply was adequate until more could be shipped. All squadrons and sections used the machine after cutting their own stencils, and the output was high.

On the arrival of the organization in the United Kingdom, the Commanding Officer was flooded with many letters from well wishing English people. The correspondence ran from invitations for leave activities to 'idol' letters from young, lonely girls. The letters, after monitoring to eliminate inconsequential ones, were all answered from the Administration section. These answers received a great amount of favorable comment, and Anglo-American relationship profited from the endeavor. About one hundred (100) letters were answered. Any other correspondence calling for coordination between sender and recipient (ie. Request for Air Shows--social nights and so forth with RAF) was handled by the S-1 section. Such only tends to accentuate an earlier statement that the Group Adjutant's office was a liaison center for much intra service activity.

The attempt to provide more satisfactory living accomodations and conditions was furthered from the S-1 section. A conscientious effort to have heat turned on in barracks prior to 1 October was made, but the RAF was reluctant in most instances to oblige. The billeting of all personnel was indirectly under this section, although accountability for property lay in the S-4 section. Inspection of billets prior to inspections were made, and areas for policing were designated by this office.

The handling of Class six property, or whiskey for the officers and first three grades of airmen was monitored by this section. Three hundred (300) cases of American liquor were obtained from the Quartermaster in Germany and distributed upon basis of previous orders. One officer and one master sergeant were sent to Germany to pick up this property. All enlisted man's liquor was not allowed to leave the RAF Sergeants' Mess, and such a rule proved valuable and wise. It is understood that the American Embassy will provide liquor for Field Grade officers providing that source is the only source.

Many men expressed desire to purchase cloth to take back with them to their home station. Custom rules were checked, and it was found that each American "visitor" could take back yards in the value of four hundred dollars ($400). Eighteen thousand (18,000) clothing coupons were obtained through Embassy sources and the British Ministry of Supply. Due to brisk Black Market in these coupons a rigid system of distribution was set up. Each man is allowed only fifteen (15) coupons and he must declare what they are to be used for. No trouble has at present been encountered.

As we have no Post Office, the problem of purchasing stamps arose. The Group Adjutant made available twenty dollars ($20.00) worth of ordinary and air mail stamps, and the personnel purchased from that supply.

To cut down any possibility of bad checks, the S-1 section required the signature of the Group Adjutant as an authorizing notice to the British Banks in Lincoln. This held to a minimum the cashing of checks, personal or otherwise. The British Banks have been most cooperative in most anything we have asked them.

Original plans were that the Scampton P.X. was to be a branch of the Weisbaden P.X. in Germany and would be supplied by air direct from the Main Post Exchange warehouse. However, the English Customs officials chose Marham, England as the only port of entry and supplies were delivered there by airplane and then transported to Scampton by truck.

Supplies furnished were to be basic items; ie, Cigarettes, Tobacco, candy, shaving needs, etc. However, the food furnished by the RAF was not of the same type or quantity as the men were accustomed to and there was a large clamor for items of food.

Every effort was made by the Weisbaden P. X. to supply the U.K. with food items as well as basic necessities, but aircraft to be used in transporting supplies were very limited due to Operation Vittles and the original weekly supply would be exhausted with no new supplies in sight.

With the extension of our TDY stay to over sixty (60) days, men prepared for only thirty (30) days began to find themselves short of almost everything. There were numerous inquiries for socks, underwear, caps, handkerchiefs, camera film, writing paper, etc.

These requests were relayed to the main office in Weisbaden, but nothing could be done as they were experiencing considerable difficulty finding enough airplanes to keep the branches supplied with Cigarettes.

Each branch was headed by a civilian manager acquainted with PX procedure and other than that no provisions were made for personnel to man the stores. Enlisted personnel who were members of flying crews were used. On days when flying was scheduled the P. X. remained closed. Toward the end of our TDY authorization was given to hire English civilian personnel. This resulted in an increase in administrative paper work and at this time no satisfactory personnel have been hired. Present plans are for a central P.X. Store and warehouse to be located at Burtonwood which will buy direct from the United States and supply all stores in the United Kingdom by truck.

It is believed that this system will be satisfactory and will result in better stocked Post Exchanges in the future.

It is definitely felt that the S-1 section has carried out it's assignment properly. It has handled innumerable things to the satisfaction of the bulk of the personnel. Many accomplishments have been made which have not been mentioned. However, no matter how small the problems, or the situation, the S-1 section endeavored to cope with it.

2. Problems and Action Taken

The original problems encountered during preparation for TDY in the United Kingdom have followed us throughout this ninety (90) day period. Perhaps the most difficult situation to cope with has been the lack of information and lack of planning seemingly from higher

echelons. We should say here, that we are now aware of why we were without those prerequisites for a smooth operation. The tenseness of the situation had to be guessed at, and the resulting discontentment among all sections was alarming.

The fact that we were under the operational control of USAFE and under the administrative control of SAC has caused a degree of duplication of effort. The SAC Mobility Plan calls for the inclusion of no regulations on a thirty (30) day TDY, and originally this organization was anticipating only thirty (30) days away from the home base. We were to have bases equipped with housekeeping facilities (messrefueling-adequate barracks-station complement). Perhaps if we had known sooner what our destination was, and our mission, we could have deducted that English bases could not provide that which we expected. On arrival we found that we were under the command of Third Air Division (provisional), a command that was also seriously handicapped by lack of orders, lack of procedure, and lack of regulations. They, too, were understaffed and operating without adequate facilities. The later changing of our staying period further complicated matters.

Arriving without regulations handicapped us in matters of reclassification, finance, separation, hardships, etc. Almost every effort to acquire copies of pertinent regulations from sources in Europe have failed. Endeavor to obtain any interpretation of any regulation from our Third Air Division has been blocked by this Headquarters not having the pertinent regulation. We have relied solely at times on the past experience and knowledge of our Sergeant Major, First Sergeants and Adjutants. Each squadron brought a varied index of regulations and by loaning and pooling we have been able to cope.

Many discharges and separations came during our stay in the United Kingdom. Had we remained for the original thirty (30) days that problem would not have been present. The enlisted man has certain rights, regarding separation, set up by the AR's and WD Circulars and hence the problems concerned. As will be discussed later, the morale was at a low ebb. Men were inclined to want to take a short discharge and attempt to reenlist in a command that would allow them more stateside duty and settled conditions. Third Air Division set up a policy of a ninety (90) day extension with discharge immediately upon arrival back in the Zone of Interior, but few of the men were willing to take advantage of the extension. Our return date still had not been given and the men could not see the advantage in the procedure. Actually, there was no advantage. Third Air Division was aware of the situation and the policy of getting replacements and the transportation for those going back was started. The transportation back to the Zone of Interior was difficult, and air lift was an impossibility. The problem was handled only through explanations to the men of the situation and every attempt to get men to the Zone of Interior was made. On 1 October those men who were due for discharge around 16 October 46 were given a choice of the boat transportation or the return to the states with the unit. In almost every instance the men chose the latter. After knowing the return date the anxiety was abated and the men could plan again.

Morale on this TDY was a point for serious consideration. The Unit had been kept in a state of confusion from time of original notification (three (3) weeks before departure) to several weeks after arrival in the United Kingdom. There were statements and contradictions; there were orders and counter orders. The immediate alert ranged from a six (6) hour status to a forty-eight (48) hour status, and upon unloading aircraft for a practice bombing mission over Mendover the orders came for our departure. Men were tired physically and mentally upon arrival at our destination, which up until arrival at Goose Bay had been unknown. Every available man of certain specialties had been brought along--discounting any hardship or condition that had existed. During our first few weeks hardship cases were at a high figure. Wives and families hearing the inevitable rumors of "indefinite stay" began to ask for their husbands return during childbirth, surgical operations, and serious illness. Valid certificates obtained by the men of known or anticipated complications in any of these events prior to leaving the Zone of Interior were produced. In some instances men should not have been brought along. Red Cross facilities were meagor in England, but after many false starts a correct procedure and correct channels were obtained. Hardship cases became nil when an established date for return was set.

On leaving the Zone of Interior for this TDY period the organization had adequate personnel for a thirty (30) day period. However, when the thirty (30) days were increased, we were actually short of personnel. Our mission had grown and this was recognized by all concerned. A personnel requisition to supplement our numbers was implemented. This request was cut to the most basic of needs and even then all the specialties asked for could and have not been provided. There was no adequate manning table to use so we used one of our own based upon past experiences. Unanticipated problems and scope of operations have shown us that we had brought along personnel who must be used out of the speciality field, and in other instances we were short on certain SSN's. Careful utilization of all personnel by all concerned resulted in a good degree of accomplishment.

As directed by SAC for thirty (30) day TDY's we did not take along officers' 66's nor enlisted mens' service records. This fact seriously handicapped our administration until they were brought over from the home base. Due to certain disApproval of Air Force Service Statements, applications for Regular Air Force commissions, recommendations for promotions etc. the need for officers' Form 66's was accentuated. Interviews and correspondence back to home station had to be accomplished when if we had had our records the information would have been as close as the filing cabinet. As to enlisted mens' service records, entries of partial pays etc. should have been entered immediately upon the "happening". The catching up of entries is always a chore and mistakes are prevalent. Service records and Form 20's were just beginning to shape up at the home base prior to departure, and now we are faced with another period of concentrated effort. It is easy to see how disciplinary action would be tempered by the lack of service records. This point was alleviated by company punishment and extra effort until the time of arrival of the records. In spite of conscientious effort of

Commanders to process their men according to directives for anticipated periods of TDY, the alert for this mission caught us unprepared and unprocessed. Men had been encouraged to make out allotments, but they were prone to neglect it--then, when alert came, all were clamoring for allotments. The men could not see why it would take about thirty (30) to forty-five (45) days before the first allotment checks would be written. Considerable confusion resulted, but a commendable effort by our Air Base Service Group took care of a large number of these allotments. The same situation held true for Power of Attorney and Wills. The processing for innoculations and vaccinations had been emphasized prior to alert, but lack of serums and hospital work load had prevented a complete accomplishment. Again the Hospital Group aided by all concerned accomplished necessary requirements.

Lack of forms was a constant problem. Forms 67-1, 461-Regular Army application forms, Court Martial Charge Sheets were in short supply, and most requisitions were not filled. Late arrival of messages calling for use of these forms coupled with the shortage of the forms made meeting most suspense dates impossible. Some forms were obtained from the home base and some were hand carried from Weisbaden. Many other forms (message forms, receipts etc.) were reproduced locally.

Office supplies were in short supply upon our arrival and action on requisitions through channels was almost nil. The RAF could not supply many of our needs, and what they could supply was not up to the American standards. Typewriters were virtually unobtainable and adding machines were entirely unavailable. British stencils did not fit our mimeograph machines and their ink was not suited for our use. A list of desirablesupplies will be found in the recommendations section.

Our first pay day in the United Kingdom brought forth a problem yet unsolved. This Headquarters wanted to pay the men in Pounds Sterling rather than American dollars as a brisk black market was known to exist in illegal currency exchange. However, the Third Air Division Headquarters insisted on a one half British and one half American currency payment as the Post Exchange could only take in American currency. Also indicated was the fact that a financial meeting of some higher echelon or foreign department had agreed on the payment of troops in dollars. The exchange problem can be seen immediately. A currency exchange was set up to operate three (3) days a week by our Finance Office. Exchange was made at the rate of one pound for $4.03. It was soon indicated that Finance Officers could not, however, redeem Pounds at that rate and that the soldier would have to rely on the banks' rate of exchange in the United States, which is more than a dollar less, and fluctuating. This problem is of utmost importance and should merit the investigation of the Finance Department of the USAF. It is difficult to pay the man at one rate and redeem at another. If payments could be paid at a standard rate and in Pounds Sterling we believe most finance problems would be settled. Much unnecessary travel could be alleviated too, as some method of travel must be used to effect conversion.

Our finance setup has been a problem insofar as we arrived in the United Kingdom short of finance people. Third Air Division was terribly short for a thirty (30) day TDY period. Partial payments are adequate and satisfactory. Over and above that time the remarks section becomes too voluminous. It will take a great deal of time and effort on the part of our finance people to straighten out satisfactorily all finances. A central finance office was finally set up at Burtonwood, England, and it is felt that future organizations will not have the same problems as we did. On arrival no funds had been alloted for collection of per diem for officers and men called away from home station. A fund was received and Third Air Division agreed to publish orders in all cases warranting per diem.

Late arrival of communications due to a too heavy TWX traffic or a tardy submission of information from home base made the meeting of suspense dates almost impossible. Many communications arrived on the date of final submission of reply. Many of our reports that were submitted on time (U-3 and U-5 particularly) were later known to be late at destination and the resulting "where are they" queries arrived at our Headquarters. Another instance resulting that merits attention is as follows: On 15 August 43 we received a TWX recalling one of our enlisted men to active duty as an officer with a reporting date at Camp Kilmer, New Jersey of 17 August 43. Compliance was impossible, and when an extension was requested the man's orders were revoked by USAF. It seems unfair that a man's career can be interrupted by slow communications and non-allowance of a concession caused by a TDY status.

Lack of regulations and manuals prevented us from setting up and furthering board procedures. On any future TDY of this nature, we would appoint a reclassification and other boards immediately upon arrival. We have many procedures now to look forward to.

The operations of mess halls were a problem throughout the TDY. On arrival as "guests" we were expected to eat the British rations in the British manner. British regulations allow three (3) shillings, four (4) pence ($.68) a day per man, with one (1) shilling, four (4) pence ($.28) going for maintenance and not food. This small allowance was further restricted by the rationing setup. Meats, cooking oils, eggs, and milk were in meager supply and entirely inadequate. Even after the Third Air Division authorized an additional forty cents ($.40), the quantity of food was not adequate. The quality of the food was low, and menus overly abundant in starch. The preparation of the food was poor and the lack of seasoning was only equaled by the unappetizing finished product. British messing standards are far inferior to our standards and cleanliness is not stressed. Morale of our men suffered until the arrival of American mess personnel in the supplemental shipment of men. After arrival of our mess people the condition of the mess hall improved and the food became more palatable. On 1 October 43, American rations started to arrive and the food standard went up. However, lack of refrigeration at the airfield necessitated our arranging for a food locker in the city of Lincoln. Our food pickup point was at Ely, England which is some eighty (80) miles distance. Warehouse was well situated for Marham and Laconheath but very bad for Scampton and Waddington.

By request of the Commanding General, USAFE, all food was to be shared in common by the RAF and USAF personnel; therefore, American rations were feeding 1200 people two (2) out of every three (3) meals. It is felt, although such a condition is not the best in the world, that it is a satisfactory one, and that Anglo-American relations have not suffered.

The Officers' Mess arrangement was unsatisfactory. Officers were charged forty cents ($.40) a meal, the payment for meals being made in cash on 14 October 1948 according to a directive received from Third Air Division on 1 October 1948. This payment caught many officers short of cash and a partial payment had to be effected in some instances. Due to the quality of food obtained (on a par with the enlisted mess) the officers felt that the amount paid over and above their rations allowance was not quite fair. This TDY has been an expensive one for all personell, personally; therefore, the saving of money has been a paramount subject.

Problems of obtaining English stamps, our own stamps, and many minor problems arose. As with all problems, the best possible solution was adapted, or the most suitable substitution made. Problems did not stop the efficient running of the organization, but at times the burden was great and great effort had to be expended.

3. Conclusions and Recommendations

a. Commitment of Bomb Group by higher Headquarters for a definite period of time and whenever possible adherance to same.

b. Planning and coordination by higher Headquarters in matters pertaining to finance, supply, communications, cost control etc.

c. An advanced party from USAF, SAC or numbered Air Force be sent to adequately obtain an estimate of requirements prior to commitment of Strategic Units.

d. That adequate command personnel, in any instance such as we have experienced in the United Kingdom, precede the tactical units by no less than thirty (30) days. (Our Third Air Division was seriously handicapped by lack of personnel, communication etc.)

e. Adequate consideration be given men who are due for discharge, have undue hardships or unusual circumstances.

f. Each unit to be a part of a TDY movement be required to carry a complete set of Army Regulations and Air Force Letters. Also that each S-1 section carry a supply of forms and office equipment. The list below is a product of our TDY and should prove adequate for any ninety (90) day period.

2 - Typewriters (carried with movement)
1 - Portable Mimeograph Machine

300 - Envelopes, white, ltr size
200 - Envelopes, Brown, 8x10½
100 - Envelopes, Brown, large
6 Boxes paper clips
6 Reams paper, white, bond
12 Reams paper, white, second sheets
4 Reams paper, mimeograph, 8x10
4 Reams paper, mimeograph, 8x11½ (legal)
5 Packages stencils
1 - Field Safe
5 Packages carbon paper
20 - Form 60's
12 Books Forms 60A
50 - Form 20's
50 - Form 24A's
100 - Forms 67-1
25 Pads Morning Report
500 - Forms 11-100
5 Boxes Thumb Tacks
2 - Clip boards
2 Balls cord
3 Bottles mimeograph ink
3 - Typewriter ribbons
2 - Stapling machines
5 Dozen pencils
2 Bottles ink
200 - Air mail stamps and 50 $.20 stamps
1 - Organizational Flag, silk
100 - Cards, file, 3x5"
1 - Case, file
3 Dozen pads, note
50 - File folders
1 Box anaco fasteners
Erasers
(1 Complete set of AR's, AF Regulations, SAC Regulations, WD Circulars, AF Letters (Parent station to furnish daily changes and amendments)
100 - Charge Sheets
1 - Manual for Courts Martial
1 - TM 27-255
1 - Manual for Board Proceedings
1 - 35-0-1 Manual
1 - 15-35-1 SAC Manual
1 - FM 22-5
~~2 Rolls plexiglass and paper for personnel accounting chart~~
1 - Format for 72 hour mission report

g. All information possible should be disseminated to enlisted personnel regarding mission, fulfillment of mission, departure dates, return dates, etc. Such a policy would defeat rumors, restlessness and the resulting morale problem.

h. All personnel should be thoroughly processed at all times for overseas duty; i.e., continued allotments, completed inoculation series, power of attorneys and wills etc.

i. Consideration should be given on meeting of suspense dates on reports, completed action etc. Stateside dates are impossible to meet in many instances.

j. Officer and enlisted records should be a part of the movement.

k. Reclassification Boards, Reduction Boards, 309 Boards etc. should be appointed at home station prior to departure.

l. The currency situation as set aside in the problems section should be investigated by Finance Department, USAF.

m. American and British messes should be separated at any time possible. Due to wide breach in standards, the American airman loses when they cannot be separated. Rations should not be intermixed.

n. Recommend that officers be allowed to deduct their reimbursements for field rations from pay vouchers after return to home station after any period of indecision such as this Bomb Group has experienced.

o. It is recommended that a fund be made available to the Special Services Officer so that his section may be instrumental in carrying out its normal functions.

p. A fund should be made available to the administration section for miscellaneous purchases of foreign stamps, VIP invitations, etc. Social commitments are great and expensive.

q. On future TDY mission to places where PX facilities are not available, three (3) enlisted men should be taken along for the sole purpose of establishing and operating a Post Exchange.

r. Strategic Units be given consideration for the maximum amount of time to remain in status. Families are prone to suffer from so much TDY.

s. All personnel should be allowed per diem for all TDY periods. This and other missions has been monetarily expensive for all personnel.

t. The SAC Mobility Plan should be made more flexible in regard to clothing and requirements thereof.

u. This has shown us that there are many varieties of USAF uniforms, all legal, and yet color and tailoring are not standard. When cleaning facilities are reduced this is more apparent. Recommend that the Air Force go into a distinctive, new uniform as planned at the earliest time.

v. One of the conclusions we have drawn is that the next organization will not be faced with the large number of problems this organization had. Such cutting down of problems is due to initiative and labor of this organization.

NARRATIVE REPORT

OF

26TH BOMBARDMENT GROUP S-3

90 DAYS TDY - ENGLAND

From
17 July 1943
To
19 October 1943

[redacted]

I N D E X

SECTION I

SECTION II

[redacted]

SECRET

SECTION I

SECRET

[redacted]

NARRATIVE REPORT
of
26TH BOMBARDMENT GROUP S-3 -- 90 DAYS TDY ENGLAND
17 July 1948 to 19 October 1948

The ninety (90) day TDY tour of the 26th Group cannot be considered in the same category as the normally accepted overseas training missions. From the time of the initial alert and until the actual return to the U.S., every plan and every action was directed toward insuring immediate combat effectiveness. Before take off from Rapid City, personnel and materiel were selected on the basis of the SAC Mobility Plan insofar as possible. Where latitude was permitted, the accent was placed on providing an organization manned and equipped for combat and not one staffed for routine training. The most important difference between this and a normal training mission was the attitude of each individual. The group was mentally ready for combat operations.

The initial alert for movement overseas was received 26 June 1948. More than a normal amount of difficulty and confusion was encountered in readying the group for the movement overseas. Primary emphasis was placed upon aircraft maintenance and loading. Personnel processing, i.e., completion of allotments, insurance, medical records, etc. received secondary consideration. The lack of union between the theoretical adherence to the SAC Mobility Plan and the practical aspects of its compliance, however, cannot be attributed solely to negligence on the part of this group. The combination of acute personnel shortages, TDY assignments, heavy non-operational type flying commitments, i.e., aerial reviews, the necessity for strict adherence to the combat crew cross-training program and a constant turnover in supervisory personnel made more than token compliance with SAC mobility regulations extremely difficult.

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S-3 Narrative Report (Cont'd)

At the time of the initial alert there were twenty-five (25) B-29s assigned to the group--all Q-7 type radar equipped. This number was augmented to thirty (30) by assignment of Q-13 radar ships from Spokane but before departure from Rapid City, the Q-13 aircraft were replaced by Q-7. This jockeying of aircraft created problems in loading, in supply of parts, in trained personnel and in maintenance.

The alert period oscillated between six (6) hours and forty-eight (48) hours and, at one time, orders were received to unload the aircraft and fly aerial review and bombing missions. The final movement order directed departure from Rapid City at 0300 hours, 16 July 1948, routing through Goose Bay to RAF Station Scampton, England. The complete lack of briefing information and the inadequacy of servicing at Goose Bay delayed the movement of the group into the U.K. by at least twelve (12) hours. The last aircraft was in place in England 18 July 1948.

Once the group was in place in the U.K., immediate steps were taken to insure continuation of combat readiness. Turrets were left loaded, a twenty-four (24) hour a day guard was posted on each aircraft, bomb loading practice was conducted with 500# GP bombs and an intense effort was made to coordinate all phases of anticipated operations with the RAF at both base and higher echelon level. With the whole-hearted cooperation of the British the group indoctrinated itself. Lectures on intelligence, navigation, flying procedures and airdrome control were given by RAF personnel. Bombing and gunnery ranges were obtained and a restricted program of flying training was instituted.

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S-3 Narrative Report (Cont'd)

A provisional division headquarters had been established at RAF Station Marham to provide the bare minimums in administrative and operational guidance. It was quickly apparent that the headquarters could not adequately control the three (3) B-29 groups in the U.K. There was little uniformity in operational matters among the three (3) B-29 groups and the major portion of guidance from the provisional division came by word of mouth and not as written directives. Control of the B-29 groups by the provisional division headquarters was never satisfactory, primarily because of the lack of staff personnel allocated to mann the headquarters. From the operational standpoint, the group was directed to maintain ninety percent (90%) of its aircraft in commission, schedule flying to an average of seven (7) hours per aircraft per week, and limit flying to day missions within the confines of the British Isles. Night flying was not authorized until the last thirty (30) days of the TDY period. The point was stressed that the groups were under the operational control of USAFE and that compliance with SAC training directives and procedures was of secondary importance. Low altitude bombing (4000 feet) and low altitude navigation were accented. Division formation missions were scheduled weekly. These were not combat type formations but were primarily aerial reviews for show purposes.

The training which was accomplished in the U.K. was, in the main, not in accord with pertinent SAC training directives. The limitation of total flying time per aircraft per week automatically eliminated

S-3 Narrative Report (Cont'd)

any long range cruise control missions. The lack of radar bombing ranges made actual radar drops impossible.

The island of Heligoland, off the Danish coast was available to the group for one week.

Visual bombing was hampered by the scarcity of ranges and the extremely changeable weather. At the beginning of the TDY period, only 500# GP bombs were available and only one demolition range could be obtained. This range was used by the three (3) B-29 groups plus the RAF. Splash gunnery missions were conducted in the North Sea and served to acquaint the gunners with the gunnery equipment. Many of the gunners had not fired the turrets in more than six months. Others had not fired at all. No air-to-air firing was conducted because of the non-availability of towed targets. It wasn't until the end of the TDY period that camera gunnery missions were scheduled with the RAF Fighter Command. Altitudes on these missions ranged from 30,000' to 1,000'.

The system of reporting combat personnel laid down by the provisional divisional headquarters was not a true indication of the combat potential of the unit. In reporting combat crews available for duty, all staff personnel were included as integral parts of the crews. Thus, squadron commanders, group operations officers, the group staff navigator, bombardier, radar, flight engineer, if not already assigned as combat personnel, were considered available to make up thirty (30) complete combat crews. This left no group operations staff to carry out the normal group operations functions. Under actual combat conditions, a situation such as this would be intolerable.

S-3 Narrative Report (Cont'd)

The problem of combat crew moral was an ever-changing one. All group personnel were restricted to the base for three (3) days after landing in the U.K. This directive, issued by the provisional divisional headquarters, was intended to insure combat readiness of the aircraft and proper briefing of all personnel on British customs and courtesies. After this three (3) day period a pass system was established whereby seventy-five percent (75%) of the group was on the station at all times, eighty-five percent (85%) was available within three (3) hours and the entire group available within forty-eight (48) hours. This system of pass control limited each man to about two (2) evenings off the base a week plus one forty-eight (48) hour pass every three (3) or four (4) weeks. Saturdays and Sundays were considered work days although an effort was made to limit the normal duties as much as possible. Coupled with this seven day a week schedule a one man per aircraft, twenty-four (24) hour a day guard was detailed from among all personnel. This use of sixty (60) men per day seriously affected combat crew potential. For a period of approximately one (1) month the guard system was revised to a roving patrol but was later reestablished at the original schedule because of thefts of aircraft equipment and as an anti-sabotage precaution.

RAF Station Scampton is a pre-war British Station with permanent hangars and other maintenance and administrative facilities. There is no information available as to the maximum stress loading of the runways, hardstands or perimeter track but no break-up of any of these was apparent to date. Normal operations were conducted at gross weights of

S-3 Narrative Report (Cont'd)

approximately 126,000 pounds. Of the three runways, only one, the NE-SW was used by B-29s. It is 8000 feet long and 150 feet wide. The other two runways are considered too short for normal B-29 use. Complete night lighting facilities exist and are adequate. Radio aids consist of a low powered, low frequency, non-directional beacon and a VHF homer. The control tower is manned by RAF personnel.

The base weather station is controlled by 1 Group of RAF Bomber Command and staffed by the British. One American officer and one American enlisted man were assigned from USAFE and worked with the British. The main disadvantage of the present system is that the metro section is located away from the flying line and that all forecasts must be approved by the metro office at 1 Group. It is understood, however, that a completely American metro section will be established in the near future.

Dispersion of aircraft on the field was accomplished by spotting them on hardstands with about 150 feet between aircraft. Normal maintenance was carried on at these hardstands. An alternate dispersal plan involved spotting the aircraft all over the airdrome on the grass areas with approximately 150 yards between ships.

One of the major problems in the event of combat operations was bomb loading. The bomb dump was manned by British personnel using British equipment. Bomb loading tests indicated that the maximum delay was encountered in delivering the bombs from the dump to the aircraft. Weekend were the critical period because most of the RAF ordnance personnel were off the base. Two weeks before the group returned to the U.S., however, 3rd Division Headquarters directed that a full bomb load be placed within rolling distance of each aircraft.

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S-3 Narrative Report (Cont'd)

The ground school training program instituted by the group was designed to familiarize combat crew personnel with the duties of other members of the crew. No attempt was made to complete the requirements of the comprehensive cross-training program laid down by SAC regulations because of the lack of even minimum ground school facilities. Classrooms were inadequate, text books, training aids and mock-ups were unobtainable. Precedence in training was given to establishing the flying proficiency of the combat crew with ground training of secondary importance.

The maintenance factor of ninety (90) percent aircraft in commission at all times was a high goal and was too high a percentage to maintain with the restrictions imposed by personnel shortages, supply difficulties and outdoor maintenance in inclement weather. Although the reports submitted indicate that this percentage was met the major portion of the time, it is common knowledge that commanders will tend to over estimate the capabilities of their maintenance organizations in order to submit a more favorable report. Such reports present an erroneous picture of the combat readiness of the unit and can bring about a dangerous condition relative to immediate combat potential. Augmentation of personnel in both base support and combat group activities, coupled with a more flexible supply system will act to increase maintenance effectiveness. Until corrective action is taken, however, the "90% in commission" figure should not be taken too literally.

Action is being taken by Headquarters 3rd Air Division to acquire additional bombing ranges, both visual and radar, for the exclusive use of USAF units. If clearances can be obtained to bomb at all altitudes

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S-3 Narrative Report (Cont'd)

(many ranges are now limited to 14,000' because of the small danger areas) and satisfactory methods of scoring can be set up, bombing training will be simplified from these standpoints. The RAF, however, has long ago realized that an intensive training program cannot be carried out in the U.K. because of the prevailing weather. There are relatively few days during the year when high altitude bombing can be scheduled and accomplished. Low cloud conditions frequently limit visual bombing to a maximum of 4000'. At the present time there are no ranges within the U.K. upon which completely radar bombing can be conducted. There is one SCR-584 type radar bomb scoring unit which is used by the RAF with secondary or tertiary use permitted by the USAF. All of these factors tend to make the institution of a comprehensive bombing training or proficiency maintaining program difficult of sincere accomplishment.

The SAC Mobility Plan is predicated upon the operation of a combat unit from a base capable of fully providing all support activities. Units undergoing the present ninety (90) day TDY assignment in the U.K. are not on a purely training status. In order for a unit to be considered combat ready twenty-four (24) hours a day, seven (7) days a week, the support furnished by the base must be available on the same time status. The RAF was incapable of furnishing this support, primarily because of its shortage in personnel and equipment and because of the differences in methods of operation between our two services. If USAF units are to continue to be rotated through the U.K. and are required to meet the same operational standards, base support must be provided by completely USAF men and materiel. Joint use of bases is impractical in all its aspects,

S-3 Narrative Report (Cont'd)

administratively, technically and operationally.

One week prior to departure from the U.K., the group was relieved of division flying commitments. Final test flights, maintenance and loading were accomplished. Three (3) aircraft scheduled for the SAC bombing competition at Castle Air Force Base attempted a non-stop flight to Rapid City but adverse winds forced a landing at Goose Bay. The first increment of the main body of the group departed Scampton at 0800 Zebra, 17 October 1948. The main body was in place at Rapid City Air Force Base 20 October 1948.

SECRET

SECTION II

SECRET

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GUNNERY REPORT

The Gunnery Section of the 28th Bombardment Group (H) was affiliated with the Armament and Ordnance sections during this group's TDY period in the United Kingdom. This was found to be advantageous because of the similarity of the sections.

Two-hundred and eighty-four thousand one-hundred and twenty (284,120) rounds of fifty (50) caliber ammunition were expended. No air-to-air or air-to-ground ranges or targets were available, and all firing was done in the North Sea on splash missions.

Gunnery Ground School was conducted by the "coach-and-pupil" method on the line. Zeroing of selsyns, adjusting firing cams and other related gunnery duties were covered by this method. Every gunner also had classroom work covering the weapon, adjustment of the gun charger and safety measures. The CFC gunner did all the instructional work with his crew.

The first gun camera mission flown with the RAF was on Operations Dagger, 4 September 1948. Twenty-seven hundred (2700) feet of gun camera film were exposed. This film was never shown to the gunners but was kept by the RAF Bomber Command.

Joint fighter-bomber missions were flown with the RAF. Two thousand five-hundred and fifty (2550) feet of film were exposed in these missions.

Some of the gunners were OJT gunners who had never fired from B-29 type aircraft. Many of the gunners were former B-26, B-17, and B-24 gunners who had never ridden in a B-29 until just prior to the overseas movement.

None of the aircraft were equipped with interrupter cams to prevent firing into the AN/APQ-7 radar wing.

[redacted]

Gunnery Report (Cont'd)

The external reinforcement on caliber fifty (cal. .50) machine gun barrels, part number D7162259 SAFHR, were becoming loose after only a few rounds were fired. Sleeve should be fastened in some other way.

Recommend that a harmonization range be built at all TDY stations in the United Kingdom. This would mean that harmonization could go on at all times.

Recommend that adequate training devices be taken for gunnery training. One (1) turret mock-up, selsyns, servo-amplifier and many small items would aid considerably in the training of gunners.

Recommend that gunners be trained to a higher degree of efficiency before cross-training in another MOS. Many of the gunners need more training.

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NAVIGATION REPORT

The 28th Bombardment Group (M) operated thirty (30) B-29 aircraft in the United Kingdom from 17 July 1948 to 19 October 1948. Training and operational missions were conducted in accordance with orders received from 3rd Air Division Headquarters.

Air Navigation training was greatly limited by the types of missions flown and the navigational aids available. Aside from the flight from Rapid City to the U.K. no navigation leg was flown in a straight line more than two-hundred (200) miles. The majority of missions flown in the U.K. were tied in with visual and radar bombing missions limiting navigation training to a little map reading and monitoring of the radar scopes on bomb runs.

Rotation of the lead navigator by squadrons and permission to carry out a complete briefing proved to be invaluable as far as training a Staff Navigator is concerned.

Lack of training aids, mock-ups, and lecture room space made it difficult to carry out navigation training. However, 743 hours of navigation cross-training and further training within the 1034 MOS was accomplished. This included a course for all navigators in Pressure Pattern Flying.

It is recommended that long range navigation trips be part of the training planned for future tours in the U.K. This will enable the navigator to use more celestial, loran, radar and D.R. in zones where the territory is unfamiliar.

This group led the 3rd Air Division four times with good results, giving the lead navigators practice in effecting group assemblies.

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Navigation Report (Cont'd)

judging formation turns, etc. Assembly along a line rather than around a beacon or land mark was found to be easier and safer, especially during periods of restricted visibility.

Radar was the primary aid to navigation due to the limited number of radio ranges, the lack of GEE navigational equipment and prevailing low ceilings. The installation of GEE is strongly recommended for future operations. The British have found that the Air Position Indicator is an invaluable aid, especially in the U.K. when frequent wind shifts are encountered. Not enough emphasis has been placed on the use of the A.P.I. in the USAF primarily because the inherent error of the equipment is excessive.

BOMBING REPORT

Bombing training accomplished in the U.K. was not in accord with pertinent SAC training regulations. The point was stressed by Headquarters 3rd Air Division that the combat units were under the operational control of USAFE and that compliance with SAC directives was of secondary importance.

The group was directed to accent low altitude, tactical-type bombing, at 4,000 feet. This radical departure from high altitude radar bombing was closely coupled with minimum altitude navigation missions with simulated bomb runs on selected airfield targets.

Although the amount of training accomplished does not look imposing on the records, each bomb dropped was carefully analyzed. Combat crew integrity was stressed and only a small number of bombs were dropped on each mission. Scoring was effected by triangulation and photographs.

The execution of a comprehensive training program was hampered by several factors.

a. Only one visual bombing range was available for use of both the RAF and the three B-29 groups.

b. 100# practice bombs were not available for about one and one-half months after the group was established in the U.K.

c. The radar range at Heligoland was available for less than a week.

d. Extremely changeable weather conditions forced cancellation of many scheduled bombing missions.

Bombing Report (Cont'd)

An innovation to bombardier training was the splash gunnery missions conducted in the North Sea. These served to acquaint the bombardiers with the CFC system and, in the majority of cases, was the first time many of the officers had actually fired from a B-29.

If more ranges and more practice bombs had been available, it would have been possible to drop a greater number of bombs. It is the opinion of the staff bombardier that as much actual training was accomplished in the ninety (90) day TDY period as was normally realized in six months duty within the ZI.

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WEATHER REPORT

A warm front through the southwestern districts on 17 July 1948 produced small amounts of rain, and this unsettled southwest type continued for some days. On the 21st a deep depression moved northeast across Ireland and Scotland and gave rise to considerable cloudiness over the English Isles.

An anti-cyclone developed over South Scandinavia on the 25th and spread westward and produced a spell of very fine warm weather which commenced on the 25th in the southeast and spread later to all districts. Thunderstorms broke out over the West Midlands, Wales and Ireland on the 28th, in the southwest on the 29th, and over a large area in the south on the 30th and were severe in some western districts. Monthly rainfall figures were mainly below average.

The fine warm spell of late July collapsed on August 2nd and an exceptionally wet period followed. Following a cloudy ridge of high pressure on the 4th a complex depression spread in from the Atlantic bringing rain to all districts and exceptionally large amounts in Southern England. On the 7th a deepening depression approached the Western English Channel from the southwest and during the night this depression moved north-northeast to Southwest England and then east-northeast across London to the North Sea. Rainfall was heavy. A weaker depression moved east-northeast from the Bristol Channel to the Wash on the 11th and further heavy rain and thunderstorms occurred near the centre. A depression which crossed Scotland on the 15th - 16th brought further rain. A cool showery period followed with local thunder, chiefly in northern and central areas. Further deep depressions until the 25th chiefly effected the west and north. From the 22nd onwards there was little

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Weather Report (Cont'd)

rain in the south and long bright periods. By the 27th an anti-cyclone covered the British Isles and fair weather resulted over England and Wales until the 31st. There was, however, appreciable rain in Ireland and most of Scotland during the period and rain spread to all districts by the evening of the 31st. Rainfall was generally well above normal for August.

The first half of September was generally unsettled especially in the north. The second half was mainly fair in the south but still unsettled in the north. Winds of the numerous deep depressions which pass d northward of Scotland were originally tropical hurricanes. On the 2nd to 4th a deep depression moved east-southeast across the British Isles and filled up after giving general rain, heavy locally, with thunderstorms in places. Subsequently, a series of deep depression followed tracks well to the north of Scotland. Weather was changeable, tut in the southeast weather was fair from the 7th until late on the 10th. On the 12th a small depression moved eastward across Southern England giving considerable rain. A deep depression formed northward of Scotland on the 14th and a small one moved east near the Scottish border on the 15th but these gave almost no rain in the south. On the 15th and 16th an anti-cyclone developed off the southwest coasts which extended east and produced a fair spell in the south, while unsettled weather continued in the north. A new anti-cyclone which developed south of Greenland introduced a cooler spell on the 20th - 22nd with ground frost at many places. The anti-cyclone moved southeast and temperatures

[redacted]

Weather Report (Cont'd)

soon rose with more fine weather in the south but unsettled conditions in the North. A cold front with small waves on it gave the only appreciable rain in the second half of the month in southeast districts. It was followed by a large new anti-cyclone which was centered near the southwest coasts on the 30th.

For the first ten days of the month of October the weather was characterized by a large anti-cyclone centered on the European continent giving generally fair weather over the southern portions of England although considerable fog areas developed after midnight during this period and persisting till near noon on the following days.

SCAMPTON, ENGLAND

Observations at	JULY 0900	JULY 1500	JULY 2100	AUGUST 0900	AUGUST 1500	AUGUST 2100	SEPTEMBER 0900	SEPTEMBER 1500	SEPTEMBER 2100
Low Cloud									
Below 1000 feet	1	1	0	8	3	4	2	1	1
1000 - 5000 feet	24	26	20	17	25	15	18	26	12
5000 - 8000 feet	0	0	0	0	0	1	1	0	6
Visibility									
Dense fog	0	0		0	0		0	0	
Thick fog	0	0		0	0		0	0	
Fog	0	0		0	0		0	0	
Mist	0	0		1	0		0	0	
Good Visibility	17	24		12	24		12	22	

GROUND TRAINING REPORT

The ground training program was put in operation following the arrival of the 28th Bomb Group (M) at Scampton RAF Station, Lincoln, England on 17 July 1948.

Training policies were established in accordance with existing SAC directives but existing conditions at this station prohibited strict compliance. The training program set in operation consisted of the following subjects:

a. Navigation Lectures for Pilots and Bombardiers.

b. Bombing Lectures for Pilots and Navigators.

c. Gunnery Lectures and Ground Training on Guns and Turrets for Bombardiers and Gunners.

d. Ground maintenance instruction for Flight Engineers.

e. Communications Lectures for Pilots.

f. Communication Maintenance for Radio Operators.

g. Intelligence Lectures for all Officers.

h. Aircraft Recognition for Bombardiers and Gunners.

i. Radar Familiarization for Navigators.

j. Weather and Preflight Planning for Pilots, Navigators and Flight Engineers.

k. Medical lectures for all Flight Crew Personnel.

Many difficulties were encountered in establishing the above outlined program. With plans in view for a thirty (30) day TDY tour no preparations were made to bring training materials as part of the accompanying baggage. Plans for establishing classrooms had not been

Ground Training Report (Cont'd)

made in advance and building accommodations at Scampton were limited making it practically impossible to establish the training program under conditions of maximum efficiency. The primary deficiency was the lack of training aids and lecture material. This put the instructors under a severe handicap.

The man hour breakdown of training accomplishments is as follows:

a. Navigation lectures	-	743 hours
b. Bombing lectures	-	497 hours
c. Gunnery lectures	-	3089 hours
d. Aircraft Maint.	-	297 hours
e. Communications	-	210 hours
f. Intelligence	-	380 hours
g. Aircraft Rec.	-	600 hours
h. Radar Familiarization	-	115 hours
i. Weather & Flt Planning	-	600 hours
j. Medical lectures	-	200 hours
Total hours	-	6731 hours

It is recommended that every effort be made to provide the necessary training facilities in the event ground training is to be carried on under similar circumstances in the future.

SECRET

RADAR SECTION

The 28th Bombardment Group (M) operated thirty (30) B-29 aircraft equipped with APQ-7 radar in the UK from 17 July 1948 to 19 October 1948. Training and operational missions were conducted in accordance with orders received from 3rd Division Headquarters.

With no training mock-ups available, ground training was limited in scope but classes were conducted to further familiarize navigators and bombardiers with the problems of radar navigation and bombing. Valuable flight training was gained during this period of operation because of the importance of radar as a means of navigation in this particular theater. Low ceilings, weather, and limited navigational aids placed heavy importance on the use of radar by this group.

A total of 84 500 lb bombs were dropped on Heligoland by radar and a total of approximately 1525 hours scope time were accomplished during this assignment. Several radar missions were conducted on the one available ground plot radar scoring station in the U.K. In the absence of radar bombing ranges, simulated radar bomb runs were made on targets of opportunity on practically all flights.

Heligoland was available to this group for two days for radar bombing. Other than that, no radar bombing range was available. Several problems were encountered before utilizing the one radar ground scoring station (comparable to SCR-584) in the U.K. Only one set of crystals for air-to-ground communications were eventually made available to this group, thus limiting its use. Most of the missions scheduled for this ground scoring station were cancelled due to the priority

SECRET

Radar Section (Cont'd)

of the RAF.

The importance of radar in this theater cannot be over-stressed and all crews in the ZI should be trained to use it as a primary means of navigation. Because of its size and coastline, the U.K. affords ideal conditions for training radar operators and developing their speed in obtaining winds, ground speeds and drift. It is recommended that radar bombing ranges be acquired or made available for USAF bases in the U.K. and that additional radar bomb scoring units be established.

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COMMUNICATIONS REPORT

The communication personnel were originally split into three representative groups at Rapid City, each group to be able to set up operation of all Squadron "A" functions immediately upon arrival.

After operations were established, the communication personnel were divided into four sections. These consisted of: Teletype, Radio, Crypto and Telephone personnel.

On 20th July, the Teletype Section went into operation using the call sign CKO assigned by the British. The 28th of August our call sign was changed to JFQAMA, and on the 27th it was again changed to JFLS. Both of the latter were assigned by U.S. agencies. Prior to 22 July, the schedule called for an eight hour day, thereafter the teletype section stayed open around the clock.

When Headquarters 3rd Air Division moved from Marham to Bushy Park, the GPO installed two new British teleprinters on direct lines to Bushy Park. The loop to Marham remained installed until about 1 October.

The Radio Air-to-Ground Station was installed by the British, consisting of one 500 watt transmitter. This station was placed into operation on the 23rd of July. No USAF equipment was available at the time the ground station was installed. The British supplied the necessary equipment while the 28th Bomb Group supplied the operators, this arrangement worked satisfactorily.

The Crypto Section went into operation on the 24th of July with two Crypto Technicians and the Communications Chief for relief. The first location of the Crypto Section was insecure in that the windows were not

[redacted]

Communications Report (Cont'd)

barred, no suitable safe could be obtained and the door was neither fireproof nor sound proof.

Ground School was held to familiarize all flying radio operators with procedures and operating conditions in the U.K. Training was given in the use of Nanad, the British equivalent of Radio Facility Charts. Operators were given instruction in the operation of Consol and on flights over the U.K. helped the navigator to determine the aircraft's position by use of Consol. All operators were familiarized with the British ATC, and worked the ATC Centers on actual flight around the U.K.

A Radio Beacon was installed by the British as an aid to navigation.

Upon arrival, it was found that USAFE had sent teletype personnel here from Germany to install and begin operation of a teletype loop using a KE-97 teletype set with Marham, 3rd Air Division Headquarters as NCS and relay station. However, the loop was to be established on GPO lines which carry a constant load of 110 volts with 20 milliampers of current necessitating the use of a British teleprinter in place of the KE-97.

The encrypted flow of traffic in the code room was slow during the first few weeks due to the limitations of both security and the system in use. On the 1st of September the crypto section was moved to a more secure location in the same building as the Group Headquarters. This room had barred, opaque, windows, thick brick and concrete walls and a heavy steel door. In this location class "A" systems were replaced through heated channels and put into operation. From that day until departure, encrypted traffic volume steadily increased.

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Communications Report (Cont'd)

All control towers in the U.K. are on different VHF frequencies for local control and VHF D/F. Sufficient sets of crystals were obtained from the British to crystallize all B-29 aircraft.

Standard channelization of the VHF was not accomplished before leaving the ZI nor immediately after arriving in the U.K. A conference was held in USAFE Headquarters at which standardization of the VHF was set forth.

In order to use the British Bombing Ranges, both visual and radar, a limited quantity of crystals were obtained. Crystals for the Radar Range were the biggest problem as only one set was obtained. These crystals had to be changed each time a different plane used the range. The same procedure applied to fighter cooperative missions.

It is the recommendation of the Crypto Officer of this organization that, to facilitate prompt and adequate crypto communications, Class "A" systems and pertinent supporting documents should be held by each Bombardment Group Headquarters. It was six weeks after the arrival of the group in the U.K. before two CH-7C safes arrived containing all the items necessary to establish an efficient code room capable of handling the traffic.

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FLYING TRAINING AND GROUND TRAINING ACCOMPLISHMENTS

The following is a tabulation of the flying training and ground training accomplishments of the 28th Bombardment Group during its ninety (90) days TDY at Scampton, England:

Total Time 16 July 1948 to 15 Oct 1948:	-	3018
Total Time in UK:	-	2441
Total Night Time:	-	32:00 (Approx)
No Division Missions:	-	7
No Fighter Interception sorties:	-	38
No Bombs Dropped	-	455
Visual: 371 CE:	-	288
Radar: 84 CE:	-	1362
No SCR 584 Runs: 15 CE:	-	1600
Rds Ammo Expended:	-	284,120
No GCA Approaches:	-	177
Man Hrs Ground School:	-	5771
Percent Acft in Commission:	-	91%

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NARRATIVE REPORT

OF

2[illegible]TH BOMBARDMENT GROUP S-4

90 Days TDY - England

FROM

17 July 1948

to

19 October 1948

OFFICE OF THE GROUP ENGINEERING OFFICE
HEADQUARTERS 28TH BOMBARDMENT GROUP (M)
Rapid City Air Force Base
Weaver, South Dakota

MLM/jbc

28BG34 319.1

21 October 1948

SUBJECT: SAC Report for TDY Mission, To England

1. The inclosed report on the TDY Mission performed by the 28th Bombardment Group (M) to RAF Station Scampton, Lincoln, England from 17 July 1948 through 20 October 1948 is herewith submitted in five parts as follows:

Part I - Supply (Squadron and Base)

Part II - Electronics Section (Radio and Radar)

Part III - Transportation

Part IV - Armament and Ordnance

Part V - Engineering (Including Flyaway Kits)

2. The inclosed report was sub-divided into parts as listed above for clarification. Due to the many and varied subjects to be discussed, it is believed that the above divisions will aid in deriving the greatest benefits from the report.

MARSHALL E WOOLEVER
Capt, USAF
S-4

[redacted]

PART I

Report for TDY Mission of 28th Bomb Group (M), Supply (Squadron and Base)

SECTION I - SUMMARY OF TRAINING AND ACCOMPLISHMENTS

Since this section was strictly an improvised "set up" little or no training in MOS specialties was possible. Another reason for lack of training was that almost no prescribed supply procedures were used. The benefits from training stand point consisted in the fact that improvised means were used to accomplish the desired ends.

SECTION II - PROBLEMS ENCOUNTERED AND ACTION TAKEN

It was decided in RCAFB prior to leaving that an officer from base supply be sent with the group to act as their representative. This was done and a sub base supply was established at Scampton. This idea was vetoed by higher headquarters soon after arrival at Scampton and we were told to use the depot at Burtonwood for accountability which has since been straightened out.

The group supply section was set up and charged with the responsibility of coordinating all supply requirements for the group. Requisitions were received from the several squadrons and departments, then consolidated prior to being forwarded to our source of supply. All serviceable and unserviceable parts were received and issued from this section.

Source of supply was set up as follows; Ordinary replacement aircraft parts from RCAFB, ACCP from USAFE and clothing from Weisbaden. Most of the sources fell down and toward the end the group was depending upon the home station for all supplies. During the first part of the TDY a few supplies (clothing, cleaning materials, etc.) were received from Weisbaden but during the last two months no supplies were received from this source. Third Air Division was helpfull in a few cases in getting ACCP's for the group. Another source of supply that worked out very well was the interchanging of aircraft parts between the several groups now stationed in the U.K. The two other groups(307th and 2nd Bomb Groups) were very cooperative and helped to a great extent.

Normally the stock record card is used to record receipts, issues, balances and the due in and due out quantities. Since this form was not available nor feasible for use, without visible file, cabinets, bin cards were used. Columns on the reverse side were suitably modified to record due in and due outs.

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Part I, Section II - Problems Encountered and Action Taken (Co t'd)

Due to the limited facilities, personnel, and insufficient supply of issue slips, the usual "due out" procedure prescribed in TM 38-410 could not be used. In lieu of this, signatures for receipt of property, were obtained opposite each item on the issue slip when same was issued. In this manner the need for preparing "Due Out" vouchers was eliminated.

An Officer was designated responsible officer to draw supplies from the RAF and the Depot at Burtenwood. This necessitated a memorandum receipt section being set up to pass on responsibility to the various Squadron supply officers on memorandum receipt property. All property documents were vouchered and filed in the usual manner and these will be taken to our home station for the accountable officers file.

Lumber, equipment and materials for packing and crating unserviceables were not available. This problem was solved by reclaiming boxes the PX and those received with serviceable supplies.

Wiesbaden, Germany was designated as our source of supply for other than Air Force property. Requisitions were submitted through the CO 3rd Air Division, and all instructions received were verbal. This resulted in much confusion and less than half the property ordered was received. A shuttle air lift was operated between Wiesbaden and Marham from whence supplies were brought to Scampton by truck. Shipments were very haphazard, no manifests were sent with the property, boxes or packages in many instances were not addressed, and no air freight terminal was set up at Marham. As a result a good percentage of shipments never got to the proper consignee. These difficulties were reported to the Division and a supply conference during the latter part of August was held at Marham to try and iron them out. We were instructed to submit requisitions twice monthly - to date no supplies requisitioned since that time have been received. It is believed that the supply establishment at Wiesbaden is not of sufficient magnitued to furnish three heavy bomb groups in addition to their own station.

On leaving the home base no one seemed to know what would be needed in the way of equipment or what job would be assigned upon arrival. From past experience it was decided to have at least an intial supply of forms, office supplies and a typewriter. It turned out that the group had to get along the whole time on what was brought, as repeated requisitions to

[redacted]

[redacted]

Part I, Section II - Problems Encountered and Action Taken (Cont'd)

Wiesbaden for office supplies availed nothing. The Cryptographic Officer had to make envelopes out of regular 8 x 10½ paper to distribute secret messages.

The Group was first ordered out on 30 days TDY, then it was extended to 60 and 90 days and for a time the duration of our stay was unknown. As a result of this many men failed to bring adequate clothing and suffered some discomfort. Requisitions for winter clothing to repair this difficulty were submitted but it was too late since we had gone before it arrived. This uncertainty as to length of our stay also made it difficult to intelligently plan our needs and when to "cut off" requisitioning supplies which could not possibly arrive prior to our departure.

An advance party was not sent to precede the Group's arrival. This resulted in considerable confusion in assigning billets, etc., and the responsible officers, to receipt for bedding, furniture, etc., furnished by the AAF, were appointed only after the property was in use. In the meantime much of it had been moved around and it later proved difficult to fix responsibility and obtain proper receipts which process taxed the AAF personnels patience to the utmost.

SECTION III - CONCLUSION AND RECOMMENDATIONS

It is quite obvious that the Group was figuratively "thrown out" with very little planning and provisions for its support. There is no question that the Supply Channels provided would not have sustained any extensive operations had they been necessary. A Bomb Group cannot operate successfully without normal base facilities for any considerable length of time.

It is recommended that:

a. Future missions be preceded by an advance party to make a survery of equipment needs, facilities, etc., and prepare to receive the Air Bachelors.
b. Adequate provisions be made for supply needs.
c. If at all possible, the duration of the mission should be known at once in order to permit intelligent planning as to requirements for equipment, clothing, etc.

[redacted]

[redacted]

Part I, Section II - Problems Encountered and Action Taken
(Cont'd)

d. Personnel from all branches of supply be sent with proper catalogues and stock list for their particular equipment, i.e., signal , QM and Ordnance.
e. That a complete transportation section accompany the movement.

[redacted]

LIST OF SUPPLIES DRAWN FROM STATION STORES, RAF STATION SCAMPTON

SECTION	REF-NO.	NOMENCLATURE	UNIT	AMT
8-L	6	Lamp 200 W.	ea	2
21-C	1339	Wicks	ea	2
28-K	3514	Cable	ft	12
29	1005	Tacks Copper	lb	1½
32-A	111	Twin Packing	rl	1
32-B	343	Rags	cwt	4
32-C	637	Tape Cellulose	rl	2
32-C	944	Tape Cellulose	rl	5
33-C	NIV	Crayon, Black	ea	43
33-C	100	Soda, Caustic	cwt	3
33-C	246	Spirit, White	gal	1
33-C	620	Carbon-Tet	gal	5
33-C	720	Ethyl Alcholol	gal	5
33-C	777	Inhibitor	gal	15
33-D	221	Polish, floor	lb	85
33-D	343	Powder cleaning	ea	24
34-A	27	Fuel MT	gal	300
34-A	81	Fluid Hyd.	gal	20
34-A	162	Oil MT	gal	100
34-B	500	Oil Parrafin	gal	808
71-A	113	CO 2	lbs	35
114-B	94	Paper Bromide Cr-3	grs.	10
114-B	368	Paper Bromide Cr-4	grs.	10

[redacted]

PART II

Report for TDY Mission of 20th Bomb Group (M), Electronics Section.

SECTION I - SUMMARY OF TRAINING AND ACCOMPLISHMENTS

All radio operators were trained in organizational maintenance by maintaining the sets in their own airplanes. Supervision of training and maintenance on radio equipment was exercised by the section chiefs. The high experience level of these men contributed to the effecient operation of the squadrons even though flyaway kit spares were incomplete. One component part of each radio and radar set was brought by each squadron as spares. These were drawn on hand receipt at the home station.

All Radar mechanics received valuable "on-th-job training" on this TDY trip. Each man had the opportunity for some field maintenance on their equipment under the supervision of three Radar repairmen, MOS 955. Field maintenance was necessitated by the lack of replacement units and it became necessary to remove parts from one unit in order to repair another unit.

SECTION II - PROBLEMS ENCOUNTERED AND ACTION TAKEN

Several radio compass loop base mounting plates cracked and were repaired in accordance with instructions in the UR Digest.

Since all British power supply at this station is 230 volt AC, difficulty was encountered in obtaining the correct 28 bolt power requirements for operating field maintenance radio and radar mockups. Rectifiers were requisitioned from the Royal Air Force but they were not available in sufficient quantity and the capacities were not entirely adequate for the requirements. A total of three rectifiers were drawn from the British and these were supplemented by use of RAF storage batteries and C-13A power plants for driving a PU-7 inverter for supplying 115 volt AC 400 to 2400 cycles and an MG149F inverter for supplying 110 volt 400 cycle power. Several combinations of rectifiers and batteries were used before a suitable combination was found. The operation of the mockups could be improved by the installation of adequate transformers. One 110 volt 2500 kw transformer was supplied for use by this section. All cryptographic section equipment plus testing equipment requiring 100 volt power supply was operated from this transformer.

Trouble was encountered with braces and baffle plates cracking on the AS-82 antenna assemblies. These were repaired locally and returned to service. Two cases of bearing failures in these antenna assemblies were encountered and the defective

[redacted]

Part II, Section II - Problems Encountered and Action Taken(Cont'd)

units were used for parts. Four cases of antenna selsyn motors failing were encountered. Three were replaced through cannibalization of other repairable antenna assemblies.

The plastic leading edges of the antenna assemblies were severly damaged by gravel during taxing of aircraft. Most of the taxiways leading into hardstands were covered with a fine crushed rock. Spilling of gasoline onto the leading edges of the wings by the aircraft maintenance crews during inspections weakened the leading edges to the degree that they had to be replaced in one or two instances. Three low voltage rectifiers went bad during the TOUR period. One was used for parts. In each case, the transformer part of the rectifier failed.

Some trouble was experienced with modulators (MD-8) which required tube replacements. Field maintenance was performed on one of these units in order to return it to use.

No unusual difficulties were experienced with the Radio Frequency Units and the IE-36 and IE-97 indicators. In each case these units were returned to use by replacing fuses and tubes.

The moisture content of the air caused some corrosion in the relays. Frequent cleaning corrected this difficulty. A larger of number of dehydrating units were used for the same reason.

The critical shortage of transportation was definitely a hindrance to the effective functioning of this section. Radio and Radar mechanics had to wait for Line Taxis and more or less "Chisel" rides when they could.

Since the British were responsible for the maintenance of the Air to Ground Station no difficulties were encountered that affected the operational effectiveness of the group.

The British General Post Office Department was responsible for the maintenance and upkeep of all teletype equipment. This fact at times interfered considerably with our operational effectiveness since our maintenance personnel were not allowed to make repairs on this equipment. On several occasions the lines were "out" for a day or two before the necessary British Channels could be transferred successfully. The one and only on-station circuit between the cryptographic center

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Part II, Section II - Problems Encountered and Action Taken(Cont'd)

and the teletype room was installed and maintained very effectively by our own personnel utilizing our own equipment brought from the U.S.

The telephone exchange and all equipment was under the control of the same British agency. Our personnel were utilized as switchboard operators only. In this instance service was very good and no great difficulties were experienced.

The installation of cryptographic equipment was accomplished with the aid of an installer-repairman who accompanied the equipment from Headquarters, USAF. The one occasion of a breakdown caused a delay of a day and a half in normal operation until a cryptographic repairman could be borrowed from the 307th Bomb Group at Warton, England to repair the trouble. The authorization and presence of one such MOS in each group, or as a very minimum alternative, the assignment of one to the 3rd Air Division Headquarters would seem essential to safeguard future operations from breakdown and unnecessary delays.

SECTION III - CONCLUSIONS AND RECOMMENDATIONS

It is recommended that spare parts such as resistors and condensers be supplied in the flyaway kit lists. Although qualified radio and radar repairmen were on hand, the necessary parts were not available for them, to accomplish the required parts. The flyaway kit spares, while authorized under the provisions of SAC Manual 67-50-1 dated 1 March 1948 for this section, authority to requisition was with-held by higher headquarters. It was contemplated that initial issue would be made in the form of an AF special project. Such a shipment was never made. It is recommended that each squadron be supplied with all electronics spares now authorized in the above mentioned SAC Manual. It is requested that study be given to the possibility of including selsyn motors, resistors, fuses, transformers, antenna motors, etc. referred to above being included in the authorized spares.

SECTION IV - LIST OF ALL PARTS USED

The complete list of all parts used are included in Section IV of Part V of this report.

[redacted]

PART III

Report for TDY Mission of 93th Bomb Group (H), Transportation

SECTION I - ACCOMPLISHMENTS

Upon arrival at RAF Station Seampton, the 93th Bombardment Group (H) Transportation Section was given an allotment of British vehicles and drivers. These vehicles included tankers, fire tenders, crash wagons and personnel carriers. The vehicles issued at this time were over and above the vehicles normally issued for station use. All vehicles in the Base Transportation section were committed to daily use and could seldom be used by the USAF.

The vehicles assigned to the USAF transportation section were divided among the three (3) squadrons. Each squadron was issued one (1) small van, one (1) tractor, one (1) troop carrier, one (1) three (3) ton truck and one (1) coach with seats. One (1) small car was issued to the group commander.

Notification was received that American vehicles were available for pick up at Burtonwood(New American Depot). These vehicles were picked up and taken in convoy to RAF Station Seampton. These vehicles consisted of three (3) F-1 four thousand (4000) gallon gasoline tankers with tractors, three (3) F-15 oil trucks, three (3) one quarter (¼) ton jeeps, three (3) three quarter (¾) ton weapons carriers and one (1) one and one quarter (1¼) ton Ford Fire truck.

SECTION II - PROBLEMS ENCOUNTERED AND ACTION TAKEN

The allotment of British vehicles used by the Americans were on the most part reconditioned and had been in storage for a long period of time. As a result, the vehicles were too frequently out for inspection or ACOP.

The drivers assigned by the RAF were not experienced in operating the equipment. Most were OJT, which may have been a contributing factor to the poor operation of equipment.

The USAF Transportation Officer performed as a liaison officer, having no command over the drivers or equipment. He could only make suggestions which were for the most part ignored.

It was impossible to place American drivers on the RAF vehicles. Several infractions of Base Regulations were noted and given to the Base Transportation Office for action. No action was taken in any case.

[redacted]

Part III, Section II - Problems Encountered and Action Taken(Cont'd)

No advance warning was given to notify squadrons of vehicles being pulled for inspections or to perform other duties.

The American vehicles received from Burtonwood were in either fair or good condition. No spare parts, no spare tires and no tool kits were with the vehicles. Due to shortage of personnel at Burtonwood, the vehicles were not properly equipped.

There were no motor maintenance men included in the roster of the 28th Bomb Group(H), only those needed in the engineering sections. This necessitated borrowing men from the squadrons for the maintenance of the American vehicles, lessening the working potential of the squadrons engineering sections and still did not provide proper maintenance for the vehicles.

SECTION III - RECOMMENDATIONS

It is recommended that if the USAF organizations are to operate on British bases, a definite plan be made and executed, showing requirements and allowing the USAF Transportation Officer on duty at that base a definite command of the vehicles assigned to him.

It is recommended that less emphasis be placed on the Americans being guests and more emphasis be placed on work and improving efficiency.

[redacted]

PART IV

Report for TDY Mission of 28th Bomb Group (M), Armament and Ordnance Sections.

SECTION I - ACCOMPLISHMENTS

The Armament and Ordnance Section of the 28th Bomb Gp.,(M), adequately performed all of its designated functions during the TDY period spent in the United Kingdom. Two days after arriving at RAF Station Scampton, the RAF armament officer was contacted and four Nissen huts were obtained; one for each squadron armament section and one for ammunition storage for all three squadrons. One large room was obtained in a hanger adjacent to the perimeter track for bombsight maintenance. A small room next to this was established as Group Armament, Ordnance and Gunnery Office. Group armament was given a room for the storage of tools, etc. Thru the RAF armament officer, three tugs and six bomb dollies were obtained to unload armament equipment from the airplanes and to transport it to the armament huts.

The fourth day at Scampton a practice loading of bombs was performed. It was planned to load sixteen bombs per aircraft. Bombs were AN-M-64 five hundred (500) pound general purpose bombs. It was found that the RAF could not get the bombs to the aircraft in enough quantity or in a short enough period of time. At the suggestion of the RAF Armament Officer, the practice loading was delayed for two days. The second time the bombs were leaving the bomb dump at the rate of one hundred and fifty per hour. One squadron practiced loading and an average was taken. The resultant figure showed that an average time for loading thirty airplanes would be one hour per bomb; i.e., if thirty airplanes loaded sixteen bombs each, the time would be approximately sixteen hours. The delay in loading was due to shortage of hoists, shortage of external power units, and type of hoists used. The Hoists in use at this time were type C-3. Type C-3 hoists were requisitioned immediately. The C-3 hoists were received and the loading time was estimated (at forty bombs per aircraft) at slightly over twelve hours. Bombs were placed at the aircraft hardstandings and the loading time was estimated at six and one half hours.

Harmonization of the sights and turrets was started on the fifth day at Scampton. Range harmonization was employed due to lack of a harmonization range. This work went slowly during the TDY period due to other armament work and mainly due to high winds and frequent days of poor visibility. During the month of September only three days were suitable for harmonization. Other detriments were the shortages of harmonization equipment and external power units.

[redacted]

Part IV, Section 1 - Accomplishments(Cont'd)

Difficulty was experienced in getting four volt current and one hundred and ten volt current for the bombsight maintenance shop. Twenty four volt current was obtained by wiring it to the bombsight maintenance shop from the radar maintenance shop, which got its current from an external power unit. Eighteen days elapsed before a transformer was obtained with which to cut down the normal two hundred and twenty volts to one hundred and ten volts. Two bombsights were inoperative for this period due to stabilizers.

Bomb storage areas consisted of three two hundred ton dumps and two seventy ton dumps. At one time over eight hundred tons of explosives were stored in these areas. Approximately one half of the bombs stored in these areas were British bombs. Efforts were made to have the British bombs removed, but they were not moved during this groups TDY period.

Approximately two weeks before departure word was received from Third Air Division Headquarters to place bombs at the aircraft hardstandings. Twenty AN-M-64 bombs and twenty AN-M-81 bombs were placed at each aircraft hardstanding.

Ammunition storage facilities are considered adequate. The RAF armament section belted and delivered all ammunition required.

All upper turrets in the aircraft were left loaded at all times on the ground for base defense purposes.

One hundred and eighteen AN-M-64 bombs were dropped. Three hundred and thirty eight M-38A2 were dropped.

Three hundred and eleven thousand four hundred and twenty round of ammunition were fired.

PART IV

Report for TDY Mission of 28th Bomb Group (M), Armament and Ordnance Sections.

SECTION II - PROBLEMS ENCOUNTERED AND ACTION TAKEN

The loading of bombs was slowed down as the type hoists then in use (hoist assembly, type C-6) were breaking inside the drums. These hoists were replaced by hoist assembly, type C-3A. The C-3A hoist is a manual hoist, but can be converted to an electrical hoist by use of a motor drive.

The external sleeve reinforcements on cal. 50 gun barrels were coming loose after firing only a few times. Unsatisfactory Reports were submitted on the part. Front barrel bearings were coming loose after firing once or twice. These parts were restaked so as to prevent unscrewing.

The ammunition loaded in the aircraft was handled so much before leaving Rapid City Air Force Base that it was Grade 3 upon arriving at Scampton. This was not due to mishandling so much as to over handling. Much of the ammunition was turned in at Scampton for salvage. New ammunition was obtained from the RAF when necessary.

Many of the small arms started rusting, even when stored in the station armory. A policy was established so that the small arms were cleaned and oiled at least once each week. Guard weapons were cleaned daily.

Aircraft weapons were cleaned twice weekly. Weapons left in the open rusted in five days time.

Guide rods for link ejection chutes were not available prior to being alerted for the TDY trip. These were manufactured locally in sufficient quantity to completely equip all aircraft.

Insufficient rags and cleaning materials were taken with the group. These items could be obtained from the RAF, but the cleaning rags were in small quantities and not adequate to meet the needs.

Many small parts that were needed were not in the fly away kits. There were no filters for compressor motors, no intervelometers, no micro-switches for booster motors, etc.

Only group bombsight maintenance had one hundred and ten volt and twenty four volt current.

A critical shortage of Technical Orders existed. The only applicable ones were in the Rapid City Air Force Base master file in the Wing Tech Inspection section.

Part IV, Section II - Problems Encountered and Action Taken (Cont'd)

Transportation was difficult to obtain. Bombsights had to be carried to and from the aircraft by means of the line taxi. Although a weapons carrier was assigned to each squadron, they were in constant use. Many delays were experienced due to lack of transportation.

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PART IV

Report for TDY Mission of 28th Bomb Group (M), Armament and Ordnance Sections.

SECTION III - RECOMMENDATIONS FOR TDY IN THE UNITED KINGDOM

It is recommended that each unit going on TDY in the United Kingdom be completely equipped with C-3A hoists. (Hoist assembly, type C-3A, Class 11A, stock number 8490-385815) These hoists are sturdier that the C-6 hoists and not as many malfunctions are liable to occur.

In conjunction with the type C-3A, hoist, it is recommended that a drive unit be used. These drive units (Kit, Bomb-rack, C-3 hoist, 24 VDC and 110 VAC, ½ HP, motor drive, Schnitzer-Cummins, Class 19-A, Stock number 8200-417000) will convert the manual C-3A hoist to an electrical driven unit. If possible, the 24 volt drive unit should be obtained as its power source can, if necessary, be the airplane auxiliary power unit.

Small parts should be taken in the flyaway kits. Some of the parts likely to be needed are filters for compressor motors, intervalometers, micro-switches for booster motors, guide rods for link chutes, and necessary cleaning solvents and oil. An ample supply of rags for bombsight maintenance should be carried.

One portable bombsight shop and one portable armament shop per squadron should be taken. Nomenclature: Shop, field maintenance, air-borne, complete, Class 19-A, stock number 8200-854000. Both shops have the same nomenclature and stock number. Equipment for the bombsight shop is in TO 00-30-5 and for the armament shop is in TO 00-30-184. These shops have twenty-four volt current, one hundred and ten volt current and compressed air. For TDY of longer than ninety days add one of each to group armament section.

Pertinent technical orders should be taken in sufficient quantities for all shops and sections regardless of location.

Two cartridge positioning machines per squadron should be taken.

At least one two-to-one step-down transformer should be taken as most of the USAF equipment is designed for 110 volt current, and the British current is 220 volts.

It is recommended that the following personnel be included for TDY periods of ninety days or less:

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Part IV, Section III, Recommendations for TDY in the UNITED KINGDOM(Cont'd)

a. Remote Control Turret Repairman(MOS 575): Two (2) for the group with a computer field kit.
b. Bombsight Mechanics (MOS 685): Two(2) per squadron.
c. Airplane Armorer (MOS 911): Two (2) for group armament and five (5) per squadron.
d. ROT Mechanic (MOS 960): Three (3) per squadron.
e. If the tour of TDY is to extend ninety (90) days, it is recommended that two (2) bombsight and automatic pilot repairman (MOS 874), Two (2) ROT mechanics (MOS 960), and three (3) bombsight mechanics (MOS 685) be assigned to group armament section.

Armament parts in flyaway kits should be inspected upon receipt. Many parts needed in the flyaway kits had been on order for over six months. Upon being alerted, emergency requisitions were forwarded and parts were received incomplete and unserviceable. There was insufficient time to put all parts in a serviceable condition. Parts were received from Odgen Air Material Area with Serviceable Parts Tags that were found to be unserviceable due to improper crating and handling. Bombsight stabilizers, servo amplifiers, and compressor motors were the main items damaged due to improper crating and handling.

Each squadron armament section should be issued a weapon carrier for transportation. Group armament needs no transportation.

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Part 5

Report for TDY Mission of 20th Bomb Group ( ) Engineering Section

Section 1: Summary and Accomplishments

Adequate organizational maintenance and supply personnel were taken on the trip for the amount of flying accomplished by the group. However, a shortage in Field Maintenance personnel hampered the efficient operation of the Maintenance Sect on to a considerable degree. RAF Station Pocklington is an RAF modification station for the Lincoln bombers, and as such has a limited number of Field Maintenance shops. Though these shops are not as completely equipped as those in the Field Maintenance shops of any station in the United States, they were adequate to fulfill the needs in most of the cases. The RAF permitted us to put our Field Maintenance personnel in the shops along side of their own men and made available any tools and supplies that they had on hand. It is a known fact that the use of these shops materially reduced the number of AGO requisitions for aircraft parts. For example, two airplanes were damaged in the overseas by accidental gun fire and the repairs were accomplished only through the shop facilities made available to us. If these shops had not been available, two dorsal fin assemblies, one vertical stabalizer, and one rudder would have been placed on AGO requisition from the United States. The Bomb Group departed the US on what was then thought to be a 30 day TDY trip, consequently the stress was placed on organizational maintenance personnel and not of Field Maintenance personnel. Certain Field Maintenance personnel were taken along to fill the vacancies in the tactical organizations. These men were used entirely in the shops and additional personnel could have been used effectively. The lack of Field Maintenance personnel was necessitated by the reduction in personnel stipulated by higher headquarters. The most critical shortages in the Field Maintenance personnel were in the engine build up section sheetmetal section, parachute department and machinists. Lack of correct testing devices for the instrument and electrical departments greatly curtailed their usefulness. The same applies to the propellor department. However, the personnel assigned to these sections performed many inspections and accomplished numerous minor repairs on their related units with the testing equipment they had on hand.

As a whole the number of supply personnel was adequate since the bulk of the supplies were carried in the flyaway kits in each squadron. These men were, for the most part, thoroughly familiar with their jobs and with the flyaway kits as a whole. No difficulties were encountered with the with the consolidated supply in the requisitioning and turning in of parts.

The dispersal of the airplanes necessitated covering of considerable distances between housing and messing areas, Hangar areas, and working areas. This was aggravated by the lack of adequate transportation. To

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partly circumvent this problem, each squadron was assigned mission huts in their general working area for use as engineering offices and supply rooms for airplane parts. This greatly reduced the distances between the airplane and the technical supply buildings. Even with this arrangement distances of several hundreds of yards were involved within a squadron. Two squadrons were located on the opposite side of the flying field from the hangar and housing areas. Considerable time was lost in the transporting men to and from their working areas.

The type of climate encountered on the [illegible] plus the lack of fuel for heating the billets considerably reduced the efficiency of the maintenance personnel. This condition was further aggravated by the quality of rations served and the uncertainty surrounding the length of our stay in the [illegible]. However, in spite of these factors affecting the morale of the men, an excellent job was done by the squadron C-1 sections under other than ideal conditions. Unexpected maintenance problems and difficulties plus the shortage of critically needed equipment not available at our home station made the task more difficult that it should have been. This was offset somewhat by the low flying requirements set down in higher headquarters.

The number of AOCP requests for the 20th Bomb Group as well as the other groups in the [illegible] were materially reduced by the policy of exchanging parts between the groups. On numerous occasions, this policy worked to advantage for the 307th Bomb Group and the 20th Bomb Group. Due to the distances involved, the number of occasions for this exchange of parts between the 20th Bomb Group and the 2nd Bomb Group were greatly reduced.

The hangar facilities were better than those available at our home station and were adequate. They were not used as extensively as they could have been due to the dispersal of the aircraft. Each hangar can house three B-29s. There were four such hangars on the field but only one was made available for constant use. One hangar was used by the [illegible] for a motor pool. An occasional airplane was housed in the other two hangars which were under the control of the [illegible] and used for their aircraft. An engine build up section was organized in a portion of the hangar set aside for our use. Permanently installed overhead chain hoists greatly facilitated the handling of engines in this section. Personnel for manning this section were drawn from the engineering sections of the squadrons. A shortage of the necessary special tools and equipment and replacement parts limited the amount of work that could be accomplished. In spite of these hinderances, the section was instrumental in keeping the aircraft hours out of commission for engine changes to a minimum.

The lack of adequate facilities for a propellor shop and the fact that propellor governor testing equipment was not available made it impossible to even approach what could be called a shop for this department. Several propellor governors could have been returned to service had testing facilities been available at the TDY station.

Adequate facilities for caring for parachutes and other emergency equipment existed and full use was made of them. No especial difficulties were encountered in this department.

Lack or proper testing equipment in the instrument and electrical shops that could be adapted to our parts reduced the effectiveness of these shops.

The squadron engineering sections used, with very few exceptions, the equipment brought with them from their home station. A critical shortage of crew chief stands was partially alleviated by drawing sixteen from the RAF.

Aircraft parking hardstands were designed for aircraft to the size and gross weight of Lincolns and B-17s. The B-29 can turn on them but it almost necessitates the pivoting engine wheel. The majority of the hardstands, 20 out of 35 needed, are not surfaced with a material that will permit engine operation in the parking stand itself. These hardstands are made up of egg sized rocks held together with tar. The foundation under some of these hardstands are not adequate for the weight per square foot imposed upon them. Those hardstands that have been resurfaced are satisfactory except in diameter. Some of the hardstands are not useable by B-29s due to their proximity to the taxi strips. The taxi strips into approximately half of the hardstands have been coated with fine crushed rocks which causes excessive wear and tear on the propeller blades. Two propeller assemblies were changed due to excessive damage done to the blades by rocks pulled from the hardstands and taxi strips. Other propellers will have to be changed in the near future due to this cause. With the hardstands in their present condition, a total of 25 or 30 B-29 airplanes can be parked satisfactorily. Dispersal is not adequate due to the alignment of the hardstands and their proximity one to another.

Nine RAF fuel refueling units of 3500 Imperial gallons each are available on the field plus three US type P-1A refueling units of 4000 gallons each. Under normal operations these units are adequate.

A test was conducted after a maximum effort mission of 26 airplanes to determine the length of time required to reservice the airplanes in the event an emergency should arise. Only nine RAF tankers were used in this test which was started approximately 1830 hours local time and was completed at 0400 hours the next day. An average of 3200 Imperial gallons were serviced into each airplane. No difficulties were encountered. An average of one hour and thirty minutes is required for an RAF tanker to leave the parking area, proceed to the most distant spot on the airdrome, pump its load into an airplane, return to the bulk plant and refuel and return to the parking area again.

There are two underground bulk plants of 75,000 Imperial gallons each on the base. Two refueling trucks can be serviced simultaneously at each of the plants. Approximately 25 minutes is required to service an RAF tanker.

The RAF oil servicing rankers are merely trailers that have to be towed by tractors or some other means of locomotion. Two of these trailers are available for U.S. aircraft and each has a capacity of 450 Imperial gallons. Recently these have been augmented by three U.S. type P-3A oil servicing units. No difficulties have been encountered in servicing aircraft with these units. Oil can be serviced faster with the RAF trailers than the fuel can.

There are two oil bulk plants on the field of 3500 Imperial gallons each. Only one of these is available for U.S. use since the RAF aircraft and the U.S. aircraft do not use the same grade of oil. A period of seven hours or more is required to refill one oil trailer. The bulk plants are located underground and the oil is removed by means of suction pumps mounted on the trailers themselves. Needless to say, this necessitates quite a loss of time and would be a controlling factor in time of emergency. The capacity of the one bulk plant is not sufficient to permit a margin of safety in the event of a delay in receipt of replenishments stocks. The normal delay from date of requisition do date of delivery is seven days. Delivery is made by rail from Lincoln and by tank truck from there to the base. Recently, a delay of ten days was experienced with the result that no oil was available on the base.

One RAF fork lift of 6000 pounds capacity was available and proved to be one of the better pieces of RAF transportation equipment available. It was used in loading and unloading B-24 C-54 type airplanes.

Two RAF vehicles and one U.S. weapons carrier were assigned to each squadron for use by them for hauling personnel, parts, etc. These vehicles were inadequate in number and considerable time in man hours were lost. Vehicle maintenance personnel were not available hence additional U.S. vehicles could not be maintained.

The tractors used by the RAF fro towing airplanes are entirely inadequate. They are underpowered and too light. Considerable difficulty was encountered in ground handling of airplanes because of this factor.

The Field Maintenance sectionperformed a total of 411 jobs for an expenditure of 8655 man hours as follows:

Section	Total Jobs	Man hours
Pope & Fabric	15	100
Parachute	25 (750 repacks)	525
Sheet metal	54	850
Welding	125	420
Machine Shop	61	300
Propeller	20	120
Electric	12	100
Instrument	25	140
Miscellaneous	14	100
Engine build up	50	6000

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The engine build up section built up 9 engines for installation, changed 17 cylinders, and prepared 38 engines for shipment. The engines were built up through the process of removing parts from the old engine.

The tactical squadron engineering sections changed a total of 42 engines, 53 cylinders, and 36 turbo-superchargers during their stay in the UK. The average engine time for all changes was 313 hours. Of the total number changed, 18 were changed for internal failures with an average of 282 hours each.

Thirty-five 50 hour inspections, thirty 100 hour inspections and 64 minor inspections were performed during the tour of TUY. Forty sighting blisters and 23 astrodomes were changed during the same period of time.

Major sheet metal repairs were performed on the appendage of two airplanes due to damage from gun fire on a routine gunnery mission.

A total of over 100 unsatisfactory reports were submitted prior to departure with several unsubmitted due to the shortage of blanks. These reports will be submitted immediately upon arrival in the U.S.

Adequate office space for the engineering offices was available. In each case a Nissen hut was used. The lack of electric power was a handicap but the use of portable electric power plants overcame that when lights were needed. The telephones were available in each office.

Nissen huts were used by two squadrons for technical supply functions. Two huts each were required to house the flyaway kit bins. No outstanding difficulites were encountered. Issues could have been made more efficiently from these kits had there been room to arrange the kits properly. The lack of proper lighting of the Nissen huts curtailed the work only slightly.

All parts for replenishing the flyaway kits were received from the U.S. via air lift. A total of 203,756 pounds of freight was airlifted to the group during the TUY period. Included in this total were airplane parts, and Unit Essential Equipment. A total of 146,382 pounds of repairable freight was returned to the U.S. via air lift. These figures do not include the parts and equipment carried in unit aircraft.

A total of 68,065 pounds of freight, engines and rations, was received from Burtonwood via truck. A total of 80,715 pounds of repairable engines were shipped to Burtonwood by the same means.

A total of 3472 hours was flown by the group from 16 July 1945 through 31 October 1945. During this period 1,707,008 U.S. gallons of gasoline and 17,192 U.S. gallons of oil were used. A total of 877 landings were made with an average of 4.0 hours flown per landing. An average of 492 gallons of fuel was consumed per hour flown. During this same period the airplanes were maintained in an "In Commission" status 92% of the time. This necessitated working overtime, on week ends and at nights. A total of 1352 aircraft hours were out of commission for AOCP reasons. Over half of this total was for rear cylinder assemblies and engines.

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Section II: Problems Encountered and Action Taken

Due to the unusual number of engine changes encountered by this group the engine build up section became of primary importance. It was necessary to draw personnel from the engineering sections of the tactical squadrons to man it adequately. The lack of special tools and replacement parts were a cause of wasting many man hours since on several occasions two or three repairable engines had to be partially dismantled in order to obtain the necessary parts for rebuilding a serviceable engine. Engine special tools were brought in sufficient quantities for the tactical squadrons. In order to equip the engine build up section, it was necessary to withdraw some of the tools from the squadrons which left them short. The lack of engine stands slowed the progress of the section considerably. It was necessary to turn an engine during build up procedure by means of make shift arrangements that entailed hazards to equipment and personnel that would not have been encountered under normal conditions and with normal equipment.

The repair of fabric surfaces became a problem due to the fact that air conditioned space was not available for applying the dope. Due to the temperatures encountered and the lack of heat, the dope had a tendency to blush and bubble. Fortunately, the requirements for this type of work were very small and no unusual delay was encountered.

The lack of adequate machinery and tools in the machine shop caused several delays and often resulted in improvised repair jobs.

Lack of sufficient personnel was the major problem in the sheet metal shops.

The difference in the fittings on the British oxygen and acetylene bottles posed quite a problem until the local manufacture of adapters overcame it. The only welding equipment available to us was what was included in the Unit Essential Equipment List. Arc welding equipment was not available on the station.

A critical shortage of forms of all kinds was encountered. This shortage was due to the conditions that were beyond the control of group personnel since the movement was planned for a period of thirty days. After arrival at the TDY destination, it was changed to 60 days and then to an indefinite period. The only forms that were recieved during the TDY period were requisitioned from the home station. Forms and office supplies requisitioned from USAFE were never recieved. Follow ups were made but no act on could be obtained to e fect delivery. Local reproduction of forms was limited by the quantity of paper brought from the home station. A very limited supply of office supplies was available through USAF supply channels.

An inadequate number of technical order files and stock list files was brought for reasons mentioned above. Only once was distribution received from the home station and that was approximately one week prior to date of return to the home station.

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Files of pertinent regulations were non-existant. References were made by higher headquarters to regulations that are not normally called for on 30 day TDY missions. Other references were made to USAFE regulations that could not be located in the U.K. It is believed that this difficulty will be eliminated as soon as the Third Air Division Headquarters becomes completely operational.

All electrical power available at the TDY station was 220 volt alternating current. A shortage of the correct type of transformers necessitated a large amount of temporary installations using the portable C-1B electric power plants brought from the U.S.

Since the RAF could not furnish adequate guards for protection of our airplanes, it was necessary to schedule all enlisted personnel from the grade of staff sergeant down for this duty as well as other necessary squadron duties. Higher headquarters required one guard per airplane during off duty hours. This required 60 guards per night for the Airplanes alone. As a result, the number of S-4 section personnel available for duty fluctuated since a goodly percentage was required for other duties each day.

The loading and unloading of C-54 aircraft at all hours of the night and day necessitated picking details at random since it was impossible to set up and operate a transportation section due to lack of personnel.

One British custom that was directly responsible for numerous loss of man hours was the Tea Wagons. Since all RAF vehicles were operated by RAF drivers all transportation came to a halt with the arrival of these vans. Needless to say, it was a British custom readily adopted by the Americans. It is estimated that approximately one hour per day per man was lost because of this custom. The vans made a trip during the morning and during the afternoon. The hot tea and cakes and coolies were a morale builder for those men working outside in the cold and damp.

The lack of clear cut channels of command with special reference to supply procedures and problems worked a great deal of hardship and caused a considerable loss of time in procuring required supplies. In many cases conflicting instructions were received from different higher headquarters with reference to supply procedures. This was further complicated by the arrival of staff officers from these headquarters with verbal instructions, that, in all cases, did not agree with written directives. This problem was overcome by depending entirely on the home station for everything. Higher headquarters were informed of items in critically short supply and in one or two instances located those items with in the jurisdiction of USAFE.

A problem that caused considerable loss of time and much inconvenience was that the British were on a strictly peace time schedule. For Example Wednesday afternoons was devoted to sports, Saturday afternoons and Sundays were holidays. Overtime in some sections was practically unheard of and definitely frowned upon. In their eagerness to cooperate, much of this was eliminated, but the problem was still there and very real.

It is believed that the unusually large number of engine changes can be partially attributed to the lubricating oil used by the group on the TDY trip. This oil was RAF oil and was manufactured according to their specifications. Samples of oil from four engines that had failed in flight were submitted to the British Ministry of Supply for testing. The results of these tests were forwarded to A-4 section of Strategic Air Command on 7 October 1948, reference letter Headquarters 28th Bomb Group (H), APO 633A, c/o Postmaster, New York, New York dated 7 October 1948, Subject: Report on Tests on Used Oil Samples.

Section III: Recommendations

It is recommended that on all group missions of more than 30 days an engine build up section be included in the personnel. This section should include an 026 (Supply Technician) as well as an NCOIC and engine mechanics. Fifteen EMs are considered adequate for missions of 90 days TDY. This section should be complete with all of the special tools in addition to the individual hand tools. It is further recommended that a supply of parts that are normally replaced only at engine change be included for the engine build up section. A small kit of such parts similar to the flyaway kits, would be of great value on the group missions where the use of the flyaway kits are required beyond the normal 30 day period.

Each squadron is authorized two sheet metal workers. An additional four are necessary to take care of jobs that invariable fall on the Field Maintenance shops. Routine minor and major inspections require the full time of sheet metal men in the tactical squadrons. In many cases it is more desireable to replace a unit requiring sheet metal work than it is to repair it while installed on the airplane. In cases such as these, a Field Maintenance sheet metal department is necessary.

Where machine shops are located, such as at RAF Station Scampton three machinists are very desireable providing they are equipped with sufficient small tools peculiar to their MOS.

One Rope and Fabric Worker is considered adequate for TDY missions of the nature just completed. It is recommended that this man be completely equipped with needles, materials, thread, etc. to repair any fabric surface on the airplane to the extent of replacing panels on a control surface.

The experience gained on the TDY mission just completed indicates that two welders in addition to those in the tactical squadrons are desirable.

Due to the peculiarities of the propeller governor installed on the B-29 airplane, it is recommended that a portable propeller governor testing stand be included in the Unit Essential Equipment List for a group movement.

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Two electricians and two instrument specialists are considered adequate for Field Maintenance shops.

A total of five parachute riggers are required to adequately take care of the number of parachutes required for a group movement.

The administrative section of the Field Maintenance shops should include an officer, a 825 Inspector, a 502 chief clerk, and a 405 clerk typist. These personnel are required to adequately supervise the sections and to prepare the necessary paper work for control of the work load. A system of work orders was instituted that worked very effectively yet entailed no undue delays. It tended to conserve the very limited supply of critical materials that were available for use at the TDY station. Careful screening of work order requests eliminated unnecessary waste of materials.

It is recommended that each squadron engineering section devise and carry with it all times a portable status board. A kit should also be made up consisting of 90 days supply of forms and office supplies not all ready included in the flyaway kit. This kit should also include technical orders, stock lists, and other pertinent regulations.

It is believed that a large percentage of the engine changes made by this group at its TDY base could have been illminated had all engines over 300 hours been replaced prior to departure. Lack of time and build up kits at the home station made this impossible. As a result engines had to be airlifted from the home station to the TDY station by commercial carrier. This was above and beyond those carried in unit aircraft. Every effort should be exerted to have the above recommendation accomp - lished prior to leaving.

The procedure of sending out an advanced party at least 10 days prior to the arrival of the unit, and perferably two weeks, should be made standing operating procedure. This party should include representatives of all of the sub sections under S-4 control with special emphasis placed on supply. This would permit information and recommendations to be relayed to the main unit prior to its departure from the home station pertaining to any details peculiar to the station. This would also eliminate any difficulties pertaining to supply and equipment on the base upon arrival of the main unit. This could also be done by putting a permanent party on each base to be used for TDY and turning over to them the equipment and supplies necessary for the functioning of the unit immediately upon arrival. Such items of supply and equipment, bedding, and billets, morning equip ent and other items that are impractical to move with every unit. This permanent party should be thoroughly familiar with the type of aircraft involved as far as the S-4 section is concerned.

The flyaway kit and unit essential e ipment authorized the tactical squadrons are based on the supposition that the squadron will operate for 30 days as a unit. No allowance is made for additional equipment required for a group on a TDY mission of 60 or more days. It is recommended that a UEE list be prepared for those portions of field maint nance sections that are absolutely necessary on a group mission. This UEE

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should list the special equipment required as the present one does for the tactical squadrons.

Due to the climatic conditions existing in the TUY area, it is recommended that act on be taken to obtain the undivided use of three of the four hangars on the base for future operations. Inclement weather will practically prohibit outside maintenance.

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HEADQUARTERS 28TH BOMBARDMENT GROUP (M)
Office of the Intelligence Officer
Rapid City Air Force Base
Weaver, South Dakota

372

28BGS2

20 October 1948

SECTION I

Narrative Report for S-2 for TDY in the U. K.

From: 16 July 1948 To: 20 October 1948

1. Summary of Training and Accomplishments:

a. The 28th Bombardment Group (M) was alerted on 29 June 1948 for a TDY mission to England for thirty (30) days duration. Preparations were made and the details accomplished for this movement. Many problems were encountered by the S-2 section due to the limited Scope of directives in the field order, but ingenuity was used in place of directives. On 16 July 1948, the group departed Rapid City for England, arriving AF Station Scampton, Lincoln, England on 17 July 1948.

b. Immediately upon arrival in the United Kingdom, the S-2 section began the long and arduous task of setting up its office, briefing room and equipment for operation. S-2 equipment and Intelligence material arrived in good shape and was hastily unloaded, inventoried, and assembled for use.

The S-2 section was alloted one room in the Headquarters block (Hanger No. 2) for its office space. This room was approximately 12' x 12', located between S-1 and S-3 on the second floor, overlooking the airdrome. The briefing room was in a nissen hut just opposite Hanger No. 1, about 150 yards from the S-2 office. There was no provision for a group map room, so our maps (19 cases total)

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were stored in an office alcove of the Communications Office, also in Hanger No. 2.

The S-2 Office was furnished with two (2) tables and five (5) chairs besides a file cabinet. The S-2 field safe was used to store as many of the classified documents as possible, and the remainder were put in the file cabinet and secured by locking the office door and having the OD, who stayed in S-1, guard the room during off duty hours.

A situation map board was erected in the S-2 Office and a map was posted thereon showing Order of Battle of the USSR and the European Nations. A bed sheet was hung over this map to screen it from prying eyes.

The briefing room was already set up on our arrival, having been prepared by the RAF Navigation Staff. However, due to limitations of space, it was deemed advisable to remove the tables from the briefing room and have only chairs. New blackboards were also obtained and hung for posting mission data. A baloptican was obtained from the RAF and installed to be used for briefings. Blackout blinds were requisitioned for the windows, but these never arrived, blankets were hung in place of them.

c. On-the-job training was given to all S-2 personnel when time permitted. This training included lectures, practical work, conference periods, discussions and actual Intelligence work. Not too much of the theoretical side was given, but a great deal of practical experience was obtained by all S-2 personnel, especially in map storage, use of a balopticon, handling of classified documents, routine administration and mission report writing.

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d. Due to the critical world situation at the time of our arrival in the U. K., all combat personnel were given an Intelligence briefing. This briefing discussed the capabilities of the USSR; her political, economic and military organization; the basis of Communism and its aims; the Order of Battle of USSR forces; the latest developments in the Soviet War Machine; and the types and strengths of Russian fighters.

Classes were also begun on aircraft recognition for all combat personnel with special attention being given to gunners. The classes stressed the recognition of fighters of the USSR, Germany, France, Sweden, and Great Britain. None of the gunners are considered qualified yet, but some advance has been made and it will be necessary to continue these classes in the future. A total of 586:00 hours aircraft recognition were given.

e. Two (2) lectures of one hour each were also given to all Officers of the group--one on "Communism", and another on "China". These lectures were part of a program to keep the Officer personnel of the Air Force in time with the latest World developments.

The Staff Officers and various other Officers were kept informed of the situation at frequent intervals, through informal discussions and Staff briefings. In addition to those given by the Group S-2 Officer, two such lectures were given to key personnel by USAFE Intelligence Officers.

The Intelligence Officer from the Air Attache Office in London gave a one hour briefing on World Intelligence to all combat personnel shortly after our arrival in the U. K.

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f. In addition to the improvements and changes (Noted above) in S-2 equipment, the S-2 Section also posted a map board and map in the S-3 Section for mission planing.

S-2 personnel aided in the preparation for and briefing of missions. Only four missions required interrogations. Maps were also furnished all flying personnel by S-2 and/or Navigation Section.

g. Liaison was maintained with all lower, higher and adjacent Intelligence units. The Group Intelligence Officer spent four days on TDY in Weisbaden, Germany with the Director of Intelligence, USAFE. The A-2 Officer, 3rd Air Division, was contacted frequently, as was the Intelligence Officer at Bomber Group 1, Bewtry England (RAF). There was a RAF Intelligence Officer assigned to Scampton, but he was new on the job and had no Intelligence files, library or office to work from, so he was of little value to the 28th Bombardment Group (M).

h. Several special missions were flown by the 28th Bomb Group, requiring reports:

24 August 1948:

Two aircraft dispatched on a high altitude, fighter interception mission over England at 30,000 feet.

4 September 1948:

Twenty-seven (27) aircraft were dispatched on "Operation Dagger", a joint British-American exercise, designed to test the radar net and fighter defenses of England against hostile bombers. Seven (7) aircraft aborted; twenty (20) completed the mission. Seventeen (17) aircraft flew at 30,000' (Variable), and three (3) aircraft flew at 35,000

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feet. Attacks were made by Meteors, Vampires, Mosquitoes and Hornets.

30 September 1948:

One (1) aircraft was dispatched on a 25,000 foot fighter interception mission.

1 October 1948:

Two (2) aircraft were dispatched on a 25,000 Ft. fighter interception mission.

4 October 1948:

Three (3) aircraft were dispatched on a medium altitude fighter interception mission.

5 October 1948:

Six (6) aircraft were dispatched on a medium altitude fighter interception mission.

8 October 1948:

Three (3) aircraft were dispatched on a medium altitude fighter interception mission.

Several Division Missions were flown as follows:

DATE	NO. SQDRNS	NO. A/C	DIV. FIELD
26 July 1948	2	18	F.O. # 1
29 July 1948	3	29	F.O. # 2
23 August 1948	2	19	F.O. # 4
4 September 1948	3	27	F.O. # 6
11 September 1948	1	6	F.O. # 10
14 September 1948	3	28	F.O. # 8
28 September 1948	2	24	F.O. # 13

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i. There was the normal amount of routine and regular administration to be carried on in the S-2 Section. A special report was prepared for the RAF commander at Scampton, entitled "Adequacy of RAF Facilities to Sustain a B-29 Group in Combat". A special report was submitted to USAFE, entitled "Proposed T/O & E for Intelligence Sections of Medium Bomb Groups in the European Theater". A survey of Special Service books disclosed the presence of books written by Communists, so a special report was submitted to 3rd Air Division. Various publications on Intelligence were received and processed, as were also the bulk target materials and target maps, from USAFE.

j. The field order (for the 28th to return to the U.S.) arrived on 28 September 1948, and the staff began preparations for our return flight. Maps necessary for the return flight were ordered from 3rd Air Division. There were many last minute preparations to be made and all reports were completed and typed before take off from Scampton for the United States; the reports included the unit Monthly History, and SAC Training Report.

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2. Problems Encountered and Action Taken.

a. The first problems encountered were in the preparation for TDY at Rapid City, South Dakota. The alert status arrived 27 June 1948, via telephone from 15th Air Force. This method of alert was a gross breach of security, since succeeding teletype messages and further correspondence were a non-descript mixture of top secret, secret and unclassified documents, of confirming and contradicting contents. The Wing Commander at Rapid City further hampered security by having a radio announcement made over KOTA, and in the local theaters, for all men from the Air Base to report for duty immediately. This caused considerable consternation and speculation on the part of Military and civilian personnel. No one but the key Staff Officers were given any exact information for several days, and no other personnel were briefed on security, the damage had been done in the first few hours after the alert and nothing could be done to counteract it. It is hoped that in the future more caution is exercised in the method of alert (if classified), and that all personnel will be called together immediately to be told what is going on and to be security conscious.

b. The Intelligence set up in England was far from satisfactory and left much to be desired. What space there was available was suitable only for limited operations on a short term status. It would never have done for extended TDY or combat operations. The briefing room could accomodate only 150 persons at one time; the S-2 office was terribly crowded with five (5)

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men working to the one room; there was no positive security for classified files; there was no map room or map cases to store maps and target material; there was no space for a situation room and war room for posting Order of Battle and the like; there was no interrogation room; there were no scrambler telephones to 3rd Division or Hq. USAFE; and there were available no 3 combination safes in England.

The electric current of 230 volts handicapped us considerable, since U.S. electrical equipment was made for 115 volts, thereby necessitating installation of a transformer to cut down the 230 volts to 115 volts.

There was no heat in any of the buildings till October, making it very disagreeable, particularly since England has such a cold damp climate anyway. Colds and flu were common and many manpower hours were lost because of this.

Supplies of office equipment, paper, carbon paper, typewriter ribbons, franked envelopes, maps, banding wire, scotch tape, and other such items were very poor. Such items were requisitioned frequently but were always in short supply.

c. Distribution from higher headquarters of Intelligence information was most inadequate. We received a "Weekly Summary" from USAFE, but all other Intelligence had to be sent from our home base at Rapid City. Since mail took almost three weeks or more to arrive from Rapid City (A.P.O, Gov't. Official Business) the information was way out of date by the time it arrived, and it was impractical to send all Intelligence publications in such a manner.

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d. The personnel problem was of great concern to the S-2 Section, as to many others. Our T/O & E was entirely inadequate to begin with (Peace or War). None of the Airmen assigned to S-2 were graduates of the Intelligence School so were only partially qualified in their jobs. The three squadron Intelligence Officers were all members of combat crews and thus were never available for S-2 work; moreover, only one of the three was a graduate of the Air Intelligence School, so they were not cognizant of their duties or the importance of Intelligence.

The personnel problem was further complicated by the discharge of a great number of men. These men were returned to the States for discharge. True, there were replacements arriving but we were and are losing some of our better men. The reason for the present dilema lies in the refusal of the Air Force and Strategic Air Command to follow the tenets of Personnel Management. And until the men feel they are wanted and are being looked after and have some security, they will continue to refuse reenlistment in the Air Force and particularly in SAC.

One of the Airmen in S-2, instructorlin A/C Recognition, was returned to the U.S. for hospitalization, thereby leaving the section short of one man and an instructor. Another S-2 man was confined to the hospital for six weeks and further depleted the strength. All in all, it was rather difficult to operate the S-2 Section with the personnel available, and it must be stressed that the S-2 had assigned two more Airmen than the T/O & E authorized.

e. The absence of an A-2 Officer at 3rd Division Headquarters added nothing to the efficiency of our operation in the

U.K., and caused more confusion than anything else. It was only through the efforts of the Director of Intelligence at USAFE Hq. in Weisbaden that Intelligence channels were operating at all. But it was still poor.

f. The security of the Base at RAF Station Scampton at Lincoln, England was altogether inadequate, there being no man proof fences around the field to keep out non-military persons or others; no guards were stationed as sentries around the field or around restricted areas on the base; no pass system was employed for identification of persons entering or leaving the base; and there were not sufficient personnel available to put a guard on each aircraft twenty-four hours a day.

The situation was remedied as much as possible by placing guards on the aircraft in the greatest numbers possible and making frequent checks of all guards, aircraft and equipment. However, the aircraft and facilities were considered very vulnerable to sabotage and lacking even meager security. The main highway from Lincoln ran adjacent to the East side of the airfield and was within twenty yards of the runway and dispersal areas.

g. The greatest problem to be met by all concerned was the difficulty of getting the British to do anything at all. They were, as always, non-progressive, tied to tradition and habit and red tape, obstinate, unimaginative, very backward, slow and apathetic, to name but a few of their characteristics. It was maddening to try to get anything done by them. One sooner or later gave up in utter disgust and let things take their course. This

attitude on the part of the British persisted in everything but their desire to do nothing, have their tea at set times, take Wednesday afternoons off as well as Saturday and Sunday, and their desire to always "put off". This perhaps was a result of the RAF being on a different footing--strictly "peacetime operation", whereas we were on a wartime basis and consequently worked hard and long hours. Higher RAF Headquarters should certainly have instructed the RAF personnel at Scampton on the significance of our TDY at their base and put them on the same footing as we were.

h. Another tremendous handicap was our indefinite status. We left the United States on a thirty day TDY mission; this was later changed to sixty days; and then to an indefinite period. Consequently much confusion was caused and hardships were bourne. The thirty day dictated a limited supply of everything, including personnel, no records, no decimal files or regulations; the sixty day TDY and indefinite changed the picture entirely and made necessary the acquisition of more of everything, which in England was a real problem. The indefinite part made it still worse, and precluded our operating on any sound basis.

3. Conclusions and Recommendations for Future TDY Missions in the United Kingdom.

a. In conclusion, it may be said that this TDY mission to the U.K. was of some value to the group from the standpoint of carrying on against great odds and difficulties, even if little was gained in training our combat crews while there. Every man certainly had to implement and use ingenuity to get along, and gained valuable experience. However, from the standpoint of accomplishing any real training of value to our crews, it was pretty much a failure; much, much more could have been done in half the time at our home base in the United States.

b. In view of the experience gained in operating from a British base in England, certain recommendations are applicable. Certainly the first should be the proper handling, transmission, dissemination and safeguarding of information pertaining to any such TDY mission, and great care and discretion should be exercised by all commanders to insure the security of such information from the very moment the alert is given.

Under no conditions should Top Secret information be given over the telephone, as it was when the alert came down from Fifteenth Air Force, followed by the same information in a Top Secret TWX.

c. All personnel of a base so alerted for a TDY mission should be called together in a mass meeting at once and told the facts, what is expected of each one, and the classification and safeguarding of the information.

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No radio broadcast should be made to get personnel back to the base at once. This is a gross breach of security and throws things into confusion at the very outset.

An H-hour should be given in the original alert communication as a basis on which to plan and work.

Personnel should be allowed to come and go from the base as usual to prevent undue speculation and curiosity on the part of civilians.

Telephone calls off the base should be monitored and disciplinary measures taken against anyone violating security.

d. The field order should contain explicit information for the S-2 Section as to requirements, length of TDY, and other information needed so badly but not forthcoming. Intelligence channels should be clearly defined so as to leave no doubt as to their being.

e. An immediate revision of the T/O & E for S-2 should be made, so as to allow for the proper functioning of an Intelligence Section. This T/O & E should be increased to give S-2 adequate personnel for operation in Peace or War, which it does not now permit. It should authorize:

Group S-2 (Peace or War):

1 Lt. Col.	9301	Intelligence Officer
1 Major	9301	Intelligence Officer
1 M/Sgt	631	Intelligence Specialist
1 S/Sgt	631	Intelligence Specialist
1 Sgt	631	Map & Target file Specialist
1 Sgt	405	Clerk-Typist
1 Cpl	405	Clerk-Typist

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Squadron S-2 (Peace or War):

1 Major	9301	Intelligence Officer
1 T/Sgt	631	Intelligence Specialist
1 Sgt	405	Clerk-Typist

All personnel assigned to Intelligence should be graduates of the Intelligence School, USAF, and no Intelligence Officer should be a member of a combat crew.

f. It is recommended that the S-2 and S-3 offices be set up in the operations block on RAF stations. This would permit the proper setup for space (War room, Situation room, Planning room, Map room, Target file room and office space), and make for better cooperation. Each RAF station has such a building built expressly for this, but at present they are being used for other purposes.

The briefing room should be adjacent to the operations block for easy access and use for briefing missions.

An interrogation building should also be close by, separate from the briefing room, so as to permit a permanent setup for such. Otherwise, if one building or room serves double duty as a briefing room, the room might be rearranged each time to take care of both.

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HEADQUARTERS 28TH BOMBARDMENT GROUP (M)
Office of the Intelligence Officer
Rapid City Air Force Base
Weaver, South Dakota

OTANT 373

27 December 1948

MEMORANDUM FOR: Colonel A. T. Wilson Jr.

THRU: Colonel John B. Henry Jr.

SUBJECT: TDY Mission Report

1. In accordance with instructions contained in LTR AG 373, Headquarters, 28th Bombardment Wing (M), Rapid City Air Force Base, Weaver, South Dakota, dated 21 December 1948, submitted herewith is a detailed explanation of items cited in first indorsement to SAC 373 (7 Dec 48).

2. The narrative report for the S-2 section was written in all sincerity in an attempt to present the problems and difficulties encountered on this TDY movement so that they might be analyzed by this and higher headquarters and perhaps preclude their reoccurence or at least to alleviate them to a considerable extent. These problems were considered of such importance to the United States Air Force that it was deemed inadvisable not to mention them. Factual data was utilized in the writing of said narrative report, and it was not intended to be either opinionated or biased.

3. In explanation of the statement "A nondescript mixture". . . "of confirming and contradictory contents", I should like also to include in this explanation the correlation of the Wing Commanders "recall to duty" and "a breach of security".

On 27 June 1948 at 1430 MST, the acting Wing Commander at Rapid City Air Force Base, Weaver, South Dakota received a long distance telephone call from Headquarters 15th Air Force. This telephone call was made over commercial telephone lines and was not a scrambler system. The telephone call was for the purpose of informing the Wing Commander at Rapid City Air Force Base that the 28th Bombardment Wing (M) was alerted for a maximum effort overseas movement. Limited information was disclosed over the telephone but enough was said to start the wheels turning in preparation for the TDY.

Immediately after this telephone conversation all personnel on the base were notified of the alert by messenger, guard, runner, tannoy and/or telephone. Military personnel living off the base or on pass were, where possible, notified in a similar manner; there were

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Subject: TDY Mission Report

many who could not be contacted directly. An announcement was made over the local radio station, KOTA, for all Air Base personnel to report for duty immediately. All theaters in Rapid City were asked to flash a similar message on their screens - which they did. Within a few hours everyone, it seemed, had knowledge of the alert and pending TDY - civilian and soldier alike. Many civilians were alarmed at the information and believed war was imminent.

From the time of the alert notice until around midnight no civilians were allowed to enter the Air Base and all personnel were restricted to the Air Base - friends, wives, visitors alike.

The following morning, 28 June 1948, the Wing Commander received a Top Secret radio note message from 15th Air Force. This radio note message repeated the information given via telephone on 27 June 1948 and in addition listed other information relative to the overseas movement. This information was disseminated to the using agencies for action. Before the day was over military personnel had overheard civilians discussing the alert and reported to me their conversations - which embodied a large portion of the original Top Secret message.

On the evening of 28 June 1948 a Top Secret teletype message was received from 15th Air Force giving substantially the same information as given previously in the Top Secret radio note. This radio note was then destroyed.

Telephone usage was unrestricted, and monitored calls disclosed the leakage of some information via telephone, between male military personnel and their wives of girl friends in Rapid City.

In the ensueing days which followed, many teletype messages were sent and received by the 28th Bomb Wing; most pertained to the TDY, either giving information and/or directives, or receiving information and/or directives, from or to higher, adjacent or other headquarters. Some were Secret, some confidential, some restricted and some unclassified, but regardless of classification they mostly dealt with the TDY movement - "a nondescript mixture". This quotation was taken from the journal of the 28th Bomb Group adjutant, wherein the phrase "a nondescript mixture" was used in referring to messages of various classifications.

Messages were received indicating certain critical information (perhaps the number of engines to be taken along, or whether bomb bay tanks were to be carried, or our final destination), and either shortly thereafter of the next day other messages would indicate something entirely different.

It is to be pointed out that the lack of security consciousness was the initial cause of consternation and loose talk.

4. In explanation of the statement "The reason for the present

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dilemma . . . and particularly in Strategic Air Command", a check of the number of discharges of enlisted men against the number of reenlistments (in the Strategic Air Command) will substantiate the statement that a great many of the enlisted men do not want to be in SAC. Or, one has only to talk to B-29 gunners, flight engineers, radio operators of other bomb group personnel about their attitude toward SAC units and reenlistment in SAC, and in a great many of the cases these personnel will protest against any future reenlistment in SAC. I have known and talked to many men in the 28th Bombardment Wing and the 28th Bombardment Group who have expressed such sentiments. Many of these have since been discharged and have either reenlisted in other commands or have failed to reenlist. A great many of them were men in critical jobs with extensive experience in B-29 operation.

Why does this condition exist? Because of many reasons, many of them a part of the Principles of Military Management.

It is taught that the basic needs of any individual must be met by his employer in order to secure efficiency and cooperation from this individual; these needs are rest, food, shelter and protection from the elements. In addition, an employee must be made to feel he is wanted; working conditions must be conducive to his safe, pleasant and efficient operation; he must be given an incentive to work hard and do a good job, with a chance for promotion and higher pay; he must feel security in his job for himself and for his family; and he must be allowed to enjoy the fruits of his labor and lead a normal or near normal home life, if he so desires. Without these things an employee will become dissatisfied and complaintive; his morale and efficiency will decrease; he will create unrest in an organization, will begin to look for work more promising, and will eventually quit if conditions remain unchanged.

What, specifically, do the enlisted personnel and officer personnel in SAC complain about? And why are they trying to get out of SAC? In brief they are as follows:

a. Too much TDY.

b. Being away from their families too much and too often.

c. Unavailability of housing for their families at Rapid City and the exhorbitant rents charged for houses and apartments in Rapid City.

d. Service families being pushed out of their houses, apartments, rooms and/or cabins when the tourist season begins each year.

e. The uncertainty of knowing when or how long they can be with their families at any time.

f. No per diem payable on TDY trips.

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Subject: TDY Mission Report

g. The long hours of work required in SAC units while other commands have normal work hours.

h. The difficulty of getting leaves or days off.

i. The difficulty in trying to get released for further training in their current job or another job at Service Schools, while quotas at these schools are known to be unfilled in many cases. Men in SAC, because of frequent TDY movements, are in many cases away on TDY when quotas have to be filled; and even though they applied for a specific course at some Service School, being on TDY precludes their attendance. Also certain MOS's are critical in SAC, so men holding a critical MOS are unable to follow further training in a different field of endeavor.

j. Married men being sent on long TDY trips when their wives are pregnant, when these men should be at home.

k. The short notices given on TDY trips or transfers.

l. The extensive ground training requirements being set up by higher command and at the same time being burdened with many air commitments and special projects - to such an extent that both are jeapordized in accomplishment because one must give way to the other.

These are the complaints of the men of the 28th Bomb Wing. All men do not complain - particularly the single men - nor do all the men complain about the same things. But these things mentioned above are the complaints most often heard. And it seems that more and more of our longer-service men are getting out of the service, making the personnel situation even more critical.

As an employer, the United States Air Force has a great responsibility to its personnel, and in this time of world crisis every attempt should be made to create a desire on the part of Air Force personnel to stay in SAC so that Air Force and SAC will have the fighting units it strives continuously to maintain.

5. In explanation of the insertion of the contents of paragraph 2e (1st Ind), this fact was mentioned for the sole purpose of pointing out a situation which, in case of an emergency, might have proved disastrous; and to further show why intelligence information was very limited and hard to obtain.

When the 28th Bomb Group arrived in England, the Intelligence section for the 3rd Air Division consisted of one (1) liaison officer at Marham, on loan from USAFE Headquarters. He was not familiar with the normal needs of a combat intelligence section and could give little

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aid to our group. There just was no 3rd Div A-2 who could supply needed information to the 28th Bomb Group,,or make distribution of very important Intelligence Publications, document, maps, charts, etc.

Should combat operations have become necessary during this period, intelligence could not have performed its function in a satisfactory manner.

Direct communication was then set up between the 28th Bomb Group S-2 and the A-2 at USAFE Headquarters. This proved more satisfactory, but still there was a delay in communication and only a weekly Intelligence publication was distributed to the S-2, 28th Bomb Group while in the United Kingdom.

It was in late September 1948, 2½ months after our arrival in the UK, that an A-2 section was set up at Headquarters 3rd Air Division and could begin to cope with the problem.

Elmer H. Hammer, Jr.
ELMER H. HAMMER, JR.
Major, USAF
Intelligence Officer


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016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

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FOREWORD

This report is published as a summary of activities of the 43rd Task Group during the period of Operation Combine III maneuver.

MICHAEL N W McCOY
Lt Col, USAF
Commanding

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

I N D E X

SEC.
I

PERSONNEL

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

P E R S O N N E L

1. MISSION:

To provide personnel to accomplish the mission of medium bombardment aircraft as directed by Operation Combine III.

2. OPERATIONS

A. Upon receipt of detailed instructions from Operation Combine III, and by coordination with Ninth Air Force, 43rd Task Group, and 307th Bombardment Wing a plan was formulated to affect efficiently the overall operation of this Group in the field. To augment the combat crews of the 64th Bomb Sq, six combat and maintenance crews of the 65th Bomb Sq were attached, and to provide a squadron mess in the field fourteen airmen of the 43rd Food Service Squadron were attached. To support the movement of personnel to and from the maneuver area two C-47 type aircraft were assigned from Base Flight, Davis-Monthan Air Force Base. Prior to departure special orders were published and all records completed.

B. At MacDill Air Force Base the squadron was assigned seven buildings, consolidated in one area, thereby greatly simplifying administrative control. The billets for the officers were considered adequate while those of the airmen were satisfactory. The only permanent records maintained were the sick book, duty roster, and morning report.

C. The operation of the mess was considered excellent and the quality of food superior.

D. An orientation talk was given by the squadron commander prior to departure and frequent squadron meetings were held thereafter at the maneuver base. Morale was excellent, and as a result of complete indoctrination no disciplinary problems arose and no cases of venereal disease were reported during the five week maneuver period.

E. Personnel breakdown was as follows:

15 Combat crews	165
Maintenance	140
Administration, supply and mess	20
TOTAL:	325

3. COMMENDATIONS

CDC2A1 1164 PD The following message was received from Mr Forrestal QUOTE The performance of the units participating in Operation Combine III this morning reflects great credit on coordination efforts of all. My congratulations to those who contributed to this operation. UNQUOTE. The following message was received from Lt General Quesada. QUOTE The Strategic Air Command units participating in Operation Combine III contributed a large part of the satisfactory impression that was gathered by the Secretary of National Defense of his recent visit to Operation Combine III. UNQUOTE.

Lt Colonel Michael N W McCoy, Commanding 64th Sq and MSG-1 George E Jenkins, 1st Sgt.

64th Sq at Mess

SEC
II

INTELLIGENCE

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

I N T E L L I G E N C E

1. MISSION

A. The Ninth Air Force in conjunction with Third Army, Fleet Marine Force, Atlantic, Naval Air Fleet, Atlantic, Stragetic Air Command, and Air Proving Ground Command will execute Operation Combine III in the Eglin Air Force Base Area during the period 7 September 1948 through 10 November 1948. The purpose is: to provide tactical indoctrination in the employment of a combined Army-Navy-Air Task Force to student officers of various service schools; to train all units participating in the execution of their primary missions; and to portray staff coordination and communications.

B. GENERAL PLAN OF OPERATIONS.

a. Due to the eminence of war, the Namoran Government has decided to become the aggressor nation and to attack Deluvia without warning. Through the element of surprise and a short campaign, it is planned to end the war by dividing the Deluvian nation in two parts and capturing the capitol, Atlantis, in 60 days.

b. Two task forces, one from the North and one from the South, Task Force "Combine III," will make simultaneous drives for the capitol of Deluvia, Atlantis. The southern task force will consist of strategic and tactical air forces, airborne forces, amphibious forces, and naval forces. The strategic and tactical forces, will obtain air superiority by destroying Deluvian air forces on the ground and in the air through simultaneous attacks prior to H-Hour on D-Day. The airborne forces will establish and airhead in the Eglin AFB area on H-Hour of D-Day with the mission of securing the Eglin AFB area and the beaches in that area for amphibious landings. The amphibious forces will land on D plus 1 with the mission of capturing the port of Sacola and establishing a base area in preparation for the major offensive towards Atlantis. Combined Namoran army and air forces will launch an offensive from the Sacola base area with the objective of capturing Atlantis.

The campaign culminating in the capture of Atlantis on D plus 60 will be divided into three phases. Phase I will be the establishment of the airhead, the landing of the amphibious forces, securing the port of Sacola, and establishing a base area. Phase II will be the period between establishing the base area and the next offensive towards Atlantis from the base area. Phase III will be offensive from the base area, resulting in the capture of Atlantis.

The time schedule for these phases follows:

Phase I

D-Day	—	Air head
D plus 1	—	Beach-head
D plus 16	—	Capture of Sacola

Phase II

D plus 16 thru D plus 30 - Consolidation of Base Area. Destruction of Deluvian air and ground forces, industry and communications in preparation for Phase III.

Phase III

D plus 30 thru D plus 60 - Atlantis Offensive
D plus 60 - Capture of Atlantis.

C. SUMMARY OF ENEMY SITUATION:

a. Strength in Aircraft:

161 Fighter Aircraft	225 Troop Carriers
214 Medium Bombers	200 VH Bombers

b. Replacement of aircraft: The Deluvian aircraft industry is capable of manufacturing 200 combat aircraft per day.

c. Personnel replacement: Deluvia has a potential military manpower strength of 3,000,000 men. Training centers and schools are in a high state of efficiency.

D. MISSION OF TASK FORCE "COMBINE III"

a. Air - will provide units for the destruction of the Deluvian Air Forces, destruction of defense installations in airborne-amphibious landing areas prior to landings, visual and photo reconnaissance, night photo reconnaissance, isolation of battle areas, destruction of ground targets in cooperation with Army Forces.

b. Training Exercises (Thursday, Friday, weekly).

All units under the Operational control of Headquarters Ninth Air Force during the period of Operation Combine III will participate in joint training exercises consisting of Army-Navy-Marine-Air Force missions, night and day high and low altitude interception missions, bombing and gunnery training, radar warning and radar countermeasures missions, unit and individual proficiency training missions. Missions will be assigned by Field Orders, Headquarters Ninth Air Force, daily.

E. TASK OF STRATEGIC AIR COMMAND

a. A descriptive mission assigned the Strategic Air Command represented by the 43rd Task Group.

MAPS: U.S. Sectional Charts, Scale 1:500000, Code AFC-6, Mobile, Birmingham, Savannah, Jacksonville.

World Aeronautical Charts, Scale 1:1,000,000, Code WAC, 407, 408, 409, 410, 466, 467, 468.

1. 9 B-29 Aircraft will attack an airdrome.

Load 10 x 500 lb GP per acft. Inst nose fuse, AN-M103A1 and 0.1 sec delay tail fuse, AN-M101A2.
Route Base to N 30-23 W 87-14 to Bomber IP to target to Base.
Alt enroute 10,000'
Alt at IP 10,000' or below cloud base.
TOT-Mon-H-35
"Diaphram Able"
Missions to be conducted on D plus 1, D plus 5, D plus 6, D plus 13, D plus 20, D plus 27, D plus 34.

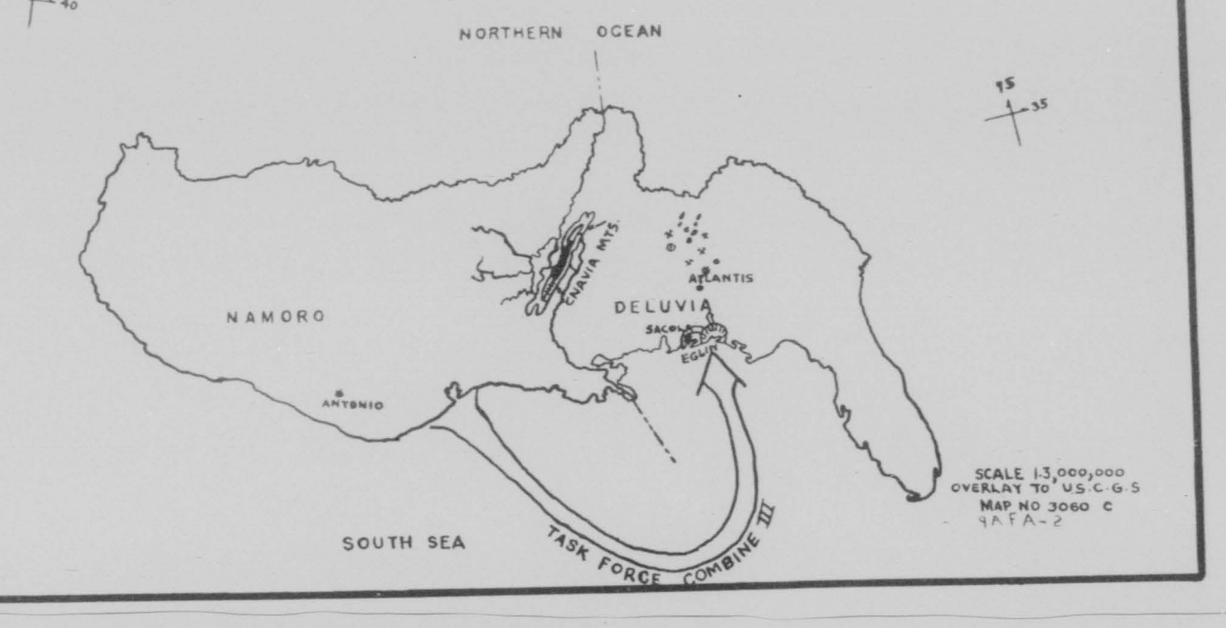
F. CONCLUSION

The 43rd Task Group destroyed all targets assigned by higher headquarters during the maneuver. All missions flown in coordination with ground forces were well within the allowable time limits and at no time were the friendly ground forces endangered by the bombs of the Strategic Air Command.

Due to the nature of assigned fighter interception missions our aerial gunners exposed a minimum amount of gun camera film.

THE CONTINENT OF DELMORO

(GENERAL SITUATION COMBINE III)



SEC
III

OPERATIONS

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

Training Schedule for the period of Operation Combine III Maneuver

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
			7 Flt to MacDill AF from D-M	8 "A"
11 "D"&"I"	12 "A"	13 "A"	14 "G-B-C-H"	15 "B-E-G-H"
18 "D" & "I"	19 "F" & "I"	20 "A"	21 "G-B-C-H"	22 "B-E-G-H"
25 "D" & "I"	26 "F" & "I"	27 "A"	28 "G-B-C-H"	29 "B-E-G-H"
1 "D" & "I"	2 "F" & "I"	3 "A"	4 "G-B-C-H"	5 "B-E-G-H"
8 "D" & "I"	9 "F" & "I"	10 "A"	11 Take-off for Davis-Monthan AFB	

LEGEND

A —Formation Bombing Mission—Combine III
B —Interception Mission—Combine III
C —Practice Bombing Mission
D —Navigation and Air to Ground Gunnery Mission
E —SCR 5Z4 Runs
F —Transition and Instrument Flying
G —Synthetic Trainer
H —Small Arms Firing
I —Ground School

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

O P E R A T I O N S

I. Narrative:

1. In accordance with F.O. 4 dated 5 Oct 48 Hqs 43rd Bomb Wing DMAFB, a Composite Sq consisting of 15 crews and 15 aircraft (B-29) departed DMAFB 0600 7 Oct 48, and landed MacDill AFB 1700 (EST) 7 Oct 48. The 64th Bomb Sq furnished nine crews and nine B-29 aircraft and the 65th Bomb Sq furnished six crews and six B-29 aircraft. The Composite Sq will be referred to as the 43rd Task Group, commanded by Lt Col Michael N. W. McCoy.

Three Base Flight C-47 aircraft were used on the move to MacDill AFB to carry excess personnel and equipment, and two C-47's were used on the return trip to Davis Monthan Air Force Base.

Operation Combine III was terminated 10 November 1948. The 43rd Task Group completed its final mission at 1200 10 November 1948. Fourteen B-29's returned to Davis Monthan AFB 1500 11 November 1948, one B-29 was left at MacDill to clear all Mess, Supply and Maintenance problems. The last B-29 arrived Davis Monthan AFB 2120 12 November 1948.

II. Purpose:

The 43rd Task Group replaced the 97th Task Group which was staging out of MacDill AFB for the purpose of participating in Combine III. The 43rd Task Group was placed under operational control of the 9th AF, for the duration of Combine III.

All Combine III missions were flown in accordance with F.O.'s received from Joint Operation Control at Eglin AFB #2 and are given in detail later in this report.

Training missions were accomplished in accordance with 8th Air Force Reg 51-1 and 50-8, utilizing all spare time that combine commitments would permit. A summary of this training is covered in pertinent annexes.

III. Outline of Flying:

A. Combine Mission

1. On 8th of Oct 48 a practice mission was flown in accordance with F.O. #159 Hq 9th AF. 9 B-29 flew four dry runs, and one wet run dropping 10 500lb GP bombs per aircraft. Mission was successful.

2. 11 Oct 48 a practice mission No. 71 was flown--one dry run

was made and bombs were dropped on second run. The mission was successful.

3. On 13 Oct 48 the first mission was flown. Nine (9) B-29 dropped ordnance on target as briefed in accordance with mission number 71, F.O. #159 Hqs 9th AF. Time Over target was 9 seconds early and bombing was excellent.

4. On 14 Oct 1948 an interception mission was flown, simulating the bombing of Crestview, Florida and Mobile, Alabama at 25,000'. Three (3) B-29 were over the target on time as briefed. Fighter interception was negligible.

5. On 15 Oct our interception mission was flown, simulating the bombing of Eglin AFB No. 1, Brookley AFB at 25,000' and Pensacola, Florida at 15,000'. Three B-29's made the first two targets on time as briefed. Only one B-29 made the third target on time. Two B-29's returned to Base at dark. Only one Fighter was seen.

6. On 20 Oct 48, Mission 71, F.O. #159 Hqs 9th AF was flown. Nine B-29's dropped ordnance as briefed. Take-off was 3 seconds early. Bombing was excellent.

7. On 21 Oct 48 an interception mission was flown simulating the bombing of Eglin AFB #2, Eglin AFB at 25,000' and Milton, Florida at 15,000'. Three B-29's made first two targets on time as briefed and one B-29 made 3rd target as briefed. Only minimum fighter interception was seen.

8. On 22 Oct 48 an interception mission was flown simulating the bombing of Eglin AFB, and Milton, Florida, at 25,000' and Pensacola, Florida at 15,000'. Three B-29 were over Targets 1 & 2 on time as briefed and one B-29 was over Pensacola, Florida on time. Four F-51's made interception on 2nd Target.

9. On 27 Oct mission 71, F.O. #159 was flown. Nine B-29's dropped ordnance on target as briefed. Time over Target was 21 seconds early. Bombing was excellent.

10. On 28 Oct an interception mission was flown simulating the bombing of Dothan, Alabama and Eglin AFB at 32,000' and Atmore, Alabama at 15,000'. Mission was cancelled by Joint Operation Control at Eglin AFB before first target was reached.

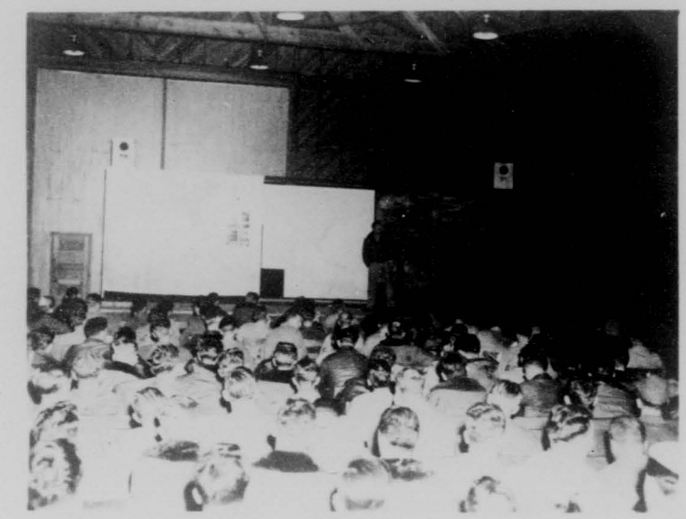
11. On 3 Nov mission 71 F.O. #159 Hqs 9th AF was flown. Nine B-29 dropped ordnance on target as briefed. Time over target was zero hour. Bombing was excellent.

12. On 4 Nov an interception mission was flown simulating the bombing of De Funiak Springs, Florida and at Eglin AFB at 32,000' and Milton, Florida at 15,000'. Three B-29's were over targets 1 & 2 as briefed. Target No. 3 was cancelled by Joint Operation Control.

13. On 10 Nov mission 71, F.O. #159 was flown. Nine B-29's dropped their ordnance on target as briefed. Time over target was zero hour and bombing was excellent. This was final mission of Operation Combine III.

B. Total flying time during this maneuver for 43rd Task Group including trip to MacDill AFB and returning to Davis Monthan AFB was 1133 hours and 40 minutes. 558 hours and 10 minutes were flown on Combine III missions. A total of 575 hours and 30 minutes were flown on training missions. Toward accomplishing minimums in accordance with 8th AF Reg 51-1 and 50-8.

IV. From an operational standpoint the mission was highly successful. Fighters could not intercept satisfactorily at 30,000'. Fighter interception on scheduled interception missions was negligible.



Briefing prior to mission

Lead Crew during maneuvers

SEC
III A

NAVIGATION

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

N A V I G A T I O N

The navigation phase of the 43rd Task Group's participation in Operation Combine III consisted, in the main part, of extremely accurate timing and close coordination of the "Bombing Team". Time, given by Operations Combine III, was the time of bomb impact; thus a high degree of efficiency was required on the part of the lead team to make this time good.

1. The first phase of Operation Combine III consisted of formation bombing of Target "Y", Eglin Proving Ground. The route was as follows:

Depart MacDill AFB, forming over field, depart on course to Turning Point #1 (30-02N, 86-32-1/2W) to Orbit Point (30-02N, 87-13W) to Fairpoint (30-22N, 87-13W) to Initial Point (30-39N, 86-43W) to Target "Y" (30-33N, 86-21W). Return direct from target "Y" to MacDill AFB.

Average Time: 4:00
Distance : 611 NM

A plan was devised whereby the formation of nine (9) aircraft would arrive at the ORBIT POINT with 30 to 40 minutes to lose prior to making target run. All turns, by lead aircraft, were 1/4 needle width precision turns so that times and distances could be accurately predicted. A "Figure 8" (Shown on attached sketch) was devised so that the squadron formation could be kept intact and ready to make the target run in the event of a change of target time. Time to be "lost" was divided so that one-half of the time would be lost per loop of the "Figure 8".

Radar was used, by the lead navigator, to determine position off shore during maneuvers prior to target run. This method proved an invaluable aid as no other means could be used that could accurately determine the formations position as quickly and as easily. The formation departed the Orbit Point exactly on a predetermined time for the target run--during this run, time in seconds, was "lost" or "gained" by turning "before" or "after" reaching the I.P.

The Target run--a distance of 70-1/2 NM--required from 20 to 22 minutes depending upon the altitude and winds in the target area. A "Weather aircraft" furnished the lead navigator with winds in the target area and time required to make impact time was calculated while maneuvering in the "Figure 8" at the ORBIT POINT. To further facilitate "timing" an ATF of 26 seconds was used and the "Whole Range" was considered as one mile.

Impact times made good are listed below:

Mission #1	9 seconds early
Mission #2	3 seconds early
Mission #3	21 seconds early
Mission #4	0 seconds
Mission #5	0 seconds

The second phase consisted of day and night simulated bombing and fighter interception at high altitudes. These missions did not require accurate timing but all crews were briefed on definite "Target Times" for training purposes. No navigational difficulties were encountered on any mission. Radar and Loran were the methods used.

2. The route covered, in the second phase, varied for each mission flown, but generally the targets were in the same area. Eglin AFB Mobile, Alabama and Pensacola AFB. The mission was designed to utilize ground radar tracking and fighter interception and as a result navigation played a minor part.

Three navigation missions were flown and each mission was designed so that a maximum amount of training could be accomplished on each mission. "D", Grid, Radar and Loran were the methods used on all missions and as a result all navigators completed their quarterly 8th AF 51-1 requirements with the exception of the long range mission.

The normal amount of trouble, with navigation instruments, was encountered but none proved to be a serious drawback to successful completion of any mission. In order of occurrence; Fluxgate, Radar and Loran had the greatest number of malfunctions.

NOTE: Length of legs in Figure 8 depends upon amount of time to be lost.

SEC
III B

BOMBING

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

B O M B I N G

The primary function of the 43rd Task Group in this maneuver was to demonstrate the effectiveness of bombing from B-29 type aircraft as a softening up measure in weakening the enemy's defenses. The target assigned to this group was Target "Y", Range #52 of the Eglin Bombing Ranges. (See enclosed photo of overall target area). Target "Y" consisted of four B-26 type aircraft which were assumed to be loaded with gas and bombs and were standing by for an immediate take-off. The aiming point assigned by higher headquarters was the base of the letter "Y", which was located approximately 200' west of the parked aircraft.

Upon arrival at MacDill AFB, the 43rd Task Group was ordered to stage two practice missions on Target "Y". These missions were intended to familiarize the crews with routes to and from the target area, and also to emphasize target identification as a safety factor. Ordnance was carried on each of these two practice missions. After completing four dry runs permission was granted to expend the ordnance in a formation release. These practice missions were dress rehearsals of the actual missions the 43rd Task Group was scheduled to fly in the maneuver, Operation Combine III, and developed the close coordination needed between Bombardier, Navigator and Radar that was later to pay off in the successful completion of the missions assigned to the 43rd Task Group.

The mission, as defined by 9th AF, called for a formation of 9 B-29 type aircraft to attack Target "Y" with 10 500lb GP bombs per aircraft at H hour plus 6, and also stipulated that the bomb impact time was to be within a tolerance of plus or minus 30 seconds of the assigned bomb impact time. Five missions of this nature were completed with the results as indicated on the enclosed strike photos, and all bomb impact times were well within the assigned tolerances.

In view of the fact that troops were located near the assigned target area, every possible safety measure was enforced to insure their safety at all times. These measures included such points as a control point for opening of bomb doors, another point for turning on rack switches, and a positive check on course to the target, with the wingmen of the lead element keeping a constant check on the aiming point of the lead aircraft to insure positive identification. Each bombardier was thoroughly briefed on the target location and also the locations of the troops and observers of the maneuver. At no time during the maneuver was any public property or personnel subjected to hazardous conditions that could be attributed to negligence on the part of the 43rd Task Group.

In addition to the above mentioned bombing missions, the 43rd Task Group also participated in 5 high altitude simulated camera bombing and camera gunnery missions in which fighter interception was probable and expected. The missions as assigned consisted of a formation of three aircraft to fly above 25,000' on a camera bombing mission on which fighter interception was anticipated. The objective was to arrive over a designated target area at a definite time and perform camera bombing attacks on the industrial areas of the assigned targets. On missions of this type, the bombing section completed 53 individual camera bombing attacks at altitudes above 25,000'.

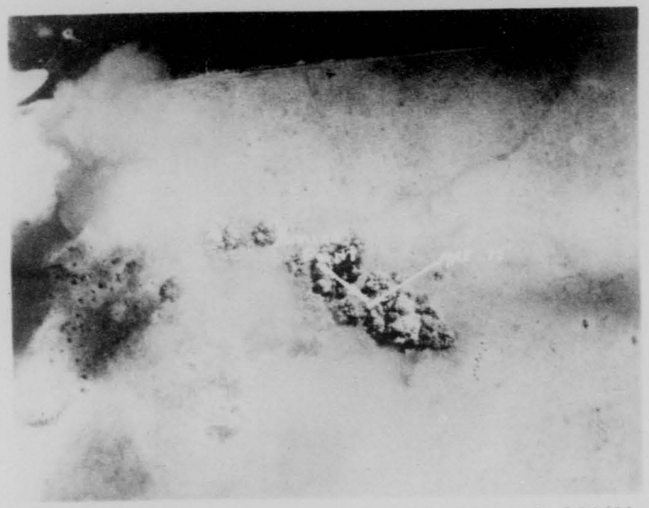
The assigned targets destroyed at the briefed time contributed greatly toward the successful completion of the missions assigned to the 43rd Task Group in the maneuver Operation Combine III.

The following training was accomplished in addition to Operation Combine III missions:

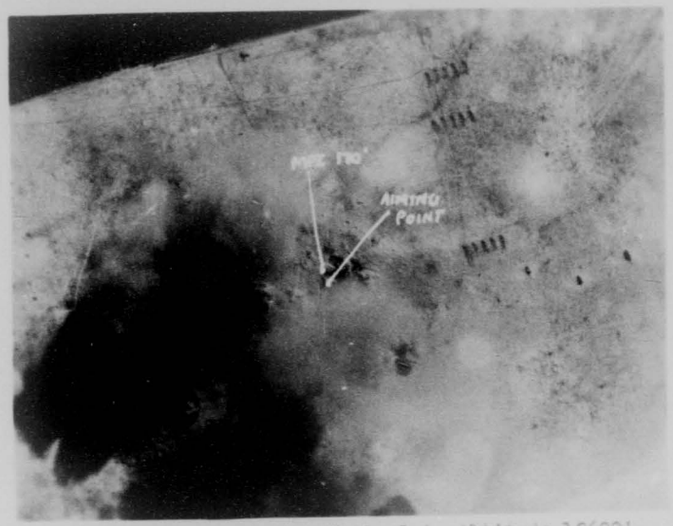
35 individual practice bombing releases
50% of the navigation training missions required for the quarter completed.
75% of the aerial gunnery requirements for bombardiers completed.
20 hours of bomb trainer time.
95% of the Bombardiers qualified on .45 cal pistol
100% of the Bombardiers were checked out as being proficient in 1. Loading and fusing of Demo bombs.
2. Aerial camera installation and operation.
3. "Q" system of determining ballistic winds.

OPERATION COMBINE III

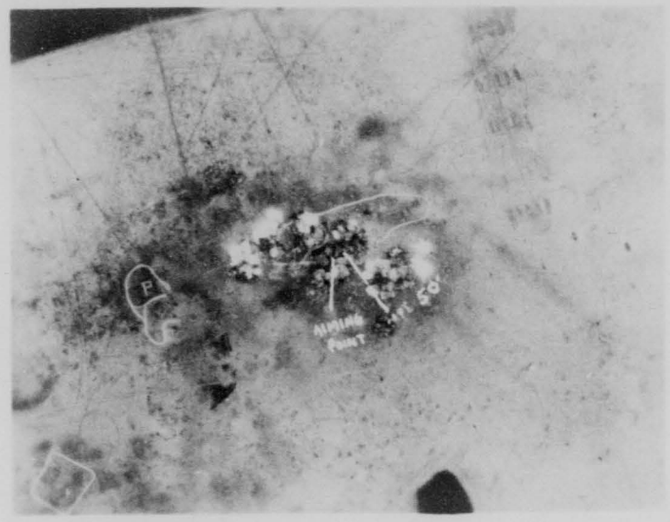
OVERALL VIEW OF TARGET AREA



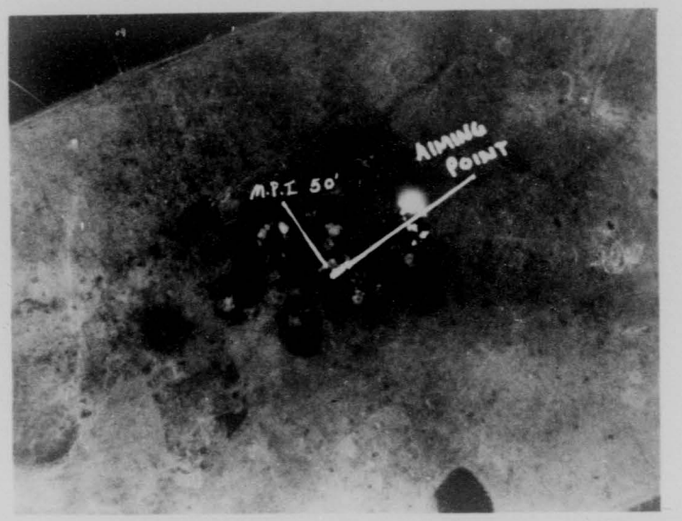
13 Oct 48 Release Number 1 Absolute Altitude 10480'
Bomb Pattern: 350' X 800'



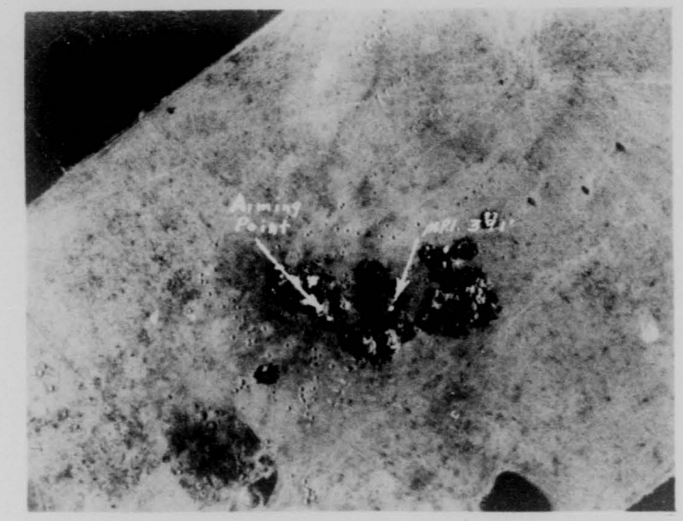
20 Oct 48 Release Number 2 Absolute Altitude 10600'
Bomb Pattern: 775' X 375'



27 Oct 48 Release Number 3 Absolute Altitude 10450'
Bomb Pattern: 700' X 325'



3 Nov 48 Release Number 4 Absolute Altitude 10340'
Bomb Pattern: 750' X 425'



10 Nov 48 Release Number 5 Absolute Altitude 10550'
Bomb Pattern: 775' X 400'

SEC
III C

RADAR

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

R A D A R

The success of Operation Combine III depended upon close coordination and accurate timing of land, sea and Air Forces.

It was of the utmost importance that the bomb impact time assigned the 43rd Bomb Gp be controlled to within plus or minus 30 seconds due to the extensive troop movements and other air operations in the vicinity of the target.

From the beginning of the operation it was apparent that radar would be invaluable in aiding the Navigators to control bomb impact time. This was accomplished by the radar operators' efficient use of the equipment placed at their disposal. The low average time error obtained was due in part to the radar operators' ability to give constant and precise fixes, along with accurate winds and ground speeds, to the Navigators.

Another phase of Operation Combine III was the numerous day-night fighter interception missions. In this too, radar played an important role in that it aided the Navigator in making good the briefed times over targets. At all simulated targets the radar operators were prepared to take over the bomb runs in the event the targets were obscured by weather. In several instances it was necessary for radar to complete the bomb runs.

In addition to flying assigned missions, during the five week period of Operation Combine III a vigorous training program to instruct all radar personnel in the technical knowledge and flying procedures required for the adequate performances of their duties, are shown by the accomplishment of the following Strategic Air Command's quarterly ground training requirements:

28% of Supersonic Trainer
42% of Line Maintenance
136 hours of APQ-13 and APQ-23 instruction on flight maintenance
12 Radar Operators qualified on small arms

Added to the ground training requirements accomplished, the following percentages of Strategic Air Commands' flying training requirements were accomplished:

12.5% SCR 584 Runs
10% Camera Photos
15% Scope Photos
18% Loran Fixes

28% Beacon Fixes
52% Navigation Missions (1000 and 3600 Mi.)

The accomplishment of these Strategic Air Command quarterly train-requirements helped maintain the radar operators' proficiency in carrying out their assigned duties.

The teamwork of the radar operator's and Navigators was made possible by the unceasing efforts of the radar maintenance and camera sections. Excellent cooperation received from MacDill Air Force Base personnel in affording proper space, parts and time greatly aided these sections in successful completion of their duties.

The coordination and teamwork between radar operators, Navigators and maintenance is borne out by the excellent results which were obtained on all Operation Combine III missions.

SEC
III D

FLIGHT ENGINEERING

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

F L I G H T E N G I N E E R I N G

FLIGHT PLANS

A detailed flight plan was originated for the Operation Combine III bombing missions to include assembly, formation climb, cruise, bombing and controlled descent. An alternate plan for possible jettisoning at sea was included. A 10% power increase for wing positions over the lead was allowed.

BOMB LOADING FOR BEST CG

Six of the usual 10-500lb GP bombs were loaded in the forward bay on forward racks and four were loaded on the forward racks of the rear bomb bay to insure safe CG. limits for all aircraft. This was done at a possible sacrifice of bombing accuracy.

FLYING THE MISSION

Formation take-off at one minute intervals, a low altitude assembly and secondary climb to bombing altitude were utilized according to the flight plan. The lead aircraft used a 2350 RPM climb so wing aircraft would not have to exceed rated power. A constant CAS of 195 was cruising and bomb run air speed as per 9th AF directive. Time consuming maneuvers were thus sometimes necessary. The original flight plan was altered to conform with these needs. It was SOP to set up 2300 RPM during the bomb run due to the excessive power requirement necessary for some wing aircraft to maintain proper formation position. The return cruise and descent was in route formation closing in at destination for peeloff and landing. During six missions of this type the following averages were computed:

Average Nautical Miles per gallon—.233
Average fuel consumed —2658 gals.
Average time —5:40

TRAINING ACCOMPLISHED:

The Operation Combine III missions emphasized the problems of formation flights during which unusual power settings are used and fuel flows varied greatly over a short period of time.

The 3000 Nautical mile Navigation missions emphasized pre-mission planning of the flight plan. The adherence to the flight plan during flight showed a high quality of pre-mission planning.

The high altitude interception missions presented another problem to the Flight Engineers. The problem of planning mission at high altitude with distance and time involved which would not allow adherance to long range cruise principles. The maintaining of time schedules showed high efficiency in planning and plan execution.

The instrument and transition flight had their place in the training program as the roster of Flight Engineers included men recently checked out as Flight Engineers and valuable panel practice was obtained on these flights by the above mentioned men.

The ground training accomplished during this period included practical work on the aircraft in assisting the Engineering Section in ground maintenance.

The Flight Engineering Section conducted classes in cruise control for the pilots and co-pilots who participated in Operation Combine III. This phase of training included 30 hrs of classroom work.

SEC
IIIE

GUNNERY

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

G U N N E R Y

Operation Combine III provided an opportunity for the Airmen of the 43rd Bomb Gp to become proficient in their respective MOS. This organization utilized every hour that could be spared from the various commitments to train and instruct the Airmen in B-29 Aircraft.

During the five week period the average airman of the 43rd Bomb Gp flew sixty hours. He fired two hundred rounds of Cal .50 ammunition, and each airman has gained invaluable experience in Bomb loading, Bomb fuzing, Ammunition loading, camera gunnery and coordination among crew members.

All personnel with the MOS of 580, 1685, and 612 were instructed in Ground School on Central Fire Control, Operational Checks, Gun cleaning and nomenclature study. A total of 1440 man hours was spent in acquainting the men with their job and other like positions.

The airmen of the 43rd Bomb Gp that are qualified to be aircrew members fired the Caliber .45 Pistol for record. One hundred and thirty-nine airmen qualified as Expert, Sharpshooter, and Marksman. Nineteen airmen (non-crew members) qualified on the M-1 Carbine Caliber .30.

In conclusion it can be stated that the airmen of the 43rd Bomb with Operation Combine III have completed almost two thirds of their Strategic Air Command quarterly training requirements during the month of October 1945.

SCANNER ON DUTY

PRE-FLIGHT OPERATIONAL CHECK

SEC
III F

COMMUNICATIONS

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

C O M M U N I C A T I O N S

I. EQUIPMENT AND PERSONNEL:

a. To maintain the communications equipment of nine (9) 64th Bomb Sq aircraft and six (6) 65th Bomb Sq aircraft, one communications Officer, SSN (0200), one communications technician, SSN (542), and five radio mechanics, SSN (754), were transported by air to MacDill Air Force Base, Tampa, Florida. The 65th Bomb Sq sent one Radio Mechanic SSN (754) to aid in the maintenance of the 65th Bomb Sq aircraft. Portable "Mock-Ups" of the AN/ARC-3 (VHF), AN/ARC-8 (Liaison), AN/ARN-7 (Radio Compass), AN/AIC-2 (Interphone), and BC-453 (Command Receiver) were transported by Squadron aircraft to MacDill AFB, also a Rectifier (Solenium) with an output of 28 volts DC to furnish power for the "Mock-Ups" was transported aboard squadron aircraft. Included in this equipment was a complete Amateur Radio station consisting of a Transmitter with a power imput of 110 watts and a high frequency receiver Hammarlund Hq-129X which was used to maintain a daily Voice schedule with Tucson for personal messages.

II. COMMUNICATIONS INSTALLATIONS AND FACILITIES OPERATED BY THE SQUADRON:

a. A "VHF" Radio set was operated by the communications section as a flight control station at MacDill. Channel "Easy" on 133.56 Mcs with "Bluebird" as the call sign was used. A Liaison frequency of 4220 Kcs was used to contact bombing formations for aircraft, aborts, strike reports and malfunctions in bombing systems.

b. Both the use of the "VHF" system and the Liaison set expedited the flying operations schedule of the squadrons. A "point to point" voice radio station was also operated between MacDill and the headquarters of "Operation Combine III" at Eglin AFB. Aerial radio operators (SSN 2756) were used to operate the station when they were not scheduled for flying duties.

c. The radio amateur station with the call sign W7VOE was set up in the communications building. Personal traffic was maintained between MacDill and Tucson, thru the use of W7MOB Station in Tucson. The communications section was set up in an unoccupied building, and a Squadron radio center was put into operation.

III. OPERATION AND MAINTENANCE OF COMMUNICATIONS FACILITIES:

a. Besides the maintaining of the flight control center, the squadron section maintained the allied radio equipment of nine 64th Bomb Sq aircraft and six 65th Bomb Sq aircraft. "Operation Combine III" presented a unique problem in "VHF" crystallization of channels, "Fox", "George", and "How". SAC's standard crystallization of these channels were removed and three, "Operation Combine III" frequencies were installed in the aircraft. Replacement of unserviceable radio parts were obtained from Service Stock #5 at MacDill Air Force Base. The portable aircraft mock-ups were a distinct aid in the discovery and the maintaining of unserviceable radio parts.

IV. TRAINING:

a. Since the participation of the squadron in "Operation Combine III" marked the first time in nearly over a year that the squadron has operated away from its home station, further training and experience were obtained in communications ability, both for the maintenance men and the aerial radio operators of both squadrons.

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

COMMUNICATIONS CONSUMPTION REPORT

CLASS	STOCK NUMBER	ITEM		AMOUNT CONSUMED
16A	1600-224643270	T-67/ARC-3	Radio Transmitter	5
16A	1600-203684000	Loop LP-21A	Radio Compass	1
16A	1600-216259000	BC-348	Liaison Receiver	2
16A	1600-206125000	T-30	Throat Microphone	1
16A	1600-211304960	AM/AIC-2	Interphone Amplifier	3
16A	1600-223129922	T-47/ART-13	Radio Transmitter	2
16A	1600-215157921	R-77/ARC-3	Radio Receiver	6
16A	1600-212996500	BC-1366M	Jack Box	1
16A	1600-211349250	R5/ARN-7	Radio Compass Unit	1
16A	1600-391427533	SA-26/U	Microphone Switch	4
16A	1600-321439500	CD-508-A	Cord Microphone	3
16A	1600-321041000	CD-307A	Cord Headset	2
16A	1600-391427575	SW-47/AIC-2	Cord Extension	4
16E	3300-291855500	JK-48	Microphone Jack	4
16E	3300-293682500	JK-26	Headset Jack	3
16E	3300-293854000	PL-55d	Plug	1
16E	3300-106360000	W-106	Wire	500 Ft.
16E	3300-294385550	M-10-U	Plug	1
16E	3300-331495000	In-88	Insulator	6
08	8800-360911	1/2 Amp.	Fuse	6
08	8800-144200	LM-27	lamp	10
16F	2100 2814 Crystal Radio 8155.71 KCS.		Receiver Crystal 8155 KCS.	1
16F	2100 2814 Crystal Radio 8007.69KCS.		Receiver Crystal 8007.69KCS.	1

SEC
IV

MAINT &. SUPPLY

SEC
IV A

MAINTENANCE

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

M A I N T E N A N C E

1. MISSION:

A. Mission of the maintenance section was to supply Operations with the required number of aircraft to complete all missions assigned by Combine III Field Orders.

2. AIRCRAFT AND PERSONNEL:

A. The 43rd Task Group consisted of 6 B-29 Aircraft from the 65th Bomb Squadron and 9 aircraft of the 64th Bomb Squadron.

B. The following is a list of MOS's utilized on this maneuver.

MOS	64th	65th
683	2	0
684 & 747	45	28
685	4	0
687	2	1
686	2	0
750	12	9
826	1	0
835	1	0
867	10	0
542	1	0
911 Or 960	8	0
941	1	0
955	2	0
754	5	0

3. SUPPLIES AND FLYAWAY KITS:

A. Ten flyaway bins and necessary UEE equipment were taken on the maneuver.

B. While in the maneuver area the Service Stock and Base Supply at MacDill Field, Florida, were utilized as a source of aircraft parts. The flyaway kits were used only as an emergency source of supply.

C. This organization received the best of service from the supply facilities at MacDill AFB.

4. TRANSPORTATION AND REFUELING:

A. Transportation was curtailed during the latter part of the maneuver due to a shortage of 73 octane gasoline on the base.

B. At the close of the maneuver, the following vehicles were being utilized within the squadron:

1 Jeep	Operations
1 6 X 6	Mess Hall, QM Supply and laundry run.
1 Weapons Carrier	Radar
1 Personnel Carrier	Armament
1 Ton and one-half	Tech Supply
1 Weapons Carrier	Flight line supervision, parts chasing, and transportation for Specialists.

C. Due to the squadron maintenance facilities and aircraft parking area being widely dispersed; lack of transportation did hinder operation of the section.

D. Refueling was a slow process during the entire maneuver. This was attributed to a lack of drivers available at the refueling unit.

5. AIRCRAFT MAINTENANCE

A. No difficult maintenance problems were encountered during the maneuver. A high percentage of aircraft were always available for assigned missions. No mission was hindered from lack of aircraft being in commission.

B. The only unusual maintenance problem encountered was an increase in the number of "Mag Drops" found on engine run-up; probably due to the damp climate. The result was an increase in consumption of magnetoes, breaker points, and spark plugs.

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

MAINTENANCE CONSUMPTION REPORT

QUANTITY	CLASS	PART NO.	NOMENCLATURE
412 Ea	03H	4703-RC35S	Plugs, Spark
402 Ea	03H	4708-L888	Plugs, Spark
5 Ea	03D	4305-135063-7	Master Control Assy.
5 Ea	03-C-1	4209-1118404	Voltage Regulator
3 Ea	03C2	4202-AAF596755	Reverse Current Relay.
4 Ea	01-F	01-8-14-3242-65	Blister Assy, CFC
4 Ea	03-B	4111-258-1	Brake Assembly
5 Ea	03D	4305-135077-3	Pump Assy., Fueling.
6 Ea	03F	4504-1E663	Reg. Assy., Cabin Pressure.
6 Sets	03H	4704-10-21417	Points Assy., Breaker
13 Ea	01F	0108-LA08809	Stack Assy., Short
4 Ea	01F	0108-14-3377-69	Hood Assy., Flight
7 Ea	04C	3900-344500	Tire, 56"
7 Ea	04C	3900-749500	Tube, 56"
4 Ea	02D	0232-890657A	Cyl. & Piston Assy.
6 Ea	02-A	0200-R3350-57	Engine
6 Ea	05A	6117-8-8DJ9ABE	Indicator, Tachometer
6 Ea	05C	6032-WH6500A	Indicator, Flight
4 Ea	05A	BA104SNN137255	Gov. Assy., Prop
4 Ea	03J	4904-AN3150	Battery, Storage
9 Ea	29-A	4861-30868	Element Filter
6 Ea	050	6119-2CM5ACZ	Generator Tachometer
6 Ea	03H	4704-10-30625-2	Magneto Assy.
1 Ea	03E		Turbo Supercharger
6 Ea	02D	0232-129980	Valve and Lock Screw
2 Ea	03-C-2	4248-10219	Radar Table Lamp
1 Ea	01F	0108-6-9880	Window, Bombardier
6 Gal.	06	ANVVO-366-A	Fluid, Hydraulic
2 Ea	03E	4400-G403A1-CA-3	Amplifier, Turbo
1 Ea	01F	0108-15-985-7-13	Rudder Assembly
3 Ea	03E	4400-G303AY2	Motor Assy., Waste Gate
8 Ea	03D	4305-135494	Fuel Strainers

SEC
IV B

SUPPLY

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

S U P P L Y

On 4 October 1948, the Supply Officer and Supply Sergeant, went to MacDill AFB by C-47 with the advanced echelon. The purpose was to establish a Supply section and to have it fully operational when the 43rd Task Group arrived.

It was necessary to establish a memorandum receipt account at the MacDill AFB, Base Supply and after that was accomplished, to conduct an inventory of all property issued to the 97th Task Group, since the 43rd Task Group was to relieve them and use the same property. After the inventory was completed a paper work transfer of property to the 43rd Task Group was accomplished and submitted, along with the accompanying reports of Survey, to the Base accountable Officer.

After a conference with the Quartermaster Laundry Officer, a laundry schedule was established and the complete facilities of the laundry made available to the Group.

In order for the line chief, flight chiefs and flyaway supply to draw aircraft parts, the Supply Officer prepared signature cards and a request for those persons to be allowed to draw supplies from Service Stock.

After drawing the necessary supplies for our intended TDY period the Supply section did a routine business until the Task Group departed MacDill AFB. After the airplanes were all airborne the Supply section had 7 trucks at its disposal and began a turning in process that lasted for 1-1/2 days. At the end of the maneuver all property was accounted for and the Group left MacDill AFB with no Reports of Surveys or Statements of Charges pending.

ARMAMENT, ORDNANCE & PHOTOGRAPHY

SEC
IV C

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 8, Florida

ARMAMENT-ORDNANCE-PHOTOGRAPHY

The missions for Operation Combine III assigned to the 43rd Task Group required precision bombing and the carrying of bombs over military installations and U.S. personnel in the immediate area in and around Eglin AFB, Florida. In executing the bombing phases of our missions safely it was recognized that all bombing equipment must be in perfect operating condition, and that the less experienced personnel working with this bombing equipment be completely and safely proficient in all phases of normal and emergency procedures. All aircraft of the 43rd Task Group were checked over for malfunctions and equipment that required, or would soon require replacing, was replaced prior to the opening of the maneuver.

The Armament section employed, during our participation in this maneuver one (1) Armament Officer (4822), six (6) aircraft armorers (911), two (2) RCT mechanics (960) and two (2) bomb sight mechanics (683). There were fifteen (15) B-29 type aircraft from the 43rd Task Group to be maintained for bombing, gunnery and photography missions, plus having the responsibility of changing all astro compass domes and CFC sighting domes.

Though all actual bomb loading was performed by the combat crews the armament section performed all maintenance required to correct any malfunctions found in pre-flight and post-flight checks. On this maneuver the 43rd Task Group expended twenty (20) M38-A2 practise bombs and eight hundred and ten (810) M-64 Demolition bombs (500 lb).

All small arms (pistols and carbines) were issued to the armament section and maintained and stored when not in use on the small arms ranges. Some supervisory personnel were supplied to the ranges during qualification firing, and all armament personnel qualified in their basic arm.

All ordnance functions were assumed by MacDill AFB ordnance personnel with the exception of fuzing the bombs used in Operation Combine III. All bombs were fuzed by armament personnel immediately prior to each mission. Superior cooperation was given by MacDill AFB ordnance personnel at all times.

Photography section functions were assumed by three (3) camera technicians (941). The camera technicians loaded and unloaded all film, serviced and pre-flighted the cameras and processed and developed all film used by the 43rd Task Group during these missions. Due to the congestion in the Base Photo Lab all of our film processing and

developing was done during normal after duty hours so as not to interfere with base personnel. Thirty (30) feet of O-15 Radar Scope Camera film and fifteen hundred (1500) feet of K-22 Aerial Camera film was developed by this section, plus all public relations photo work and those pictures required by the Operation Combine III Historical Report.

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 5, Florida

ARMAMENT, ORDNANCE AND PHOTOGRAPHY CONSUMPTION REPORT

QUANTITY	STOCK NUMBER	NOMENCLATURE
510	AN-M64A1	Bomb Assy, 500lb GP
20	M-38A2	Bomb Assy, 100lb Practice
1200 rd.	T11G0	Cartridge, Ball Cal .50M2
8150 rd.	T10A3	Cartridge, Ball Cal .30M1
3050 rd.	T2AAA	Cartridge, Ball Cal .45 M1911
2 ea.	03-N 4E01-13351	Valve Assy, Four way
1 ea.	01-F 6-20944-2	Actuator Assy, Latch
1 ea.	11-E 5901-8252811-C1	Charger, Gun
1 ea.	11-A 6400-601560	Selector, Bomb Rack
1 ea.	11-E 5915-328200	Compressor, Air
14 ea.	11-A 6400-14-8750	Cable Assy, C-3A Hoist

PHOTOGRAPHY

6 doz.	74.00-288000	Film, Photo Type V
30 ft.	74.00-266853	Film, Photo Type II
1500 ft.	74.00-276980	Film, Photo Aerial Type 1B
26	74.00-44-1650	Lamp, Photo Flash

PERSONAL EQUIPMENT

SEC
IV D

64TH BOMBARDMENT SQUADRON (M)
43RD BOMBARDMENT GROUP (M)
MacDill Air Force Base
Tampa 6, Florida

PERSONAL EQUIPMENT

To maintain parachutes, mae westa, life rafts and Gibson girl radio for fifteen (15) aircraft of the 43rd Task Group one (1) SSN 620 and one (1) SSN 594 from the 43rd Task Group were included in squadron personnel ordered to MacDill AFB for period of Operation Combine III manuevers. All aircraft and combat crew personnel were fully equipped for over water flights, thereby requiring frequent inspections by the men of the section, to insure that all such equipment was correctly maintained. Ten (10) spare dinghies and mae westa were shipped to MacDill AFB to provide replacements for damaged or lost items. Extra headsets, microphones and sun glasses were also taken to provide necessary replacements as needed.

While on manuevers all TO compliances, ten day inspections of parachutes and necessary repacks of parachutes were complied with. Twenty-five parachutes of the 65th Bomb Sq were repacked by the parachute shop at MacDill AFB. All parachutes of the 64th Bomb Sq required only ten day inspections, as all repacking of the 64th Bomb Sq chutes was completed prior to departure from Davis-Monthan Air Force Base.

While on maneuvers at MacDill AFB, no facilities were provided for storage of parachutes. Due to climatic conditions, parachutes were removed from all aircraft when not flying, and stored in the hangar being utilized by the squadrons. This method while solving the problem of parachute storage, proved to be quite unsatisfactory as adequate facilities such as line and repacking tables for correct and proper maintenance of equipment were not available.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006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 00003813I,000596

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~~B-66637~~

BRIEFING BOOK
OUTLINE

1. INTRODUCTION
2. PURPOSE CHART
3. GENERAL SCHEME
4. AIR ORDER OF BATTLE
5. E-DAY RECONNAISSANCE
6. DEPLOYMENT
7. STRIKE CHART
8. GREAT LAKES AREA
9. CELL PHOTO
10. TRANSITION PHOTO
11. COMPLETED TRANSITION PHOTO
12. FIGHTER ESCORT PHOTO
13. NORTHEAST AREA
14. NORTHWEST PACIFIC AREA
15. LOS ANGELES-SAN FRANSISCO AREA
16. BDA CHART
17. BDA COPY
18. TRAINING ACCOMPLISHMENTS
19. METHOD OF EVALUATION
20. EVALUATION COPY

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INTRODUCTION

IN THE PAST WE HAVE EXPENDED A GREAT DEAL OF OUR FLYING EFFORT TOWARDS THE DEVELOPMENT OF NEW TACTICS AND THE IMPROVEMENT OF THOSE TACTICS WHICH ARE PRESENTLY ESTABLISHED IN THE TACTICAL DOCTRINE. OPERATION "CHECK-OUT" IS A PLAN FOR A COMMAND EXERCISE SIMULATING WAR PLAN TIMING AND INCLUDING PARTICIPATION BY ALL AVAILABLE WAR PLAN UNITS. IT IS PROPOSED THAT WE CONDUCT THIS EXERCISE AGAINST THE AIR DEFENSE COMMAND FORCES ON THE EAST AND WEST COASTS AND IN THE GREAT LAKES AREA. SOME OF THE TACTICS HIGHLIGHTED IN THIS EXERCISE INCLUDE THE RECENTLY APPROVED FIGHTER ESCORT TACTICS, MASS FIGHTER IN-FLIGHT REFUELING, HIGH AND LOW ALTITUDE APPROACHES THROUGH HEAVILY DEFENDED AREAS, ELECTRONICS JAMMING, AND FORCE COMPRESSION WITH RESPECT TO PROPOSED B-36 OPERATIONS.

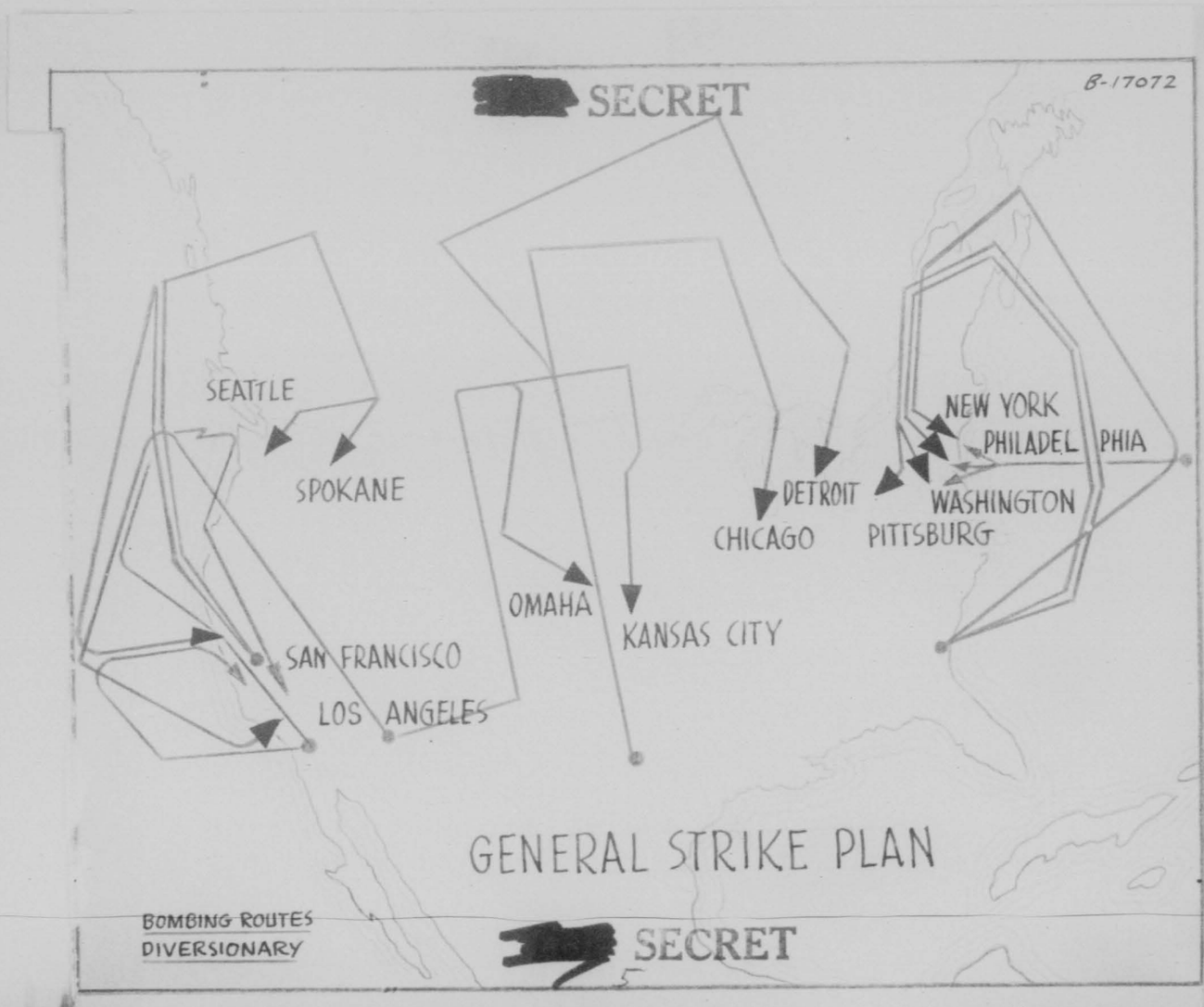
WE RECOMMEND THAT OPERATION "CHECK-OUT" BE CONDUCTED IN PLACE OF THE THREE ADC EXERCISES SCHEDULED FOR APRIL AND MAY. THE AIR DEFENSE COMMAND HAS AGREED WITH THIS PROPOSAL.

2

PURPOSE

to evaluate:

1. COMMAND WAR PLAN TIMING CAPABILITY
2. THREE SUMMER PLAN DAYLIGHT-DARKNESS CONDITIONS
3. HI-LEVEL VERSUS LO-LEVEL PENETRATIONS: STRIKE & RECONNAISSANCE
4. FIGHTER CAPABILITY TO:
   - PRE-STRIKE STAGE,
   - MAKE TIMED RENDEZVOUS,
   - MASS IFR
5. EFFECTIVENESS OF FERRET INTEGRATED IN STRIKE CELL
6. PERSONNEL & EQUIPMENT ENDURANCE ON LONG CELL MISSION
7. STRIKE FORCE COMPRESSION FOR MULTI-BOMB TARGETS *(HEAVY)*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GENERAL SCHEME

IT IS PROPOSED TO STRIKE THE EAST COAST, GREAT LAKES AND WEST COAST SIMULTANEOUSLY. THE ATTACK WILL COMPRISE E-DAY RECONNAISSANCE: DEPLOYMENT OF FORCES; E + 3 ATTACK; BDA RECONNAISSANCE. FULL UTILIZATION OF DIVERSION AND FIGHTER ESCORT FORCES IS PLANNED. TIMING IS BASED ON CHICAGO STRIKE TIME FOR B-36'S; 06:15 CST. FIRST LIGHT IN THE CHICAGO AREA IS AT 04:15 CST.

MISSION RECAP

UNIT	ZI TARGET	EWP PROFILE DISTANCE	ZI MISSION DISTANCE	FORCE
93rd	Spokane	3279	3298	6
93rd	Seattle	2941	3106	12
43rd	Los Angeles	3181	3300	6
9th	San Francisco	2684	2840	6
7th	Chicago	5661	5663	15
11th	Detroit	5234	5240	18
301st	Pittsburg	3212	3242	6
301st	Washington	3100	3289	6
2nd	Philadelphia	3383	3488	6
509th	New York	3553	3626	6
43rd	Offutt			6
43rd	Kansas City			6

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AIR ORDER OF BATTLE

(~~325~~ 297 SORTIES)

4

STRIKE		DIVERSION		RECCY		FIGHTER		TANKER	
UNIT	A/C	UNIT	A/C	UNIT	A/C	UNIT	A/C	UNIT	A/C
2 BW	6	44 BW	9	5 SRW	~~12~~ 16	27 FEW	~~40~~	91 ARS	~~8~~ 14
7 BW	~~18~~ 18	~~90 BW~~	~~X~~	55 SRW	4	12 FEW	~~24~~	~~307 ARS~~	~~8~~
11 BW	~~15~~ 16	376 BW	9	28 SRW	13	~~31 FEW~~	~~40~~	2 ARS	3
43 BW	6	22 BW	18	91 SRW	12				
9 BW	6	106 BW	9	111 SRW	~~4~~				
301 BW	12	6 BW	9						
93 BW	18								
~~502~~ 97 BW	6								
43 BW	12								
306 BW	5								
~~87~~		54		~~48~~ 49		~~120~~		~~16~~	

TOTALS	
STRIKE	~~87~~ 109
DIVERSION	54
RECCY	~~48~~ 49
FIGHTER	~~120~~ 72
TANKER	~~16~~ 17
	~~325~~ ~~337~~ 297

~~99~~ 109

✓ - UNIT MISSION CREDIT.

SECRET

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E+3

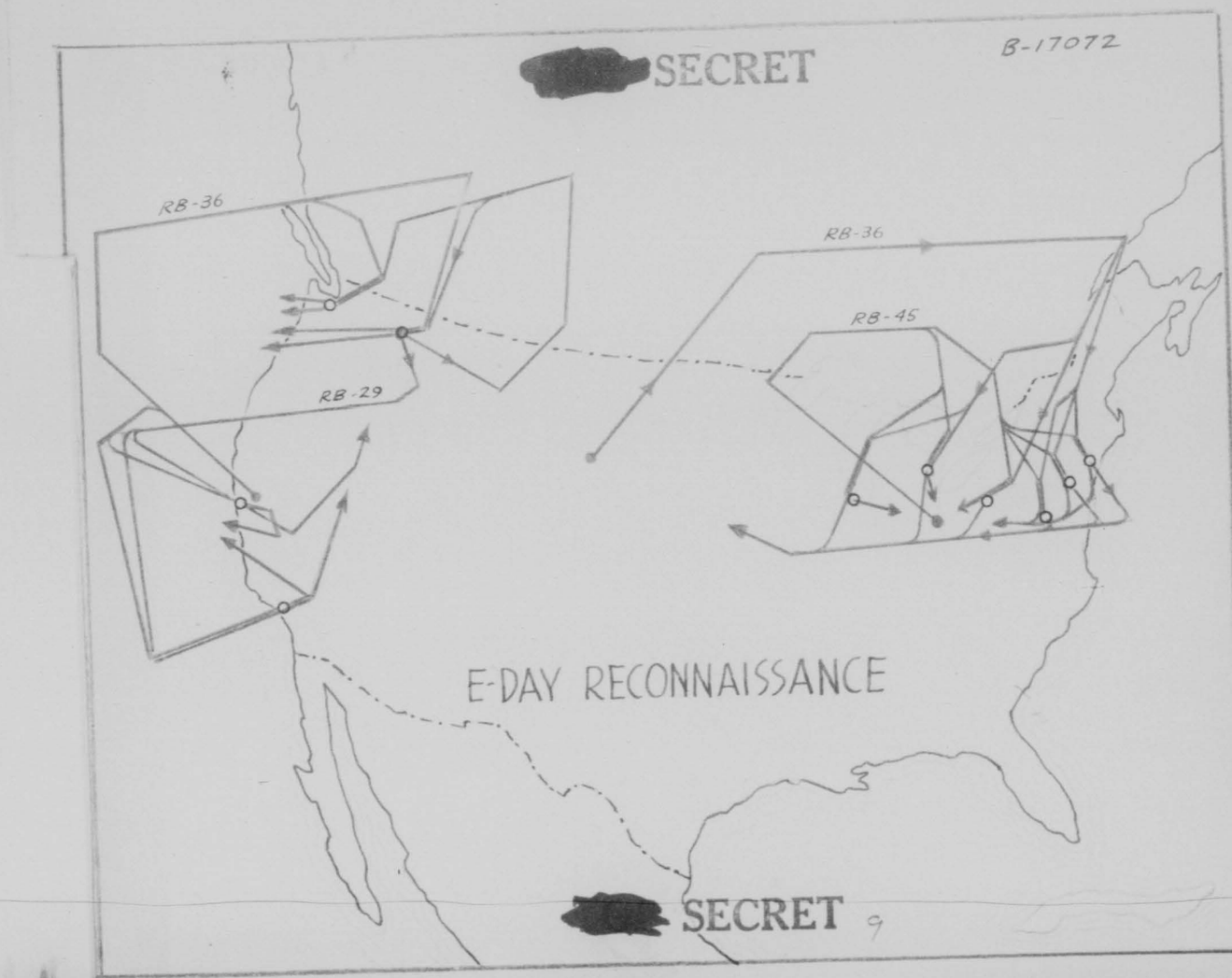
RECONNAISSANCE ~~E#~~ DAY

5

UNIT	BASE	Nº A/C	TARGETS
5 SRW	TRAVIS	~~6~~ 5	WESTERN U.S.
55 SRW	RAMEY	2	AS REQUIRED
~~28 SRW~~	~~RAPID CITY~~	~~6~~	~~EASTERN U.S.~~
91 SRW	LOCKBOURNE	6	GREAT LAKES
111 SRW	FAIRCHILD	4	WESTERN U.S.

8

SECRET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RB-36
RB-36
RB-45
RB-29
E-DAY RECONNAISSANCE
SECRET

E-DAY RECONNAISSANCE

ALL PRE-STRIKE RECONNAISSANCE MISSIONS WILL SIMULATE EWP PROFILES. SIX RB-36'S (EAST RED) WILL DEPART RAPID CITY TO ACCOMPLISH SCOPE PHOTO AND ELECTRONIC RECONNAISSANCE, PROCEED INTO NORTHERN CANADA THEN TURN SOUTH FOR RUNS ON THE FOUR EASTERN AND TWO GREAT LAKES TARGETS. ALTITUDE WILL BE 40,000 FEET.

SIX RB-45'S, (EAST GREEN), WILL DEPART LOCKBOURNE ON SIMULATED EWP PROFILES. THEY WILL PROCEED ON INDICATED COURSES, ARRIVING OVER THE EASTERN AND GREAT LAKES TARGETS SIMULTANEOUSLY WITH THE RB-36'S. ALTITUDE WILL BE 40,000 FEET.

SIX RB-36'S, (WEST RED), WILL DEPART TRAVIS ON SIMULATED EWP PROFILES. THEY WILL PROCEED ON COURSES AS INDICATED, AT 40,000 FEET. SINGLE AIRCRAFT WILL RECONNOITER SEATTLE AND SPOKANE AND TWO AIRCRAFT WILL RECONNOITER LOS ANGELES AND SAN FRANCISCO.

FOUR RB-29'S, (WEST GREEN), WILL DEPART FAIRCHILD ON SIMULATED EWP PROFILES. THEY WILL PROCEED ON COURSES AS INDICATED, WITH SINGLE AIRCRAFT RECONNOITERING EACH OF THE FOUR WEST COAST TARGETS. ALTITUDE WILL BE 25,000 FEET.

TWO RB-50G'S WILL PRE AND POST STRIKE STAGE FROM HUNTER AFB, AND WILL ACCOMPLISH ELECTRONIC RECONNAISSANCE ON THE ROUTES TO BE FLOWN BY THE BOMB FORCES ASSIGNED TO CHICAGO AND DETROIT. ALTITUDE WILL BE 35,000 FEET.

RESULTS OF RADAR, VISUAL AND ELECTRONIC RECONNAISSANCE WILL BE PROCESSED AND EVALUATED AND DELIVERED TO THE USING BOMB WING IN TIME FOR THE E + 3 STRIKE.

SECRET

DEPLOYMENT

(PRE-STRIKE STAGING)

6

UNIT	BASE	Nº A/c	STAGING BASE
301 BW	BARKSDALE	12	HUNTER
~~509~~ BW	~~WALKER~~ B, GGS	6	HUNTER
~~44~~ BW	LAKE CHARLES	9	KINDLEY
~~90 BW~~	~~FORBES~~	9	KINDLEY
376 BW	BARKSDALE	9	KINDLEY
27 FEW	BERGSTROM	~~4~~8	~~CHANUTE~~
12 FEW	BERGSTROM	~~40~~	~~LOCKBOURNE~~
~~31 FEW~~	~~TURNER~~	~~40~~	~~DOW~~
~~307 ARS~~	~~WALKER~~	~~8~~	~~DOW~~

SECRET

11

STRIKE (E+3)

STRIKE TIME – CHICAGO 06:15 CST

7

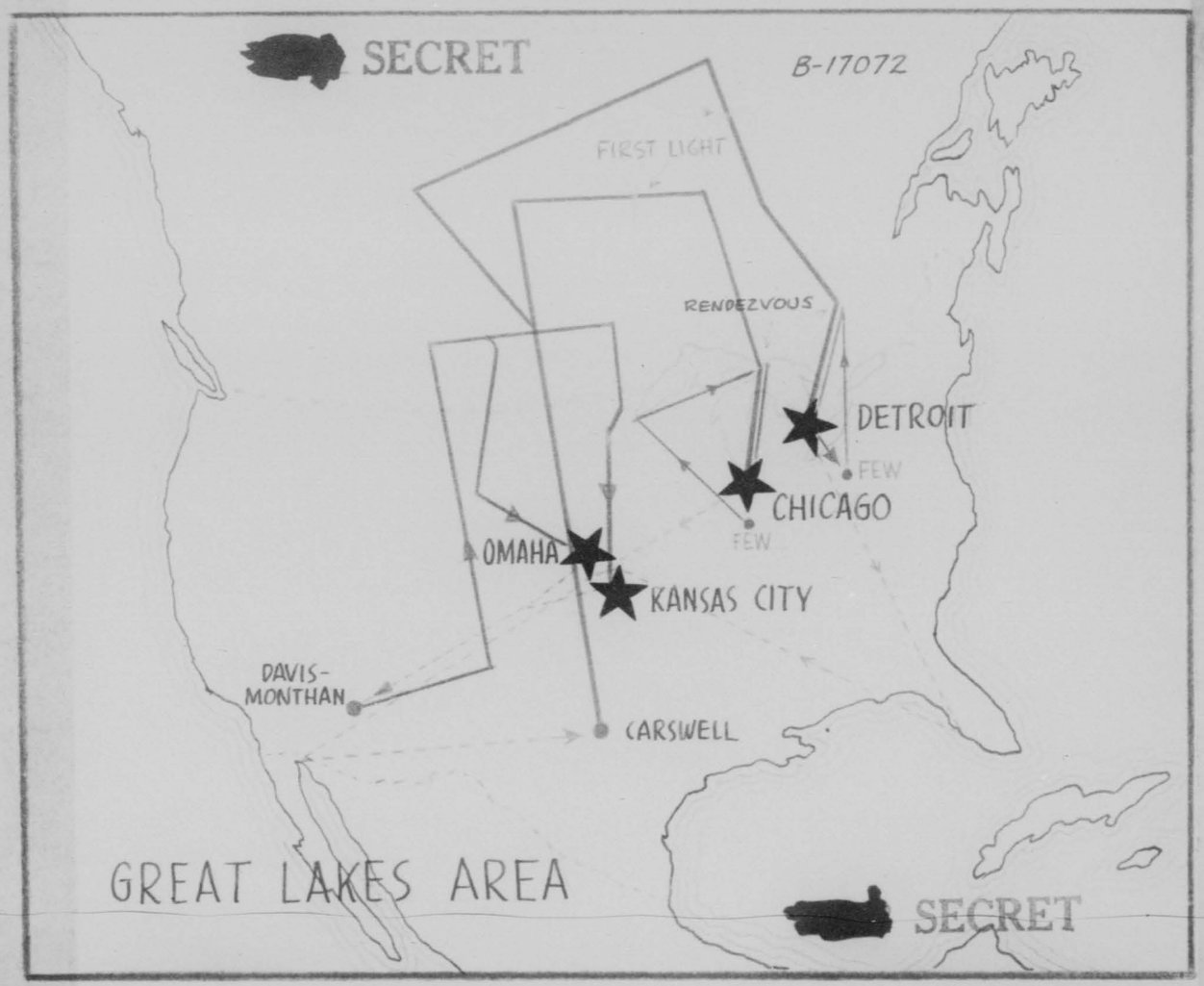
99 ~~87~~ 109 A/C ⇨ 4 TGTS. WEST COAST
~~4~~ 2 TGTS. CENTRAL
4 TGTS. EAST COAST
} 12 ~~10~~ TGTS

54 A/C DIVERSION

~~120~~ 72 A/C FIGHTER ESCORT

2 ECM A/C

SECRET


SECRET
B-17072
FIRST LIGHT
RENDEZVOUS
DETROIT
FEW
CHICAGO
FEW
OMAHA
KANSAS CITY
DAVIS-
MONTHAN
CARSWELL
GREAT LAKES AREA
SECRET

SECRET

GREAT LAKES AREA

THE B-36'S ARE SIMULATING A DEEP PENETRATION AT HIGH ALTITUDE. AFTER FLYING THE PROFILE ROUTE AS SHOWN, IN CELL FORMATION, THE CHICAGO FORCE MEETS FIRST LIGHT AT POINT MARKED ON CHART. AT THIS POINT, TRANSITION IS MADE FROM CELL FORMATION TO DAYLIGHT TACTICAL FORMATION. SUCCEEDING PICTURES ILLUSTRATE THIS TRANSITION. FIGHTERS, STAGING FROM CHANUTE FIELD, ARE SIMULATING TAKE-OFF FROM SOLA WITH AN OUTBOUND REFUELING SO AS TO ACCOMPLISH ESCORT TO THE TARGET AREA. THEY WILL FLY FROM CHANUTE TO DULUTH WHICH IS THE REFUELING AREA; DIRECT TO RENDEZVOUS AREA AT INDICATED POINT. ESCORT FORMATION WILL BE THAT DEVELOPED FROM TESTS AT EGLIN FIELD. THIS FORMATION IS ALSO ILLUSTRATED IN SUCCEEDING PICTURES.

AT TARGET, CHICAGO, WHICH SIMULATES MOSCOW, FORCE MAKES INDIVIDUAL RUNS ON 18 SEPARATE AIMING POINTS, REASSEMBLING ON A LINE AFTER BOMB RUN.

THE DETROIT FORCE MEETS FIRST LIGHT AT INDICATED POINT. (AT THIS POINT, TRANSITION IS MADE FROM CELL FORMATION TO TACTICAL FORMATION.) FIGHTERS STAGING OUT OF LOCKBOURNE, FLY DIRECT TO RENDEZVOUS AREA AT INDICATED POINT. AT TARGET, DETROIT, WHICH SIMULATES LENINGRAD, FORCE MAKES INDIVIDUAL RUNS ON 15 SEPARATE AIMING POINTS, REASSEMBLING ON A LINE AFTER BOMB RUN. FIGHTERS WILL GIVE AREA COVERAGE WHILE BOMBERS MAKE INDIVIDUAL AIMING POINTS GOOD.

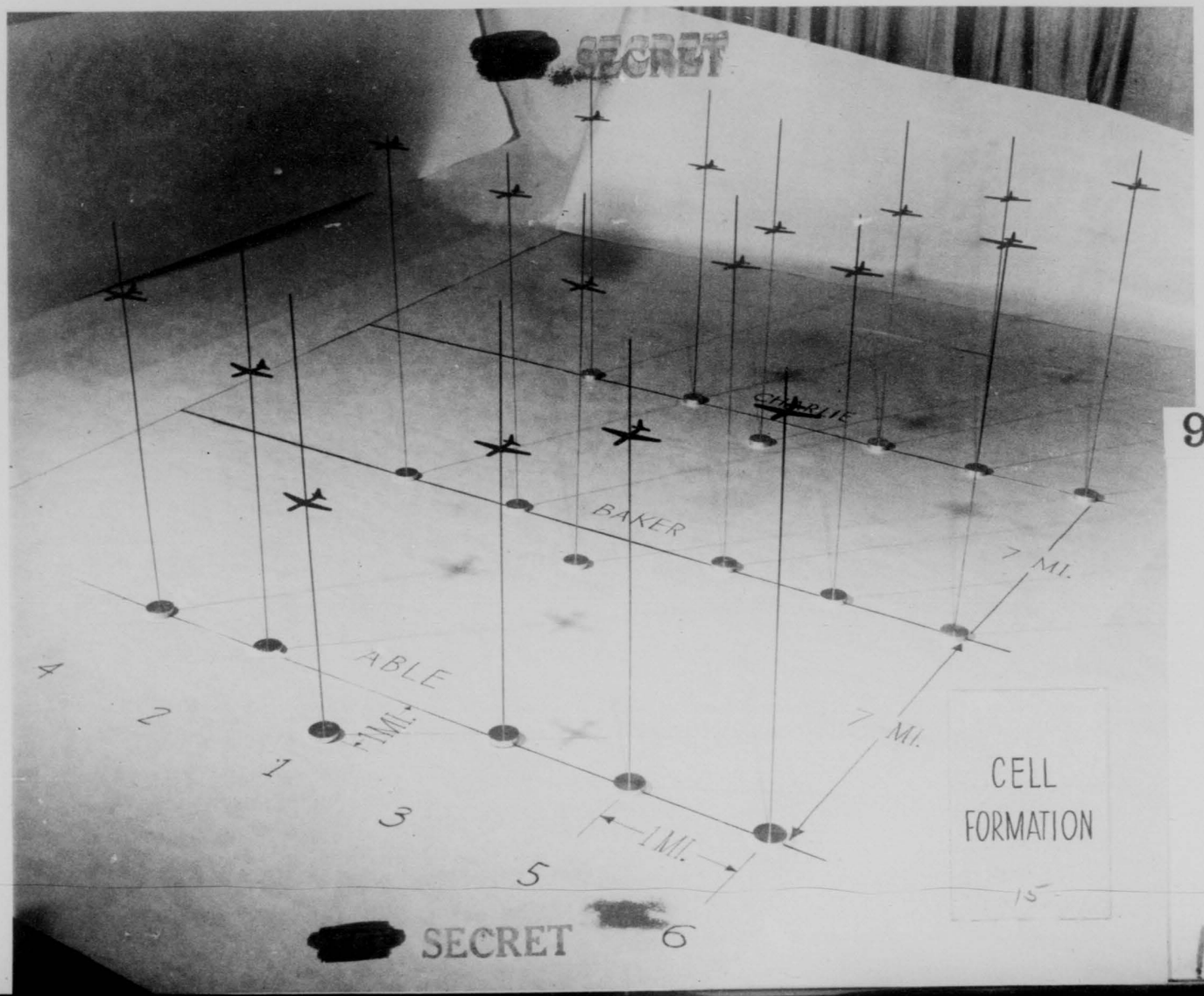
PENETRATION AND BOMBING ALT – 40,000'.

8

SECRET

FIRST PHOTO

THIS ILLUSTRATION OF THE 18 SHIP CELL DELINEATES RELATIVE POSITION OF EACH AIRCRAFT. THE CELL COMMANDER OF EACH CELL IS EQUIPPED WITH THE APN-11 BEACON. INDIVIDUAL AIRCRAFT OF EACH CELL, FLY ONLY ON THE CELL COMMANDER OF THEIR PARTICULAR CELL. THE LEAD CELL COMMANDER NAVIGATES FOR THE ENTIRE TASK FORCE; SUCCEEDING TASK FORCE CELL LEADERS FLY ON THE BEACON RESPONSE TRANSMITTED BY THE PRECEDING CELL LEADER. BY CODING THE BEACON TRANSMISSION, NO CONFUSION EXISTS AS TO THE IDENTITY OF THE CELL COMMANDER UPON WHOM STATION IS BEING FLOWN.



CELL FORMATION

15

9

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TRANSITION PHOTO

UPON RECEIPT OF COMMAND FROM THE TASK FORCE COMMANDER, TRANSITION TO DAYLIGHT TACTICAL FORMATION IS BEGUN. THREE AIRCRAFT, OF THE 2ND CELL, AS SHOWN IN THE PHOTO, ADD POWER AS THE LEAD CELL REDUCES POWER, AND JOIN FORMATION AS THE HIGH FLIGHT, LEAD SQUADRON.

SIX AIRCRAFT OF THE THIRD CELL, AS SHOWN IN THE PHOTO, ADD POWER AS THE REMAINING THREE SHIPS OF THE SECOND CELL REDUCE POWER, AND JOIN FORMATION AS THE HIGH AND LOW FLIGHTS.

FOR THE PURPOSE OF TAIL DEFENSE, EASE OF FIGHTER PROTECTION, AND SIMPLICITY OF BREAKUP TO AIMING POINT, FLIGHTS PULL UP TO MORE OF A LINE ABREAST FORMATION THAN USUAL.

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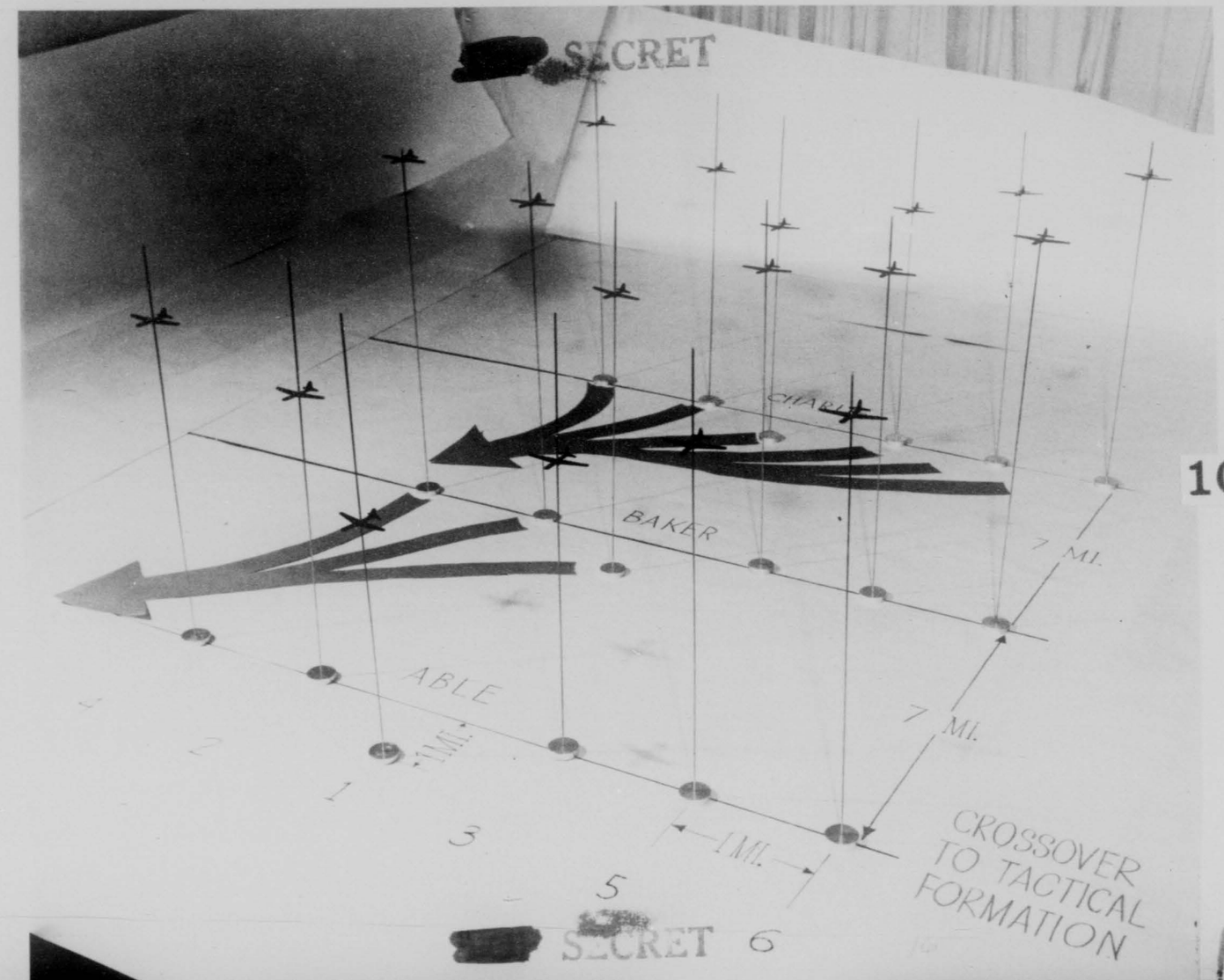
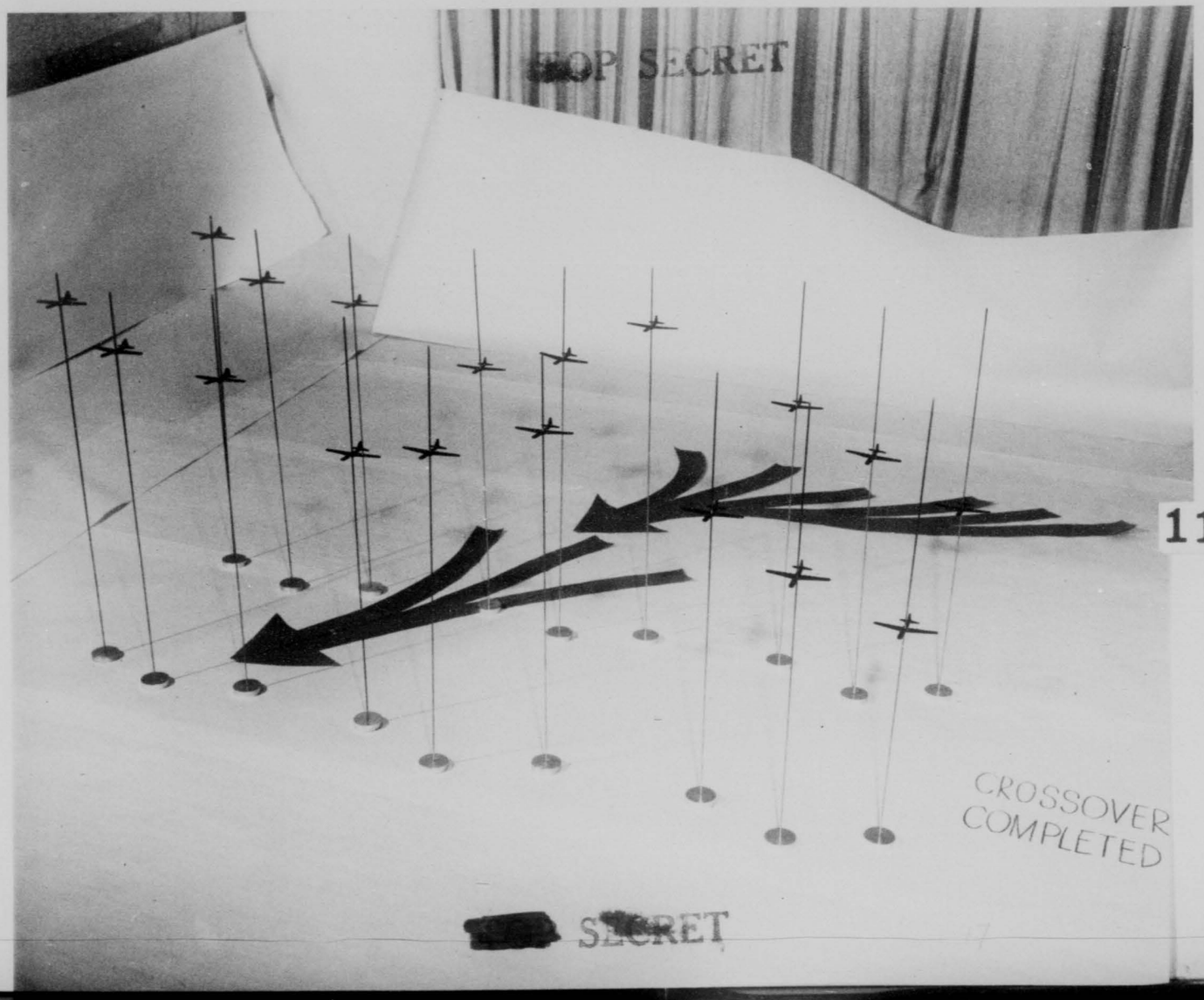

SECRET
CHARLIE
BAKER
7 MI.
ABLE
7 MI.
1 MI.
1 MI.
CROSSOVER TO TACTICAL FORMATION
SECRET

10

COMPLETION PHOTO

RELATIVE DAYLIGHT TACTICAL FORMATION FOR HEAVIES IS SHOWN HERE. AS DEPICTED, ALL AIRCRAFT FLY A SLIGHTLY MORE FORWARD POSITION THAN THE NORMAL NOSE-TAIL POSITION.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11
CROSSOVER
COMPLETED
[redacted] SECRET

[redacted] SECRET

TACTICAL FIGHTER ESCORT POSITIONING

IN THE PREVIOUS THREE PHOTOGRAPHS WE HAVE SHOWN THREE SIX-SHIP CELLS, AND THE TRANSITION FROM CELL FORMATION TO A DAYLIGHT TACTICAL FORMATION CONSISTING OF TWO NINE SHIP SQUADRONS. JUST PRIOR TO THE FIGHTER RENDEZVOUS AREA, THE SECOND NINE SHIP SQUADRON WILL REDUCE POWER AND ASSUME A POSITION TEN MILES BEHIND THE LEAD SQUADRON. AT THIS POINT TWO TWENTY-FOUR SHIP FIGHTER ESCORT FORMATIONS JOIN THE B-36 FORCES. FOR THE PURPOSE OF DISCUSSION, WE HAVE SHOWN JUST ONE OF THESE NINE SHIP FORMATIONS IN THE PHOTOGRAPH. THE POSITIONING OF THE 24 ESCORT FIGHTERS IS AS SHOWN. GENERALLY THE FIGHTER ESCORT FORMATION IS STAGGERED VERTICALLY, LATERALLY AND HORIZONTALLY TO PROVIDE ADEQUATE DEFENSE IN DEPTH. ALL AIRCRAFT, WITH THE EXCEPTION OF THE FLIGHTS SHOWN ON EITHER FLANK OF THE B-36'S, FLY WITHIN THE TAIL CONE DEFENSES OF THE BOMBERS AND EXCHANGE POSITIONS BY WEAVING BACK AND FORTH, THUS THE VULNERABLE 60° DEGREES OF THE TAIL CONE IS SATURATED AT ALL TIMES.

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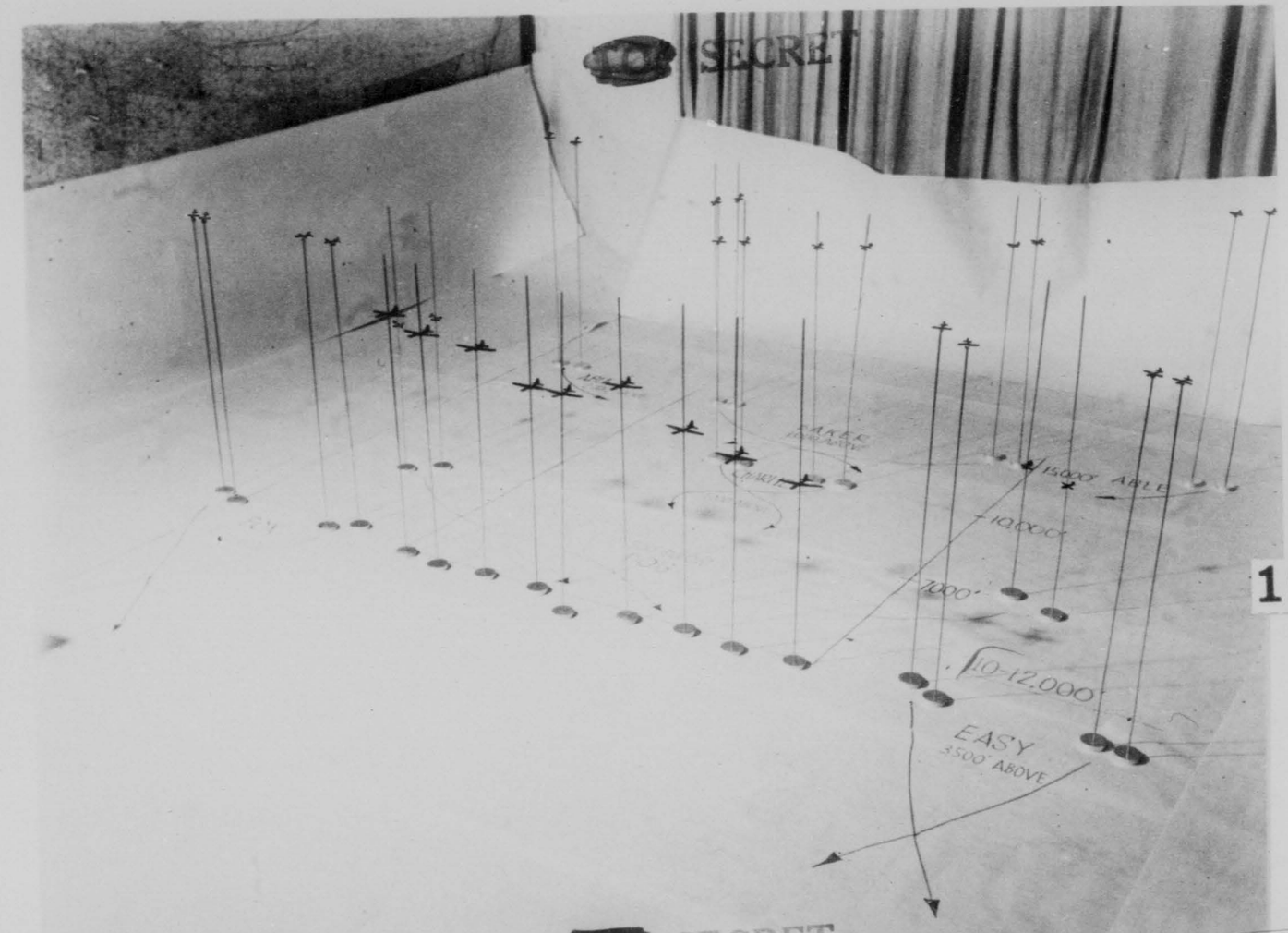
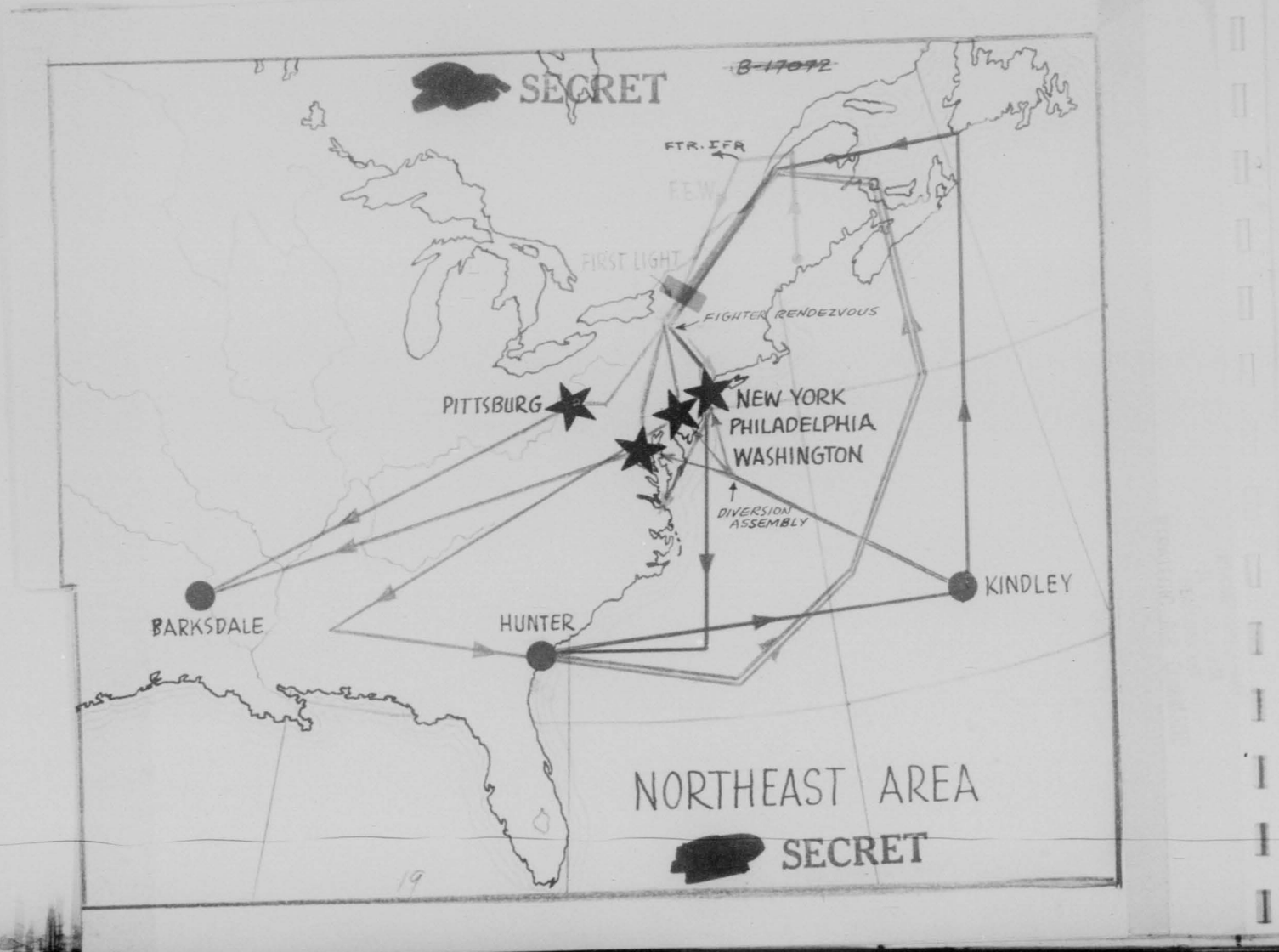


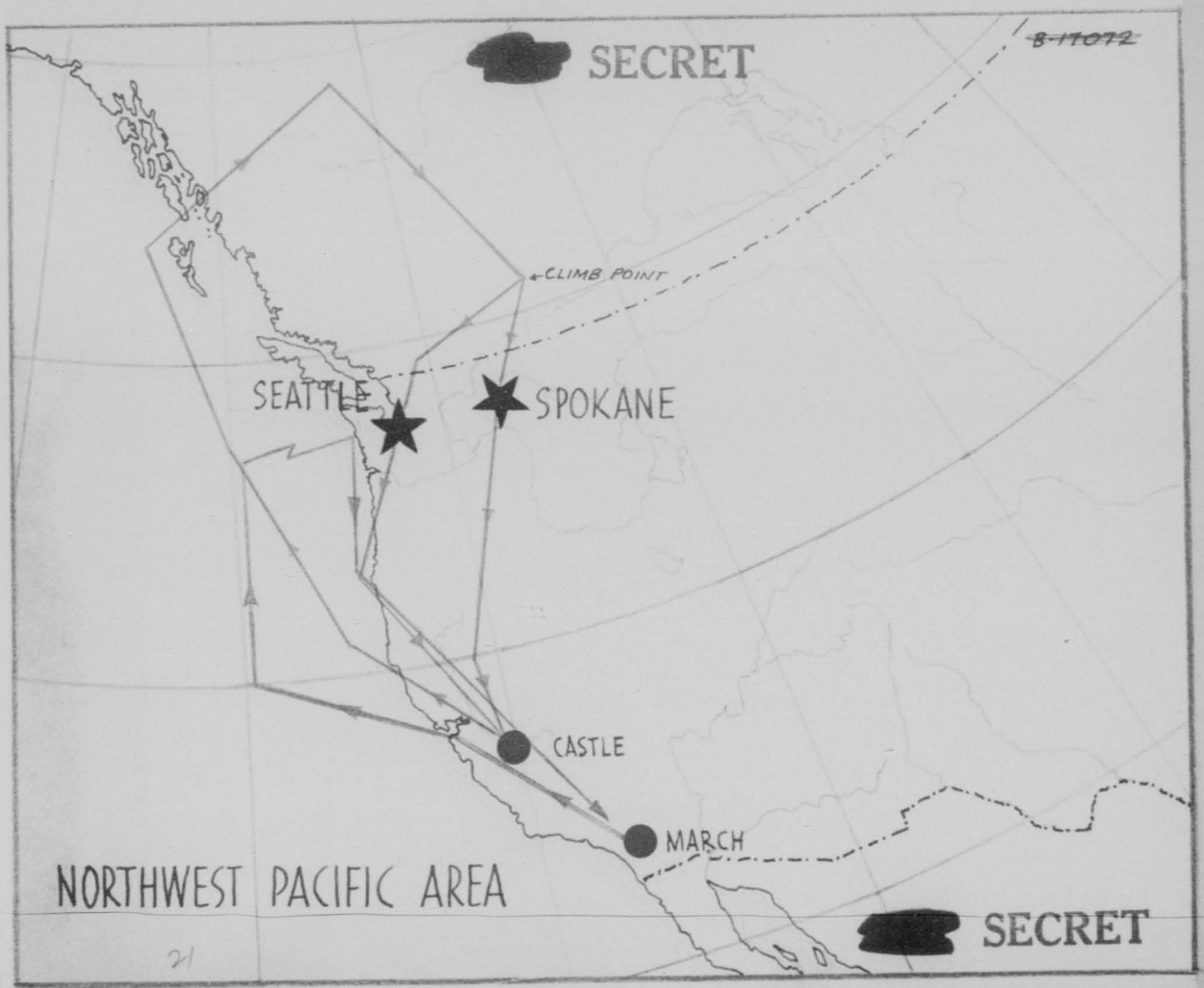
12


SECRET
B-17072
FTR. IFR
FEW
FIRST LIGHT
FIGHTER RENDEZVOUS
PITTSBURG
NEW YORK
PHILADELPHIA
WASHINGTON
DIVERSION ASSEMBLY
KINDLEY
BARKSDALE
HUNTER
NORTHEAST AREA
SECRET

NORTHEAST AREA

THE MEDIUM STRIKE FORCES (RED, GREEN AND BROWN) ARE SIMULATING AN ATTACK SIMILAR, IN RADAR DEPTH AND DEFENSE, TO THE SOVIET TARGETS LOCATED IN WESTERN USSR. THREE METHODS OF NAVIGATION TIMING ARE UTILIZED BY VARIOUS TASK FORCES: (1) CELL FORMATION, (2) SYSTEM OF NAVIGATION CONTROL POINTS AND (3) NIGHT VISUAL FORMATION. PENETRATION DOWN THE GASPE PENINSULA WILL BE AT 5,000 FEET. ADVANTAGE WILL BE TAKEN OF TERRAIN COVERAGE RELATIVE TO RADAR POSITION. TRANSITION FROM CELL FORMATION TO TACTICAL FORMATION WILL BE ACCOMPLISHED HERE. FIRST LIGHT ARRIVES AT INDICATED POINT. CLIMB WILL BE ESTABLISHED TO REACH FIGHTER RENDEZVOUS POINT, UTICA, AT 30,000 FEET BOMBING ALTITUDE. FIGHTERS, STAGING OUT OF DOW AFB, WILL FLY LEG FROM BASE TO REFUELING AREA AT SAGUENAY, CANADA; DIRECT TO RENDEZVOUS AREA. THEY WILL ESCORT ONLY THE NEW YORK FORCE. FIGHTERS WILL LAND AT LANGLEY. TASK FORCES WILL FAN FROM INDICATED POINT TO TARGET AREAS. STRIKE AIRCRAFT WILL NOT UTILIZE ECM UNTIL WITHIN 50 MILES OF TARGET. DIVERSION FORCE (VIOLET) WILL PROCEED FROM KINDLEY TO FORMATION ASSEMBLY AREA AT POINT INDICATED AT 3,000 FEET. THEY WILL BE BELOW RADAR COVERAGE AT RENDEZVOUS POINT WHICH IS 200 MILES OFF-SHORE. CLIMB WILL BE INITIATED IMMEDIATELY AFTER RENDEZVOUS.TO 20,000 FEET. CHAFFING AND JAMMING WILL COMMENCE AT 8,000 FEET. DIVERSION FORCE IS TIMED 20 MINUTES BEFORE STRIKE FORCE. WHEN AT ANTICIPATED LINE OF INTERCEPTION, 90 MILES, FROM TARGET, FORMATIONS WILL MAKE RAPID DESCENT TO 5,000 FEET ALTITUDE TURNING OFF APPROACH COURSE TO SOUTH.

13


SECRET
B-11072
CLIMB POINT
SEATTLE
SPOKANE
CASTLE
MARCH
NORTHWEST PACIFIC AREA
SECRET

21

PACIFIC NORTHWEST AREA

THE 93RD BOMB WING (RED) IS SIMULATING AN APPROACH SIMILAR IN TERRAIN FEATURES TO THE BLACK SEA-CASPIAN SEA AREAS. TASK FORCES WILL ASSEMBLE INTO CELL FORMATION IN DAYLIGHT AND PROCEED ALONG ROUTES SHOWN AT 5,000 FEET. NIGHT TARGET APPROACH ROUTES TAKE ADVANTAGE OF THE SHIELDING AFFORDED BY THE CASCADES AND THE ROCKIES. CLIMB TO 35,000 FEET, BOMBING ALTITUDE, WILL BE MADE AT FANNING POINT, AS INDICATED. IT IS ANTICIPATED THAT THIS FORCE WILL BE UNDETECTED UNTIL ON THE BOMB RUN. ECM WILL COMMENCE 50 MILES FROM THE TARGET.

DIVERSION FORCE (GREEN) WILL PROCEED ALONG ROUTE SHOWN AT 3,000 FEET. AT TURN-CLIMB POINT, 300 MILES FROM COAST, CLIMB WILL BE INITIATED TO 25,000 FEET. INITIAL APPROACH ROUTE CLOSES TO 150 MILES OF COAST, THEN TURNS SOUTH FOR TEN MINUTES, TURNING AGAIN INTO TARGET AND PROCEEDING TO WITHIN ANTICIPATED LINE OF INTERCEPTION, 90 MILES FROM TARGET, SEATTLE. AT THIS POINT RAPID DESCENT IS INITIATED TO 5,000 FEET ALTITUDE, TURNING OFF APPROACH COURSE TO SOUTH. CHAFFING AND JAMMING COMMENCE AT 8,000 FEET IN CLIMB.


SECRET
B-17072
SAN FRANCISCO
TRAVIS
LOS ANGELES
MARCH
DAVIS-MONTHAN
FAN POINT
LOS ANGELES - SAN FRANCISCO AREA
SECRET

LOS ANGELES-SAN FRANCISCO AREAS

THE MEDIUMS (ORANGE AND VIOLET) ARE SIMULATING AN APPROACH SIMILAR TO COASTAL TARGETS. TASK FORCES WILL ASSEMBLE INTO CELL FORMATION IN DAYLIGHT AND PROCEED ALONG ROUTES SHOWN AT 5,000 FEET. AFTER TURN POINT, CLIMB WILL BE INITIATED SO AS TO BE AT BOMBING ALTITUDE, 30,000 FEET, FIFTEEN MINUTES BEFORE I.P. SPOT JAMMING AND RANDOM CHAFF WILL NOT COMMENCE UNTIL WITHIN 50 MILES OF TARGET.

DIVERSION FORCE (GREEN) WILL PROCEED IN BOMBER STREAM AT 3,000 FEET TO FAN POINT. AT FAN POINT, CLIMB WILL BE INITIATED TO 20,000 FEET. CHAFFING AND JAMMING WILL COMMENCE AT 8,000 FEET IN CLIMB. SINCE THIS FORCE IS MORE SUPPORT THAN DIVERSION, IT IS TIMED TO REACH THE TARGET ONLY TEN MINUTES PRIOR TO STRIKE FORCE IN ORDER THAT THE MULTIPLE TARGETS WILL GIVE STRIKE FORCE MAXIMUM SCREENING FOR THE LONGEST POSSIBLE TIME. DIVERSION WILL PROCEED TO WITHIN 25 MILES OF TARGET BEFORE BEGINNING RAPID DESCENT TO 5,000 FEET AND TURNING OFF APPROACH COURSE TO THE SOUTH.

TOP SECRET

RECONNAISSANCE F+4

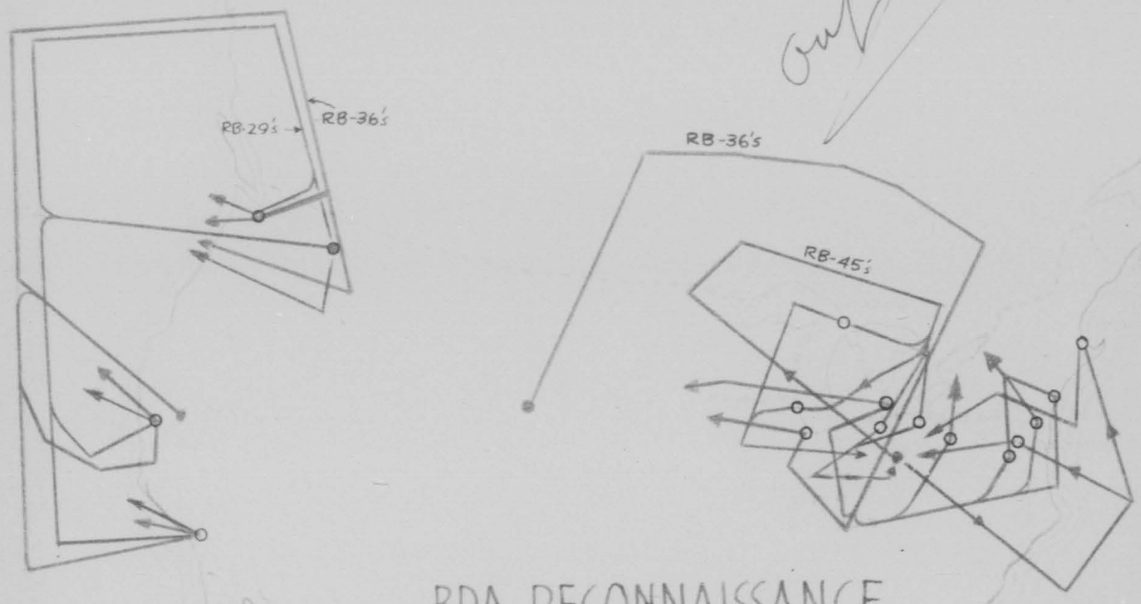
UNIT	BASE	NO A/C	TARGETS
5 SRW	TRAVIS	~~5~~ 6	WESTERN BDA EASTERN BDA
28 SRW	~~RAPID CITY~~ UK - Lajes	13 ~~6~~	EASTERN BDA
91 SRW	LOCKBOURNE	6	OTHER SELECTED TGTS.
~~111 SRW~~	~~FAIRCHILD~~	~~4~~	~~WESTERN BDA~~
~~55 SRW~~	~~RAMEY~~	~~2~~	~~AS REQUIRED~~

16

TOP SECRET

[redacted] SECRET

B-17077



BDA RECONNAISSANCE

[redacted] SECRET

BDA

ON E + 4 RECONNAISSANCE WINGS WILL ACCOMPLISH BDA PHOTOGRAPHY AGAINST THE SAME TARGETS AS THOSE THEY COVERED IN PRE-STRIKE RECONNAISSANCE WITH THE EXCEPTION OF THE RB-45'S. SIX RB-45'S (EAST GREEN) WILL ACCOMPLISH PRE-STRIKE RADAR RECONNAISSANCE AT 40,000 FEET AGAINST FIVE NEW TARGETS, ADJACENT TO THE STRIKE TARGETS, AND LOW ALTITUDE NIGHT PHOTOGRAPHY, 3,000 FEET, AGAINST ONE ADDITIONAL NEW TARGET.

SIX RB-36'S (EAST RED) DOING BDA ON THE FOUR EASTERN AND TWO GREAT LAKES TARGETS, WILL MAKE A LOW ALTITUDE PENETRATION, 1,000 FEET, OF THE DEFENSE AREA BETWEEN DETROIT AND BUFFALO. THEY WILL PENETRATE AND PASS THROUGH THE DEFENSES, SIMULATING THE CONDITION EXISTING IN NORTH CENTRAL USSR, CLIMB TO 40,000 FEET BEHIND THE DEFENSES. THEY WILL THEN RE-ENTER THE DEFENSE AREA AND ACCOMPLISH BDA, WITHDRAWING INTO CANADA.

TRAINING ACCOMPLISHMENTS

1. NAVIGATION LEGS
2. PHOTO SCORED RUNS
3. CELL MISSIONS
4. DAYLIGHT FORMATION
5. ELECTRONIC JAMMING
6. FIGHTER IFR
7. CAMERA GUNNERY
8. UNIT MISSION CREDIT
9. FIGHTER ESCORT

METHOD OF EVALUATION

1

ANALYSIS OF ADC REPORTS

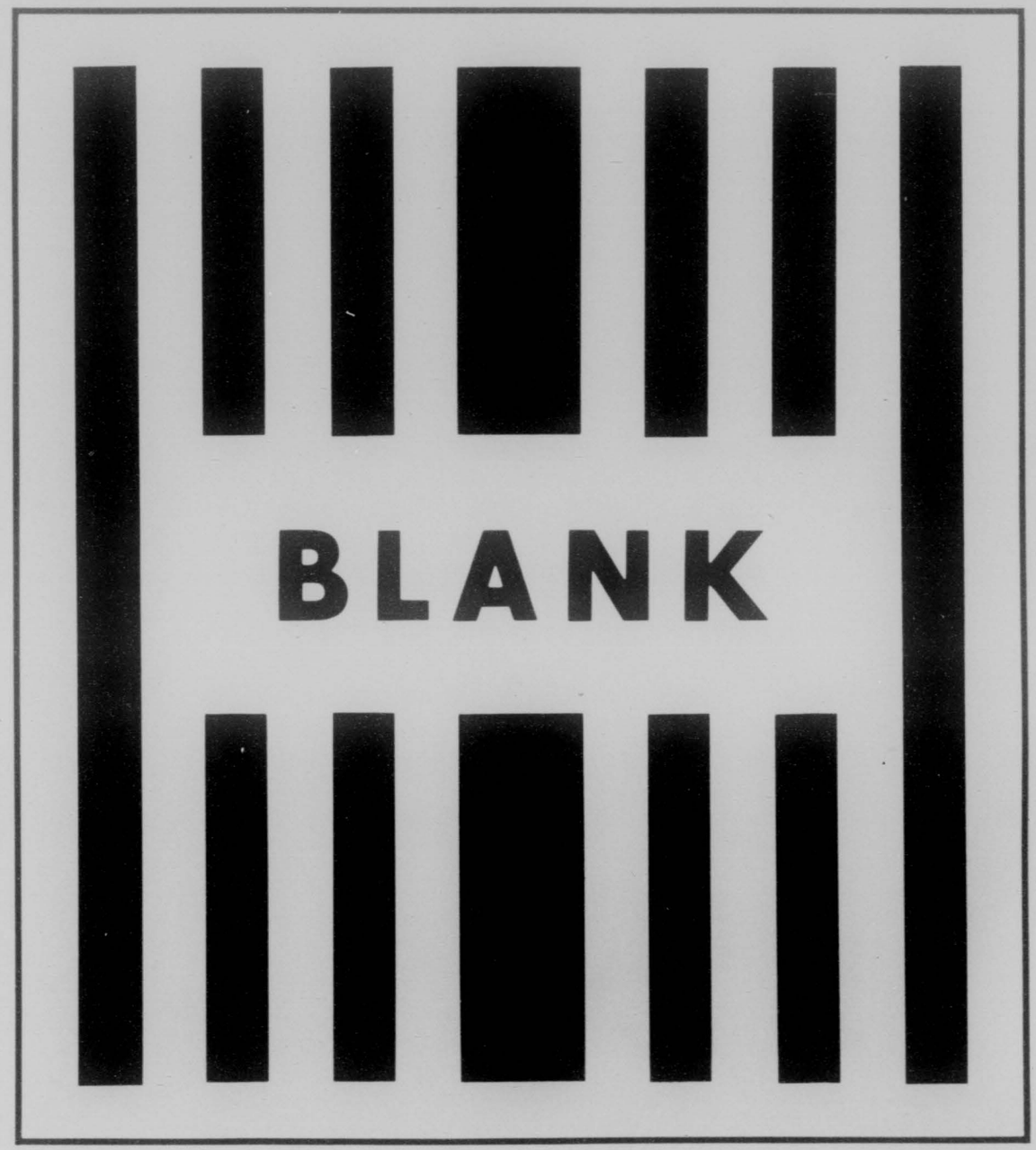
2

ANALYSIS OF SAC REPORTS

3

NARRATIVE REPORTS
FROM OBSERVERS
AT EACH TARGET CONTROL CENTER

IN ORDER TO COMPLETELY EVALUATE THIS MISSION, IT IS PLANNED TO GO BEYOND STANDARD REPORT ANALYSIS. TEAMS WILL BE FORMED FROM EACH AIR FORCE. THESE TEAMS WILL FURNISH A QUALIFIED OBSERVER AT EACH AIR DEFENSE CONTROL CENTER. THEY WILL BE FURNISHED FORMS DRAWN UP BY OPERATIONS ANALYSIS WHICH WILL, WHEN COMPLETED, GIVE US THE SPECIFIC INFORMATION DESIRED. IN ADDITION, THESE OBSERVERS WILL BE REQUIRED TO SUBMIT A NARRATIVE REPORT GIVING THE CHRONOLOGICAL STORY OF THE MISSION AS WITNESSED IN THE CONTROL CENTER. THE TEAMS WILL BE BRIEFED AT THIS HEADQUARTERS PRIOR TO THE MISSION, AND WILL BE RECALLED TO THIS HEADQUARTERS FOR DE-BRIEFING IMMEDIATELY AFTER THE MISSION.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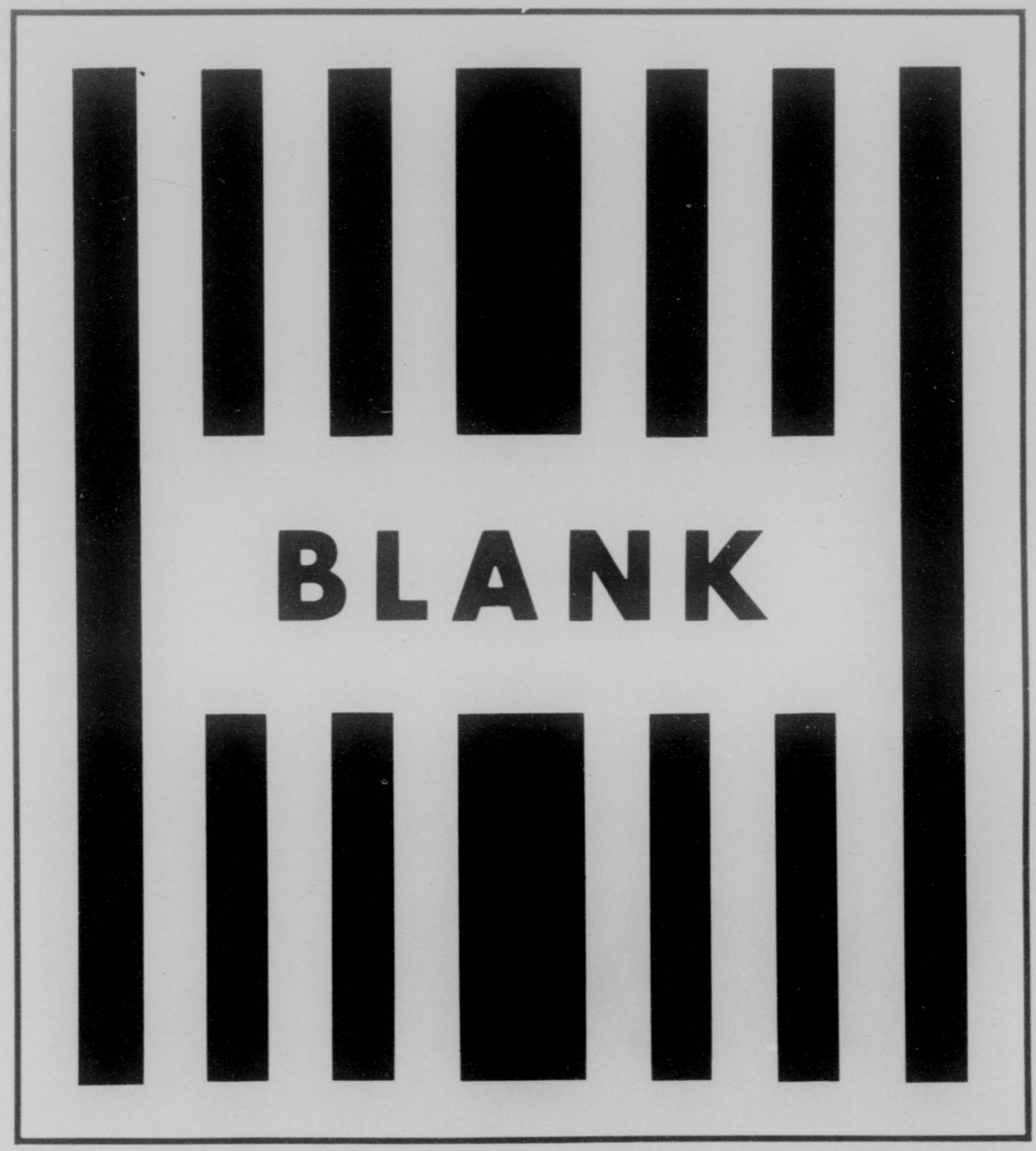
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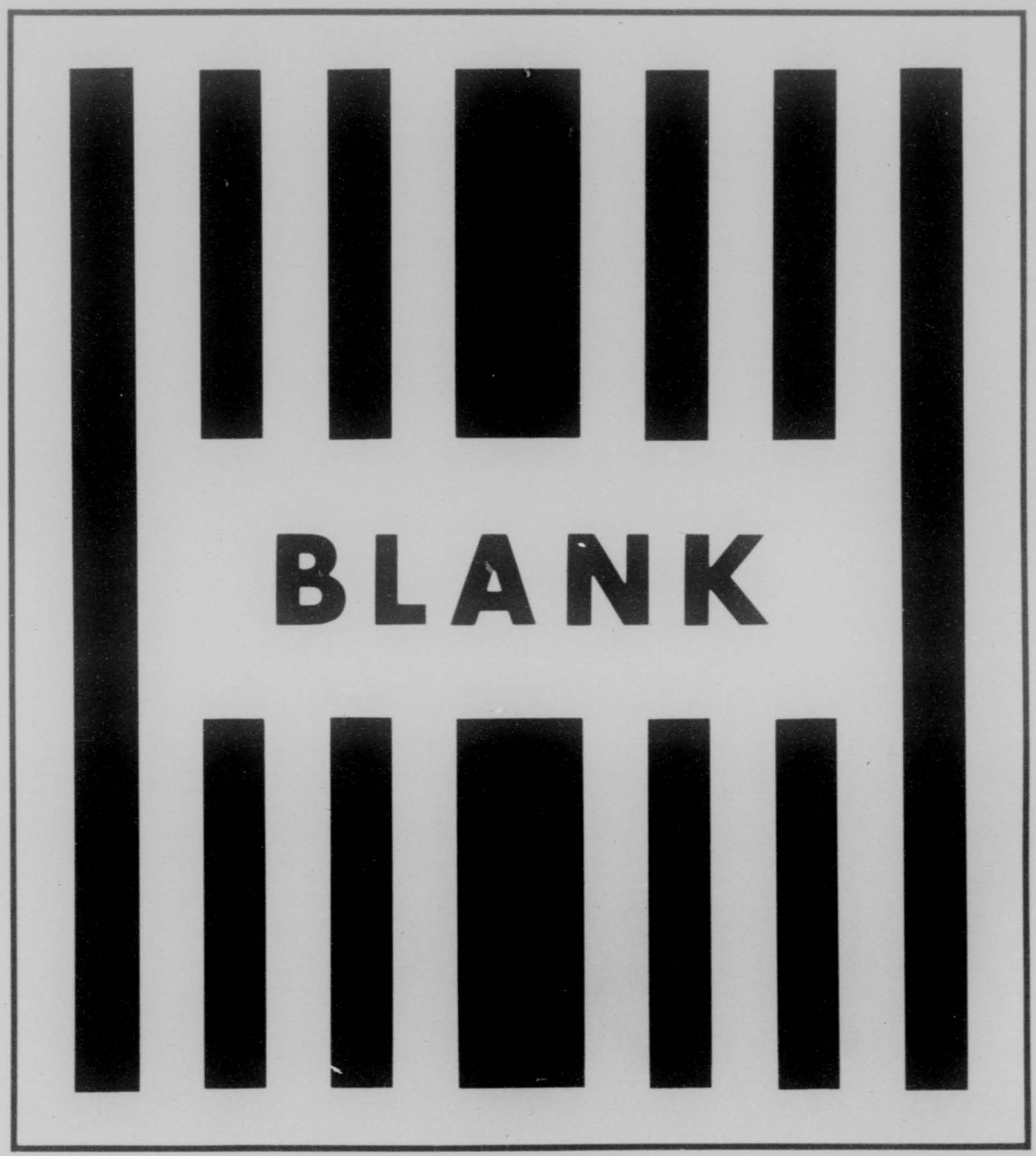
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SECURITY INFORMATION

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Copy Operations
Subdivision Operational Exercises

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Auth, CG SAC
10 Oct 52
Salyer
HA-0225

Classification
Change To
SECRET
By Authority CG, SAC
Freeman
29 Oct 1952
Date Name

DXIHR-69-0223

OPERATION CHECKOUT

FINAL REPORT

CLASSIFIED BY: _____
DECLASSIFY ON: OADR

DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED. DOD DIR 5200.10

[redacted] SECRET

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SAC, Offutt AFB O-750(53)

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APP
1 a

DXIHR-69-0223

PREFACE

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[redacted]

0-750(53)

IRIS WORKSHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 000003813100636

SECURITY WARNING/ADMIN MARKINGS

RD FR CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

PROPRIETARY INFO

THIS DOCUMENT CONTAINS NATO _____ INFO

501 DOCUMENT SECURITY

501 S

DOWNGRADING INSTRUCTIONS

DECLASSIFY ON OADR

REVIEW ON

CLASSIFICATION AND DOWNGRADING INSTRUCTIONS FOR

502 ____ / ____ / ____
TITLE ABSTRACT LISTINGS

028 REF _____ DEST DUP OF _____
INSERT TO _____ DUP OF _____

027 NUMBER IN AUDIO REEL SERIES

CATALOGING RECORD

MAIN ENTRY (Use one) (150AN)

100 - PERSONAL NAME

110 - ISSUING AGENCY

129 - TITLE AS MAIN ENTRY

TITLE (Use one) (DO NOT USE IF TITLE IS MAIN ENTRY) (150AN)

220 _____

OR CHECK

☐ 2210 ORAL HISTORY ☐ 222E END OF TOUR REPORT ☐ 223H HISTORY (AND SUPPORTING DOCUMENTS)

☐ 224C CHECO MICROFILM ☐ 225Q CORRESPONDENCE ☐ 226Z PAPERS

☐ 227P CALENDAR

250 TITLE EXTENSION ENTER VOLUME NUMBER, PARTS, ETC (20AN)

DATES ONLY 264 OR 265 MUST BE COMPLETED. SUPPLY BOTH IF KNOWN

264 INCLUSIVE DATE ____/____/____ TO ____/____/____ IF DATE ESTIMATED, CHECK HERE ☐
DD MM YY DD MM YY

265 DATE OF PUBLICATION ____/____/____
DD MM YY

300 TOTAL PAGES _____

PREFACE

This is a final report on SAC Operation's Order 27-52, dated 9 July 1952 and titled Operation "Check-Out". It includes a recapitulation of the purpose of the mission, schedule of events, requirements and accomplishments of participating units.

For easy reference and to isolate the phases of activity, this report has been broken down into sections such as Staging, Pre-Strike Reconnaissance, Strike, Air-Refueling and others as indicated by Appendix numbers in the Table of Contents. In addition to the sectional phases, each Appendix contains detailed information pertaining to the specific units concerned, including aircraft required, aborts, and target times.

TABLE OF CONTENTS

TABLE OF CONTENTS

CONTENTS

5

INTRODUCTION

Purpose
Target System
ADC Air Order of Battle
Force Requirements
Schedule of Events

INTRODUCTION

Exercise "Check-Out" was originally scheduled to take place in May 1952. However, due to a nation-wide petroleum strike, it was necessarily delayed until the latter part of July.

As a result of the postponement, new requirements were imposed to meet a joint USAF-RCAF commitment. This resulted in an exercise called "Sign Post" designed not only to exercise SAC and ADC, but to include the RCAF Defense Command.

It was agreed that SAC would participate in "Sign Post" and that "Check-Out" would be executed as originally planned, but designed to meet requirements of "Sign Post" with the least number of additional sorties required. Only that portion of the exercise pertaining to "Check-Out" is included in this report.

It will be noted that many combinations of tactics were tested in this exercise, but the tactics used are not necessarily those that would be used by SAC under actual conditions.

In this operation, pre-strike reconnaissance was executed three days before the strike. This may not be too realistic, but the use of reconnaissance in a pre-strike role and its timing when considered in conjunction with the strike itself would be entirely dependent on the situation existing at the time execution of such a plan might be required.

Generally, from the standpoint of SAC, "Check-Out" was not designed as an ideal penetration against the defenses of the United

States. On the East Coast, for example, this Command selected to make the deepest penetration possible running from Nova Scotia, down the Eastern Sea Board to targets in the New York, Philadelphia, Washington and Pittsburgh areas.

Also, in order to provide maximum benefit to the Air Defense Command and its augmentation forces a majority of the penetrations and attacks were scheduled for daylight target times.

The activities of Operation "Check-Out" were observed and monitored by normal combat reporting procedures, and air and ground observers from within the Command. Airborne observers were scheduled from Headquarters SAC to fly with participating units and more than thirty observers from the Headquarters and the separate numbered Air Forces were scheduled to observe from ADC radar sites as well as Air Defense Control Centers (See Observer Status in Reporting Section).

This report is designed to present a chronology of "Check-Out" as it occurred. It begins with the purpose for the exercise and follows from the planning phase through the execution of the flight phases. "E"-Day for the exercise was 24 July and all references to "E"-Day will be made accordingly

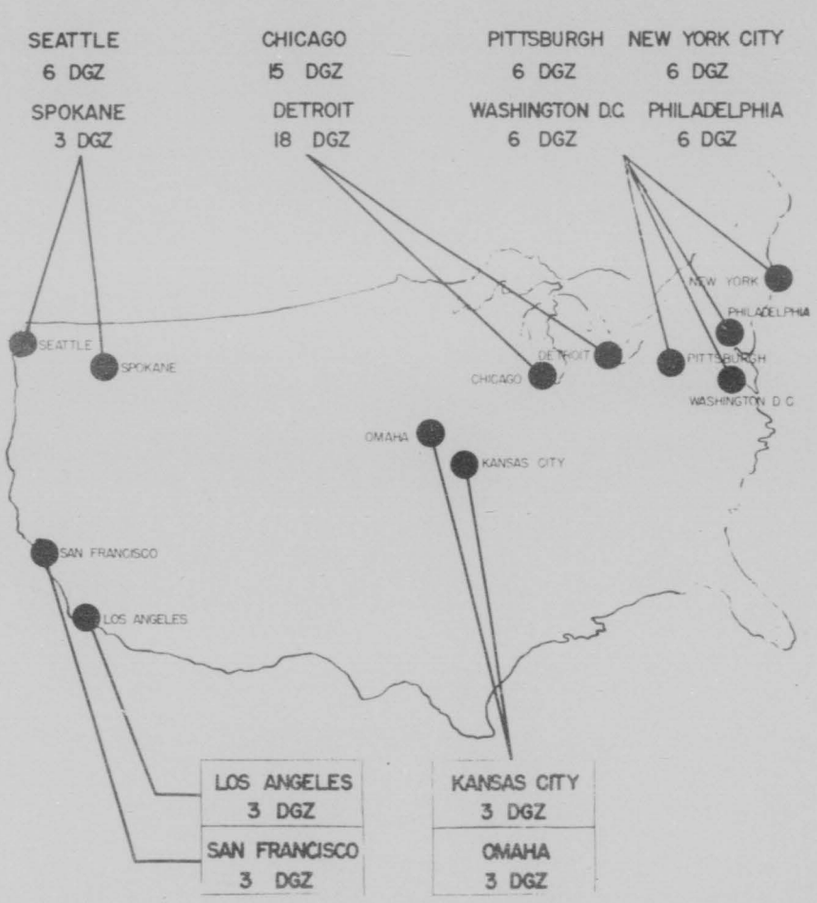
OPERATION "CHECK-OUT"

PURPOSE:

1. EXERCISE COMMAND CAPABILITY IN MOUNTING A SIMULTANEOUS STRIKE.
2. TEST REPORTING PROCEDURES.
3. TACTICS.
   - A. TIMING.
   - B. ECM
   - C. IN FLIGHT REFUELING.
   - D. DAYLIGHT FORMATION AND CELL.
   - E. ESCORT.
   - F. DIVERSIONS AND SUPPORT.
   - G. STRIKE FORCE COMPRESSION.
4. TEST RECONNAISSANCE CAPABILITY.
   - A. PRE-STRIKE.
   - B. PROCESSING AND DISTRIBUTION:
   - C. BDA.
   - D. USE OF FERRET AIRCRAFT.
5. EXERCISE COMMAND AND STAFF PERSONNEL.
6. EXERCISE ADC.

TARGET SYSTEM

12 TARGET COMPLEX — 78 DGZ'S



ADC Air Order of Battle as of 8 July 1952

1. The fighter strength of the ADC on 8 July was as follows:

Total aircraft	585
Jet - All Weather	156
Jet - Day	211
Piston engine	218

2. Broken down by Defense Forces, the strength was distributed in this manner:

EADF - 335 total aircraft	
Jet - All Weather	82
Jet - Day	151
Piston engine	102
WADF - 131 total aircraft	
Jet - All Weather	62
Jet - Day	41
Piston engine	28
CADF - 119 total aircraft	
Jet - All Weather	12
Jet - Day	19
Piston engine	88

ADC Air Order of Battle as of 27 July 1952

1. The fighter strength of ADC on 27 July was as follows:

Total aircraft	909
Jet - All Weather	181
Jet - Day	347
Piston engine	381

2. The new totals for the Defense Forces were:

EADF - 402 total aircraft

Jet - All Weather	107
Jet - Day	151
Piston engine	144

WADF - 361 total aircraft

Jet - All Weather	62
Jet - Day	165
Piston engine	134

CADF - 146 total aircraft

Jet - All Weather	12
Jet - Day	31
Piston engine	103

3. ADC's fighter strength was augmented by 177 aircraft from the Air Training Command. The aircraft types are as follows:

Jet - All Weather	25
Jet - Day	136
Piston engine	16

4. The Tactical Air Command dispatched 147 aircraft all of which were piston engine fighters.

5. In addition to the total of 909 aircraft under control of ADC, 16 units of the USN with approximately 120 aircraft were standing by to assist on E + 3.

These units were located as follows:

East Coast	9 Units
West Coast	6 Units
Great Lakes	1 Unit

6. Also seven squadrons of the ANG were alerted by E + 3 (number of aircraft unknown). Five of these units were in the eastern area, one in the Pittsburgh area and one in Northern Michigan.

7. The aircraft from the USN and ANG units added to the 909 from ADC bring the number of fighters under ADC control on E + 3 to approximately 1100 aircraft.

AUTH. CG S & C
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DATE-- 27 Aug 57
NAME--

FORCE REQUIREMENT

STRIKE		DIVERSION		RECCY		FIGHTER		TANKER		RESCUE		TOTALS	
BW UNIT	A/C	BW UNIT	A/C	SRW UNIT	A/C	FEW UNIT	A/C	ARS UNIT	A/C	ARS UNIT	A/C	UNIT	A/C
2	6	106	9	55	4	27	48	91	14	8	8		
301	12	22	18	91	12	12	24	2	3				
7	20	68	9	28	13			(301)	(14)				
11	18	376	9	5	16			(43)	(26)				
97	6	6	9	111	4								
43	18												
9	6												
93	18												
8	104	5	54	5	49	2	72	4	57	1	8	23 (2)	344

SHEDULE OF EVENTS

E – 2	22 JULY	TWO (2) FERRETS TO HUNTER.
E – 1	23 JULY	GROUND OBSERVERS ARRIVE AT ADC SITES.
E DAY	24 JULY	BOMBER AND RECONNAISSANCE STAGING. PRE-STRIKE RECONNAISSANCE.
E + 1	25 JULY	"DOWNED" CREWS FROM CAMP CARSON.
E + 2	26 JULY	FIGHTER STAGING. STRIKE AIRCRAFT TAKE-OFF.
E + 3	27 JULY	STRIKE.
E + 4	28 JULY	BDA & PICK-UP OF DOWNED CREWS.

STAGING

Mission of the 3904th Composite Wing

SUBJECT: Staging

MISSION:

To provide necessary positioning of forces required to complete a simulated command wartime strike.

FORCE:

Aircraft from three Strategic Reconnaissance Wings, four Bombardment Wings, and two Fighter Escort Wings were required by Operations Order 27-52 for a total of 128 sorties. A brief recapitulation of the aircraft staging schedule and requirements is indicated in the two photographs attached. Eight stars appearing on the staging map indicate the location of crews simulating eight combat crews downed in combat to be rescued by the 8th Air Rescue Squadron.

DISCUSSION:

1. Staging of 2 RB-50G's on E -2 was required to accomplish ECM reconnaissance for the strike of the heavy units.

2. Staging of the 19 RB-36s on E-Day was required to perform BDA of eastern and central targets on E +4.

3. Staging of the 2 RB-50Gs on E +1 was required to furnish 2 ferret aircraft to accompany the strike forces of the 2nd and 301st Bomb Wings.

4. Staging of the 27 B-29s on E +1 was required to furnish diversionary forces on the East Coast targets on E +3 and 6 B-50s from the 97th Bomb Wing were staged through Hunter AFB to participate in the Strike with the 2nd and 301st Bomb Wings.

5. Staging of the 12th and 27th FEWs was required to place the Fighter Wings in a position to effect escort for the Detroit and Chicago strike forces. The fighter staging bases were selected in order to have the fighter aircraft proceed outside the USAF ADIZ prior to making rendezvous with the bombers.

6. Placing of downed combat crews throughout the U.S. was effected to provide a realistic rescue mission for the 3904th Composite Wing.

SUMMARY:

Staging of the required units was accomplished without difficulty and all units were at their assigned pre-strike bases prepared to execute assigned missions as planned.

AUTH: CG S.A.C
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DATE: 22 Aug 49
NAME:

STAGING SCHEDULE

● SRW ● BOM. WGS. ● FEW

UNIT	STAGING BASE	DATE	AIRCRAFT REQUIRED	AIRCRAFT AIRBORNE	AIRCRAFT ARRIVED
55 SRW	HUNTER AFB	E-2	2	2	2
5 SRW	LAJES	E-DAY	6	6	6
28 SRW	LAJES	E-DAY	6	6	6
28 SRW	UK	E-DAY	7	7	7
6 BW	KINDLEY	E+1	9	10	10
68 BW	KINDLEY	E+1	9	11	11
376 BW	KINDLEY	E+1	9	10	10
97 BW	HUNTER	E+1	6	6	6
55 SRW	HUNTER	E+1	2	2	2
27 FEW	LOCKBOURNE	E+2	48	54	53
12 FEW	DOW	E+2	24	28	24
TOTALS:			128	142	137

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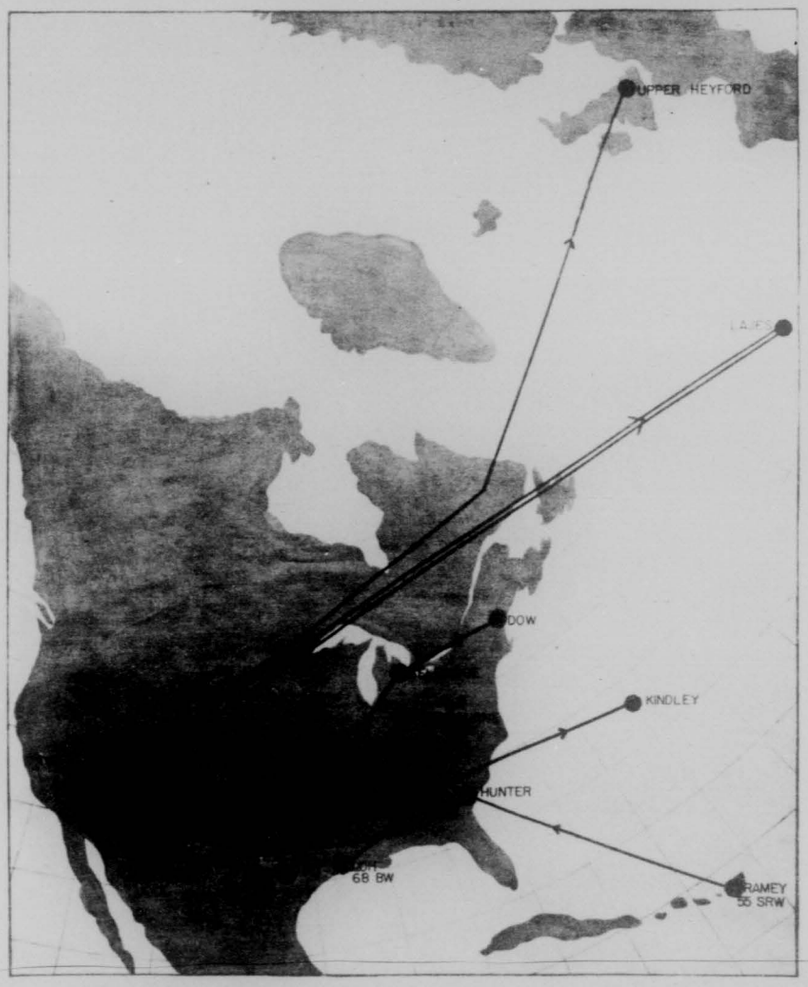
STAGING

● STAGING BASE ● HOME BASE * SIMULATED DOWNED CREWS



SUBJECT: Recovery of Downed Combat Crews by 3904th Composite Wing

MISSION:

1. On E + 4 to recover four (4) combat crews from simulated enemy territory. Each crew to consist of 10 men each.

FORCE:

1. To accomplish above mission, eight (8) C-47 aircraft were dispatched by the 3904th CW. Two (2) C-47's to pick up each downed crew.

DISCUSSION:

1. Each downed crew was supplied with minimum survival equipment and RS-6 survival radios. The 3925th Communications Squadron monitoring distress messages were able to pick up three (3) of the four (4) messages transmitted by the downed crews during the first night of operation. The message from the fourth crew was picked up during the third night of monitoring. Recovery instructions were transmitted to the crews including ETA's and authenticating code words by the 3925th Communications Squadron.

2. Eighth Air Rescue Squadron dispatched eight (8) C-47's to locations given by downed crews. All the rescue aircraft completed their rescue operations within 30 minutes of scheduled time, with each A/C picking up five (5) members of the downed crew.

3. The locations of the rescue site, scheduled time of rescue and unit furnishing "downed crew" is as follows:

Rescue Site	Scheduled time of Rescue	Base Furnishing "Downed Crew"
a. LaGrande, Oregon	28 July 1453Z(1st A/C) 1523Z(2nd A/C)	Castle AFB
b. Preston Glen Airport, Va.	28 July 1030Z (1st A/C) 1100Z (2nd A/C)	Lake Charles AFB
c. Bowling Green, Kentucky	28 July 1100Z (1st A/C) 1130Z (2nd A/C)	Barksdale AFB
d. Elkins Airport, West Va.	28 July 1030Z (1st A/C) 1100Z (2nd A/C)	Carswell AFB

SUMMARY:

1. The recovery portion of "Operation Check-Out" was very successful.

"E" DAY PRE-STRIKE RECONNAISSANCE

Unit Data:

5th SRW
91st SRW
111th SRW
55th SRW

4. The two RB-50G aircraft of the 55th SRW were to perform ECM ferret reconnaissance over Chicago and Detroit.

SUMMARY

1. The pre-strike reconnaissance effort was very successful.

2. Attached are three photographs that summarize the requirements and distribution of E-Day reconnaissance photography.

3. Delivery of target materials to the bombardment units was late in two instances due to late landing times of the reconnaissance aircraft and a shortage of trained personnel at the Reconnaissance Technical Squadron processing the materials.

AUTH: CG SAC
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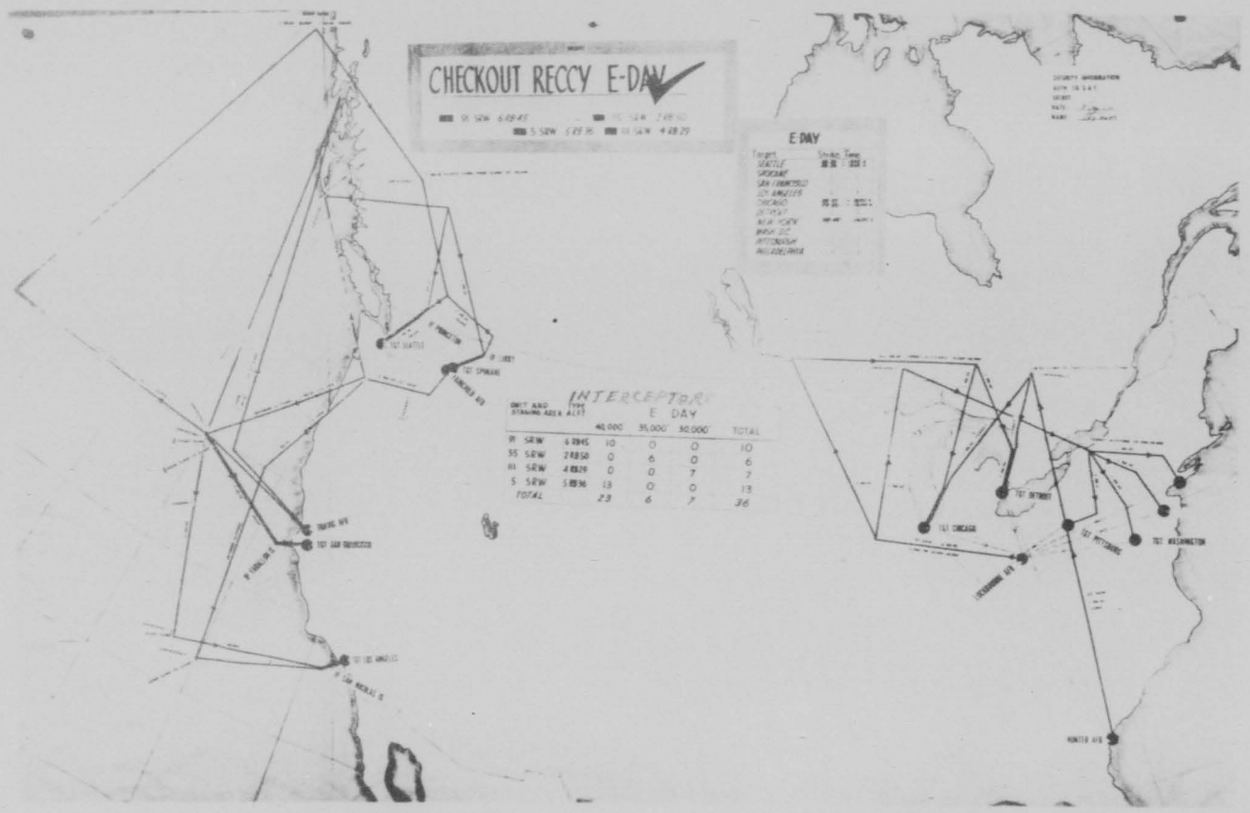
DATE- 27 Aug 52
NAME- Lyfland

E-DAY RECONNAISSANCE

UNIT	AIRCRAFT			TARGETS		
					COVERED	
	REQ	OVER TGT	COMPL.	ASGD	RADAR	AERIAL
5 SRW	5	5	5	4	4	3
91 SRW	6	6	4	6	6	6
111 SRW	4	4	4	4	4	3
55 SRW	2	2	2	2	COMPLETE	


CHECKOUT RECCY E-DAY
E-DAY
INTERCEPTORS
E DAY
40,000 35,000 30,000 TOTAL
91 SRW 6 0945 10 0 0 10
55 SRW 24850 0 6 0 6
81 SRW 41829 0 0 7 7
5 SRW 51856 13 0 0 13
TOTAL 23 6 7 36

AUTH. CG SAC
SECRET
DATE-
NAME-

STATISTICS ON FILM PROCESSING

TARGET	RTS TIME	COURIER TIME	TIME AVAIL TO BOMB WG
CHICAGO	26:15	3:00	27:01
DETROIT	25:20	2:52	26:03
NEW YORK	28:20	1:15	25:10
PHILADELPHIA	28:15	1:20	26:40
PITTSBURGH	27:10	:10	25:30
WASHINGTON, D.C.	27:30	:10	26:07
SPOKANE	28:55	1:53	18:50
SAN FRANCISCO	30:05	2:30	12:37
AVERAGE	27:44	1:39	23:06

RB-50 G FERRET REPORTS

TARGET	TIME F-1		TIME F-2	
	REQUIRED	ACTUAL	REQUIRED	ACTUAL
CHICAGO	2237Z	2359	1915 Z	2030
DETROIT	2237 Z	2237	1915 Z	2030

AUTH: CG S A C
SECRET
DATE- 27 Aug 79
NAME-

E DAY RECON SUMMARY

1. PHOTO RECONNAISSANCE (ASGD, COVERED)

RADAR TGTS	10 ASGD	9 COVERED	(90%)
AERIAL TGTS	10 ASGD	10 COVERED	(100%)

2. QUALITY OF PHOTOGRAPHS (IN PERCENT)

	REJ	POOR	FAIR	GOOD	EX
RADAR		7	53	27	13
AERIAL	14 (WX)		20	33	33

3. AIRCRAFT EFFECTIVE

17 SCHED	15 EFFECTIVE	(88%)

4. ABORTS

2 GND	2 PRE TGT	0 POST TGT

5. CAMERA MALFUNCTIONS

NONE

6. RECON TECH SQUADRON

PRE-STRIKE TGT MATERIALS DELIVERED TO BOMB UNITS PRIOR TO DEADLINE (EXCEPT SPOKANE AND SAN FRANCISCO).

PRE-STRIKE (5th SRW)

1. MISSION: To accomplish pre-strike reconnaissance of four targets on E-Day utilizing a force of five RB-36 aircraft.

2. FORCE:

SCHEDULED BY O/O -UNIT	GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
5 5 / 3 GS	1	6	1	5	0		5

3. TARGET TIMES:

	Scheduled	Actual
San Francisco	1800Z	1800Z
San Francisco	1830Z	1841Z
Spokane	1800Z	1822Z
Seattle	1800Z	1806Z
Los Angeles	1800Z	1212Z

4. Tactics:

High altitude daylight.

Single aircraft reconnaissance.

5. REMARKS: This mission was considered highly successful and illustrates excellent planning by unit in order to replace pre-target abort and accomplish mission on time.

Pre-Strike (91st SRW)

1. MISSIONS: To accomplish pre-strike reconnaissance of six targets on E Day utilizing a force of six RB-45 aircraft.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
6	6*	1	7	1	6	0		4

* 2 a/c replaced aborts, but took off late.

3. TARGET TIMES:

	Scheduled	Actual
Chicago	1600Z	1440Z
Detroit	1600Z	1600Z
New York	1600Z	1601Z
Philadelphia	1600Z	1601Z
Pittsburgh	1600Z	1608Z
Washington	1600Z	1621Z

4. TACTICS: Single Recon aircraft for high altitude daylight recon.

5. REMARKS: Although 90% of required reconnaissance was accomplished, under actual conditions the late take-off might not have been effective.

PRE-STRIKE (111th SRW)

1. MISSION: To accomplish pre-strike reconnaissance of four targets on E Day utilizing a force of four RB-29 aircraft.

2. FORCE:

SCHEDULED BY O/O -UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
4	6	0	4	0	4	0		4

3. TARGET TIMES:

	Scheduled	Actual
Seattle	1800Z	1800Z
Spokane	1800Z	1822Z
Los Angeles	1800Z	1804Z
San Francisco	1800Z	1804Z

4. TACTICS:

Scheduled

Individual sorties

5. REMARKS: This mission was considered highly successful with all required reconnaissance accomplished except aerial photography of one target which was overcast.

PRE-STRIKE (55th SRW)

1. MISSION: To accomplish pre-strike electronic reconnaissance in the Central United States with two RB-50G aircraft.

2. FORCE:

SCHEDULED BY O/O -UNIT		GROUND ABORTS	AIRBORNE	PRE-TGT ABORTS	OVER TGT	POST-TGT ABORTS	COMPLETED AS BRIEFED
2	2 / 1GS	1	2	0	2	0	2

3. TARGET TIMES:

	Scheduled	Actual
Chicago	1600Z	1559Z
Detroit	1600Z	1556Z

4. TACTICS:

High altitude single.

Aircraft electronic reconnaissance timed simultaneously with photo reconnaissance aircraft.

5. REMARKS: This mission was considered successful as electronic reconnaissance information was obtained by both aircraft.

E +3 STRIKE

Target Complex Areas:

Northwest
West Coast
Central
Great Lakes
East Coast

Unit Data:

93d BW
9th BW
43d BW
11th BW
7th BW
301st BW
2d BW
97th BW
55th BW (Incl in 2d & 301st BW)

SUBJECT: E ⅓ Strike

MISSION

To simulate a Command wartime strike on 12 complex strategic targets comprised of 78 DGZ's (Designated Ground Zeroes).

FORCE

To accomplish the strike on E ⅓ aircraft from 13 Bomb Wings, 1 Strategic Reconnaissance Wing, 2 Air Refueling Squadrons and 2 Fighter Escort Wings were required by SAC Operations Order 27-52 for a total of 249 sorties. Two additional Air Refueling Squadrons participated as a requirement of subordinate units. A brief recapitulation of only the strike unit accomplishments is listed below:

Unit	Type Aircraft	Aircraft Required	Aircraft Airborne	Aircraft Over Target
93 BW	B-50	18	13	11
9 BW	B-29	6	8	6
43 BW	B-50	18	20	13
11 BW	B-36	18	20	19
7 BW	B-36	20	21	19
301 BW	B-29	12	13	9
2 BW	B-50	6	5	5
97 BW	B-50	6	6	6
55 SRW*	RB-50	2	2	2
TOTALS	9 Units	106	98	90

*1 RB-50G each integrated in Washington and Philadelphia strike forces.

DISCUSSION

1. It was planned that nine of the twelve targets would be bombed simultaneously. For reasons of aircraft separation and daylight rendezvous, one of the three remaining targets would be bombed five minutes later and the last two, three hours after the initial strike. Certain tactics were to be tested for each target complex to include simultaneous strike, daylight-darkness conditions, high vs medium level penetrations, fighter escort, ECM and force compression over targets. "E"-Day was 24 July; Strike Day was E +3, three days following pre-strike reconnaissance. (See attached Strike E +3 statistics and Strike Map).

2. To support the strike effort, "E"-Day and E +4 reconnaissance was scheduled. Additionally, diversionary task forces, fighter escort integrated ferret aircraft, air refueling, strategic support and air rescue missions were required.

3. The 306th Bomb Wing was originally scheduled to strike Washington, D. C., with five B-47's on five DGZ's. This mission was cancelled on E +1, two days prior to strike day due to grounding of B-47's in the Command.

4. Listed below are target and target time assignments:

Target	DGZ's	Strike Unit	Schedule (Time Z)	Actual
Seattle	6	93 BW	1215	1211
Spokane	3	" "	"	1223
San Francisco	3	9 BW	"	1224
Los Angeles	3	43 BW	"	1215

Target	DGZ's	Strike Unit	Schedule (Time Z)	Actual
Omaha	3	43 BW	1215	1201
Kansas City	3	" "	"	1212
Chicago	15	11 BW	1515	1544
Detroit	18	7 BW	1515	1541
Pittsburgh	6	301 BW	1215	1205
Washington, D.C	6	" "	"	1210
Philadelphia	6	2 BW	"	1223
New York	6	97 BW	1220	1225

5. The following paragraphs will be a discussion of the Strike broken down into five target areas. For purposes of clarity and explanation the target areas will be called the Northwest, West Coast, Central, Great Lakes and East Coast targets. Each target area will be discussed by a brief outline of the mission as planned with a photograph of the mission as executed. See attached photographs and discussion. Each photograph depicts units and aircraft required, departure bases, routes as scheduled and targets. Additionally, cross hatching areas crossing routes near the target areas indicate where the units were first detected by the ADC early warning net. Small dots along the routes indicate the number of fighter intercepts and where forces were intercepted. The aircraft near the targets indicate where the first aircraft of each force was located relative to the prescribed target times.

6. See accompanying charts for paragraphs 6, 7, 8, 9 and 10.

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STRIKE E + 3

MISSION: 12 TARGETS, 78 DGZ'S

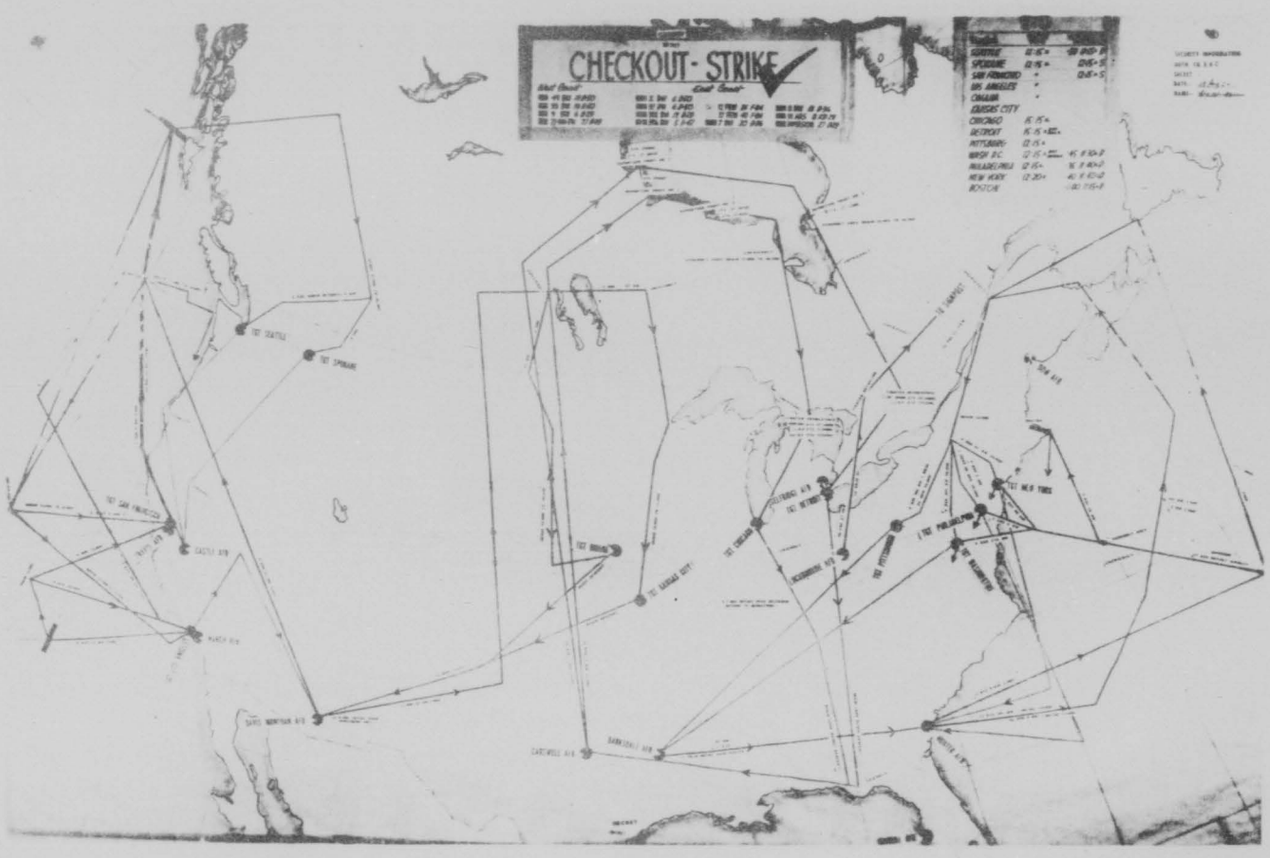
NORTH WEST	2	9
WEST	2	6
CENTRAL	2	6
GREAT LAKES	2	33
EAST	4	24
TOTAL	12	78

FORCE:

BOMBERS	104
DIVERSION	54
FIGHTERS	72
TANKERS	17 (40 a/c 301st, 43d not incl)
FERRETS	2
TOTAL	249

TIMING: ALL TARGETS BUT THREE (3) (CHICAGO, DETROIT, AND NEW YORK) WERE TO BE BOMBED AT 1215Z.
NEW YORK AT 1220Z.
CHICAGO AND DETROIT AT 1515Z.

TACTICS: SIMULTANEOUS STRIKE
DAYLIGHT FORMATION
CELL FORMATION
HIGH AND MED. LEVEL PENETRATION
DIVERSIONS AND SUPPORT
ESCORT-ECM-FERRET


CHECKOUT - STRIKE

6. NORTHWEST

It was planned that penetration to Seattle and Spokane targets would be shielded from early detection by the Cascade Mountains. Task forces of the 93rd Bomb Wing were to make night approaches in cell formation to the targets and strike at daybreak. Six DGZ's in Seattle were to be bombed by two forces of six aircraft each and three DGZ's in Spokane were to be bombed by a force of six aircraft. A diversion force of nine aircraft was scheduled for target Seattle.

The desired effectiveness of this mission was not achieved. The Strike force flew at higher altitudes than expected and was detected by ADC ground radars a full fifteen minutes ahead of the Diversion. Reason for the higher altitude was due to cruise control requirements. Early detection of the Strike force resulted in 10 interceptors attacking the Strike and only one attacking the Diversion.

E+3 STRIKE NW COMPLEX

MISSION

TO STRIKE SEATTLE AND SPOKANE

FORCE DATA

UNIT	TGT	DGZ'S	AIRCRAFT				ABORTS			TGT TIMES	
			REQ	A/B	O/T	COM	GND	PRE	POST	BRIEFED	ACTUAL
93 BW	SEATTLE	6	12	6	5	5	7	1	0	12:15 12:45	12:11 12:36
	SPOKANE	3	6	7	6	6	0	1	0	12:15	12:23
106 BW	NA	NA	9	9	8	8	0	1	0	11:55	11:55

TACTICS

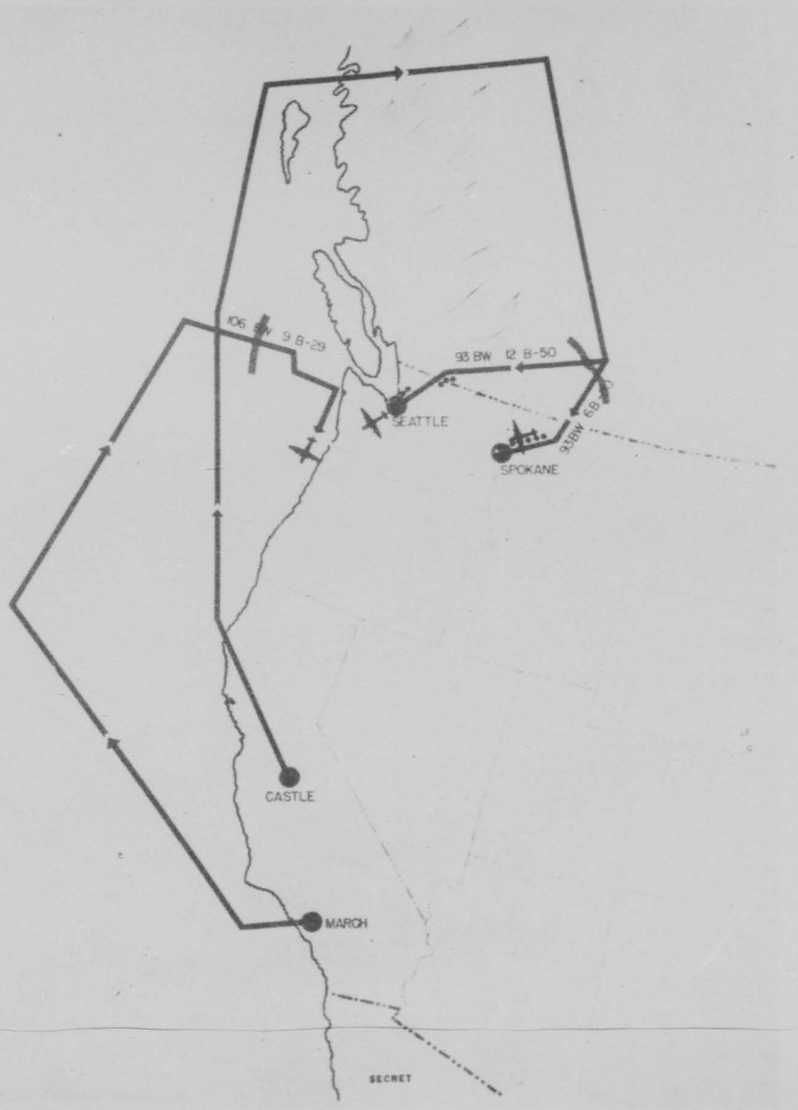
1. STRIKE FORCE — THREE CELLS
2. SHIELDING BY MOUNTAINS
3. ECM OVER TARGET
4. USE OF DIVERSIONARY FORCE 20 MINUTES PRIOR TO STRIKE

EFFECTIVENESS

1. SHIELDING BY MOUNTAINS NOT EFFECTIVE
2. DIVERSIONARY FORCE NOT EFFECTIVE

AUTH. CG S A C
SECRET
DATE- 27 Aug 62
NAME-

NORTHWEST "COMPLEX"



7. WEST COAST

San Francisco and Los Angeles simulate an approach similar to coastal targets. Task forces of the 9th Bomb Wing and the 43rd Bomb Wing were to make night approaches in cell formation and strike at daybreak. Three DGZ's in each target area were to be bombed by forces of six aircraft each. Two Support forces of nine aircraft each were scheduled for each target. All forces were to employ ECM. Results of these two strikes were good. In essence, all forces flew missions as briefed. A total of only four fighters in each target area made intercept. The low number of fighter interceptors (8) is attributed to effective VHF jamming which caused controllers to use broadcast control and the early morning attack which prevented some fighters from becoming airborne due to restricted visibility. Some delay in replotting tracks in the Los Angeles area was attributed to chaff when an ADC ground radar became temporarily in operative.

E+3 STRIKE W. COAST COMPLEX

MISSION

TO STRIKE SAN FRANCISCO AND LOS ANGELES

FORCE DATA

UNIT	TGT	DGZ'S	AIRCRAFT				ABORT			TARGET TIME	
			REQ	A/B	O/T	COM	GND	PRE	POST	BRIEFED	ACTUAL
43 BW	L.A.	3	6	6	3	3	0	3	0	12:15	12:15
9 BW	S.F.	3	6	8	6	6	0	0	0	12:15	12:25
22 BW	L.A. SUPPORT	—	9	9	9	9	0	0	0	12:15	12:20
22 BW	S.F. SUPPORT	—	9	9	9	9	0	0	0	12:15	12:20

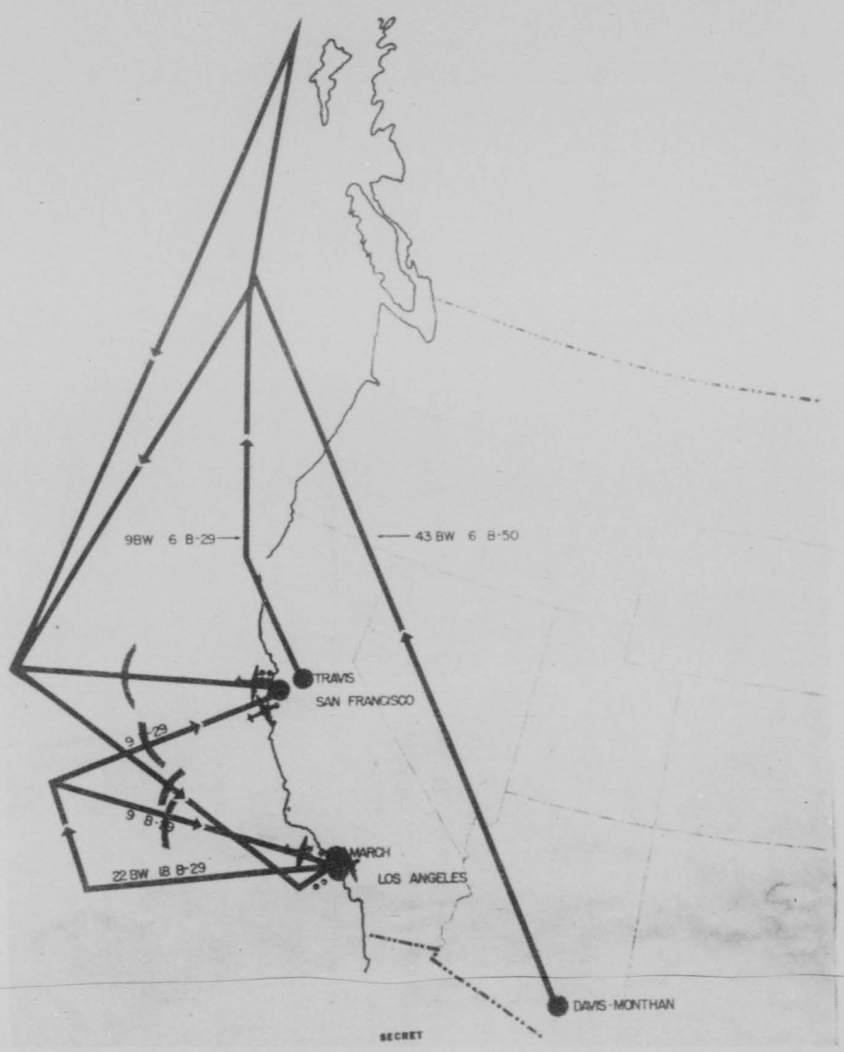
TACTICS

1. STRIKE FORCE -- 1 CELL EACH.
2. VERTICAL SEPARATION (10,000) STRIKE AND SUPPORT.
3. SIMULTANEOUS TIMING —— STRIKE AND SUPPORT FORCES.

EFFECTIVENESS

1. ECM EFFECTIVE -- BOTH TARGETS.
2. SUPPORT PARTIALLY EXPLOITED.

WEST COAST COMPLEX



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8. CENTRAL AREA

Omaha and Kansas City targets simulate approaches to interior targets. Task forces of the 43rd Bomb Wing were to make medium altitude night and early morning cell penetrations to the target areas and strike in daylight tactical formation shortly after sunrise. Three DGZ's in each target area were to be bombed by forces of six aircraft each. No diversionary or support forces were scheduled. ECM was to be employed only by the Omaha force.

The Omaha task force was picked up by ground radars intermittently, but due to weather and a course deviation around Rapid City no fighter interceptions were encountered. Electronic jamming over Omaha was effective. The GCI controller was unable to definitely determine the size of the force involved.

The Kansas City force encountered heavy fighter interception from Duluth to Minneapolis for a total of 20 F-51 aircraft at an altitude of 12,000 feet.

Both forces penetrated at altitudes higher than required due to IFR clearance problems and for reasons of cruise control.

STRIKE CENTRAL COMPLEX

MISSION

TO STRIKE OMAHA AND KANSAS CITY

FORCE DATA

UNIT	TGT	DGZ'S	AIRCRAFT				ABORT			TGT TIMES	
			REQ	A/B	O/T	COM	GND	PRE	POST	BRIEFED	ACTUAL
43 BW	OMAHA	3	6	7	5	4	0	2	1	12:15	12:01
43 BW	K.C.	3	6	6	5	5	0	1	0	12:15	12:32

TACTICS-CENTRAL

1. STRIKE FORCES-1 CELL EACH TARGET.
2. MED. ALTITUDE PENETRATION.
3. HIGH AND MINIMUM ALTITUDE BOMBING.
4. ECM-EW RANGE FOR OMAHA.

EFFECTIVENESS

1. ECM VERY EFFECTIVE ON OMAHA.
2. OMAHA MED. ALTITUDE PENETRATION EFFECTIVE.
3. NO CONCLUSIONS ON HIGH VS MED. STRIKE.

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DATE- 27 Dec 62
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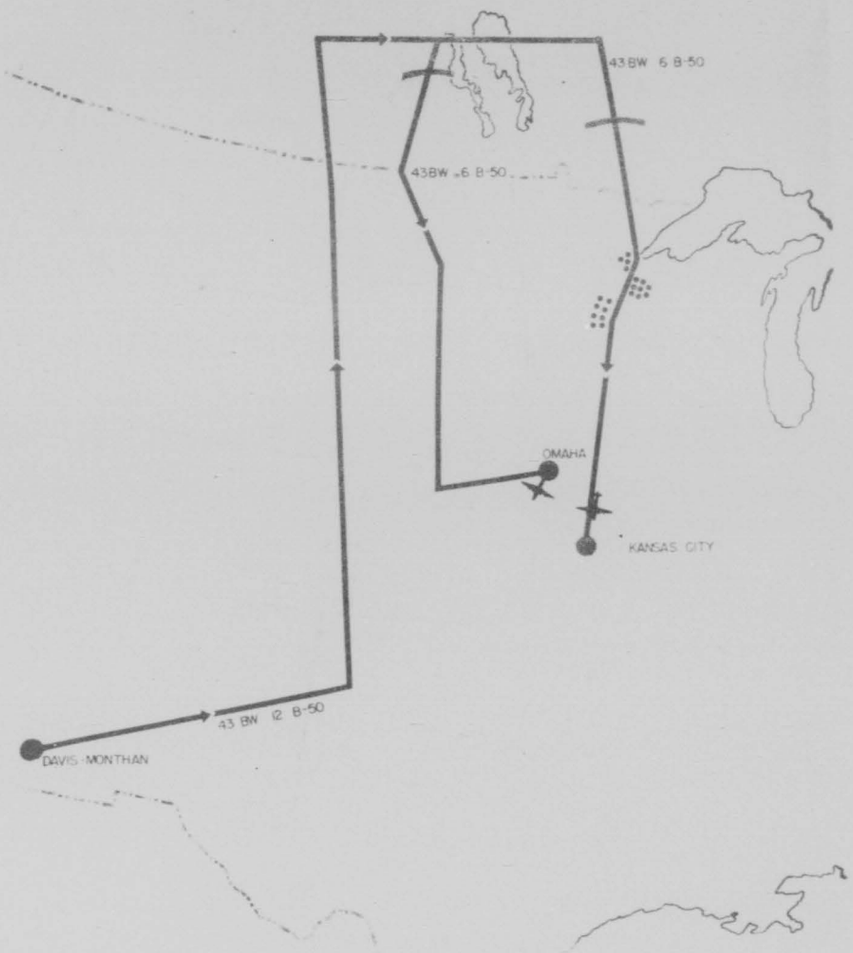


9. GREAT LAKES

Chicago and Detroit targets simulate a deep penetration by heavy bombers with fighter escort. Task forces of the 7th and 11th Heavy Bomb Wings and the 27th and 12th Fighter Escort Wings were to make high altitude and morning attacks on the two large complex targets. Fifteen DGZ's in Chicago and eighteen in Detroit were to be bombed by forces of eighteen and twenty aircraft respectively. The Chicago fighter escort force was to be air refueled prior to rendezvous with the bombers. ECM was to be employed only by the Detroit force.

The B-36's, even though flying at 40,000 feet, flew some of the best formation flown by bombers to date. Both forces bombed their targets within a five minute period after making individual bomb runs, and they reformed into daylight tactical formation subsequent to bombs away.

The Chicago force was detected prior to the Detroit force. The B-36's bombing Detroit employed maximum ECM. Chaff and VHF jamming were effective. Observers indicated that this force was spread out a distance of over 100 miles and that a condition 2 appeared intermittently on the PPI scope at Selfridge.

Results of the fighter Escort are discussed in the section entitled "Escort".

A total of 33 interceptors were encountered by these two forces.

STRIKE GREAT LAKES COMPLEX

MISSION

TO STRIKE CHICAGO AND DETROIT

FORCE DATA

UNIT	TGT	DGZ'S	AIRCRAFT				ABORTS			TGT. TIMES	
			REQ	A/B	O/T	COMP	GND	PRE	POST	OPS ORDER	ACTUAL
7 BW	DETROIT	18	20	21	19	16	1	2	3	1515	1541
11 BW	CHICAGO	15	18	20	19	19	0	1	0	1515	1544
12 FEW	ESCORT (DETROIT)	NA	24	24	22	18	0	2	4		
27 FEW	ESCORT (CHICAGO)	NA	48	50	35	35	0	15	0		

TACTICS

1. STRIKE FORCE - HIGH ALTITUDE DAYLIGHT TACTICAL FORMATIONS.
2. FIGHTER REFUELING.
3. ECM AT EW RANGE VS NO ECM.
4. TIMED RENDEZVOUS.
5. FIGHTER ESCORT.
6. TARGET COMPRESSION.
7. TARGET BREAKUP AND ASSEMBLY.

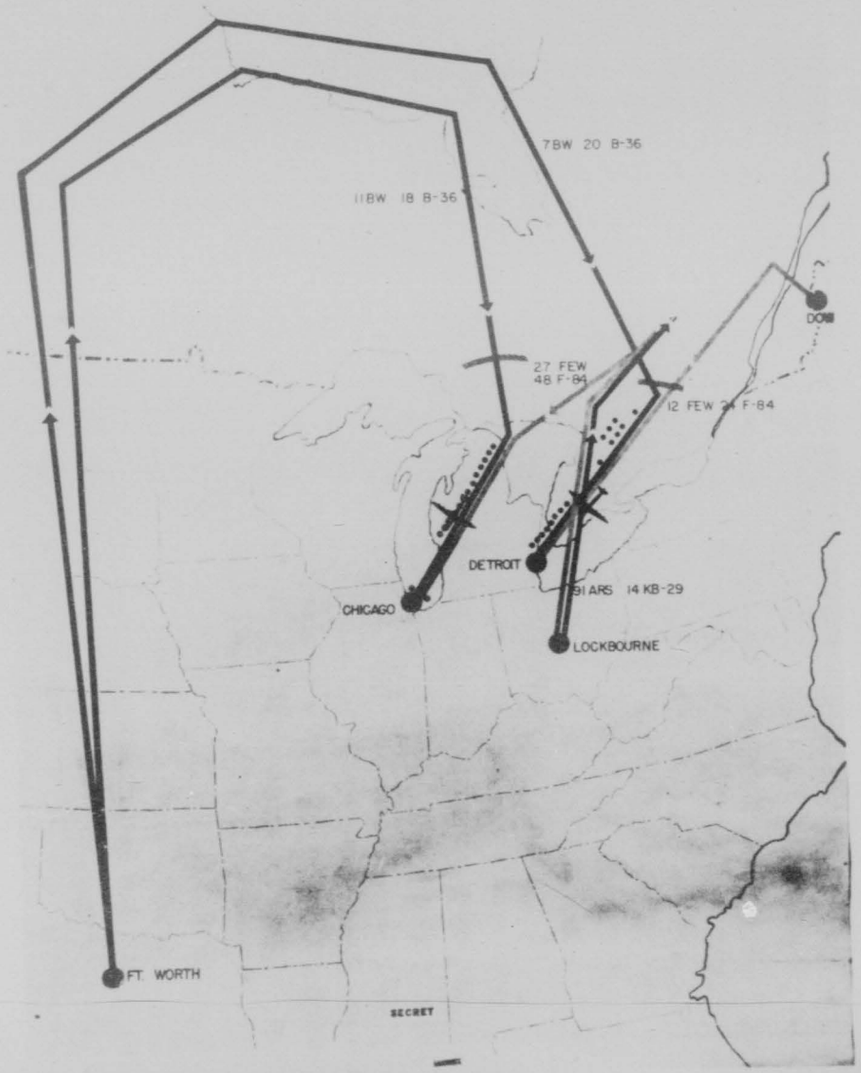
EFFECTIVENESS

1. FORCE COMPRESSION - DAYLIGHT TACTICAL FORMATION - GOOD.
2. ECM EFFECTIVE.
3. TARGET BREAKUP - GOOD.
4. REASSEMBLE OF FORCE - POOR.
5. FIGHTER ESCORT EFFECTIVE AS DETERRENT.
6. FIGHTER REFUELING - NOT COMPLETE - LACK OF TANKERS AND SYSTEM MALFUNCTION.
7. FIGHTER - BOMBER RENDEZVOUS - EXCELLENT.

SECRET

AUTH: CG S A C
SECRET
DATE: 27 Aug 57
NAME: [illegible]

GREAT LAKES COMPLEX



10. EAST COAST

Pittsburgh, Washington, D. C., Philadelphia and New York simulated approaches requiring a deep penetration through enemy defenses. Task forces of the 301st, 2nd and 97th Bomb Wings were to make night cell penetrations to the target areas and strike in daylight tactical formation shortly after daybreak. These strikes were to be assisted by diversionary forces of twenty-seven aircraft approaching the target areas from the Atlantic. Six DGZ's in each of the four target areas were to be bombed by forces of six aircraft on each target. All forces were to employ ECM.

The four strike forces were all intercepted by fighters along the common penetration route for a total of 48 interceptors (10 RCAF). The Pittsburgh force was the first to penetrate the early warning net. However, in spite of being under continual radar surveillance, this force was able to penetrate approximately 300 miles prior to intercept. The chronological sequence and geographic position of intercept revealed that as successive task forces penetrated and proceeded on the common route at progressively later times, intercept occurred progressively closer to the penetration point of early warning.

The Diversion forces drew off an appreciable number of fighters (34) from the strike forces. Chaff and VHF jamming were partially effective in this area.

The integration of ferret aircraft within bomber formations appeared to be feasible, however, much work remains to be done to develop operating procedures between the ferret and bomber aircraft to permit full exploitation of this idea.

STRIKE EAST COAST COMPLEX

MISSION

TO STRIKE PITTSBURGH, PHILADELPHIA, WASH D.C. AND N.Y.

FORCE DATA

UNIT	TGT	DGZ	AIRCRAFT				ABORTS			TGT TIMES	
			REQ	A/B	O/T	COM	GND	PRE	POST	BRIEFED	ACTUAL
301 BW	WASH D.C.	6	6	6	4	3	0	2	1	12.15	12.11
301 BW	PITT.	6	6	7	5	4	0	2	1	12.15	12.05
55 SRW	ECM A/C	NA	2	2	2	0	0	0	2	NA	NA
97 BW	N.Y.	6	6	6	6	6	0	0	0	12.20	12.25
2 BW	PHILA	6	6	5	5	4	1	0	2	12.15	12.23
376 BW	WASH D.C.	DIV	9	8	6	6	1	2	0	11.30	11.30
68 BW	N.Y.	DIV	6	6	6	6	0	0	0	11.40	11.42
6 BW	PHILA	DIV	9	8	8	7	1	0	1	11.40	11.55
68 BW	BOSTON	DIV	3	3	3	3	0	0	0	11.15	11.30
TOTAL			*53*			*45*					

TACTICS

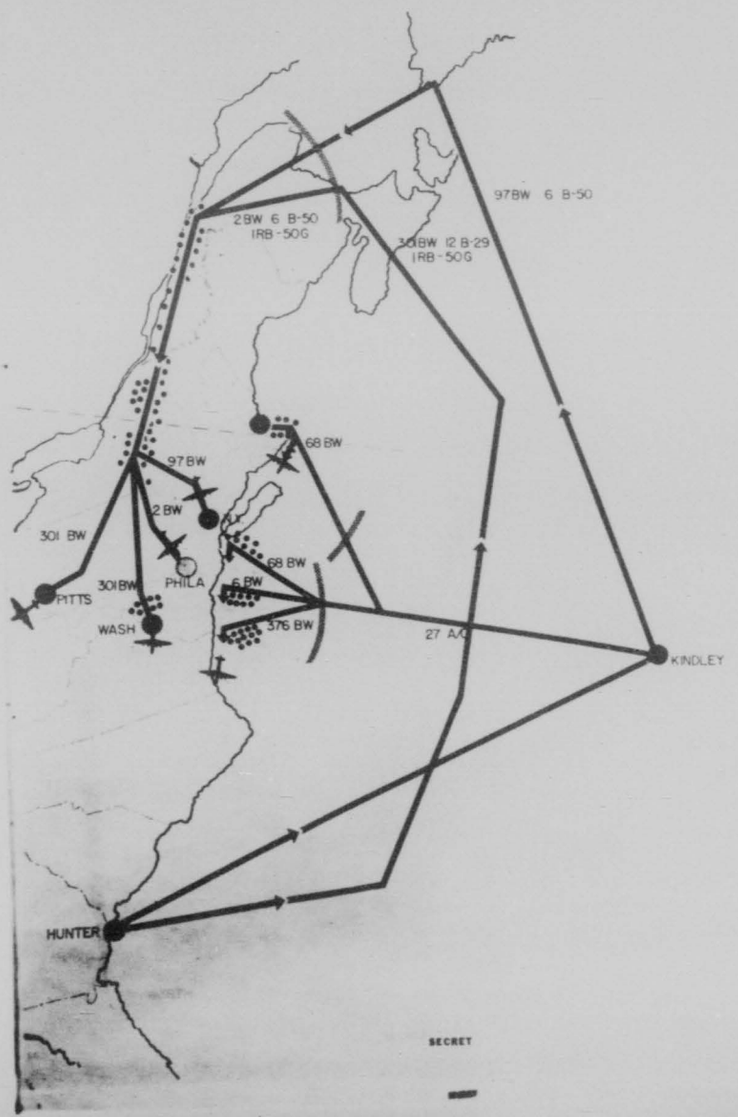
1. STRIKE FORCE--4 CELLS.
2. LONG MED. ALTITUDE PENETRATION--LATE CLIMB.
3. MED. ALTITUDE CELL.
4. DAYLIGHT FORMATION.
5. USE OF DIVERSION.
6. ECM AFTER LEVEL OFF.

EFFECTIVENESS

1. MED. ALTITUDE PENETRATION NOT EFFECTIVE.
2. DIVERSION--EFFECTIVE.
3. ECM--EFFECTIVE.
4. FERRET-CELL COMBINATION.

AUTH: CG S & C
SECRET
DATE-- 27 Aug 62
NAME-- Hq Comdr

EAST COAST COMPLEX



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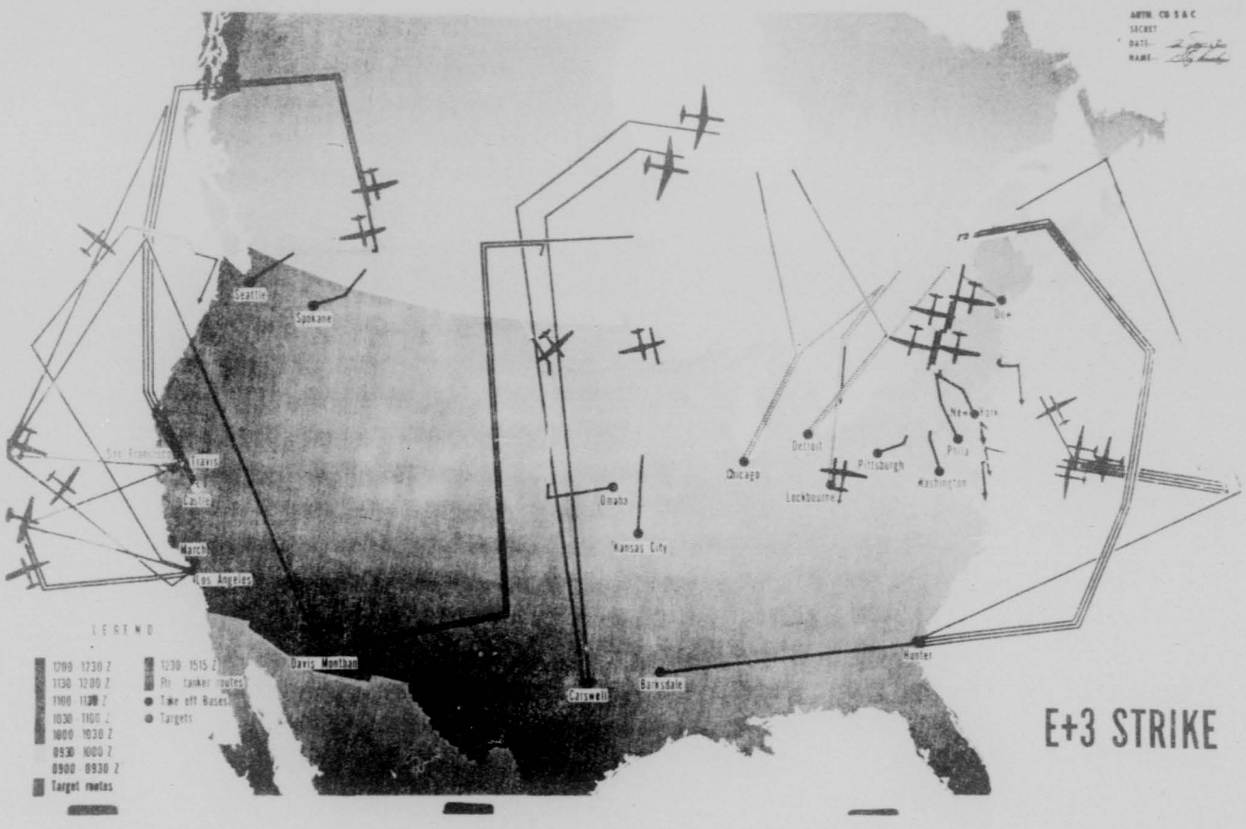

ARTHR CD S & C
SECRET
DATE
NAME
Seattle
Spokane
Travis
Castle
March
Los Angeles
Davis Monthan
Omaha
Kansas City
Chicago
Detroit
Pittsburgh
Lockbourne
Washington
Carswell
Barksdale
Hunter
LEGEND
1700 1730 Z
1730 1200 Z
1100 1130 Z
1030 1100 Z
1000 1030 Z
0930 1000 Z
0900 0930 Z
Target routes
1230 1515 Z
Air tanker routes
Take off Bases
Targets

E+3 STRIKE

SUMMARY

1. Timing: It has been determined that timing of forces is critical and that proper planning should avoid a simultaneous bombs away time for numerous task forces as much as possible. Of the twelve strike forces involved in this exercise one force bombed on time, seven bombed late for an average time of fifteen minutes each and four forces bombed early for an average time of eight mimutes each.

2. Common Route: As depicted on the East Coast, a common route for attacking forces appears to be more desirable for defending forces. Units on a common route are easier to maintain under surveilliance and the problems of decision on dispatching of fighters by controllers is made easier in that intercept problems are localized. Additionally, fighters can search the common route if communications are jammed or non-effective.

3. Diversion Forces: Successful use of diversionary forces hinges upon proper timing in relation to the intended strike. When properly timed, it appears that Diversionary forces can be effective in diverting enemy defenses away from the Strike forces and withdrawing fighters from the target areas.

4. Penetration: Results of this mission indicated that simulating low altitudes at 4000 to 6000 feet is of relatively no value. A low altitude approach must be below 1000 feet to be effective. It appeared that penetrating forces should take advantage of darkness up to the target to achieve conditions of limited visibility resulting in less efficient operation of enemy defenses.

5. ECM: VHF communications resulted in the most effective type of jamming. It caused the defenses to go to broadcast control and reduced the effectiveness of ADC fighters. Chaff did confuse some controllers and interfered with certain AA radar directed guns. Electronic jamming was barely effective, but this was primarily due to the lack of equipment available for counteracting known ADC equipment.

6. Fighter Escort: Fighter Escort of bombers at high altitudes is feasible, but ceiling limitations of the fighters, if they are to be effective, must not be exceeded. Fighters that are air refueled just prior to escort must pay a penalty of having their fuel load seriously affect combat ceiling and maneuverability, particularly at a time when enemy interceptors are apt to be encountered.

7. Aborts: A review of pre-target aborts of airborne aircraft reveals the following percentage of aborts:

Bombers	14%
Diversion	5.4%
Fighters (Pre-rendezvous) . . .	26%
Tankers	14.3%

8. ADC Fighter Reaction: See attached Fighter Reaction Chart.

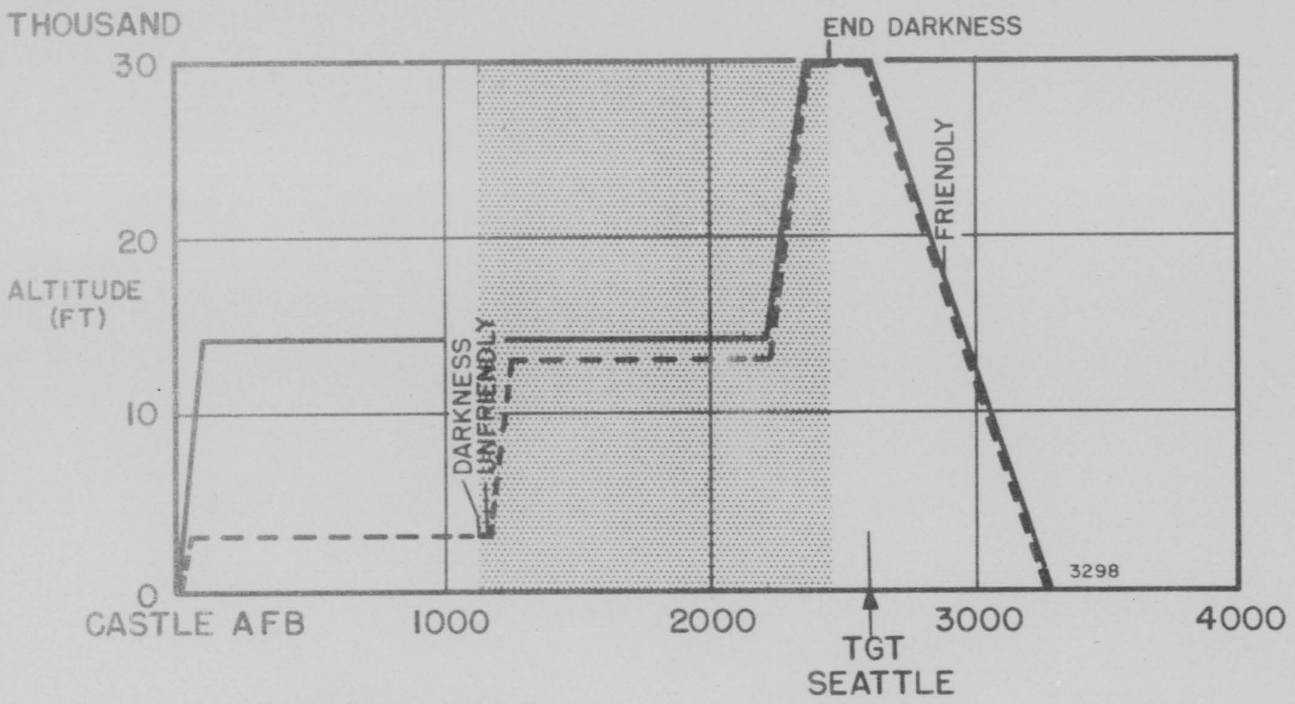
ADC Fighter Reaction Chart

Number of Fighters Making Pounce Before BRL on E + 3

TARGET	BOMB WING	NO. FIGHTERS
Spokane (Strike)	93rd	5
Seattle (Strike)	93rd	5
Seattle (Div)	106th	1
San Francisco (Strike)	9th	2
San Francisco (Div)	22nd	2 plus same 2 ftrs on strike.
Los Angeles (Strike)	43rd	2
Los Angeles (Div)	22nd	2
Omaha (Strike)	43rd	0
Kansas City (Strike)	43rd	20
Chicago (Strike)	11th	16
Detroit (Strike)	7th	17
Detroit-2 low alt. late bombers	7th	*22
Pittsburgh (Strike)	301st	4
Philadelphia (Strike)	2nd	9
Philadelphia (Div)	6th	8
Washington (Strike)	301st	13
Washington (Div)	376th	12
New York (Strike)	97th	12
New York (Div)	68th	8
Boston (Div)	68th	6
TOTAL		144

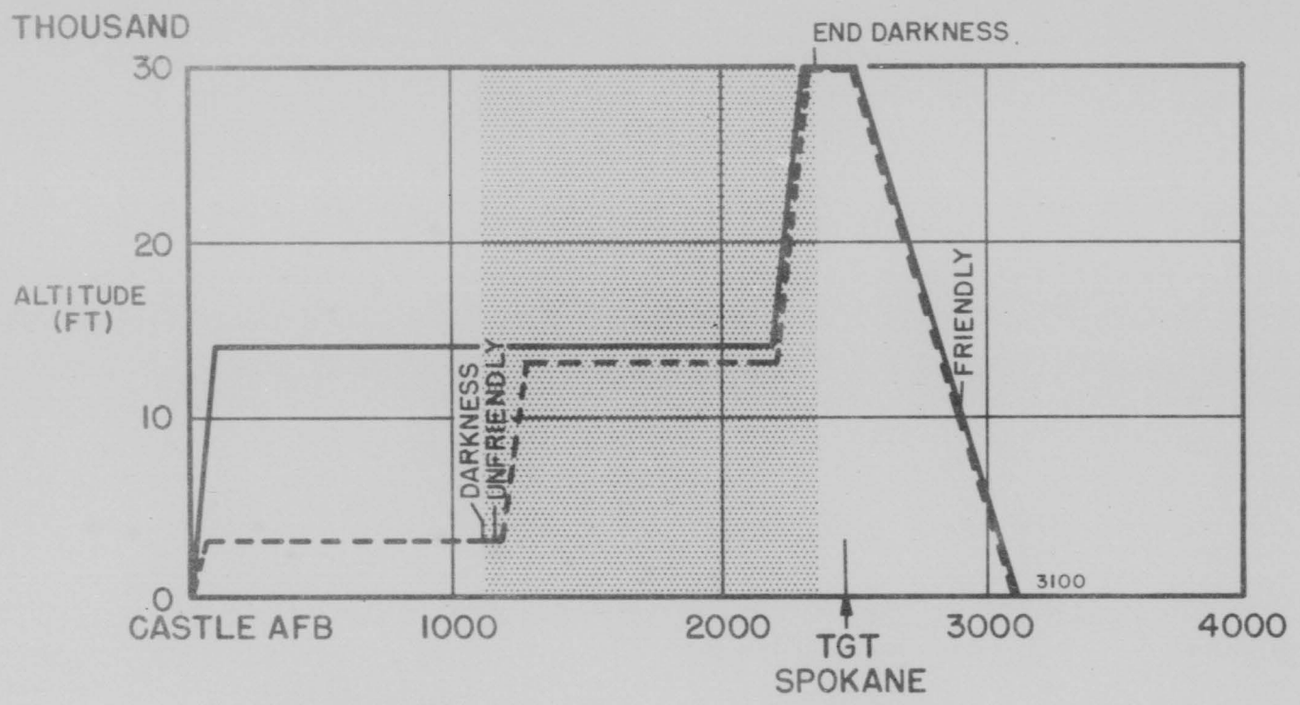
*Not included in totals

Does not include 10 RCAF fighters which intercepted Eastern Strike Force in the St. Lawrence Valley.



54

93 BW PROFILE



93 BW PROFILE

93rd BW

1. MISSION: To attack 3 DGZ's at Spokane and 6 DGZ's at Seattle.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
Spokane								
6 BC	6 BC	0	7*	1	6	0	5	5
Seattle								
12 BC	12 BC	7	6*	1	5	0	5	6

*Includes 2 additional spares.

3. TARGET TIME AND ACTUAL COMPRESSION:

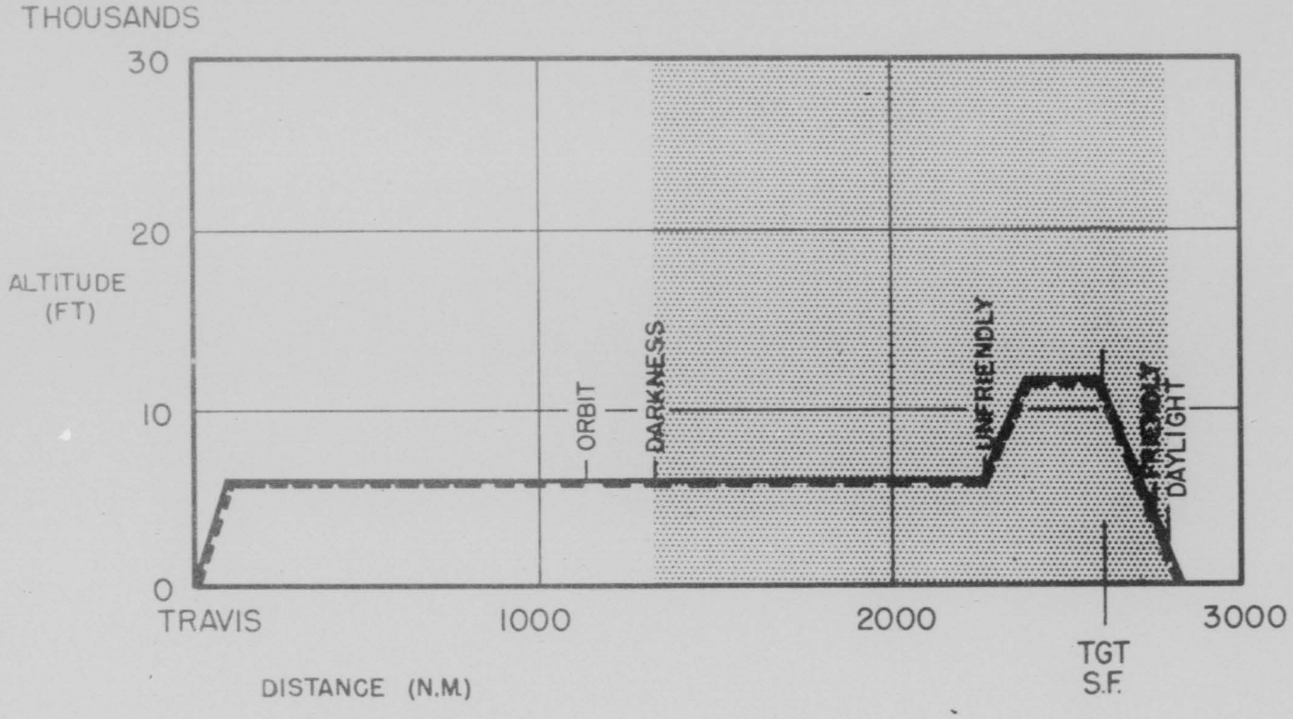
	Scheduled	Reported
Seattle	1215Z	1211Z
		1211Z
		1211Z
		1211Z
Seattle	1230Z	1236Z
Spokane	1215Z	1223Z
		1225Z
		1225Z
		1225Z
		1230Z

4. TACTICS:

Scheduled	Where Employed
Jam "L" Band and VHF Drop Chaff	Target area

5. REMARKS:

This mission is considered unsuccessful due to the abort rate and high penetration altitudes flown by strike force.


THOUSANDS
30
20
10
0
ALTITUDE
(FT)
ORBIT
DARKNESS
UNFRIENDLY
FRIENDLY
DAYLIGHT
TRAVIS
1000
2000
3000
TGT
S.F.
DISTANCE (N.M.)
ACTUAL
SCHEDULED
DARKNESS

9 BW PROFILE

9th BW

1. MISSION: To attack 3 DGZ's in San Francisco.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
3 BC	3 BC	0	3 BC	0	3 BC	0	3	3 BC
3 S	3 S		3 S		3 S			3 S
	2AS		2 AS					

3. TARGET TIME AND ACTUAL COMPRESSION:

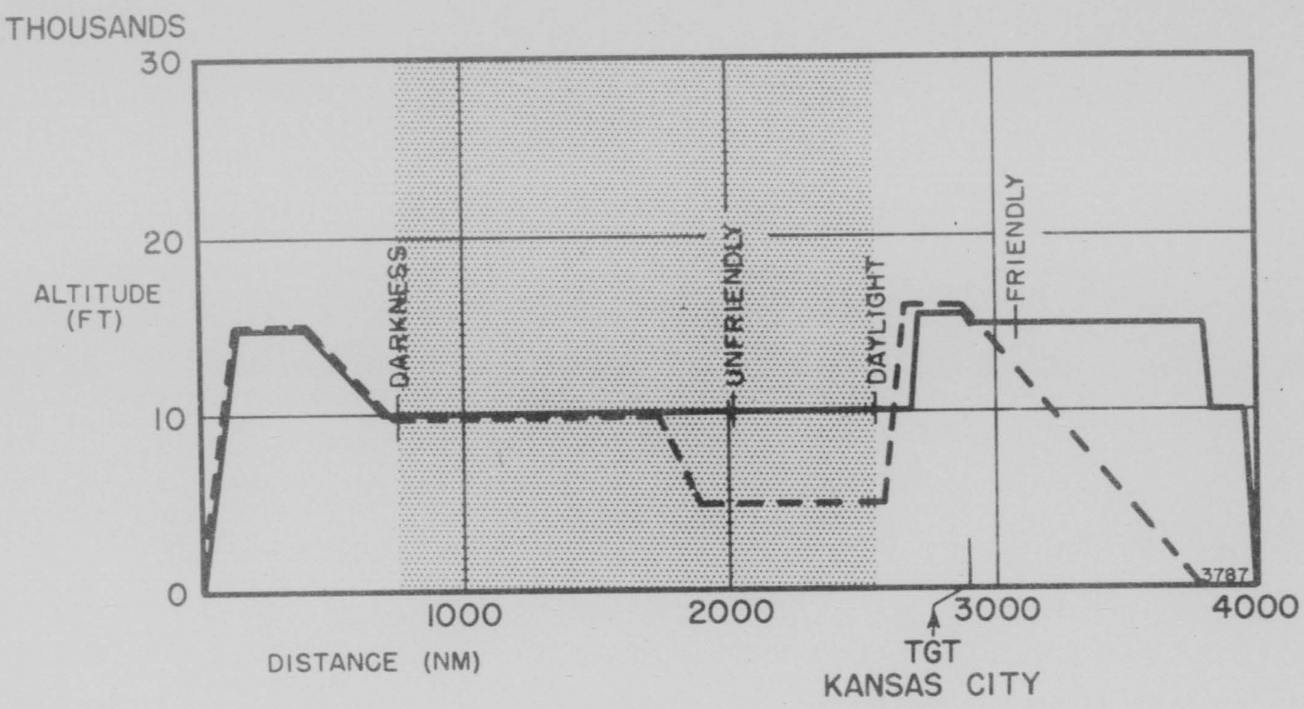
Scheduled	Actual
1215Z	1225Z
	1225Z
	1225Z

4. TACTICS:

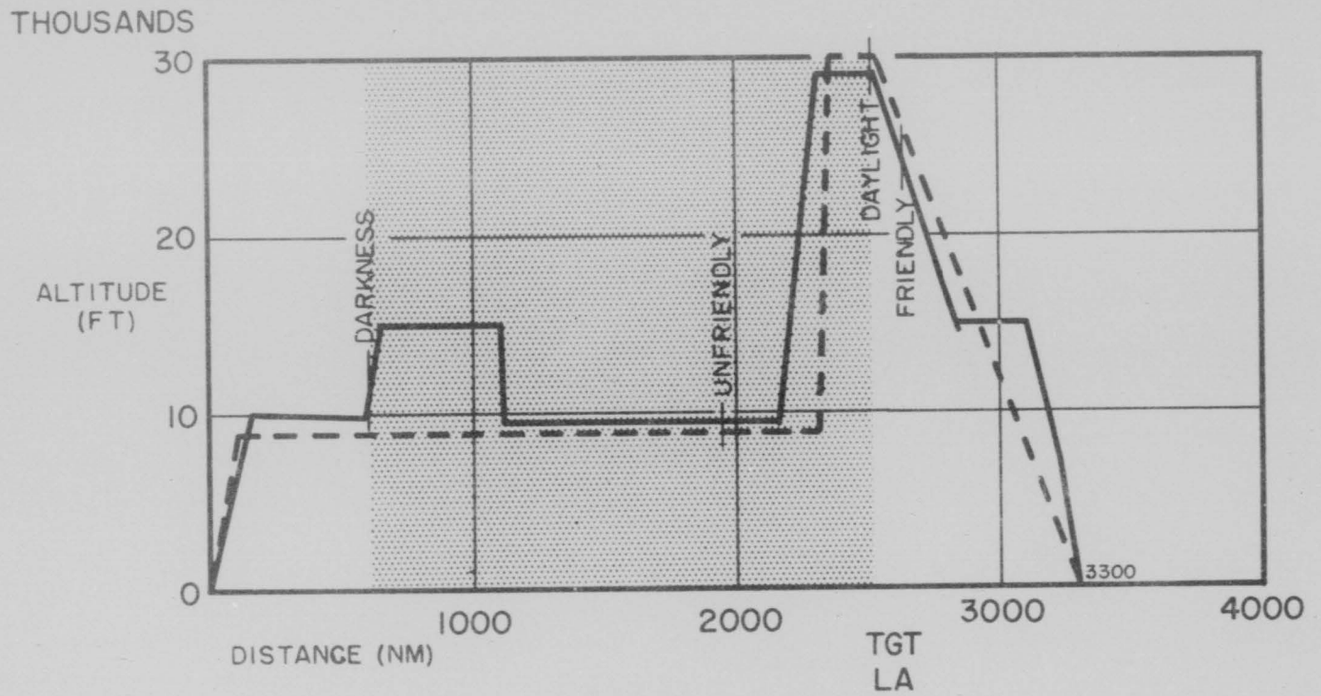
Scheduled	Employed
Jam "L" Band and VHF Drop Chaff	200 mile prior target

5. REMARKS:

This mission was considered to be excellent. Unit fulfilled the mission as briefed. ECM results were excellent, primarily due to effective VHF jamming.



43 BW PROFILE



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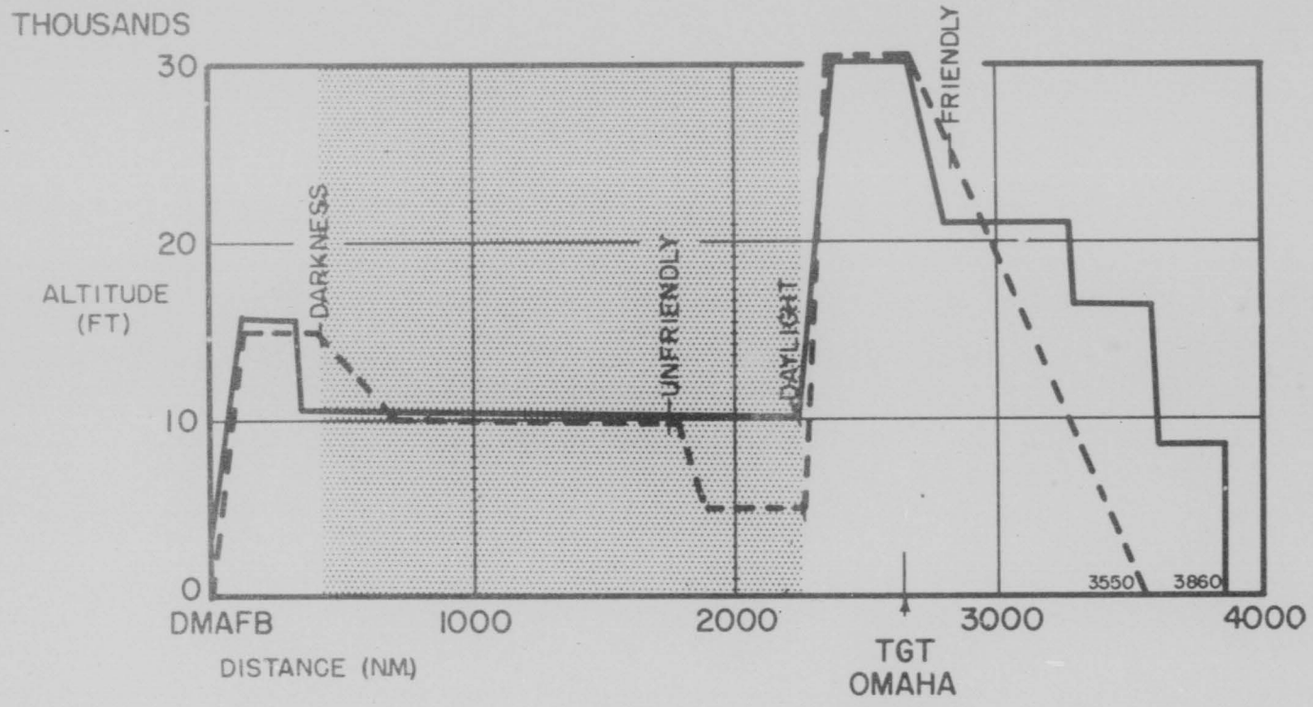
43 BW PROFILE



19

43 BW PROFILE

43rd Bomb Wing

1. MISSION: To attack 3 DGZ's at Los Angeles, 3 DGZ's at Omaha and 3 DGZ's at Kansas City.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
9 BC	9 BC		9 BC	1 BC	8 BC	2 BC	7 BC	6 BC
9 S	9 S		9 S	4 S	5 S	1 S		4 S
	3 AS	1 AS	2 AS					
0	24 T	0	27 T	1		0	NA	26 T
	3T(WX)							

3. Target time and actual compression:

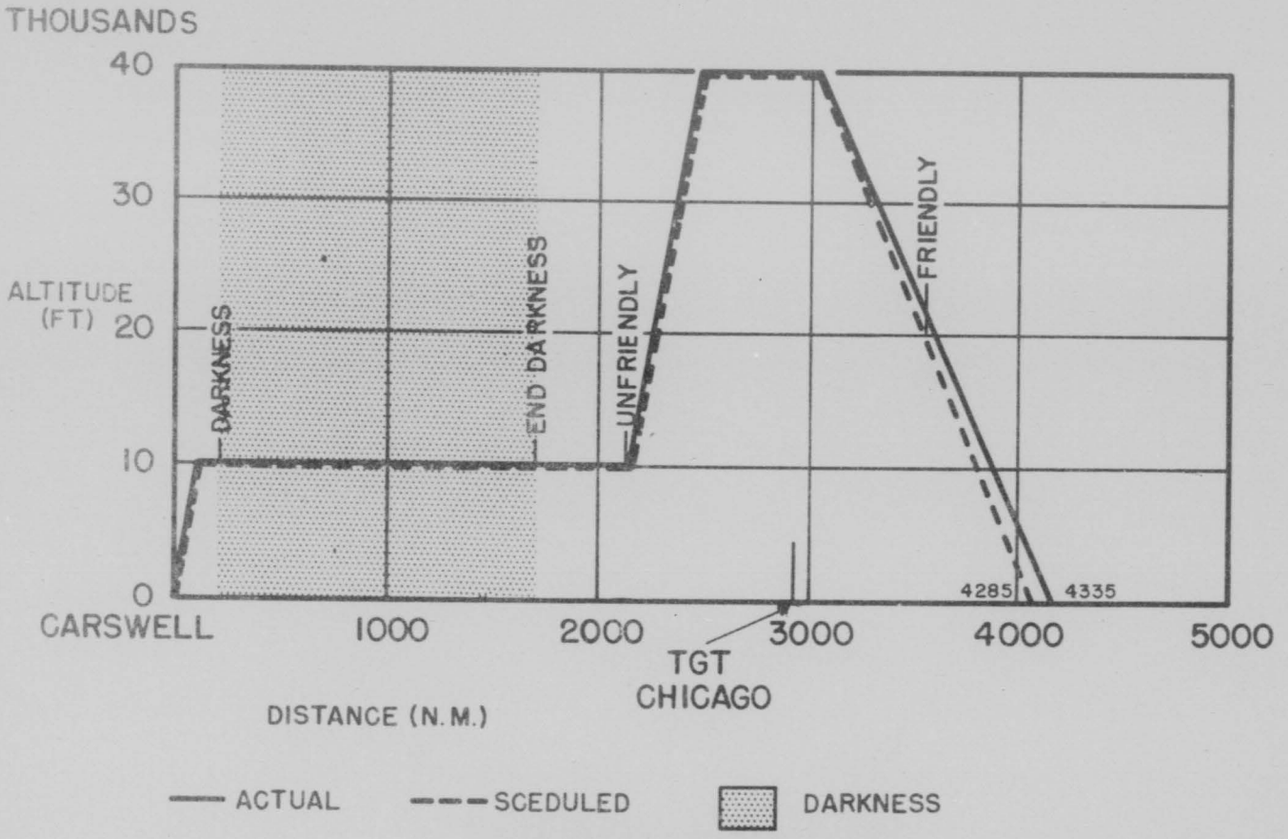
	Scheduled	Actual
Kansas City	1215Z	1232Z 1233Z
Omaha	1215Z	1201Z 1201Z 1219Z
Los Angeles	1215Z	1215Z 1235Z

4. TACTICS:

Scheduled	Where Employed
Kansas City - low altitude penetration	Due to flying safety reasons and cruise control, this tactic was not employed.
Omaha - Jam "L" Band and VHF, Chaff	from a point 200 miles pr to target.
Los Angeles - Jam "L" Band and VHF, Chaff	from a point 200 miles prior tc target.

5. REFUELING: Pre-target refueling was accomplished with excellent results - Only one (1) tanker aborted prior to IFR area. This phase of the mission was considered 96% effective.

6. REMARKS: This mission was considered 70% effective because of the abort rate and the altitude deviations from the published operations order. The refueling phase of this flight is considered excellent with all tankers completing their mission as briefed.



11 HBW PROFILE

11th BW

1. MISSION: To attack 15 DGZ's in Chicago.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
18	20	0	20	1*	19	0	19	19

*Radar out, completed mission bombing on leader

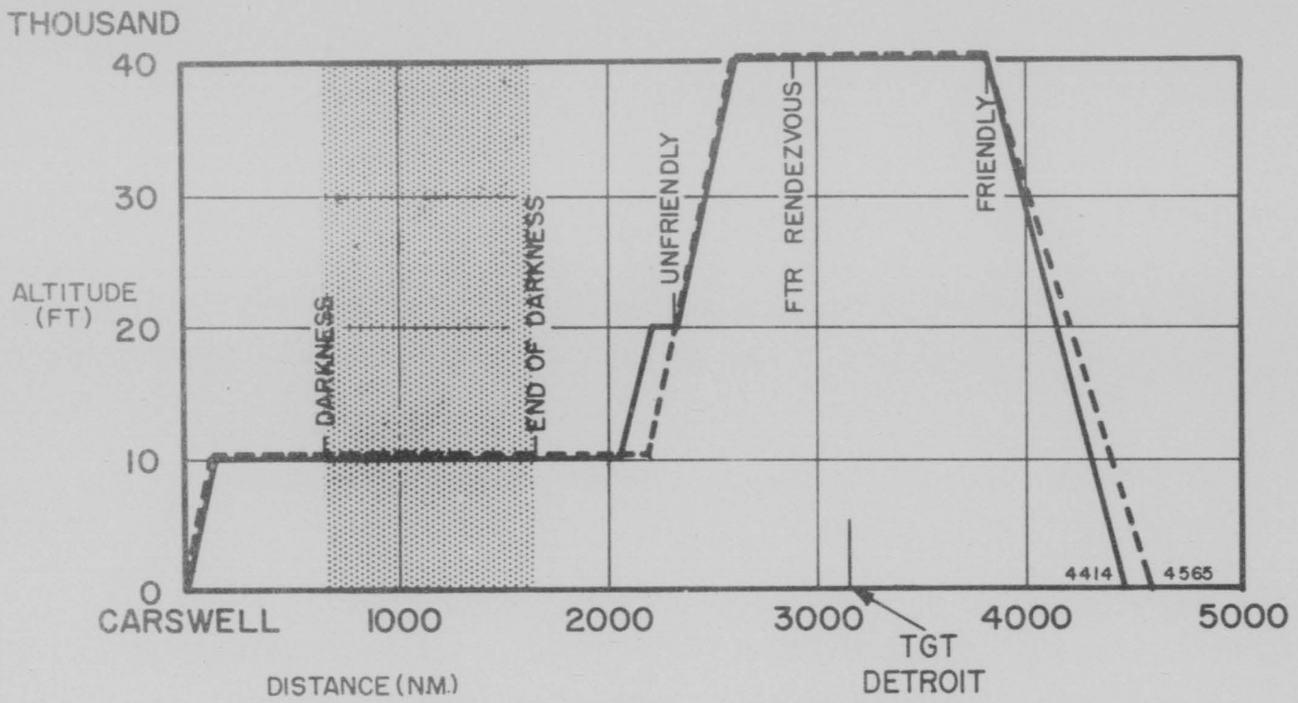
3. TARGET TIME AND ACTUAL COMPRESSION:

Scheduled	Reported
1515Z	(2) 1544Z
	(4) 1545Z
	(7) 1546Z
	(5) 1547Z
	(1) 1548Z
	Total 19

4. TACTICS:

Scheduled	Actual
Two squadron formations at 10 mile interval in trail escorted by 48 fighters	As briefed.

5. REMARKS: This mission was considered superior in quality. Entire mission flown as briefed except for a rendezvous altitude change required because of weather.



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7 HBW PROFILE

7th BW

1. MISSION: To attack 18 DGZ's in Detroit.

2. FORCE: Scheduled and reported.

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
20	21	1*	21	2	19	3	19	16

*Replaced by ground spare.

3. TARGET TIME AND ACTUAL COMPRESSION:

Scheduled	Actual
1515Z	1535Z
	1541
	(5)1543
	(2)1544
	(7)1545
	1546
	1618
	1643
	Total-19

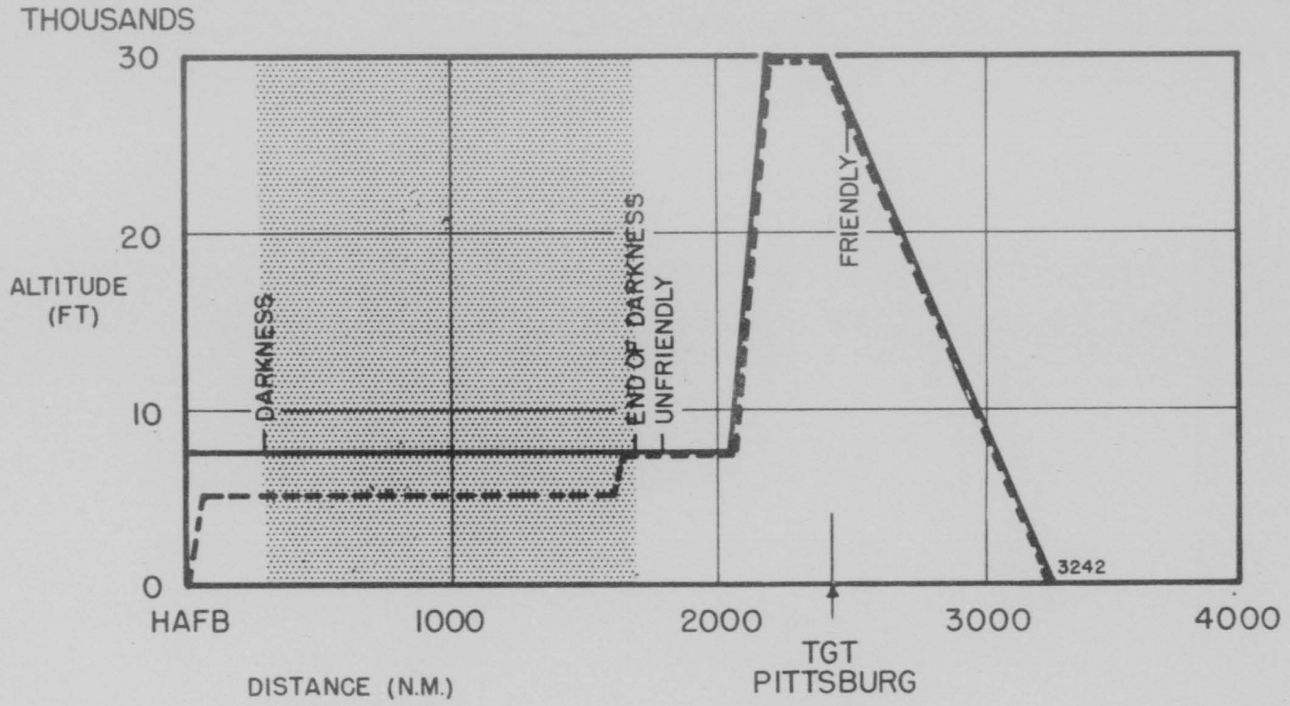
4. TACTICS:

Scheduled	Where Employed
Jam "L" and "S" and VHF Drop Chaff	200 mile prior target
Two squadron formations together escorted by 24 fighters.	

5. REMARKS:

This mission was considered highly successful. Two pre-target aborts did not noticeably effect the results. Formation was not flown closely enough for fighters to effectively escort.

67



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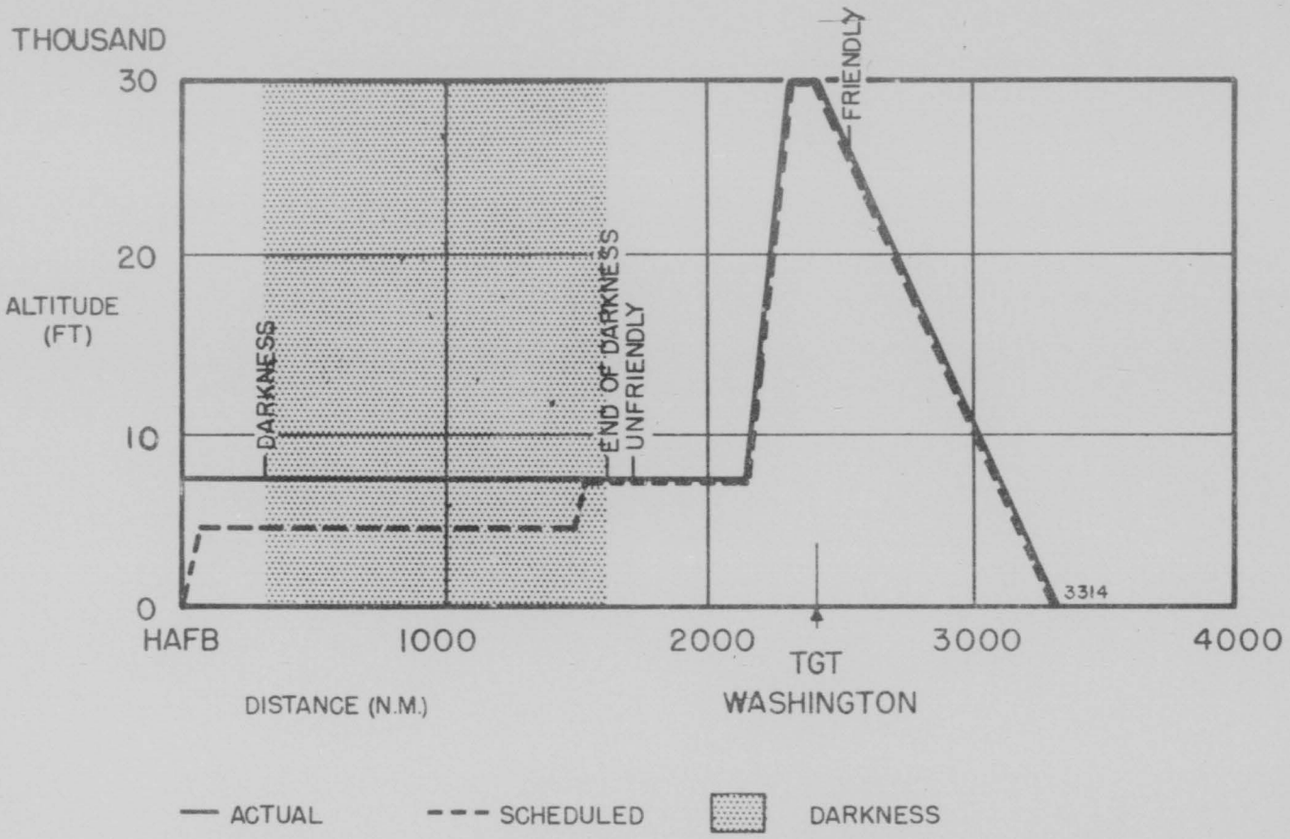
301 BW PROFILE



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301 BW PROFILE

301st BW

1. MISSION: To attack 6 DGZ's in Pittsburg and 6 DGZ's at Washington.

2. FORCE: (Augmented by 1 RB-50G of 55SRW)

	SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
		14	1T	13T	2T	11T	2T	NA	9T
Pittsburg	6	7	0	7	2	5	1	4	4
Washington	6	7	1	6	2	4	1	4	3
1 ECM	1	1	0	1	0	1	1	NA	0

3. TARGET TIME AND ACTUAL COMPRESSION:

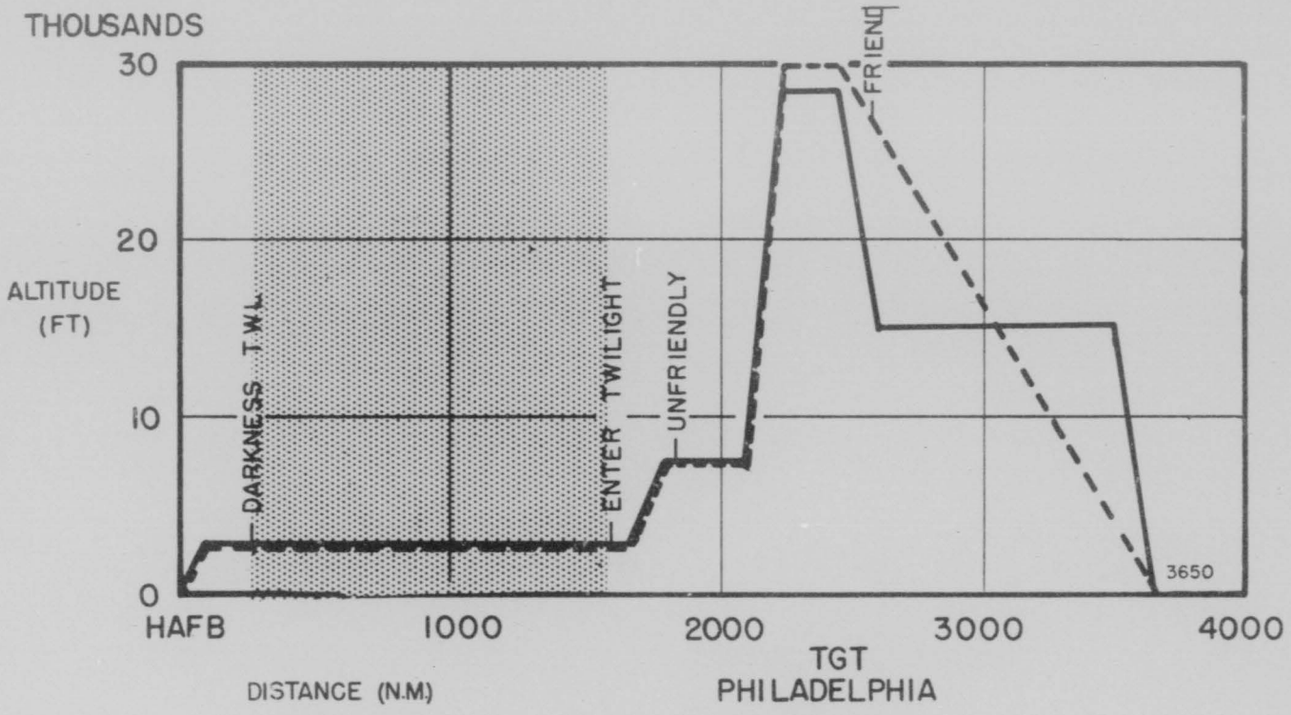
	Scheduled	Actual
Pittsburg	1215Z	1205Z 1211Z 1236Z 1350Z
Washington	1215Z	1211Z 1211Z 1211Z

4. TACTICS:

Scheduled	Where Employed
Jam "I" Band and VHF Drop Chaff	At completion of climb.

5. REFUELING: Pre-target and post-target refueling was accomplished with 98% effectiveness. Average mission time resulting from IFR was approximately 21 hours per aircraft.

6. REMARKS: This mission was considered to be 75% effective, due to number of aborting aircraft. The aborts were partially caused by materiel difficulties resulting from unit mission flown 5 days prior to E / 3.


THOUSANDS
30
20
10
0
ALTITUDE
(FT)
DARKNESS T.W.L.
ENTER TWILIGHT
UNFRIENDLY
FRIEND
3650
HAFB
1000
2000
3000
4000
DISTANCE (N.M.)
TGT
PHILADELPHIA
ACTUAL
SCHEDULED
DARKNESS

2 BW PROFILE

J

2nd BW

1. MISSION: To attack 6 DGZ's at Philadelphia.

2. FORCE: (Augmented by 1 RB-50G from 55SRW)

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
6	6	1	5BC	0	5	1	4	4 BC
	3T	0	3T	0(T)	NA	0(T)	NA	3 T
1 ECM	1 ECM	0	1	0	1	1	-	0

3. TARGET TIME AND ACTUAL COMPRESSION:

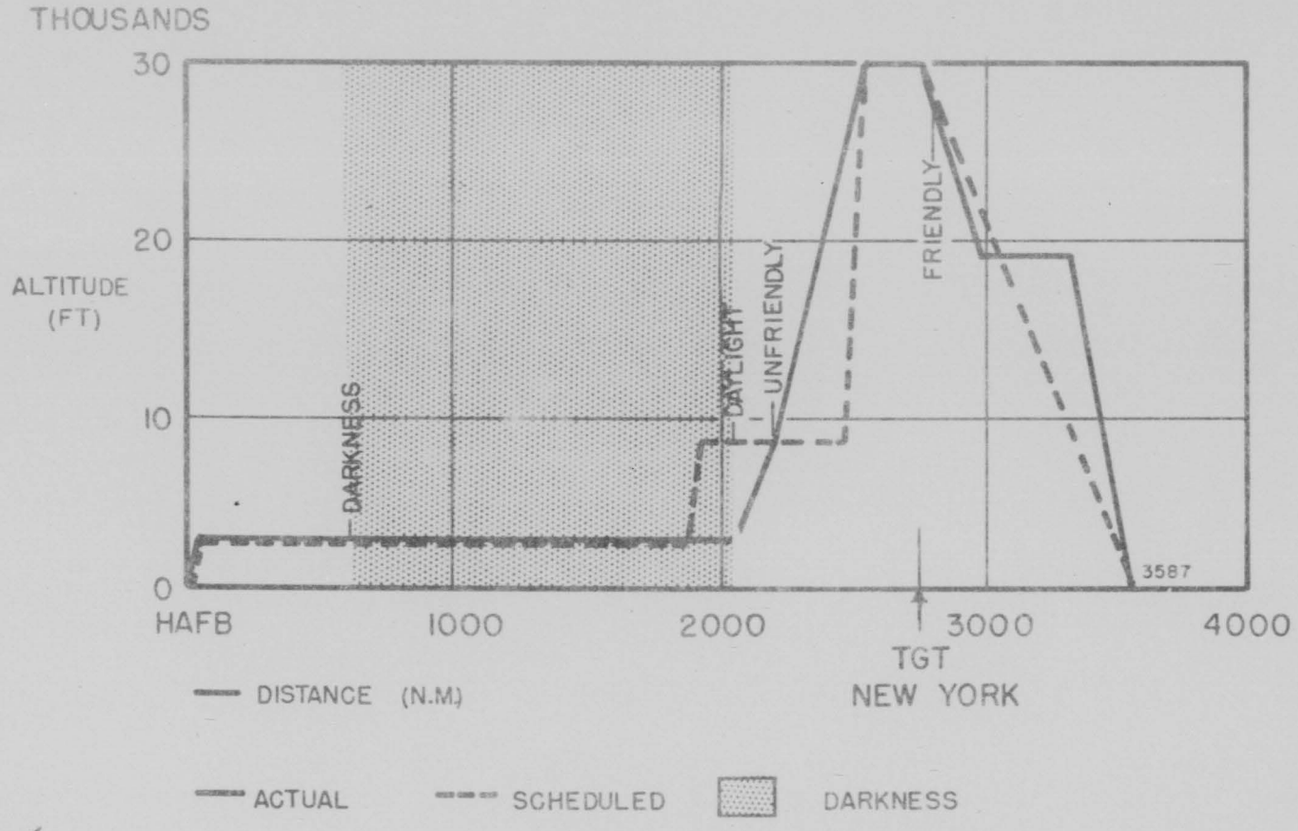
Scheduled	Actual
1215Z	1223Z
	1225Z
	1227Z
	1232Z

4. TACTICS:

Scheduled	Where Employed
Jam "L" Band and VHF Drop Chaff	At completion of climb.

5. REFUELING: Rendezvous was effected and post-target refueling accomplished. Some difficulty was experienced which can partially be attributed to bomber crew fatigue.

6. REMARKS: This mission was considered 80% effective, with one abort (ground) and one aircraft not at briefed bombing altitude over the target.



97 BW PROFILE

97th BW

1. MISSION: To attack 6 DGZ's in New York City.

2. FORCE:

SCHEDULED BY O/O-UNIT	GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
6 BC 6	0	6	0	6	0	6	6

3. TARGET TIME AND ACTUAL COMPRESSION:

Scheduled	Reported
1220Z	1225Z
	1225Z
	1225Z
	1225Z
	1226Z
	1226Z

4. TACTICS:

Scheduled	Where Employed
Jam "L"Band and VHF Drop chaff	At completion of climb

5. REMARKS:

This mission was considered very successful with all aircraft flying the mission as briefed.

E +3 DIVERSION

Unit Data:

106th BW
22d BW
68th BW
376th BW
6th BW

SUBJECT: "Diversion"

MISSION

To provide Diversion and Support Forces in accomplishing a simulated command wartime strike.

FORCE

To accomplish the mission, aircraft from 5 Bomb Wings were required by SAC Operations Order 27-52 for a total of 54 sorties. A brief recapitulation of unit requirements and accomplishments is listed below:

Unit	Type Aircraft	Aircraft Required	Aircraft Airborne	Aircraft Effective
106 BW	B-29	9	9	8
22 BW	B-29	18	18	18
68 BW	B-29	9	9	9
376 BW	B-29	9	8	6
6 BW	B-29	9	8	8
Totals	5 Units	54	52	49

DISCUSSION

1. For purposes of clarification, Diversion forces as used in this report will be forces scheduled to pass near an assigned target but so timed or routed so as to divert attention of enemy defenses away from the Strike force. Support forces as used herein will be forces scheduled to accompany the Strike forces simultaneously in support of the strike itself.

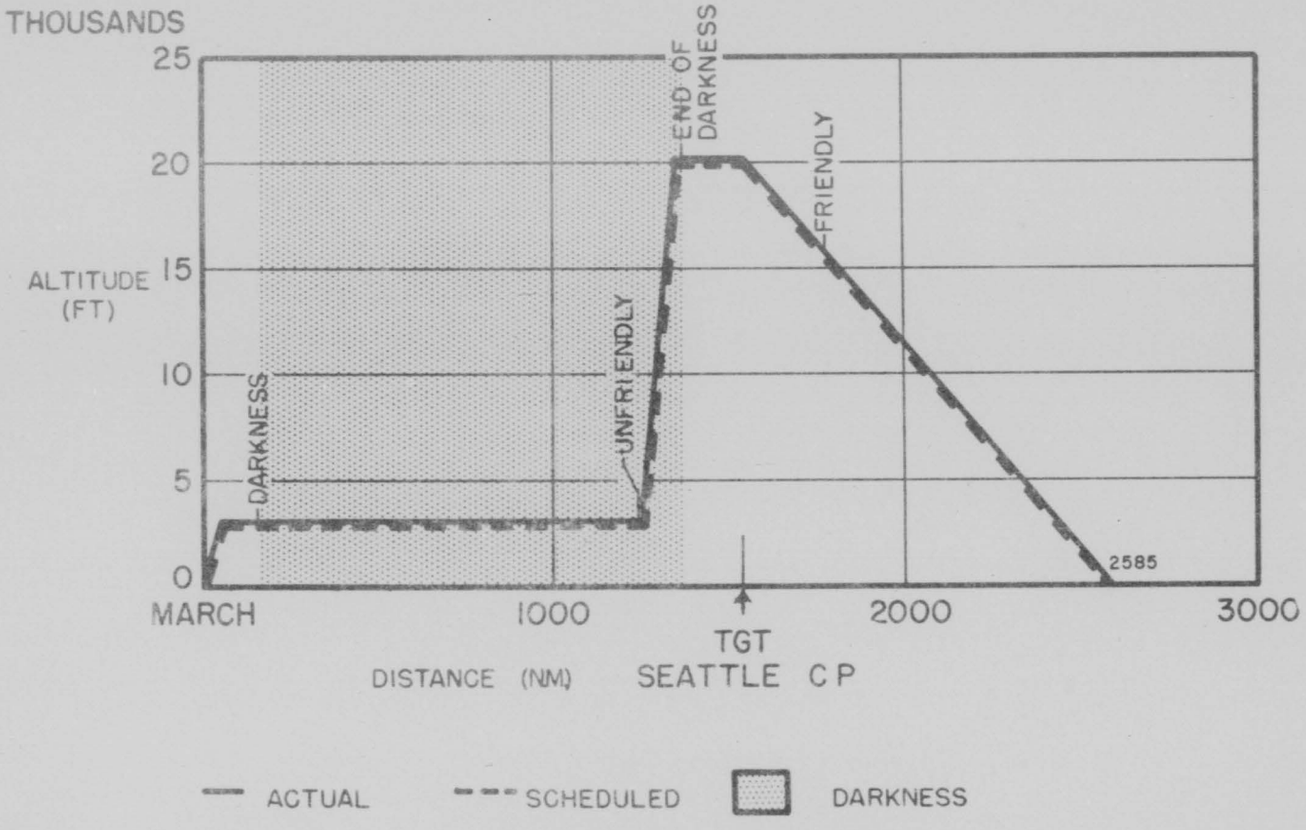
2. It was planned that Diversion and Support forces would be utilized in conjunction with Strike forces or 7 of the 12 targets on E #3. Arrival times and altitudes would be varied to divert enemy defense away from the Strike forces. Additionally, "L" Band and VHF jamming and chaff would be employed.

TARGET AND UNIT SCHEDULES

Target and Strike Unit		Diversion or Support	Time (Z) Over Target or CP Scheduled	Prior to Strike	Actual
Seattle	93 BW	106 BW	1155	-:20	1155
San Francisco	9 BW	22 BW	1215		1221
Los Angeles	43 BW	22 BW	1215		1220
Pittsburgh	301 BW	68 BW	1115	-1:00	1130
Washington,D.C	301 BW	376 BW	1130	-:45	1130
Philadelphia	2 BW	6 BW	1140	-:35	1155
New York	97 BW	68 BW	1140	-:40	1142

SUMMARY

1. Use of the Diversion and Support Forces revealed that with proper timing and routing relative to respective Strike forces, employment of such forces can be effective. Arrival times of these forces at their targets or control points shows that two were on time, five forces arrived late for an average of eight minutes each and non arrived early. Emphasis should be placed on these types of forces arriving either on time or early if necessary, but never late to be effective.



106 BW PROFILE

106th BW

1. MISSION: Diversionary attack against Seattle

2. FORCE:

SCHEDULED BY O/O -UNIT	GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT ABORTS	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
9 B-29 12	2	9	1	NA*	0	-	8

*Did not overfly the target (Seattle)

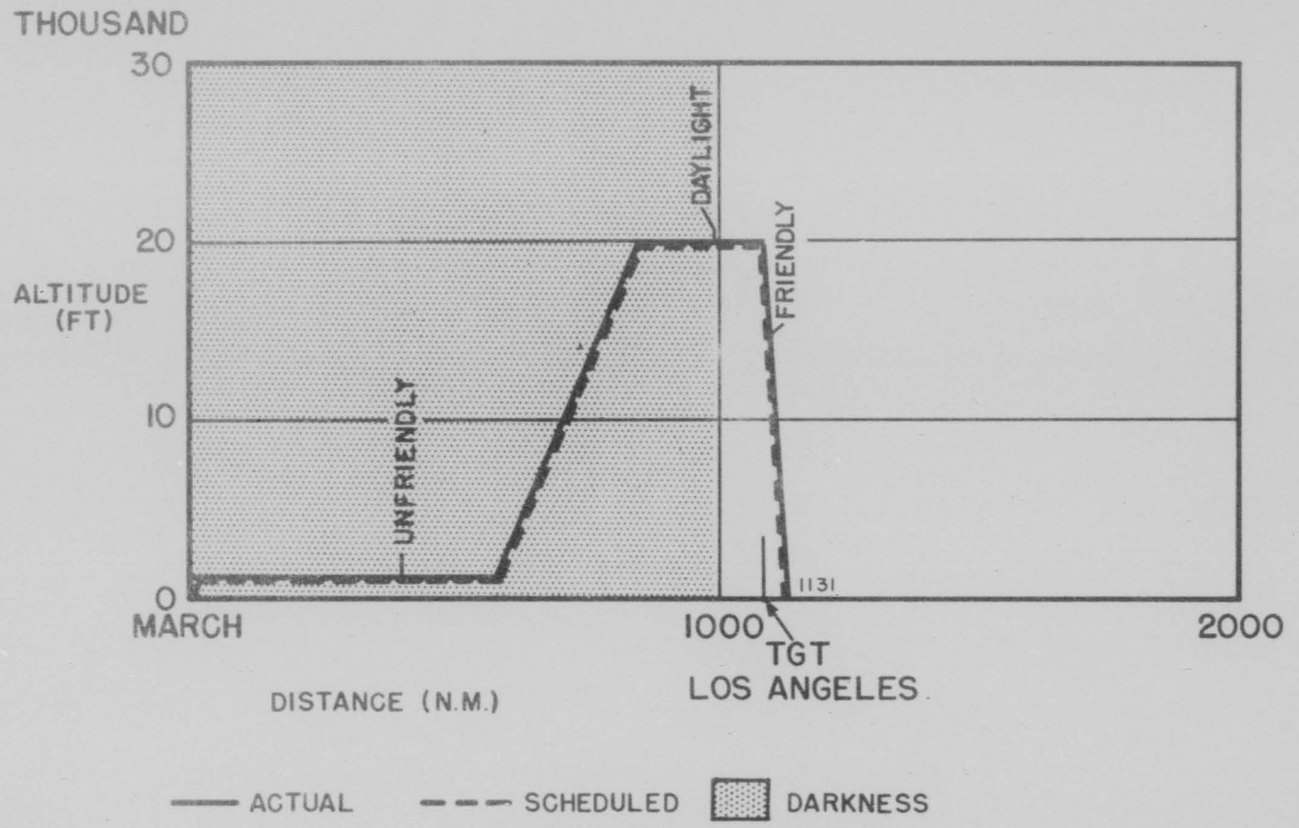
3. Control Point: Time — Scheduled 1155Z — Actual 1155Z

4. TACTICS:

Scheduled	Where Employed
Jam "L" Band and VHF Drop Chaff	200 mile prior target

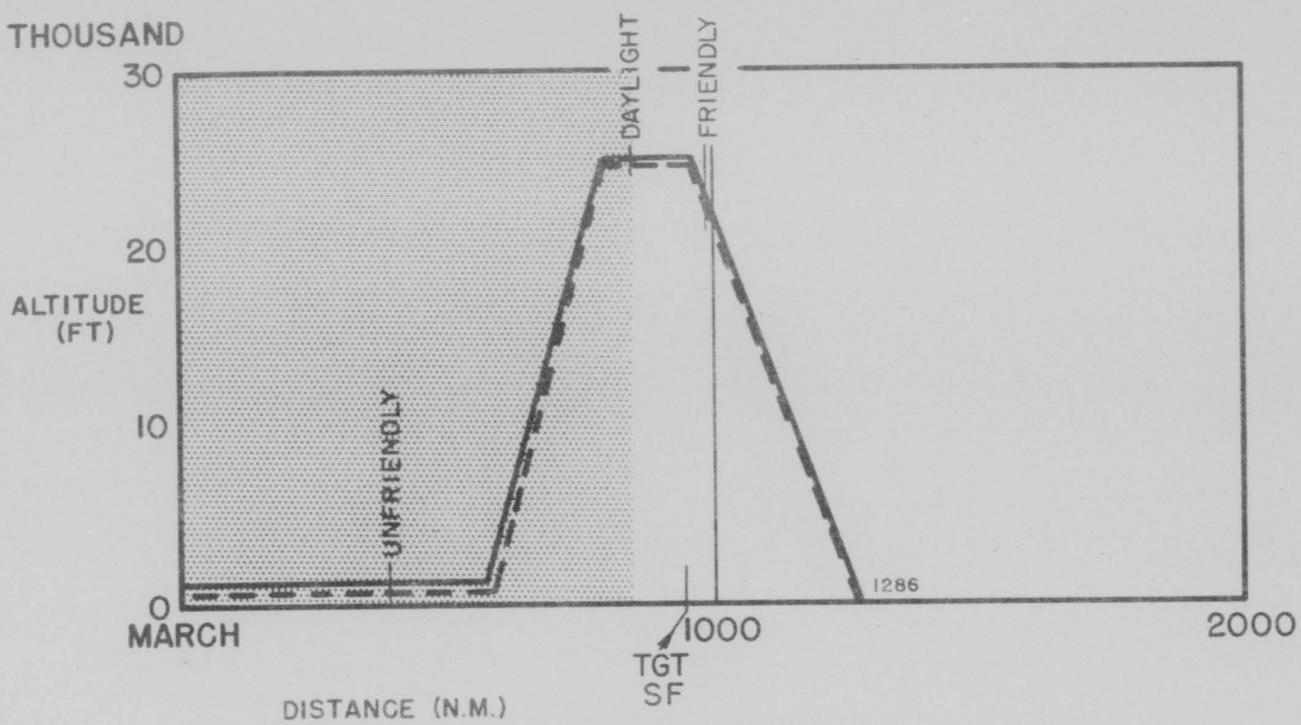
5. REMARKS:

This mission, though flown as briefed, was not effective due to strike units deviating from published operations order by flying above required altitude.



08

22 BW PROFILE



18

22 BW PROFILE

22nd BW

1. MISSION: Support attack against Los Angeles and San Francisco.

2. FORCE:

SCHEDULED BY O/O	-UNIT	GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
		LOS ANGELES						
9	11	1	9	0	NA	0	-	9
		SAN FRANCISCO						
9	11	0	9	0	NA	0		9

3. TARGET TIME and ACTUAL COMPRESSION:

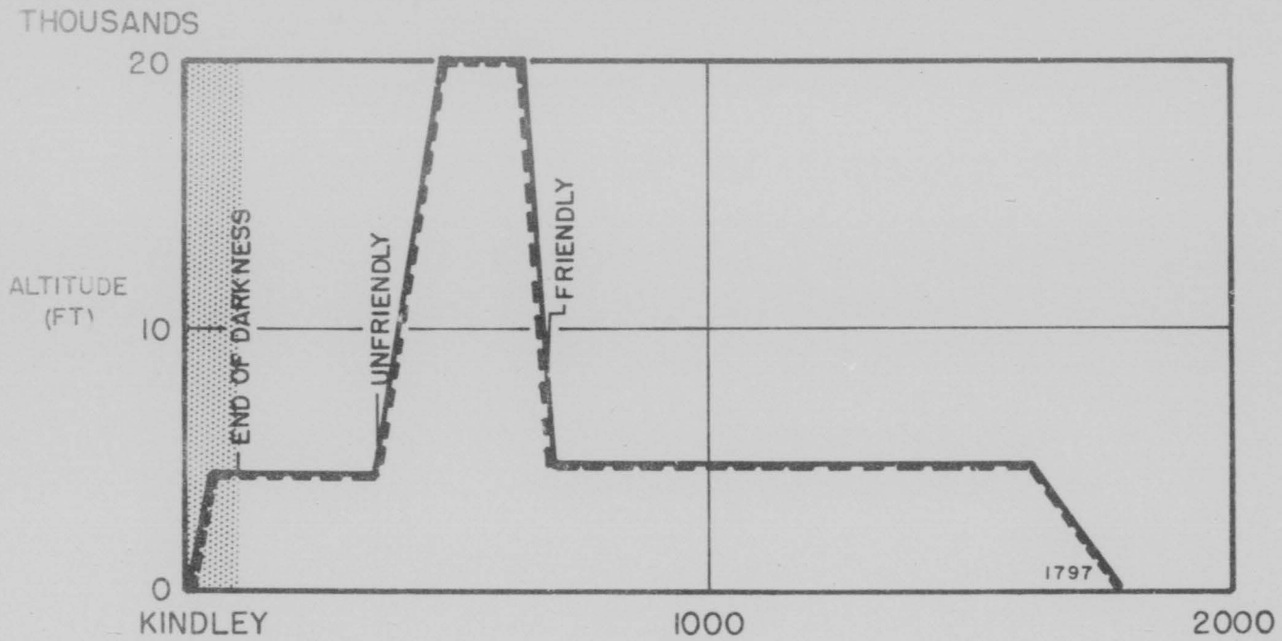
Scheduled	Actual
LOS ANGELES	
1215Z	1220Z
SAN FRANCISCO	
1215Z	1220Z

4. TACTICS:

Scheduled	Where Employed
Jam "L" Band VHF and drop chaff	200 mile prior tgt

5. REMARKS:

Mission considered successful. Entire mission flown as briefed. Support of strike very effective, in that strike units received few fighter attacks. VHF jamming effective in San Francisco area.



83

68 BW PROFILE

68th BW

1. MISSION: To dispatch a diversion force of 3 aircraft to Boston and 6 aircraft to New York.

2. FORCE:

	SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
Boston	3S	3S	0	3	0	3	0	NA	3
N.Y.	6S	6S	0	6	0	6	0	NA	6

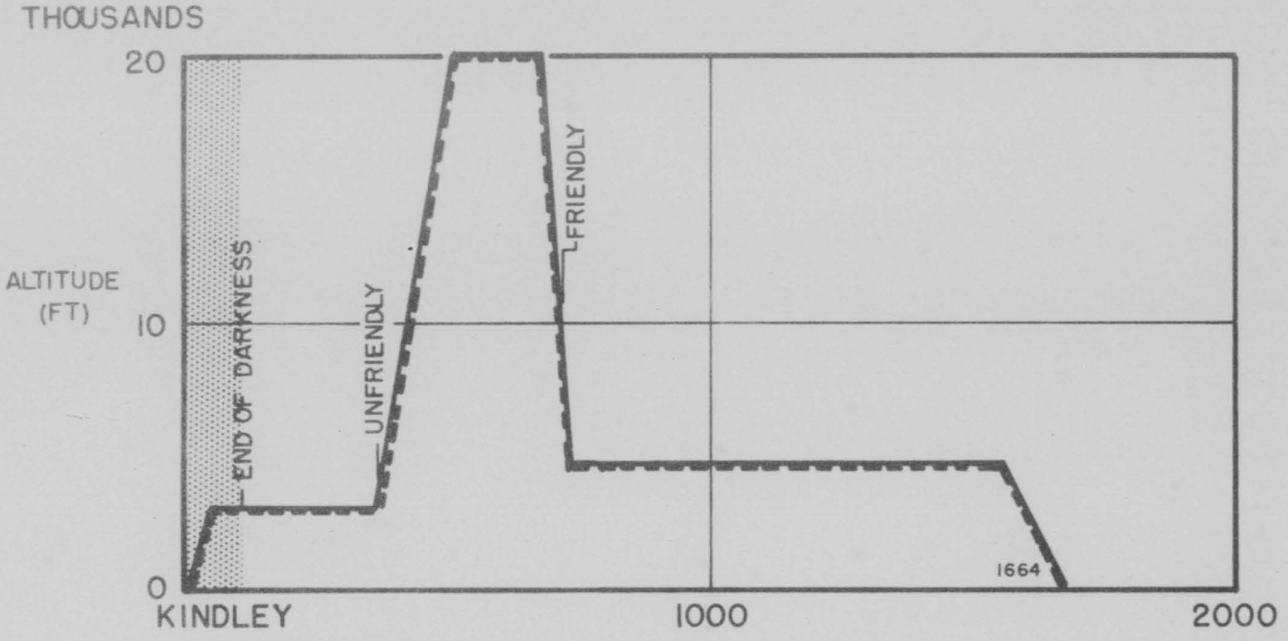
3. CONTROL POINT TIME :

	Scheduled	Actual
New York	1140Z	1142Z
Boston	1115Z	1130Z

4. TACTICS:

Scheduled	Employed
Jam "L" Band and VHF Drop chaff	200 mile prior target.

5. REMARKS: This mission considered successful as a diversion for the strike units. All scheduled aircraft flew mission as briefed.



376 BW PROFILE

376th BW

1. MISSION: Diversionary force for Washington, D.C. strike.

2. FORCE:

SCHEDULED BY O/O	UNIT	GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
9	9	1	8	2	6	0	NA	6

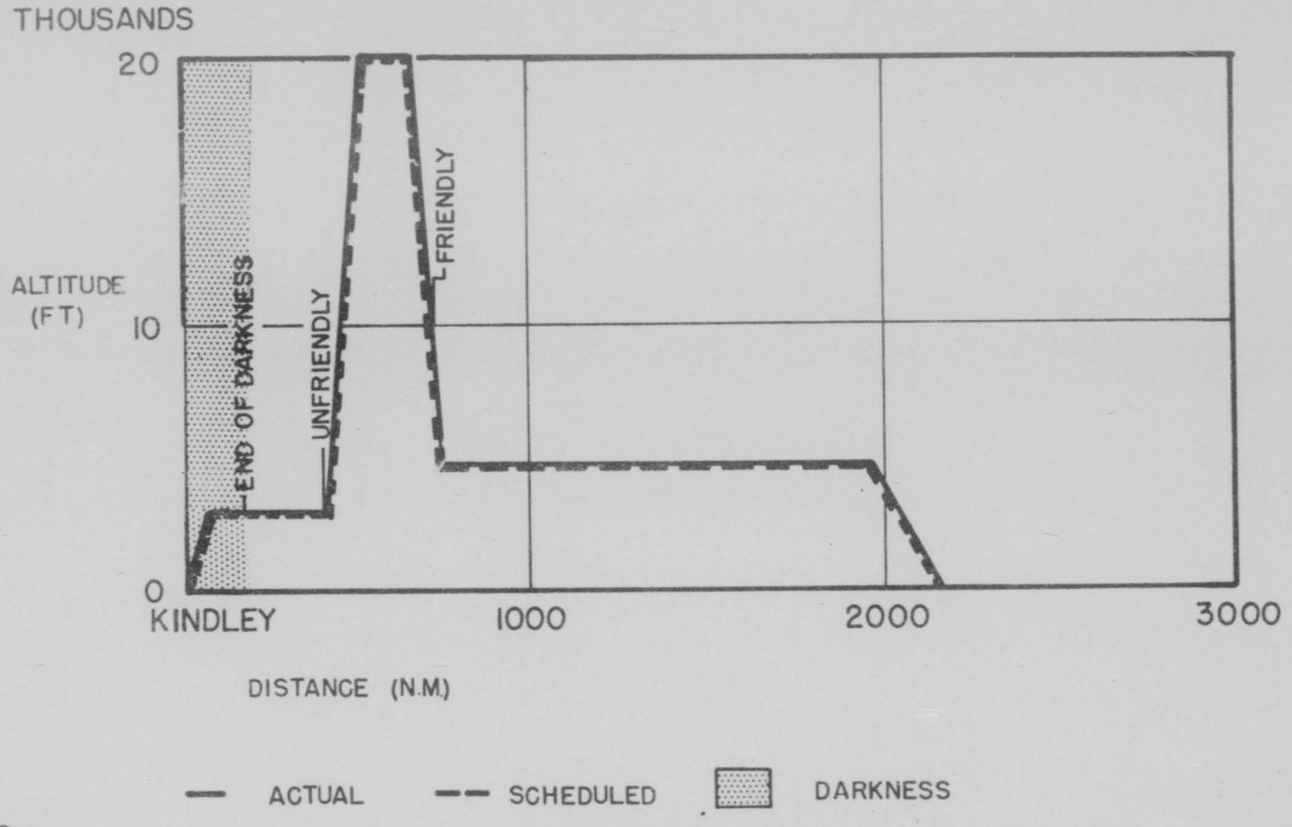
3. CONTROI POINT TIME:

Scheduled	Actual
1130Z	1130Z

4. TACTICS:

Scheduled	Employed
Jam "L" Bond and VHF and drop chaff	200 mile prior target.
Crash descent near target area.	

5. REMARKS: This mission considered 80% effective due to abort rate. The diversion served its purpose in drawing fighters away from strike units.



87

6 BW PROFILE

6th BW

1. MISSION: To dispatch a diversion force of 9 aircraft for the Philadelphia strike.

2. FORCE: (Scheduled and reported)

SCHEDULED BY O/O	Unit	GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
9	9	1	8	0	NA	1	NA	7

3. CONTROL POINT TIME:

Scheduled	Actual
1140Z	1155Z

4. TACTICS:

Scheduled	Employed
Jam "L" Band & VHF drop chaff	200 mile prior target.
Crash descent	

5. REMARKS: This mission was considered successful; numerous fighters were diverted away from strike area.

E +3 ESCORT

Unit Data:

27th FEW
12th FEW

SUBJECT: "Escort"

MISSION: (27th Fighter Escort Wing)

To escort bombardment aircraft of the 11th HBW striking targets in the Chicago area.

FORCE:

Acft Required	Scheduled	Airborne	On Target	Effective
48	51	50	35	35

MISSION AS BRIEFED:

To provide two task forces of twenty-four aircraft each to escort one of two boxes of nine aircraft of the 11th Bomb Wing. The 27th FEW was directed to deploy to Lockbourne AFB on E plus 2. On E plus 3 this wing was to rendezvous with fourteen tankers of the 91st ARS over North Bay, Canada, 482 miles north of Lockbourne where in-flight refueling was to take place from this point to the Cabonga Reservoir, 150 miles northeast. Following refueling this wing was to proceed to the rendezvous point 325 miles west and provide close escort for the B-36 aircraft. Escort was to be continued to the limit of maximum endurance. Upon completion of escort, aircraft were to land at Lockbourne Air Force Base.

DISCUSSION:

The over-all mission was considered successful inspite of the in-flight refueling difficulties and the high percentage of aborts in that both tanker and bomber rendezvous were effected as planned. Rendezvous was effected by thirty five aircraft on the corrected ETA of the bomber force at the rendezvous point as briefed. Intercepting aircraft were disorganized and non-

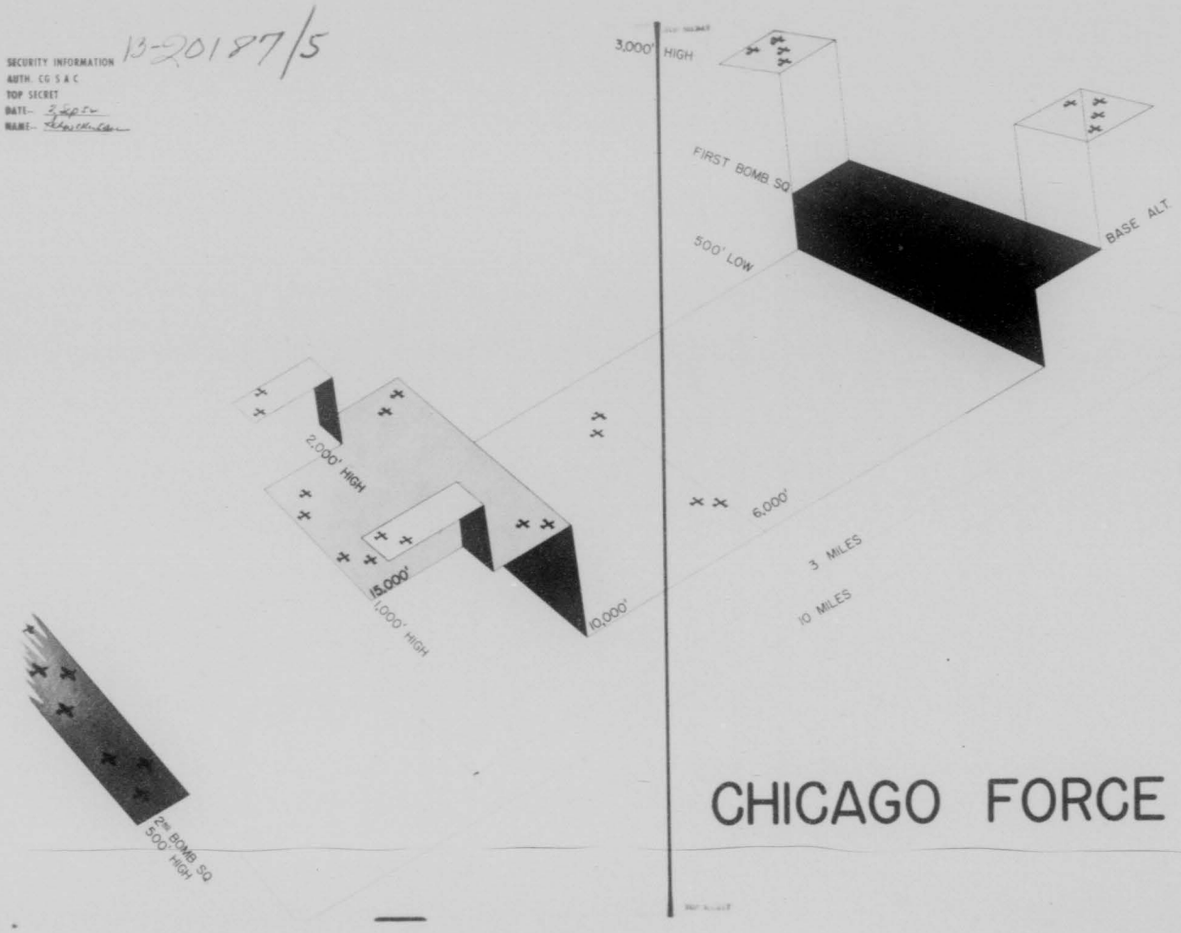
aggressive to the degree that the escorting fighters were able to cope with the majority of the attacks. Take-off at Lockbourne was delayed five minutes due to Lockbourne based interceptors receiving scramble instructions at taxi time. However, this time was made up at tanker rendezvous. Heavy precipitation and resultant water on the runway during take-off is believed to have been the cause of the high number of in-flight refueling system malfunctions. Weather information was considered unsatisfactory, especially in wind forecast at high altitudes. The high altitude winds were less than forecast from tanker take-off point to bomber rendezvous point and greater than forecast from bomber rendezvous point to target; consequently, the fighters arrived at bomber rendezvous six minutes prior to planned elapsed time from bomber rendezvous to target. The strong headwinds also resulted in fighters breaking off escort formation due to fuel shortage commencing at a point approximately 100 miles north of the target. Only fourteen fighters were able to escort the entire distance. Approximately three miles separated the first bomber box from the second, which was insufficient distance for Task Force 27 Able to position its tail cone defense in accordance with SAC Manual 55-2A. This forced the fighter commander to re-position escorting fighters, thus reducing their defensive capability. In addition, four bomber stragglers trailed the second box at a distance of approximately two miles for ten minutes after bomber-fighter rendezvous. This hindered the positioning of 27 Baker fighter aircraft in the planned tail cone defense. The high fighter abort rate reduced the escort capability. Although the fighters arrived six minutes earlier at rendezvous the fuel load at actual rendezvous time was as anticipated. This fuel load

seriously affects combat ceiling and maneuverability of the F-84G and it is felt that the lack of organization and aggressiveness on the part of the interceptor pilots enabled the escort aircraft to be fairly effective.

SUMMARY:

Rendezvous between fighter, tanker, and bomber forces to be escorted can be effected provided that fighter forces are furnished corrected ETA at rendezvous. Refueling of large numbers of fighter receivers can be effected provided that standing operating procedures are established and proper briefings conducted. A system or a method must be developed for obtaining correct winds at high altitudes if jet escort operations are to be successful. Additional rendezvous aids must be obtained for fighter aircraft if successful rendezvous is to be accomplished in other than clear weather conditions or over a fixed radio point.

SECURITY INFORMATION 13-20187/5
40TH CG S A C
TOP SECRET
DATE- 3 Sept 57
NAME- [illegible]



CHICAGO FORCE

MISSION: (12th Fighter Escort Wing)

Escort strike aircraft of the 7th HBW striking targets in the Detroit area.

FORCE:

Acft Required	Scheduled	Airborne	On Target	Effective
24	26	24	20 (Plus 2 observers)	18 (Plus 2 observers)

MISSION AS BRIEFED:

The 12th FEW was directed to deploy a task force of twenty four aircraft via Selfridge to Dow Air Force Base to escort twenty bombers striking targets in the Detroit area. Route for this task force was to be from Dow Air Force Base to Saguenay, Canada, rendezvous at Pembroke, Canada. Tactics as specified in SAC Manual 55-2A were to be employed. Escort was to be continued to the limit of maximum endurance and following escort aircraft were to land at Selfridge Air Force Base.

DISCUSSION:

This mission was considered generally satisfactory. Rendezvous was successfully made by twenty two aircraft, visually, 30 miles before reaching the rendezvous point. It is interesting to note that fighter take-off was based on the corrected ETA of the bombers at rendezvous which worked out exceptionally well. Escort was commenced with twenty F-84s after a successful rendezvous. The bombers were in good formation and no delay was encountered in effecting rendezvous. It would not have been possible to effect rendezvous had it been necessary to rely upon the homing devices provided by the bomber aircraft. Intercepting aircraft were not agressive and the escorting fighters were able to cope with the majority of the attacks. Weather information was considered unsatisfactory, especially

in wind forecasts at high altitudes. The high winds forecast prompted the task force commander to change the route specified to one of less distance by 120 miles to allow escort from the rendezvous point to the target. Approximately eight miles separated the first bomber box from the second, which was too great a distance to allow one task force of fighters to protect both boxes. All fighters were placed in position in the tail cone of the second box, consequently, no attempts were made to deter interceptors attacking the lead box. One flight of four aircraft of this task force was to be refueled over Selfridge AFB and proceed direct to Bergstrom AFB, however, due to tanker maintenance problems no tanker was over Selfridge to refuel this flight of fighters. Eight aborts were experienced by this unit as follows:

a. Two ground aborts, one radio failure, and one wing man as escort.

b. Two pre-rendezvous - one oxygen mask malfunction, one fuel system malfunction.

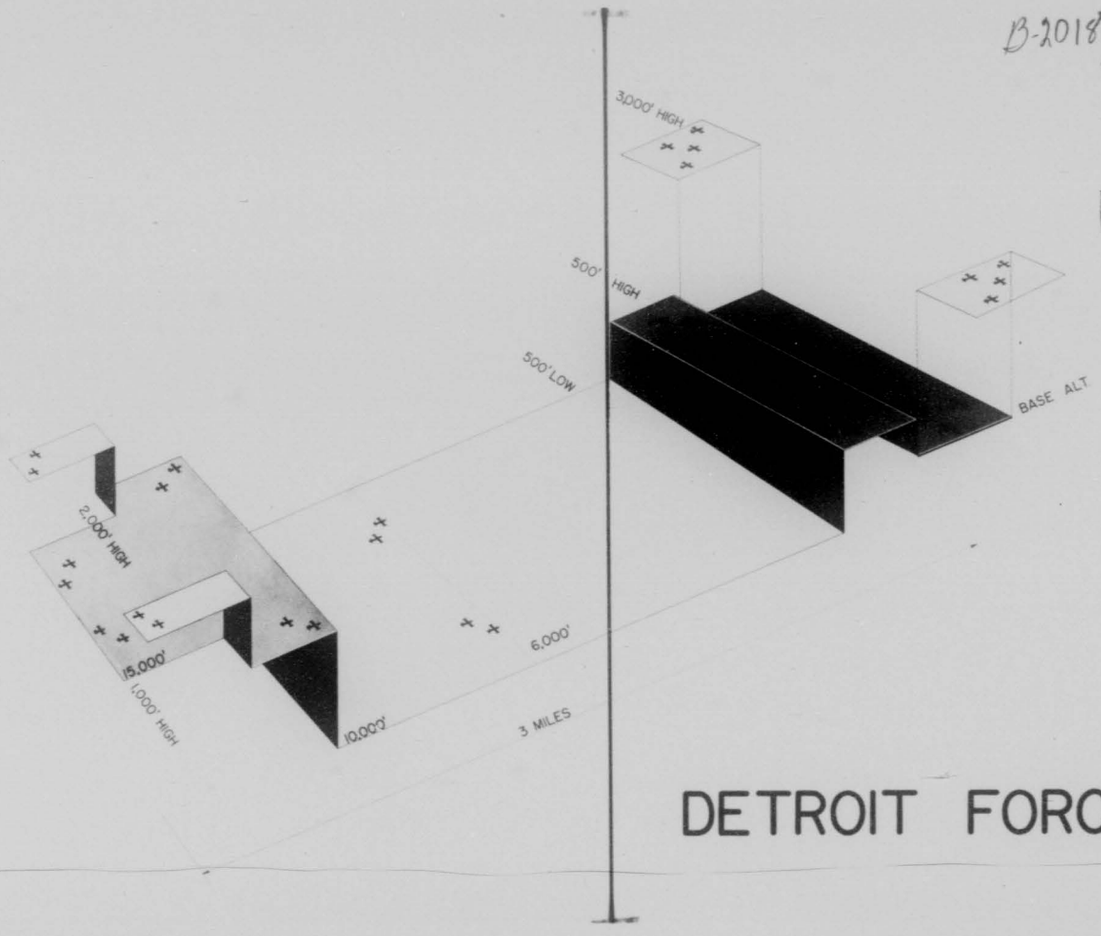
c. Four post-rendezvous aborts, one oxygen system malfunction and three fuel system malfunctions.

SUMMARY:

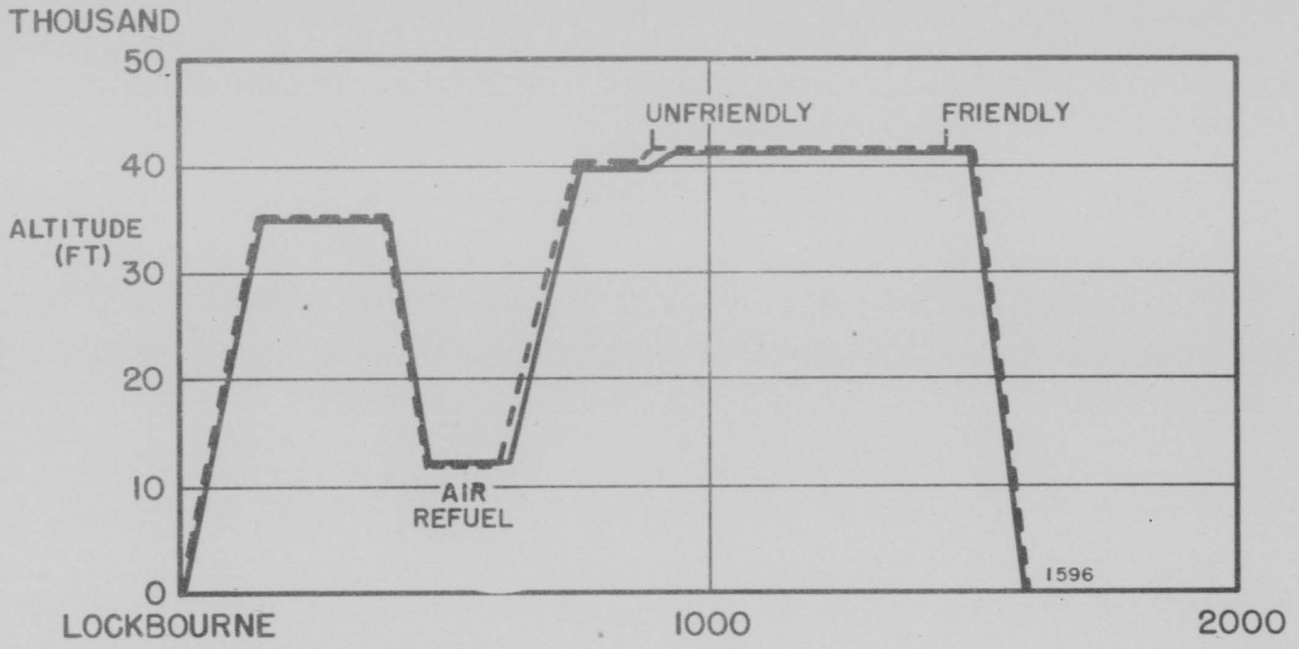
Rendezvous between fighter, tanker, and bomber forces to be escorted can be effected provided that fighter forces are furnished corrected ETA at rendezvous. A system or a method must be developed for obtaining correct winds at high altitudes if jet escort operations are to be successful. Additional rendezvous aids must be obtained for fighter aircraft if successful rendezvous is to be accomplished in other than clear weather conditions or over a fixed radio point. Due to small fighter-bomber ratio in this type of escort, it is necessary that bombers fly a tight formation at all times, otherwise only the trailing half of the formation can be effectively escorted.

B-20186/5

SECURITY INFORMATION
AUTH. CG S A C
TOP SECRET
DATE-
NAME-



DETROIT FORCE



95

27 FEW PROFILE

27th FEW

1. MISSION: Escort the Chicago Strike Force of 18 B-36s.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE REND ABORTS	AIRCRAFT AT REND	POST TGT ABORTS	COMPLETED
48	51	1	50	15	35	0	35

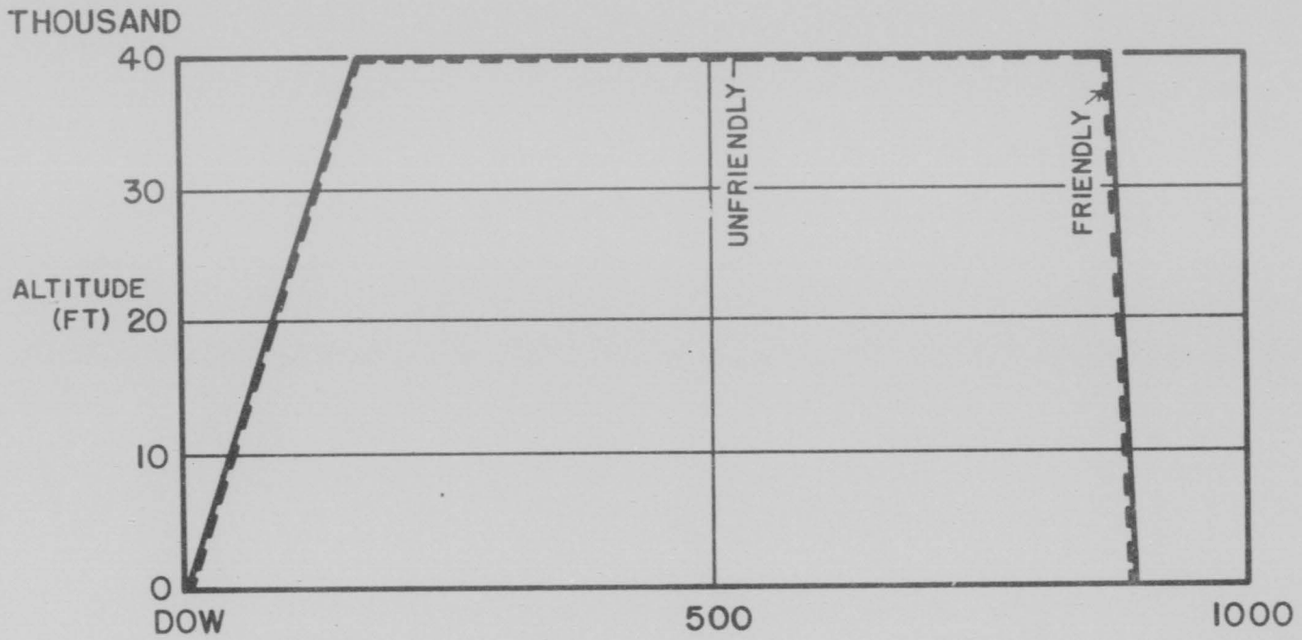
3. TIME: As determined by bomber ETA's.

4. TACTICS:

Scheduled	Where Employed
Escort two squadron formations. 9 B-36's ea with two squadrons of fighters. (24 F-84's ea)	Rendezvous to target

5. REFUELING: The 27th FEW was scheduled to refuel two fighter task forces approximately 500 miles from the staging base and 325 miles prior to making bomber rendezvous. The 91st ARS was scheduled to make available fourteen operational tankers over North Bay, Canada to refuel forty-eight fighter aircraft of the 27th FEW. Tactics to be used during this refueling were those developed during Fox Peter One. Rendezvous was successfully effected with the tankers, and forty-six fighters attempted in-flight refueling. Eight of these aircraft were unable to take on fuel due to receiver system malfunctions, one aircraft experienced tip tank failure during in-flight refueling, two aircraft were delayed during in-flight refueling and thirty-five aircraft refueled successfully and proceeded to the bomber rendezvous.

6. REMARKS: This mission was considered 80% effective as a deterrent factor to "enemy fighters". This can partially be attributed to unaggressiveness of the "enemy" forces. The escort fighters were hampered in their escort ability by being above a good operating altitude for this type fighter.



8b

12 FEW PROFILE

12th FEW

1. MISSION: To escort 7th HBW on strike against Detroit.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE ESCORT ABORTS	OVER TGT	POST ESCORT ABORTS	# A/C EFF.	COMPLETED AS BRIEFED
24	24 /	2	24	2		4	22 (includes 2 obs.)	18

3. TARGET TIME AND ACTUAL COMPRESSION:

Scheduled	Reported
NA	NA

4. TACTICS:

Scheduled	Employed
To escort wing formation with one squadron of fighters	From rendezvous point to target.

5. REMARKS: This mission was considered to be ineffective, as bomber formation was too far apart for one fighter squadron to cover two bomber squadrons. Also F-84 type aircraft are above satisfactory maneuvering altitudes as flown on this mission. The fighter escort can be considered as a deterrent factor only.

E +3 AIR-REFUELING

Unit Data:

91st ARS
2d ARS

SUBJECT: Air Refueling

MISSION:

To provide air refueling for fighter escort forces and designated bomber units as required for pre-strike and post-strike air refueling.

FORCE:

Aircraft from two air refueling squadrons were required by OO 27-52 for a total of 17 sorties. It was determined by subordinate units that additional air refueling could be accomplished. As a result two addititional air refueling squadrons were utilized.

DISCUSSION:

1.A brief recapitulation of unit accomplishments is listed below: (Does not include requirement for Selfridge tanker)

Unit	Type A/C	A/C Required	A/C Airborne	A/C Effective
91st ARS	KB-29P	14	14	12
2nd ARS	KB-29P	3	3	3
301st ARS	KB-29P	14	13	11
43d ARS	KB-29M	26	27	26
TOTAL: 4 Units		57	57	56

2. MISSION AS BRIEFED FOR FIGHTER AIR REFUELING:

a. The 91st ARS was to supply 14 KB-29P tankers to mass refuel 48 F-84G aircraft. Rendezvous was to be over North Bay, Canada at 10,000 feet to 12,000 feet. An additional KB-29P was to refuel 4 F-84Gs over Selfridge AFB.

b. Each tanker was to carry 19,000 pounds of fuel and would refuel four fighters. Each fighter was expected to require approximately

3,000 pounds of fuel, however, tankers were to transfer fuel until a pressure disconnect occurred.

c. The tankers were to form two, seven plane "V's" over a ground radio station prior to rendezvous with the fighters.

d. Fighters were to approach the tanker formation in two waves of 24, one for each tanker "V". Flights of four fighters each were to approach each tanker in order from left to right for refueling.

e. When fighters had been refueled they were to re-form 2,000 feet above the tankers and proceed on their escort mission. The tankers were to return to the rendezvous point where eight would start on Operation "Sign Post" and the remainder would return to Lockbourne.

3. MISSION AS FLOWN FOR FIGHTER AIR-REFUELING:

a. Thirteen tankers took off on time. One tanker air aborted prior to rendezvous; twelve reached the rendezvous point. The 91st ARS, even though augmented by seven aircraft from the 2nd ARS, was unable to furnish a tanker to refuel the four fighters over Selfridge.

b. The mass refueling tactic was accomplished without difficulty. Each fighter, upon completion of refueling dropped back about ten feet, waited until informed of its fuel on-load, then climbed 2,000 feet above the tanker and waited for the remaining fighters of its assigned element. Fighter formation was re-formed immediately prior to their departure time for bomber rendezvous.

c. A recapitulation of fighter refueling is attached.

4. Additional air refueling was scheduled by the 43d BW, 301st BW and 2nd BW. The 301st BW accomplished both pre-strike and post-strike air refueling; the 2nd BW accomplished post-strike air refueling.

SUMMARY:

From an operational viewpoint, air refueling requirements of this exercise were accomplished successfully. Difficulties encountered were largely due to maintenance or system malfunctions.

RECAP OF TRANSFERS

SAC OPS ORDER 27 - 52

E ≠ 3

TANKER	IDENT.	TRANSFERS	TIME	REMARKS
4151	1-10	3800, 3500, 3800, 3800, 3400	19 min	
3891	1-1	3700, 3600, 4000	16	Fuel shutoff system out. Contacts made manually.
4001	1-8	3300, 3450, 3700, 3650	16	
9915	T-11	1750		2 additional attempts made. Transfer stopped with all pumps & valves open. 110#
4123	1-3	3900, 3650, 3450, 3900	18	
4047	1-13	3800, 3400, 3800, 3500	20	
3943	1-11	3900, 3800, 3900	20	1 not refueled due to dry lock
3906	1-12	3200, 3300, 3600, 3800, 4200	32	1 could not take on fuel
4107	1-2	3600, 3700, 3800, 3800, 2800	26	
4009	T-1	900, 900, 4200, 3600	40	
3918	T-6	5200, 4150, 3700, 3800	16	First ftr made two contacts
3999	T-8	3600, 2200, 3300, 800	12	

Total contacts made 46
Total transfers of 3200 lbs. or more 40
Total fuel available per tanker 19,000 lbs.

104

POSITION DATA

4151

First Contact	1303Z
No. of Contacts	5
Last Breakaway	1322
Lbs Fuel Remain.	700

I-10

4001
1304
4
1320
4850
I-8

3891
1306
3
1322
7700
I-1

4123
1302
4
1320
4100
I-3

4047
1304
4
1324
4500
I-13

3943
1313
3
1333
7400
I-11

3906
1305
5
1337
900
I-12

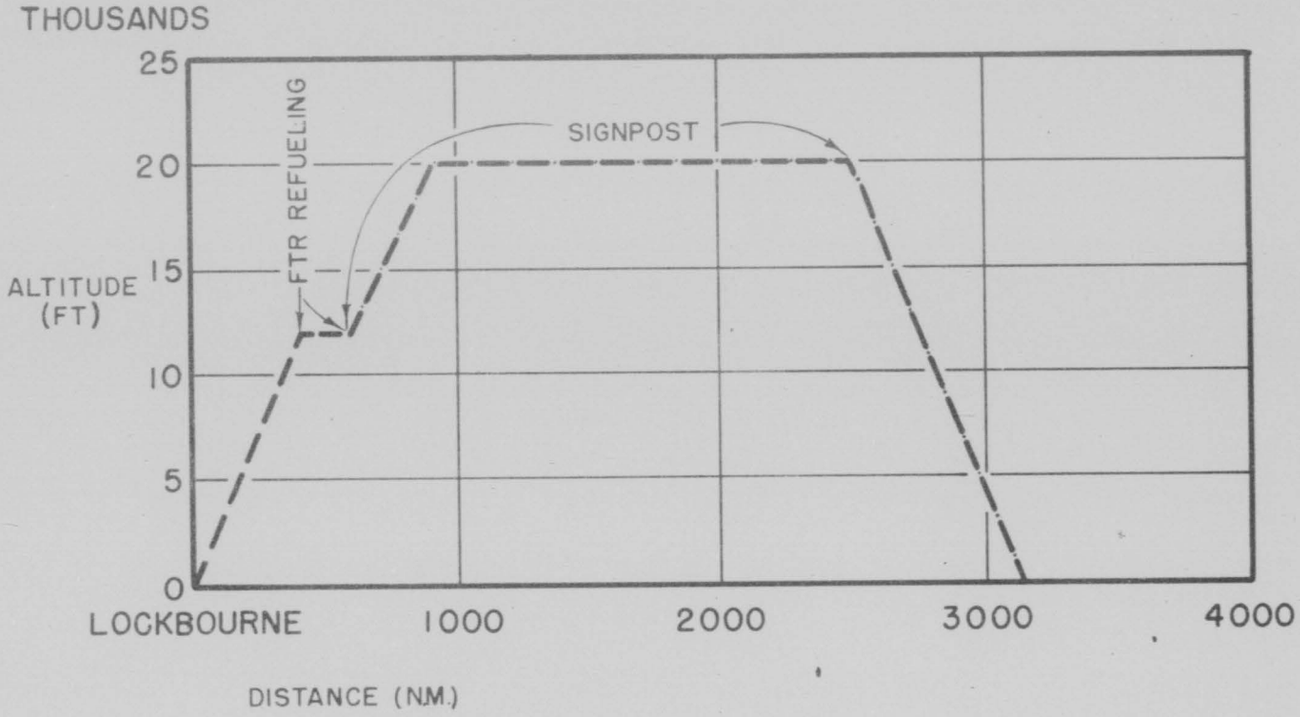
4009
1306
4
1346
9400
T-11

4107
1303
5
1329
1300
I-2

3999
1312
4
1324
9100
T-8

3918
1305
4
1321
2150
T-6

9915
1306
1
1311
Lost No. 4 at 1339
after 2 more attempts
T-11



91 ARS PROFILE

91st ARS

1. MISSION: To refuel 48 fighters of the 27FEW which escorted the B-36 Chicago strike.

2. FORCE: (Augmented by 7 tankers of the 2nd ARS)

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	IFR RENDEZ-VOUS	POST TGT ABORTS	STRIKE RPTS REC'D	COMPLETED AS BRIEFED
14	14 plus 2 ground spares	1	14	2	12			12

3. TARGET TIME AND ACTUAL COMPRESSION:

SCHEDULED	REPORTED
NA	NA

4. TACTICS

SCHEDULED	WHERE EMPLOYED
as developed during Fox Peter One	at refueling area.

5. REMARKS:

This mission was considered to be 90% effective. This percentage is based on IFR difficulties (tanker and receiver).

2nd, 43rd, 301st ARS

6. Information for these units included in App. 3 with corresponding Bomb Wing Unit Data.

E +4 RECONNAISSANCE

Unit Data:

5th SRW
28th SRW
91st SRW

SUBJECT: E #4 Reconnaissance

MISSION

To accomplish BDA reconnaissance of ten targets with 17 RB-36 aircraft and pre-strike reconnaissance of fifteen targets with 7 RB-36 and 6 RB-45 aircraft on E #4.

FORCE

Aircraft from three Strategic Reconnaissance Wings were required by SAC Operations Order 27-52 for a total of 30 sorties.

Unit	Type Aircraft	Aircraft Required	Airborne	Over Target	Effective
5 SRW	RB-36	11	10	10	9
91 SRW	RB-45	6	6	6	5
28 SRW	RB-36	13	13	12	12
TOTAL	3 Units	30	29	28	26

DISCUSSION

1. The results of the BDA reconnaissance were to be interpreted for the purpose of determining the theoretical destruction of each target bombed by the simulated strike force. The pre-strike reconnaissance results were prepared and ready for distribution to bombardment units in the form of target materials to be used for simulated subsequent strikes. Under actual emergency conditions, these would have been dispatched.

2. One RB-36 aircraft of the 5th SRW did not depart Lajes on time due to a required engine change. One RB-45 required for pre-strike radar reconnaissance encountered a radar malfunction prior to its arrival over assigned target. This aircraft continued on its route, but was considered as a pre-target abort. One RB-36 of the 28th SRW was considered a pre-target abort due to loss of both jet engines on one side after take-off from the UK and subsequent loss of No. 5 engine. One RB-36 of the 5th SRW was forced to abort after leaving the target.

SUMMARY

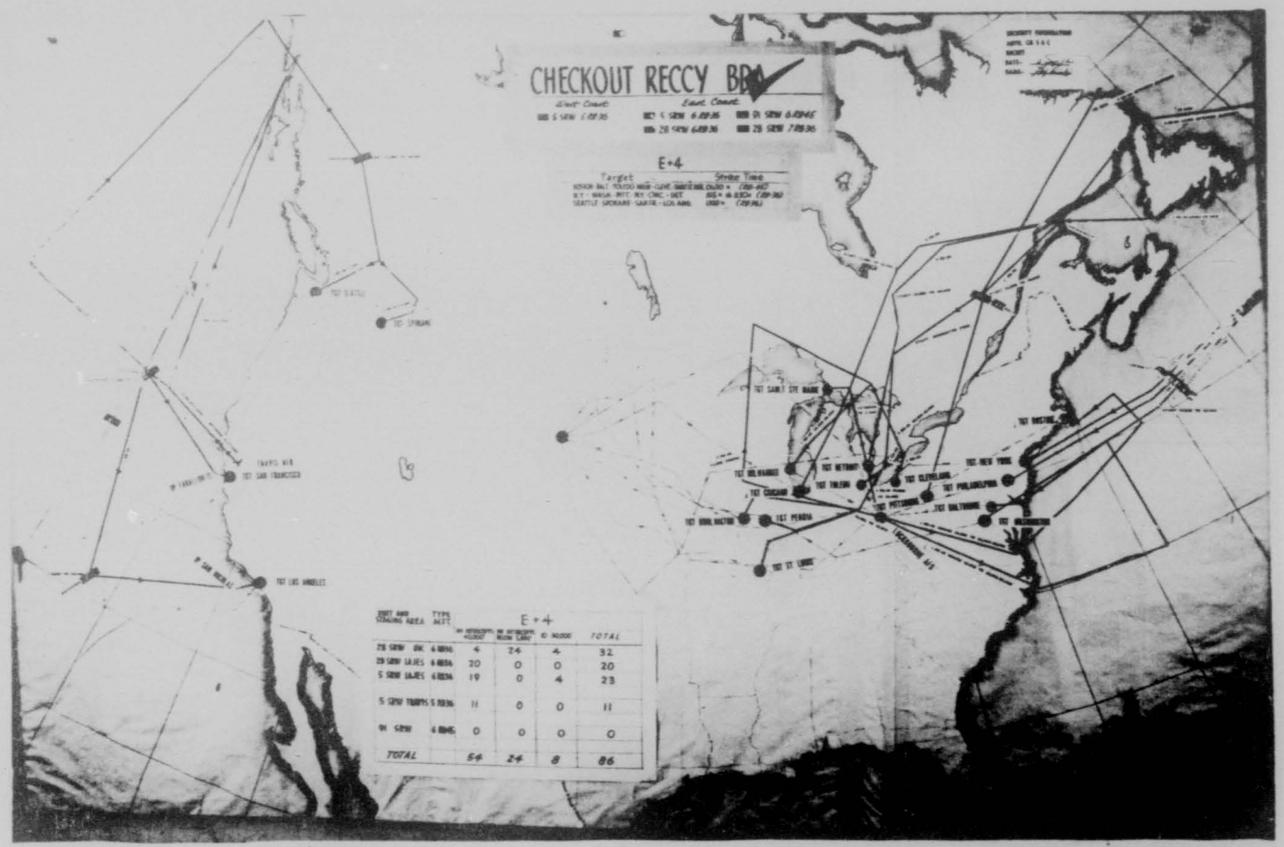
1. Reconnaissance performed on E #4 was good.

2. Attached are two photographs that depict the E #4 Reconnaissance and results therefrom.

E+4 RECONNAISSANCE

BDA & PRE-STRIKE

UNIT	AIRCRAFT			TARGETS		
	REQ	OVER TGT	COMPL.	ASGD	COVERED	
					RADAR	AERIAL
5 SRW (LAJES)	6	5	5	3	3	3
5 SRW (TRAVIS)	5	5	4	4	3	4
91 SRW	6	6	5	6	3	0 ONLY 1 REQ.
28 SRW (UK)	7	6	6	9	6	7
28 SRW LAJES	6	6	6	3	3	1
TOTALS	30	28	26	25	18	15


CHECKOUT RECCY BRA
East Coast
East Coast
E+4
Target
Strike Time
TAMPA AIR
1ST SAN FRANCISCO
1ST LOS ANGELES
1ST SEATTLE
1ST SPOKANE
1ST SAULT STE MARIE
1ST BOSTON
1ST BUFFALO
1ST DETROIT
1ST CLEVELAND
1ST NEW YORK
1ST CHICAGO
1ST TOLEDO
1ST PHILADELPHIA
1ST PITTSBURGH
1ST BALTIMORE
1ST WASHINGTON
1ST MINNEAPOLIS
1ST PEORIA
1ST ST LOUIS
E+4
TOTAL
25 SRW
25 SRW SALVES
5 SRW SALVES
5 SRW TRIPPS
9M SRW
TOTAL
54
24
8
86

113

AUTH. CG S A C
SECRET
DATE- 22 Nov 43
NAME-

E+4 RECON. SUMMARY

1. TARGET COVERAGE

RADAR – 29 ASGD 18 COVERED (72%)

AERIAL – 20 ASGD 15 COVERED (75%)

2. QUALITY OF PHOTOGRAPHS (IN PERCENT)

RADAR – 32 REJECT 5 POOR 38 FAIR 22 GOOD 3 EXC.

AERIAL – 35 REJECT 31 FAIR 26 GOOD 6 EXC.
(26 WX)

3. AIRCRAFT EFFECTIVE

SCHED 30 EFF 26 (87%)

4. ABORTS

GND 1 PRE TGT 2 POST TGT 1

5. CAMERA MALFUNCTIONS

RADAR 5 AERIAL 1 ELEC. INTERFERENCE 2

BDA 5th SRW Travis

1. MISSION: To accomplish BDA photography of four targets on the West Coast on E + 4 utilizing a force of 5 RB-36 aircraft.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	MISSION AS BRIEFED
5	5	0	5	0	5	1	4

3. TARGET TIME AND RESULTS:

	Scheduled	Actual
Seattle	1700Z	1657Z
Spokane	1700Z	1655Z
Los Angeles	1700Z	1704Z
San Francisco	1700Z	1700Z
San Francisco	1730Z	1730Z

4. FACTORS: One RB-36 aircraft post target aborted due to loss of one engine and two other engines running rough.

5. REMARKS: The BDA reconnaissance missions conducted by the 5th SRW from Travis AFB was very satisfactory. All targets were covered by radar and aerial photography with exception of one radar coverage. The lack of radar coverage was due to a radar malfunction encountered prior to the target.

BDA - 5th SRW Lajes

1. MISSION: To accomplish BDA photography of 3 targets on the East Coast on E + 4 staging 6 RB-36 aircraft from Lajes AFB.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	MISSION AS BRIEFED
6	6	1	5	0	5	0	5

3. TARGET TIMES AND RESULTS:

	Scheduled	Actual
New York	1300Z	1135Z
New York	1330Z	Ground Aborted
Washington	1300Z	1128Z
Washington	1330Z	1204Z
Philadelphia	1300Z	1127Z
Philadelphia	1330Z	1225Z

4. DISCUSSION: Scheduled target times were not met due to inaccurate winds aloft forecast prior to departure. The one ground abort was due to required engine change on one aircraft upon arrival at Lajes. This change could not be completed in sufficient time to allow the aircraft to participate in the mission.

5. REMARKS: The BDA reconnaissance missions conducted from Lajes AFB by 6 RB-36 aircraft of the 5th SRW was successful.

E / 4 28th SRW (UK)

1. MISSION: To accomplish pre-strike reconnaissance on targets in Eastern and Central United States.

2. FORCE:

SCHEDULED BY O/O	-UNIT	GROUND ABORTS	AIRBORNE	PRE-TGT ABORTS	OVER TGT	POST-TGT ABORTS	COMPLETED AS BRIEFED
7	7	0	7	1	6	0	6

3. TARGET TIMES:

Scheduled	Actual
0615Z	0641Z
0630Z	0741Z
0600Z	0551Z
0615Z	0552Z
0515Z	0536Z
0530Z	Pre-tgt abort

4. TACTICS:

Scheduled	Employed
Low altitude penetration	Through penetration phase

5. REMARKS: This mission was considered effective as 78% of the required radar and aerial photography was accomplished.

E / 4 - 28 SRW (Lajes)

1. MISSION: To accomplish BDA photography on Central U.S. targets.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE-TGT ABORTS	OVER TGT	POST TGT ABORTS	COMPLETED AS BRIEFED
6	6	0	6	0	6	0	6

3. TARGET TIMES:

	Scheduled	Actual
Chicago	1300Z	1157Z
Chicago	1330Z	1222Z
Detroit	1300Z	1221Z
Detroit	1330Z	1303Z
Pittsburg	1300Z	1243Z
Pittsburg	1330Z	1326Z

4. TACTICS:

Scheduled	Where Employed
High altitude penetration	During penetration phase of mission.

5. REMARKS: This mission was considered successful with 100% of the radar photo accomplished. Only two of the six targets were covered by aerial photo because of weather.

BDA 91st SRW

1. MISSION: To accomplish pre-strike radar reconnaissance of 5 targets and pre-strike low altitude night photography of one target with a force of six RB-45 aircraft.

2. FORCE:

SCHEDULED BY O/O-UNIT		GROUND ABORTS	AIRBORNE	PRE TGT ABORTS	OVER TGT	POST TGT ABORTS	COMPLETED AS BRIEFED
6	6	0	6	1	6	0	5

3. TARGET TIMES AND RESULTS:

	Scheduled	Actual
Sault Ste Marie	0630Z	0630Z
Milwaukee	0630Z	0639Z
Toledo	0630Z	0630Z
Cleveland	0630Z	0628Z
Baltimore	0630Z	0620Z
Boston	0630Z	0630Z

4. DISCUSSION: The low altitude night photo mission was very succesaful with complete aerial and radar coverage being obtained. Numerous difficulties were encountered by the 91st SRW in regard to aileron boost systems. The RB-45 aircraft are scheduled for modification to improve this situation during the next eight months.

5. REMARKS: The pre-strike reconnaissance missions performed by the 91st SRW on E ⁄ 4 were very satisfactory. With the exception of the one aircraft which pre-target aborted, all targets were completely covered as briefed.

REPORTING

"REPORTING"

MISSION

To establish a system of reporting to properly control, monitor and evaluate the operation as executed.

DISCUSSION

1. In addition to the normal combat reporting procedures and current posting of information in the Control Room, air and ground observers in the field were required. A total of 39 SAC representatives were placed throughout ADC including 20 of their GCI sites. A total of 12 air observers were required from the headquarters to fly with participating units of the command. (See attached Observer Assignments)

2. Air and ground observers were briefed as to their specific assignments and information desired prior to E Day. Within one week subsequent to the mission, all observers reported to Headquarters Strategic Air Command and were critiqued by representatives of the Directorate of Operations, Directorate of Intelligence and Operations Analysis. Written reports were required of each observer which were retained in the headquarters for further analysis.

SUMMARY

1. Attached is a chart depicting combat reporting effectiveness during the exercise period. The significance of this chart is that on a mission such as "Checkout", a little over 14½ hours after bombs away time, all critical planning information was submitted. At this time, a commander can plan for subsequent attacks.

2. Without the air and ground observers scheduled for this mission, analysis and valid findings would have been extremely difficult. It was found that the observers placed in the 20 GCI sites provided the most essential data. They provided this headquarters with the necessary supporting information required for evaluation and analysis of ADC reaction and performance of participating units.

ADC SITE ASSIGNMENTS

(SAC Ground Observers)

AIR DIVISION	LOCATION	SITE	SAC REPRESENTATIVE	DUTY	TEAM NUMBER	COMMAND
	ADC Hq, Colorado Springs, Colorado		1 Lt Col	Coord		SAC
	EADF Hq, Stewart AFB		1 Lt Col	Coord		2nd AF
26	ADCC Hq, Roslyn, N.Y.		1 Lt Col	Obsr	1	" "
	Benton, Pa.	(30)	2 ECM Officers	"	"	" "
	Highlands, N.J.	(9)	2 ECM Officers	"	"	" "
32	ADCC Hq, Syracuse, N.Y. (Hancock)		1 Lt Col	"	2	" "
	Lockport, N.Y.	(21)	2 ECM Officers	"	"	" "
	St. Albans, N.Y.	(14)	1 ECM Officer	"	"	" "
30	ADCC Hq, Selfridge, Michigan		1 Lt Col	Coord	3	8th AF
	Brookfield, Ohio	(62)	1 ECM Officer	Obsr	"	" "
	Selfridge, Michigan	(20)	1 ECM Officer	"	"	" "
	Empire, Michigan	(34)	1 ECM Officer	"	"	" "
	Fort Custer, Michigan	(67)	1 ECM Officer	"	"	" "
	CADF Hq, Kansas City		1 Lt Col	Coord		" "
31	ADCC Hq, Minneapolis, Minnesota (Fort Snelling)		1 Lt Col	Obsr	4	" "

AIR DIVISION	LOCATION	SITE	SAC REPRESENTATIVE	DUTY	TEAM NUMBER	COMMAND
	Finland, Minnesota	(69)	1 ECM Officer	Obsr	4	8th AF
	Sault St. Marie	(66)	1 ECM Officer	"	"	" "
	Elk Horn, Wisconsin	(31)	1 ECM Officer	"	"	" "
	WADF Hq, Hamilton AFB		1 Lt Col	Coord		15th AF
28	ADCC Hq, Hamilton AFB		1 Lt Col	Obsr	5	" "
	Mt Tamoplious	(38)	1 ECM Officer	"	"	" "
	Sacramento, California	(58)	1 ECM Officer	"	"	" "
25	ADCC Hq, McChord AFB		1 Lt Col	"	6	" "
	McChord, Washington	(1)	1 ECM Officer	"	"	" "
	Mt Bonaparte	(6)	1 ECM Officer	"	"	" "
	Bohokus Peak	(44)	1 ECM Officer	"	"	" "
27	ADCC Hq, Norton AFB		1 Lt Col	"	7	" "
	San Clements, California	(39)	1 ECM Officer	"	"	" "
	Santa Rosa	(15)	1 ECM Officer	"	"	" "
	Omaha	(71)	1 ECM Officer	"	8	SAC
	Kansas City	(72)	1 ECM Officer	"	9	544th RTS

Four additional observers were scheduled from Headquarters, Strategic Air Command to observe on E + 3.

UNIT ASSIGNMENTS

(SAC Air Observers)

DIVISION	NUMBER OF OBSERVERS	UNIT TO BE OBSERVED
DOFS	2	43d and 301st Bomb Wings
DOTR	3	68th, 93d Bomb Wings and 91st ARS
DORQ	1	12th Air Division
DORN	1	28th Strategic Reconnaissance Wing
DODF	2	12th and 27th Fighter Escort Wings
DOOP	1	2d Bomb Wing
DOPL	2	7th and 11th Bomb Wings
TOTAL	12	

(CHART)

This chart provides a picture of combat reporting effectiveness during the "Checkout" exercise period.

The top bar represents the total number of reports due: 1263

The second bar represents the total number of reports received: 1178

The third bar represents reports received late: 321

The vertical composite bar corresponds to the dark blue section of the top bar-graph.

We rely on combat reports for:

Control of current operations, and

Information necessary to plan an immediate re-strike.

Of the total 458 reports required on E + 3,, 221 gave us planning information and 237 were miscellaneous such as take-off times, aborts, etc.

The availability of this information for planning is shown by the red line in relation to average bombs away time.

The white broken line separates reports required for Critical Planning Data shown below the dotted line. They are: Strike, Weather, ECM, Intelligence Bomb Damage Assessment and Initial Mission Summaries.

The information outstanding above the dotted line was refined data which amplified information already on hand and helped to expedite planning.

TOTAL REPORTS DUE 1263

OTHER 805

TOTAL REPORTS RCD. 1178

OTHER 734

TOTAL RPTS. LATE

321

COMBAT REPORTS

OPERATION CHECKOUT

237
CONTROL REPORTS

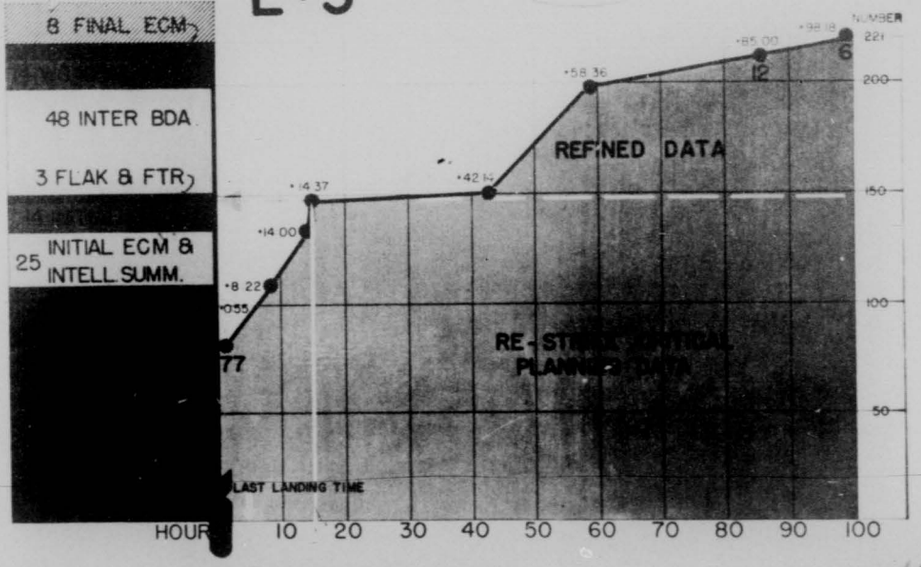
8 FINAL ECM

48 INTER BDA

3 FLAK & FTR

25 INITIAL ECM & INTELL SUMM.

E+3



"CHECK-OUT" SUMMARY

"CHECK-OUT" SUMMARY

It appears appropriate at this time to make some final comments pertaining to the exercise as a whole.

CAPABILITY TO MOUNT SIMULTANEOUS STRIKE

In the past this Command has exercised individual crews, units and Air Forces. For the first time, execution of this operation has tested Strategic Air Command's capability to accomplish a simultaneous strike. Accomplishment of the necessary staging, pre-strike and post-strike reconnaissance, rescue of "downed" crews, in-flight refueling and the simulated strike demonstrated this capability.

COMMAND EXERCISE

From a viewpoint of conducting a Command exercise, this operation was very successful. All echelons were exercised in functions of command, communications, administration, mobility, operations and reporting.

TACTICS

This exercise presented an opportunity to test various types of tactics. Results will be further analyzed and tested, and it appears that some findings will result in changes to Tactical Doctrine.

REPORTING

For sometime this Command has been concerned about a need for establishing a norm as a basis for requiring critical reports within a certain time limitation immediately following a strike.

This operation presented an opportunity for testing reporting procedures and determining just how much time was required after a strike for a commander to receive critical planning data necessary for analyzing a mission when accomplished and planning for a subsequent strike. It additionally emphasized the requirement for accurate and timely reporting to assure proper analysis. Observers must be thoroughly briefed as to their duties, and unit overlays should be completed in their entirety as well as standardized from a common reference map.

TRAINING FOR ADC

It is felt that ADC benefited in many respects. Their deployment and augmentation plan was tested. Training was provided for controllers, fighter pilots, staff personnel and commanders. Additionally, much of their equipment and communications system were tested under a simulated attack.

FUTURE EXERCISES

It is felt that this operation has established a pattern for joint analysis of future missions of a similar nature. It has provided a systematic method for exchange of information that will mutually benefit both SAC and ADC as well as the Air Force.

Results justify a recommendation for similar exercises to be considered on an annual basis.

TACTICS and ADC REACTION

DETAILED STUDY OF TACTICS AND ADC REACTION

I. INTRODUCTION

In this section a detailed study is made for each of the three days of activity of the actual attack on the targets of "Checkout." This implies a detailed study of courses and altitudes flown and ADC's reaction with respect to detection and interception. To carry out this study detailed maps of the areas concerned were constructed with both the bomber courses (including altitude) and the GCI tracks and intercepts by the defense forces. In the discussion in Section III the maps are presented along with a brief discussion of the plan of the attack and its execution. More detailed statistical results for the entire operation are presented in Appendix B.

II. GENERAL DISCUSSION

1. Detailed and fairly accurate reconstruction of the activities during Checkout leads to a few general indications, many questions, and some detailed recommendations regarding areas of further study and conduct of future exercises. Map reproductions of the reconstructions of activity are displayed in the next section with brief descriptions only. Detailed large scale maps are available in this headquarters for further study if desired.

2. Indications:

a. Wing and crew execution of their missions as finally ordered was generally good. Failure to carry out certain intended tactics, especially the low-altitude phases of the manuever cannot be charged to crews, but the failure makes assessment of certain planned tactics impossible.

b. In war, desires for simultaneous strikes should not compromise the advantages of darkness or weather during penetration and attack.

c. The fundamental difficulty of the fixed-time-at-target concept complicating navigational and cruise-control considerations in long range missions was demonstrated.

d. Observer reports were consistent in their estimates of the effect of fatigue on the defense forces. The tension and the long hours contribute to fatigue of key personnel and equipment. In the early days of a war before key personnel for 24 hour duty

are available, this fatigue offers a potential which perhaps should be exploited. The advisability of developing tactics designed to keep defense units working round the clock for several days before main strikes should be studied. These can include balloons with reflectors to insure detection, fringe penetrations by support aircraft, fighter penetrations, RB-45 penetrations, or missiles. An enemy cannot afford to let any of these go unchallenged.

e. Long stream penetrations in line simplify the problem for the radar sites, the controllers, communications, and the fighters. They lead to grouping of aircraft into fewer tracks and:

(1) The fewer the tracks the easier the problem of tracking, labeling, and cross telling for the radar operator.

(2) The fewer the tracks the easier the decision problem for the fighter controller or the area defense commander, even with chaff along the tracks.

(3) The fewer the tracks the less the demand on ground or ground-to-air communications

(4) The fewer the tracks the greater the probability of interception and/or repeated passes on some bomber by a fighter vectored initially to the bomber stream, even though vectoring to a particular bomber may be increased in difficulty or even obviated.

f. Diversion forces should be planned to divert a maximum of the defense. The tactics should be designed to insure detection at planned times and to insure against under-estimation of the size of the diversion force. Design of specific diversion tactics is a function of specific target area and mission.

g. Against day fighters medium altitude attack should be contemplated only with high assurance of heavy cloud decks. Under any other conditions only very low or very high altitudes should be used by bomber forces. Not tested in this exercise but planned as a corollary: radar sites and control centers depend heavily on DR-ing (dead reckoning) at all times, and are almost completely dependent on it in situations where fades occur. Dog-leg approaches to a target including feints at other targets should improve chances of delivery in very low altitude attacks. At high altitudes RB-45 "tracking" was essentially a case of successful DR-ing from a very few points. This may indicate that dog-leg approaches at very high altitudes with fast aircraft are desirable where possible range-wise, but this should not be concluded without more information.

h. Early electronic jamming alerts defense radars before possible detection of the aircraft itself and in cases of Condition I jamming, which is most probable in the present state of the art, provides an indication which yields direction but no range data. The potentials involved in connection with diversion forces should be investigated.

i. Chaff aids in early identification of hostile forces and, for radial approaches to a radar site, causes difficulty at that site in estimating size of force. This could be employed in helping to insure detection and identification as hostile of diversion forces plus helping to lead to over-estimates of size of force. Chaff used in this mission for these purposes and also for masking the path of aircraft at dog-leg turns toward the radar site was effective. It was also reported as effective against AA radars.

j. GCI communications jamming (VHF band) was employed with considerable success in several strikes and demonstrated the high potential of this tactic.

k. Every strike involving conventional aircraft on all three days was detected by radar and tracked. In two instances individual aircraft following the main strike were not detected. (The distribution of initial detection ranges is shown in Appendix B.) Over half of the RB 45's were detected and, due in part to the relatively straight approaches to target, were tracked fairly successfully in spite of fades. It is significant that the ADC personnel regarded the track of the E-Day recce aircraft as the most probable bomber strike path. Against an enemy, not aircraft limited, medium or deep penetrations of lone conventional aircraft for daylight visual reconnaissance is an extremely marginal tactic.

l. It appears that FEW's can be used for more profitable escort roles than that of fighter deterrent, for example, preceding bombers and attacking radar and communication sites and/or airfields.

m. Cumulative communication and control difficulties with depth of penetration of strike force suggest that progressive attacks on cities as bomber forces advance would add to enemy confusion and loss of control. The desirability of using "unloaded" bomb forces for diversion or feints against other potential targets should be thoroughly explored from the point of view of reducing total attrition and/or increasing probability of delivery for forces still target bound.

n. Bomb damage estimates as presented by recce tech units and by the bomb wings differed seriously in certain instances. An evaluation of assessment capability should be undertaken in connection with routine RBS missions as well as evaluation missions.

o. It developed during the SAC-ADC briefing that the Central Air Defense Force apparently has the "protection of the flank of industrial East" as a primary assignment and this was used as justification for adopting a perimeter defense and leaving Omaha and SAC Hq and Forbes AFB areas undefended for this exercise.

p. The relatively small number of fighter intercepts on E + 3 in comparison with the forces available may be partly explained by confusion regarding ADC rules concerning bomber kill within ADC, partly by weather and the time of attacks on the west coast, but is probably primarily due to a tendency of ADC area CO's to hold forces in reserve. This tendency was scored heavily by ADC Hq, Major General Smith stating that "he didn't want a single bomb

dropped with ADC fighters still on the ground." Because ADC is aircraft limited this policy may not be applicable to Russian defenses. Can Intelligence obtain indications of Russian policy in this regard?

q. ADC has apparently reached a state of capability where the joint exercises can be looked upon as a source of realistic test information. In future exercises, all the applicable rules for experimental design should be brought to bear in order to yield sufficient replications to provide more confidence than samples of a single trial can provide. On the basis of this exercise, which was planned with a fair amount of detail, it is evident that detailed instructions should be furnished the units with respect to reporting procedures. Every effort should be made to provide uniform and accurate final reports. The analysis of the data should be carried out as a SAC-ADC team effort. Care must be taken not to over-generalize the results of exercises of this nature to imply conclusions valid in EWP tactics. Vast differences may exist between Soviet and US air defenses. Some detailed recommendations are set forth in Appendix A.

III. DETAILED STUDY OF TACTICS BY DAYS AND AREAS

In this section the operation is broken up into areas and days for a rather detailed discussion and map presentation of the attack phase. Tabulations are made of significant parameters. It should be remarked that the results presented here represent the joining of vast amounts of data from ADC units and from SAC units. In some cases these data were sketchy and some interpretations had to be made (as, for example, matching radar tracks with bomber tracks) in order to complete the final picture.

In order to facilitate reading the maps and tabulations presented, the following notation has been used:

a. All times are Greenwich Civil time, all altitudes feet above mean sea level, and all distances in nautical miles.

b. The maps presented have the following features:

(1) Bomber tracks are indicated with solid lines. Times and altitudes are given at key points with the altitude beneath the time. The number and type of aircraft involved in the bomber tracks are given in the key for each map. The information for the bomber tracks was obtained from the overlays submitted by the wings that flew the missions.

(2) Radar tracks are indicated with broken lines. Times are given at key points and underlined. The designator for each track is given. The letter in

the designator is the code letter for the station which made the initial pick up of the track.

(3) Radar sites are given with crossed lines intersecting at the geographical location of the site. Both the site number and code letter are given to identify the site.

(4) Intercept positions are coded as given in the key on each chart. For each interception the number and type of fighters making the interception (or tally-ho if not a complete interception) is given.

(5) Electronic jamming information is given for E + 3 day. On E day and E + 4 day there was little jamming reported and it has not been entered on the charts.

E DAY

New York - Philadelphia - Washington - Pittsburgh - Chicago - Detroit

Plan:

To accomplish pre-strike reconnaissance of ten targets in the eastern sector of the United States and to obtain information on radio and radar facilities in the defense networks in the Detroit - Chicago area. Four RB-45's were to depart Lockbourne and fly as a unit on a dog-leg course up to Northern Lake Superior, then to Rochester, New York, and then fan out to hit New York, Philadelphia, Washington, and Pittsburgh at 1600Z, with altitude over unfriendly territory of 35,000 - 38,000 feet. Two RB-45's were to fly farther west in a dog-leg, separate north of Lake Huron, hit Chicago and Detroit at 1600Z. Two ferret aircraft (RB-50's) were to depart Hunter, separate northeast of Lake Huron at altitude of 30,000 feet and hit Chicago and Detroit at approximately 1600Z.

Execution:

The table and the accompanying map gives a picture of the actual execution of the plan along with the ADC reaction to the effort.

E DAY

New York - Philadelphia - Washington - Pittsburgh - Chicago - Detroit

Tabulation of Activity (Refer to Map)

Force	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs Pre-Targets RB-45's	Tgt Time	ECM
New York	I	1 RB-45	1430	1533	2	1602	None
Detroit	II	1 RB-45	1516	1554	2	1602	None
Pittsburgh	III	1 RB-45	1415	None	0	1606	None
Philadelphia	IV	1 RB-45	1415	None	0	1600	None
Washington	V	1 RB-45	1610	None	0	1637	None
Chicago	VI	1 RB-45	None	None	0	1440	None
					Ferret RB-50's		
Chicago	VII	1 RB-50	1404	1455	5	1600	None
Detroit	VIII	1 RB-50	1452	1543	4	1600	None

Since overlays from the RB-50's were not received, it is not known whether they flew the courses as planned. It is suspected that the Detroit RB-50 flew east of the planned course. The New York RB-45 flew north and east of the prescribed course; the Philadelphia and Pittsburgh aircraft flew the prescribed course; the Washington RB-45 took off late, flew direct to Rochester and then flew the prescribed course thirty minutes late. The Chicago RB-45 flew as planned. The Detroit RB-45 made an extra dog-leg in its course over Georgian Bay and then flew as prescribed. It should be noted that this dog-leg appeared to disrupt the tracking by ADC. It was noted that considerable dead reckoning was required to track the RB-45's.

E-DAY

CHICAGO, DETROIT, PITTSBURGH, WASHINGTON, PHILADELPHIA, NEW YORK

SCALE (NAUTICAL MILES)

60 55 50 45 40 35 30 25 20 15 10 5 0

BOMBER TRACK

I	RB 45	⇔	8038
II	RB 45	⇔	8037
III	RB 45	⇔	8022
IV	RB 45	⇔	8012
V	RB 45	⇔	8036
VI	RB 45	⇔	8031
VII	RB 50	⇔	?
VIII	RB 50	⇔	?

FIGHTER INTERCEPTION RECORD

- T TALLY-HO
- I INTERCEPTION
- □ BOMBER CREW DATA
- ○ GCI SITE DATA
- □ BOMBER CREW & GCI SITE DATA

VII 30,000

VIII 30,000 PLANNED ROUTE BOMBER OVERLAYS NOT AVAIABLE

1508 38,000

1448 38,700

1404

1450

1456

1516

U-72

FADE

W-52

1447

1433

1519

1438

1448

1520 38,000

1527 38,000

2-F-86 (I)

1448

1452

G-97

G50

1430

1453

1532 38,000

1501

1508

1528

1510

G-69

1509

1526

1528

FADE

2-F-86 (I)

1542 42,000

(J) P-50

1523

1539 35,000

1507 35,000

P-21 (G)

1539 36,000

1538

FADE

1553

1602

1602 42,500

3-F-94 (I)

I NEW YORK

P-9 (F)

1540

1606 35,000

III PITTSBURGH

P-63 (M)

1607 35,000

5-F-86 (I)

PHILADELPHIA

1600 36,000

1610

1616

P-54 (K)

V 1454 (T.O.)

I 1432 37,000

1430 37,000

X5

1534

1550

4-F-94 (I)

2-F-94 (I)

U-14

1537

1546

P-20 (U)

1610

DETROIT

VIII 1600 30,000

1602 38,000 II

P-61 (W)

W-52

1526

1520

1500

3-F-94 (I)

P-34 (V)

1414 36,000

1423 37,500

P-31 (F)

P-67 (Y)

VI 1440 37,500

1600 30,000 VII

CHICAGO

VI 1344 36,000

1419

III 1416 35,000

1421 36,000

IV

X4

P66

(X)

1442

P-14 (E)

E DAY

Seattle - Spokane

Plan:

To accomplish pre-strike reconnaissance of the Seattle - Spokane targets approaching the targets at 25,000 feet and 40,000 feet at 1800Z.

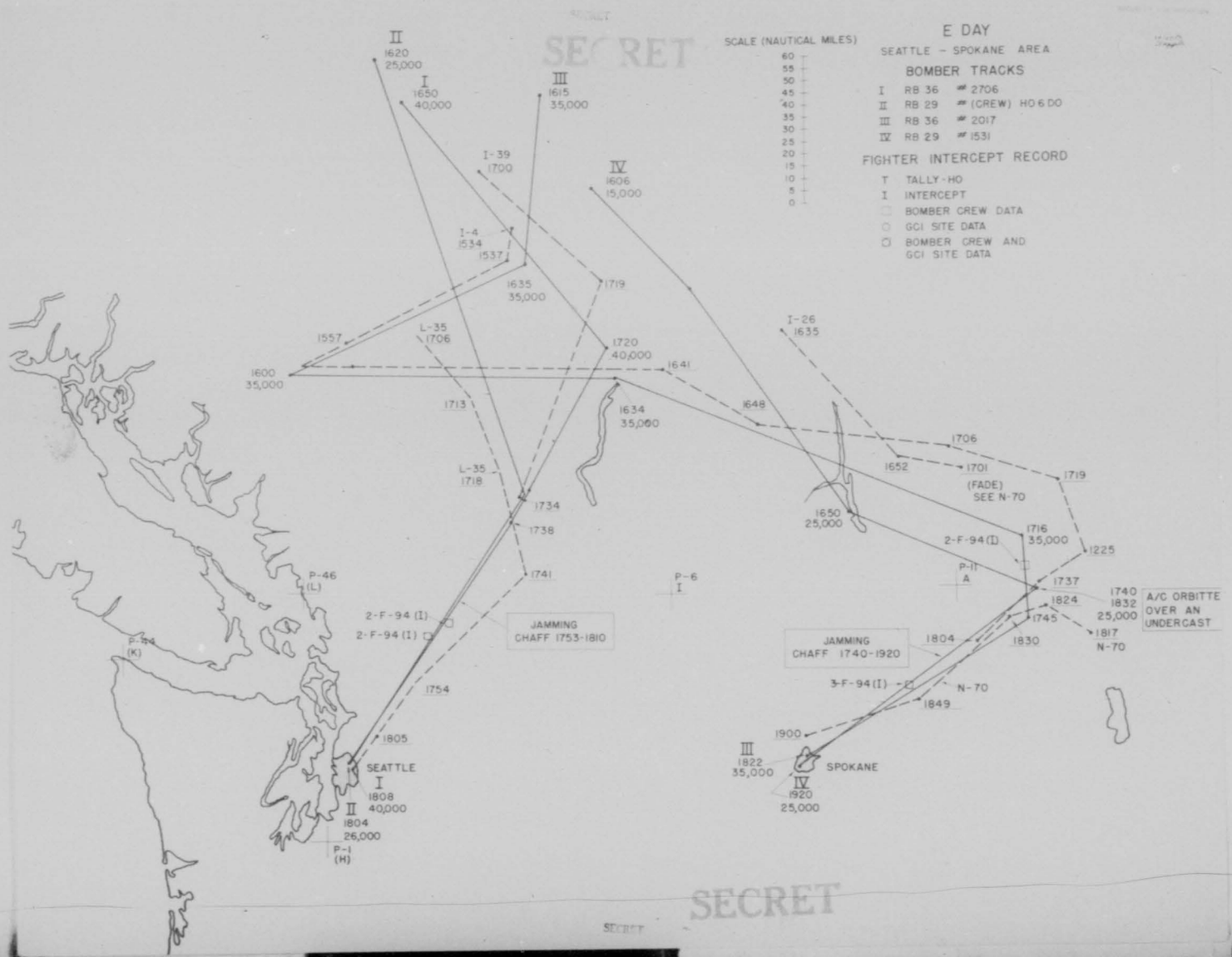
Execution:

The Spokane sorties were late, the RB-36 by an hour and twenty minutes and the RB-29 by an hour. Apparently weather to the northeast of the target had bearing on this. All of the flights were tracked and all of them were intercepted as is indicated in the table below.

Tabulation of Activity (Refer to Map)

	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs Pre-Tgt	Tgt Time	ECM
Seattle	I	1 RB-36	1704	1750	2	1808	Chaff 1753-1810
	II	1 RB-29	1706	1745	2	1804	Unknown
Spokane	III	1 RB-36	1534	1729	2	1822	Unknown
	IV	1 RB-29	1638	1846	3	1920*	Chaff 1740-1920

*Orbited about one hour northeast of Spokane - caught in overcast.



B DAY

Los Angeles - San Francisco

Plan:

The following reconnaissance missions were to be completed for pre-strike data:

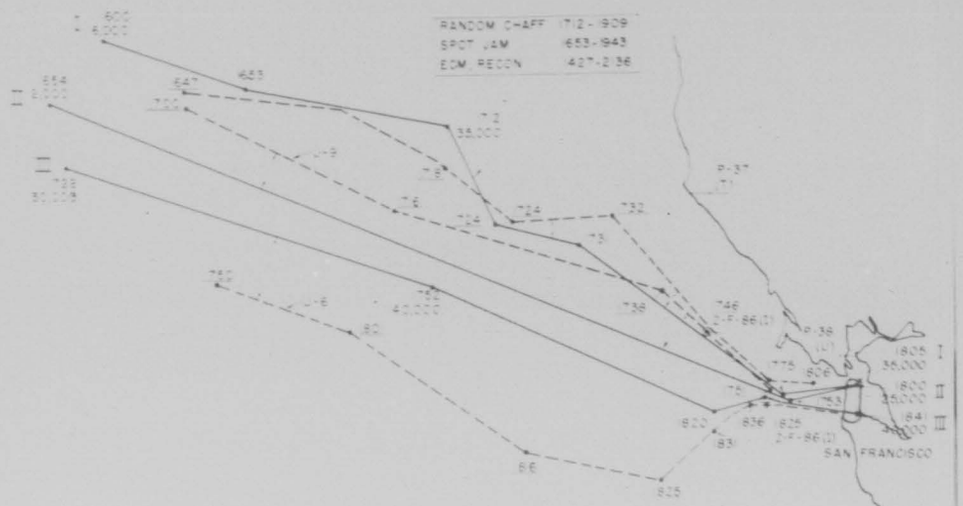
Two RB-36's at 40,000 feet over San Francisco
One RB-29 at 25,000 feet over San Francisco
One RB-36 at 40,000 feet over Los Angeles
One RB-29 at 25,000 feet over Los Angeles

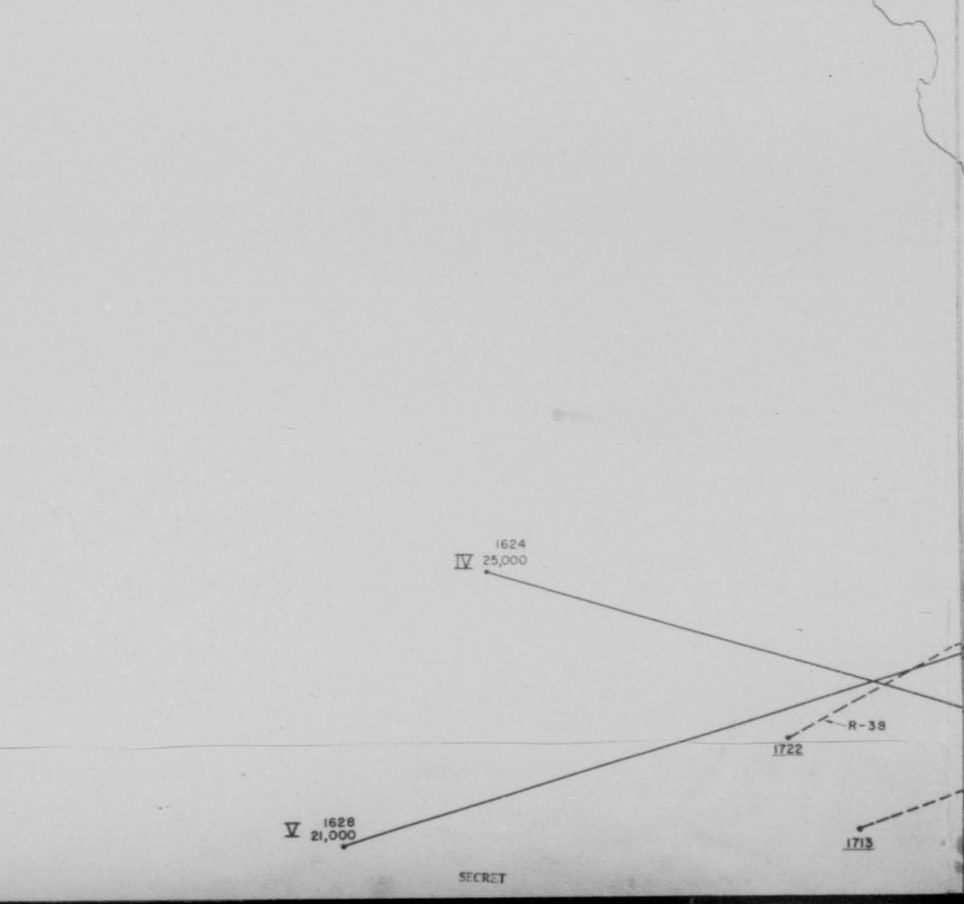
Execution:

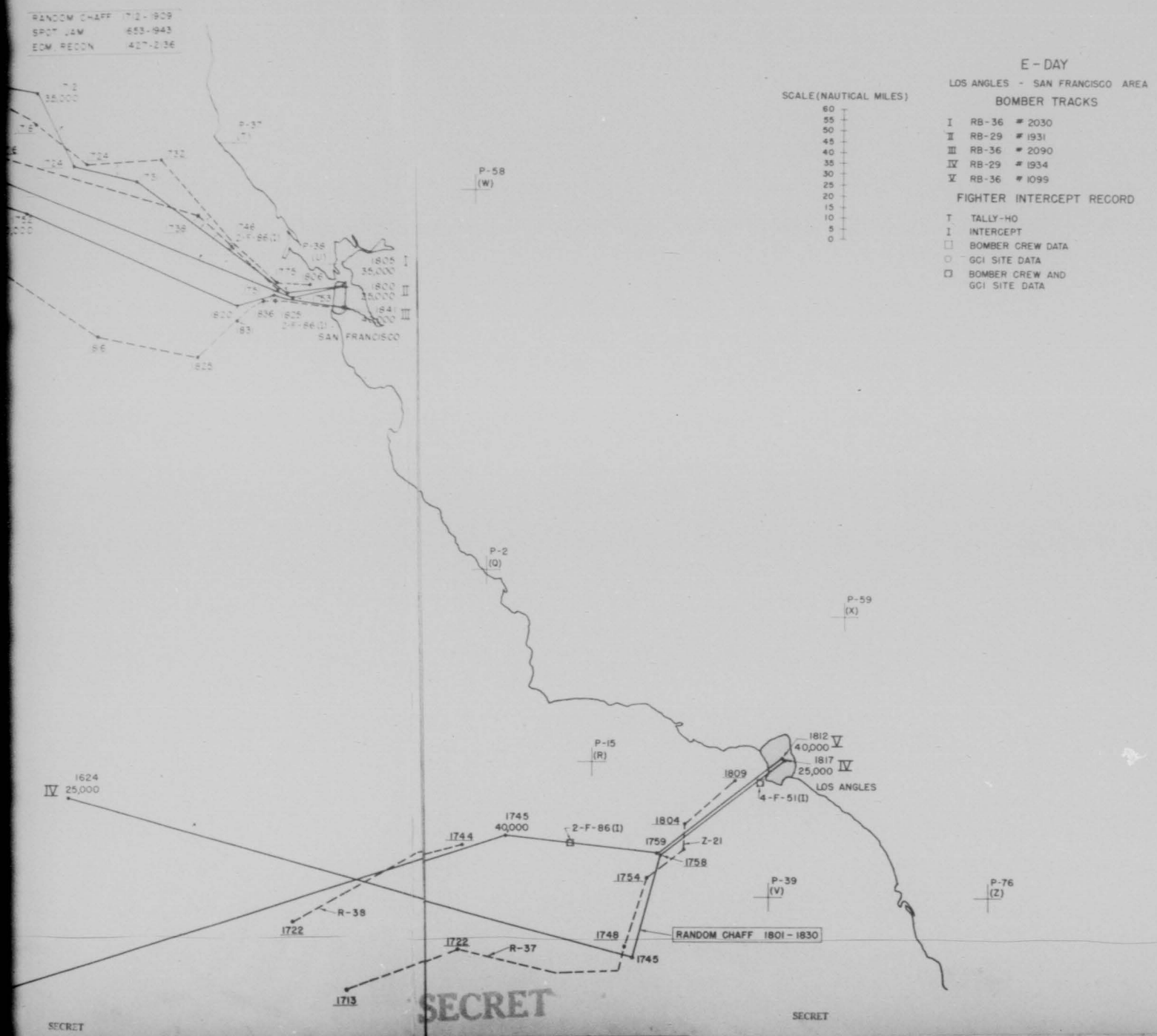
With the exception of one RB-36 over San Francisco, which was forty-one minutes late, the reconnaissance missions in this area were flown as briefed. It should be noted that all of the sorties were detected at great distances from the ground radar sites. Both of the Los Angeles sorties and both RB-36's sorties on San Francisco were intercepted before the target. The RB-29 on San Francisco apparently was not intercepted.

Tabulation of Activity (Refer to Map)

Force	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs Pre-Tgt	Tgt Time	FCM
San Francisco	I	1 RB-36	1647	1746	2	1805	Chaff 1751-1810
	II	1 RB-29	1700	None	0	1800	Chaff 1712-1908 VHF 1653-1943
	III	1 RB-36	1749	1825	2	1841	Unknown
Los Angeles	IV	1 RB-36	1713	1810	4	1817	Chaff 1801-1830
	V	1 RB-29	1722	1748	2	1812	Unknown







E DAY + 3

Pittsburgh - Philadelphia - Washington - New York - Boston

Plan:

To simulate deep penetrations through enemy defenses using bomber stream consisting of:

a. 2nd Bomb Wing with six bombers and one ferret from 55th SRW to attack six DGZ's at Philadelphia and accomplish post target refueling with three tankers. Jam L Band, VHF communications and drop chaff at completion of climb.

b. 301st Bomb Wing with twelve bombers and one ferret from 55th SRW (with fourteen tankers), to attack six DGZ's each in Pittsburgh and Washington and accomplish pre and post target refueling. Jam L Band, VHF communications and drop chaff at completion of climb.

c. 97th Bomb Wing with six bombers to attack six DGZ's in New York City. Jam L Band, VHF communications and drop chaff at completion of climb.

d. 68th Bomb Wing with nine aircraft to accomplish diversion from east, six aircraft on New York, three on Boston. Jam L Band, VHF communications and drop chaff 200 miles prior to target.

e. 376th Bomb Wing with nine aircraft to accomplish diversion for Washington, D. C., strike force. ECM same as for the 68th.

E DAY + 3

Pittsburgh - Philadelphia - Washington - New York - Boston

f. 6th Bomb Wing with nine aircraft to accomplish diversion for Philadelphia strike force. ECM same as for the 68th.

Execution:

The forces penetrated as planned with detection and intercepts by Canadian forces which are not counted in the tabulations below. The forces fanned out as shown and proceeded to individual targets, the 2nd MBW dropping on Philadelphia within a reported seven minute interval starting eight minutes late, the 97th MBW on New York within one minute but five minutes late, the 301st MBW on Washington, reported simultaneously four minutes early, and on Pittsburgh over a reported thirty-one minute interval starting ten minutes early, with one single aircraft reported as one hour thirty-five minutes late. The diversion forces reached control points essentially on time, the differences being not serious enough to affect the mission.

The stream penetration to the fan point cannot be assessed in detail, but from fan point tracks are fairly well delineated with the exception of the 97th MBW attack on New York, where at one radar site the tracks were apparently mixed with other unknowns for a time. There were reports of intermittent electronic and VHF jamming at some of the sites with occassional instances of apparently serious interference on VHF channels for a short time. Chaff was reported by some sites as the heaviest they had seen, causing difficulty in

H DAY + 3

Pittsburgh - Philadelphia - Washington - New York - Boston

Tabulation of Activity* (Refer to Map)

Strike	Track No.	No. Acft	First Detect	No. Ftrs Pre-BRL	Tgt Time	VHF	L Band	Chaff
Philadelphia	I	6 B-50	0935	13	1223-1232	0937-1145	1150-1305	0940-1312
Washington	II	5 B-29	0838	13	1210	1130-1215	1115-1215	1137-1210
New York	III	6 B-29	0951	12	1225-1226	1012-1326	1012-1258	1155-1320
Pittsburgh	IV	5 B-29	0831	4	1217**	1115-1320	1030-1335	1124-1308

Diversion	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs	Control Pt Time	ECM
Boston	V	3 B-29	1027	1108	6	1130	None
New York	VI	6 B-29	1048	1120	8	1142	VHF 1209 - 1233
Washington	VII	6 B-29	1055	1100	12	1130	VHF 1045 - 1257
Philadelphia	VIII	8 B-29	1048	1118	8	1155	None

*Since forces penetrated along common route, labeling and designation of track numbers back to the detection times shown above was probably an "after the event" process. Number and times of first intercepts on various segments of the initial common track are derived primarily from bomber reports.

**Pittsburgh strike single aircraft No. 7745 at 1206 at 15,000 feet.

estimating force size but since intercepting fighters had already reported on sizes of forces and other sites had assessed force size correctly, the question of how much chaff interfered with fighter intercept could be answered only by a study of ADC's failure to commit more aircraft. Chaff was reported effective in breaking lock on two of three AA radars at New York. That diversion forces succeeded in attracting fighters is evidenced

Pittsburgh - Philadelphia - Washington - New York - Boston

by the number of intercepts on the diversion forces. That this reduced the number of intercepts which might have been made on the New York or Washington and Philadelphia forces is highly probable. Earlier crash dives of the diversion forces might well have reduced intercepts on them without detracting from the presumed effect in diverting fighters from the strike forces.

ADC Estimate of Bomber Kill

	% By Fighter		
	Before BRL	After BRL	% by AA
New York (Strike)	18%	20%	0
New York (Div)	18%	0	*
Philadelphia (Strike)	32%	0	0
Philadelphia (Div)	13%	10%	*
Washington (Strike)	22%	17%	0
Washington (Div)	10%	8%	*
Pittsburgh (Strike)	12%	0	0
Boston (Div)	36%	21%	.5

*AA not applicable

PITTSBURGH – PHILADELPHIA – WASHINGTON – NEW YORK – BOSTON
(STRIKE AND DIVERSIONARY)

SCALE (NAUTICAL MILES)
60
55
50
45
40
35
30
25
20
15
10
5
0

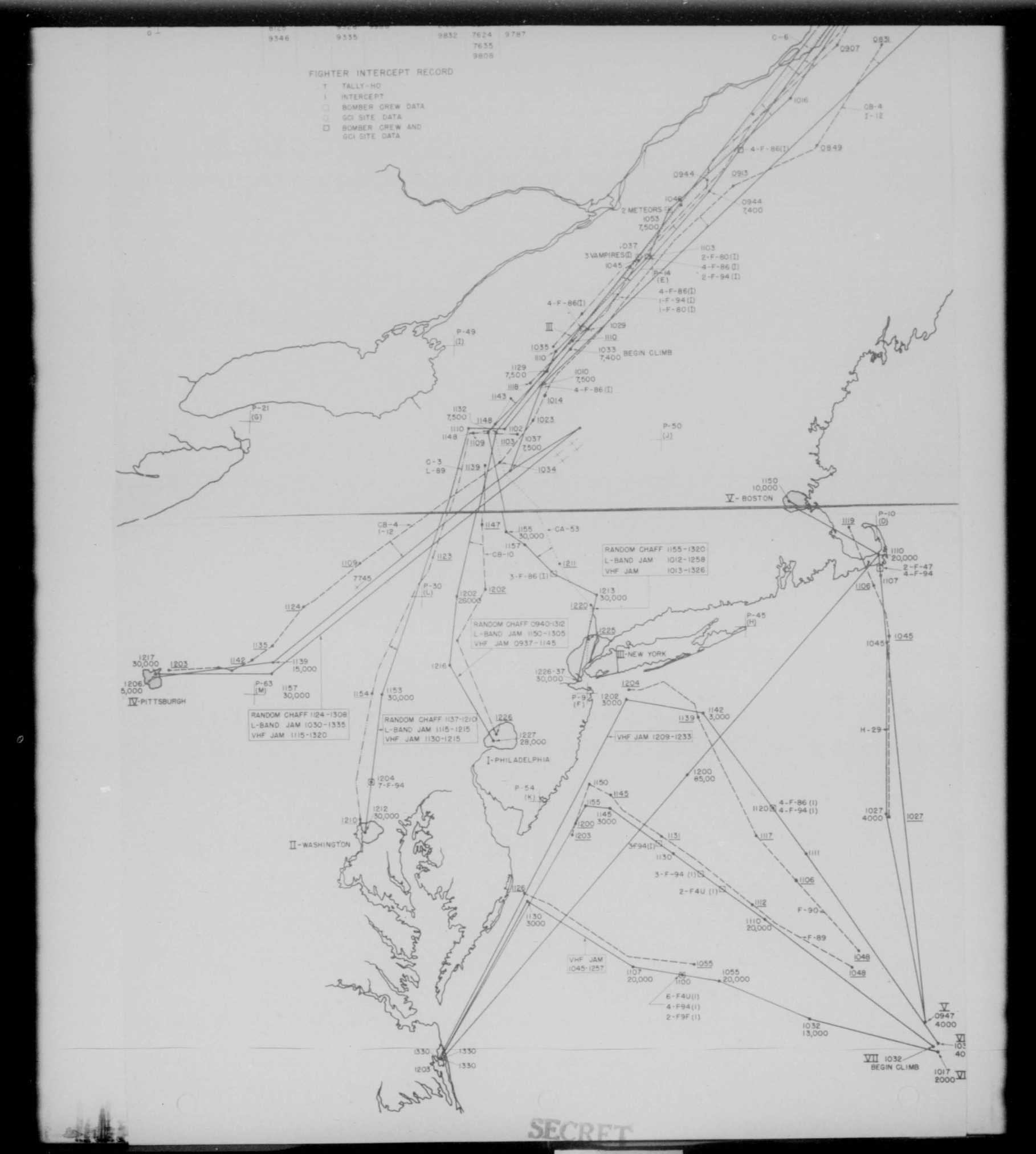
BOMBER TRACKS

TRACKS	I	II	III	IV	V	VI	VII	VIII
TYPE	68-50	18-50 48-29	68-50	58-50	38-29	68-29	88-29	68-29
A/C NOS	7153	0010	8077	1862	1925	0015	2010	0028
	8054	6325	8098	3931	2107	1851	2026	0035
	8066	7267	8109	7745	2148	1859	2041	0066
	8086	7755	8110	9862		2028	2307	1904
	8125		9326	9986		2120	6314	1914
	9346		9335			9832	7624	9787
							7635	
							9808	

FIGHTER INTERCEPT RECORD

T TALLY-HO
I INTERCEPT
□ BOMBER CREW DATA
○ GCI SITE DATA
◎ BOMBER CREW AND GCI SITE DATA

I
0918
5-F-86 (I)
0921
7,000
0828
7,500
0844
7,500
0935
0839
0941
4-F-86
3 VAMPI
CB-10
0951
CB-2
C-6
0907
0831
1016
CB-4
I-12
4-F-86(I)
0849
0944
0913
1048
2 METEORS
1053
7,500
0944
7,400
1037
3 VAMPIRES(I)
1045
1103
2-F-80(I)
4-F-86(I)
2-F-94(I)
P-14
(E)
4-F-86(I)
1-F-94(I)
1-F-80(I)
4-F-86(I)
III
1029
1110
1035
1110
1033
7,400
BEGIN CLIMB
P-49
(I)
1129
7,500
1010
7,500
1118
4-F-86(I)
1143
1014
1132
7,500
1148
1023
1110
1148
1102
1109
1103
1037
7,500
P-21
(G)
P-50
(J)
C-3
L-89
1139
1034
1150
10,000
V- BOSTON


FIGHTER INTERCEPT RECORD
T TALLY-HO
I INTERCEPT
BOMBER CREW DATA
GCI SITE DATA
BOMBER CREW AND GCI SITE DATA
I-PHILADELPHIA
II-WASHINGTON
III-NEW YORK
IV-PITTSBURGH
V-BOSTON
RANDOM CHAFF 1155-1320
L-BAND JAM 1012-1258
VHF JAM 1013-1326
RANDOM CHAFF 0940-1312
L-BAND JAM 1150-1305
VHF JAM 0937-1145
RANDOM CHAFF 1124-1308
L-BAND JAM 1030-1335
VHF JAM 1115-1320
RANDOM CHAFF 1137-1210
L-BAND JAM 1115-1215
VHF JAM 1130-1215
VHF JAM 1209-1233
VHF JAM 1045-1257
2 METEORS (I)
3 VAMPIRES (I)
4-F-86(I)
2-F-80(I)
2-F-94(I)
1-F-94(I)
1-F-80(I)
BEGIN CLIMB
BEGIN CLIMB
6-F4U(I)
4-F94(I)
2-F9F(I)
3-F-86(I)
7-F-94
2-F-47
4-F-94
3-F-94(I)
2-F4U(I)
3-F-94(I)
4-F-86(I)
4-F-94(I)
C-6
C8-4
I-12
CA-53
C8-10
P-21 (G)
P-49 (I)
P-50 (J)
P-30 (L)
P-63 (M)
P-54 (K)
P-9 (F)
P-14 (E)
P-10 (D)
P-45 (H)
C-3
L-89
F-90
F-89
H-29

SECRET

E DAY + 3

Chicago - Detroit

Plan:

To simulate medium penetration with heavy bombers at high altitude using fighter escort as deterrent forces.

a. The 7th Bomb Wing to attack eighteen DGZ's in Detroit, with twenty aircraft in a simultaneous drop, the formation to be escorted to BRL by 24 fighters; to jam L, and S Band, and VHF and drop chaff 200 miles prior to target.

b. The 11th Bomb Wing to attack fifteen DGZ's in Chicago with twenty aircraft in two squadron formations at ten mile interval escorted by forty-eight fighters; to jam VHF only.

Execution:

1. On the Detroit Mission seventeen of nineteen bombers attacked Detroit in a reported time interval of 1535Z to 1546Z, with scheduled time at 1515Z. Two bombers with engine trouble, attacked later at lowered altitudes, 25 and 33,000 feet. Twenty fighter escorts joined the formation at 1423Z to 1435Z.

2. On the Chicago Mission twenty bombers, one of which had radar out, attacked Chicago within a reported four minute interval starting at 1544Z, with scheduled time at 1515Z. Thirty-four fighters joined the formation at 1420Z.

E DAY + 3

Chicago - Detroit

Tabulation of Activity (Refer to Map)

Strike	Track No.	Bombers	First Detect	First Intercept	No Ftrs Pre-BRL	Target Time	EGM
Detroit	I	19 B-36	1451	1502	17	1535-1546	Chaff 1400-1627 VHF 1416-1625 L 1409-1623 S 1416-1600
Chicago 11	1st	10 B-36	1413	1447	6	1544-1548	VHF-1st Formation 1312-1624
	2nd	10 B-36	1414	1447			VHF-2nd 1359-1635

3. The Chicago strike force was picked up thirty-eight minutes before the Detroit force, and at Selfridge the Chicago force appeared on the radar scope about one minute before any indication of the Detroit force. The first indication of the Detroit force on the Selfridge radar was the 3° strobe of jamming appearing thirteen minutes before the first radar target was picked up. The jamming was intermittent and did not mask the strike force. A heavy stream of chaff was laid by the Detroit force and it is reported that Site P-20 (Selfridge) could not identify bombers within the stream. Ground observers or other sites correctly assessed the size of the force, however. That more aircraft were not brought to bear on the Detroit force appears to be a result of a decision to vector fighters to the Chicago force which had been reported much earlier, then recalling them to the Detroit force with too little fuel remaining to

be effective. Visual observation indicated a good formation of B-36's in the Selfridge area with fighter escort in position, and observers reported hearing ADC fighters reporting their inability to reach the "42,000 foot base altitude of the bombers."

4. The size of the Chicago force was accurately assessed by CAP vectored to the area shortly after detection. Weak intermittent electronic jamming was experienced but apparently did not bother operators; rather heavy chaff streams were observed but again apparently did not bother radar operators. There were reports of intermittent VHF jamming which at times interfered with fighter control for short periods. ADC command elements were critical regarding the late dispatch of some fighter units in this strike.

5. ADC generally regarded the FEW's as ineffective deterrents. Their SOP is to ignore fighters and go for the bombers. It was indicated that some of the fighter escorts were too heavy to do anything more than maintain altitude in the early part of the escort mission at least.

6. The reported time spent over target of the Detroit strike force would have given rise to cloud problems.

* * *

ADC estimate of bomber kill by fighters and AA.
Detroit initial force: 11% before BRL, 10% after BRL, .1% by AA.
Detroit low force, 100% before BRL.

[redacted]

E DAY + 3

Chicago - Detroit

Chicago 16% before BRL, 10% after BRL, 1.2% by AA*.

*Informal information indicates that AA assessment on Chicago force, as provided by AA service, was based on 33-36,000 foot altitudes. A formal request for review has been made by ADC.

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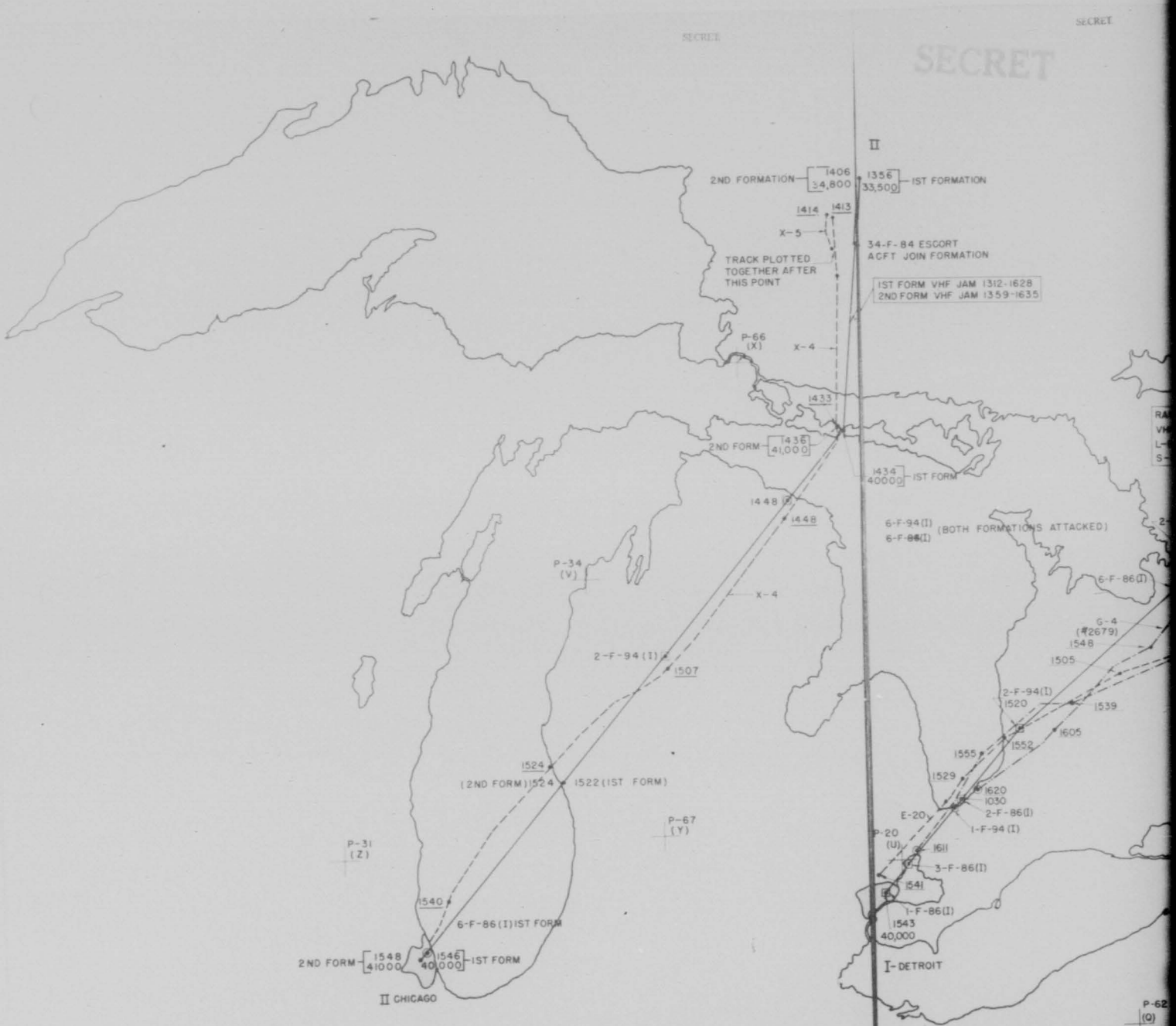


SECRET

SECRET

SECRET

E+3 DAY

CHICAGO - DETROIT AREA

BOMBER TRACKS

I B-36 # 1097, 1093, 5713, 1073, 2619, 2670, 5699 2063, 5716, 2679, 5700, 1096, 5705, 2076 2680, 5714, 1083, 2682, 1076, 5712, 2026

II B-36 # 1094, 5701, 1090, 2655, 5718, 2677 1089 1084, 5715, 1088, 5703, 1095, 2046, 2674 5702, 1075, 1069, 1092, 2675, 1091

SCALE (NAUTICAL MILES)

60 55 50 45 40 35 30 25 20 15 10 5 0

FIGHTER INTERCEPT RECORD

T TALLY-H

I INTERCEPT

□ BOMBER CREW DATA

○ GCI SITE DATA

◻ BOMBER CREW AND GCI SITE DATA

II

2ND FORMATION 1406 34,800 — 1356 33,500 1ST FORMATION

1414 1413

X-5

34-F-84 ESCORT A/CFT JOIN FORMATION

TRACK PLOTTED TOGETHER AFTER THIS POINT

1ST FORM VHF JAM 1312-1628
2ND FORM VHF JAM 1359-1635

A/CFT # 2679 AND # 5700 MADE BOMBING RUN AT LOWER ALTITUDE AND WERE INTERCEPTED BY 22 FIGHTERS

P-66 (X)

X-4

1433

2ND FORM 1436 41,000

1434 40000 1ST FORM

RANDOM CHAFF 1400-1627
VHF-JAM 1416-1623
L-BAND JAM 1409-1623
S-BAND JAM 1416-1600

I

1423 40,000

1425 (PICKED UP 4-F-84 ESCORT)

10 F-84 ESCORT TIMES UNKNOWN

1435 (PICKED UP 6-F-84 ESCORT)

1448

1448

6-F-94(I) 6-F-86(I) (BOTH FORMATIONS ATTACKED)

2-F-86(I)

1450

1531

1536

1513

6-F-86(I)

P-34 (V)

X-4

G-4 (#2679) 1548

1451

E-30-G

2-F-94(I)

1507

1505

1524

E-28 (#5700)

2-F-94(I) 1520

1539

1605

1555

1552

1529

1620

1030

2-F-86(I)

E-20

1-F-94(I)

P-20 (U)

1611

3-F-86(I)

1541

1-F-86(I)

1543 40,000

I-DETROIT

1522 (IST FORM)

P-67 (Y)

P-21 (G)

P-62 (Q)

SECRET

E DAY + 3

Omaha - Kansas City

Plan:

To attack interior targets at medium altitudes with daylight tactical formation without use of support or diversion forces, using the 43rd Bomb Wing to attack three DGZ's each at Omaha and Kansas City with two strike forces of six bombers each, employing low altitude penetration on the Kansas City strike. No ECM planned for Kansas City strike force; the Omaha force to jam L Band, VHF and drop chaff 200 miles prior to target. The Omaha force was scheduled to bomb at 29,000 feet, the Kansas City force at 16,000 feet.

Execution:

Five aircraft struck Omaha over an eighteen minute period with the first aircraft bombing fourteen minutes early. Five aircraft struck Kansas City within a reported one minute interval, the first aircraft striking seventeen minutes late. The Kansas City penetration was not at low altitudes as planned with resultant failure to test low altitude penetration tactics.

Tabulation of Activity (Refer to Map)

Strike	Track No.	No. Bombers	First Detect	First Intercept	No Ftrs Pre-BRL	Target Time	ECM
Omaha	I	5 B-50	0905	None	None	1207-1219	Chaff 1100-1331 L 1113-1329
Kansas City	II	6 B-50	0945	1010*	20	1232-1233	None

*Intercepts continued till approximately 1050.

E DAY + 3

Omaha - Kansas City

a. The Omaha force was picked up by Minot while still across the border but cloud-cover, at least in part, prevented intercept at the 16,000 foot level. Rapid City radar picked up the force at 1047, but range and weather resulted in a claimed tally-ho only. Omaha radar picked up the strike at 1130 but no fighters were available (Sioux City fighters had been deployed north for perimeter defense.) Omaha radar reported effective electronic jamming - effective to the extent that the site estimated one aircraft orbiting at unknown range and could not give estimates of the size or distance of the main attacking force.

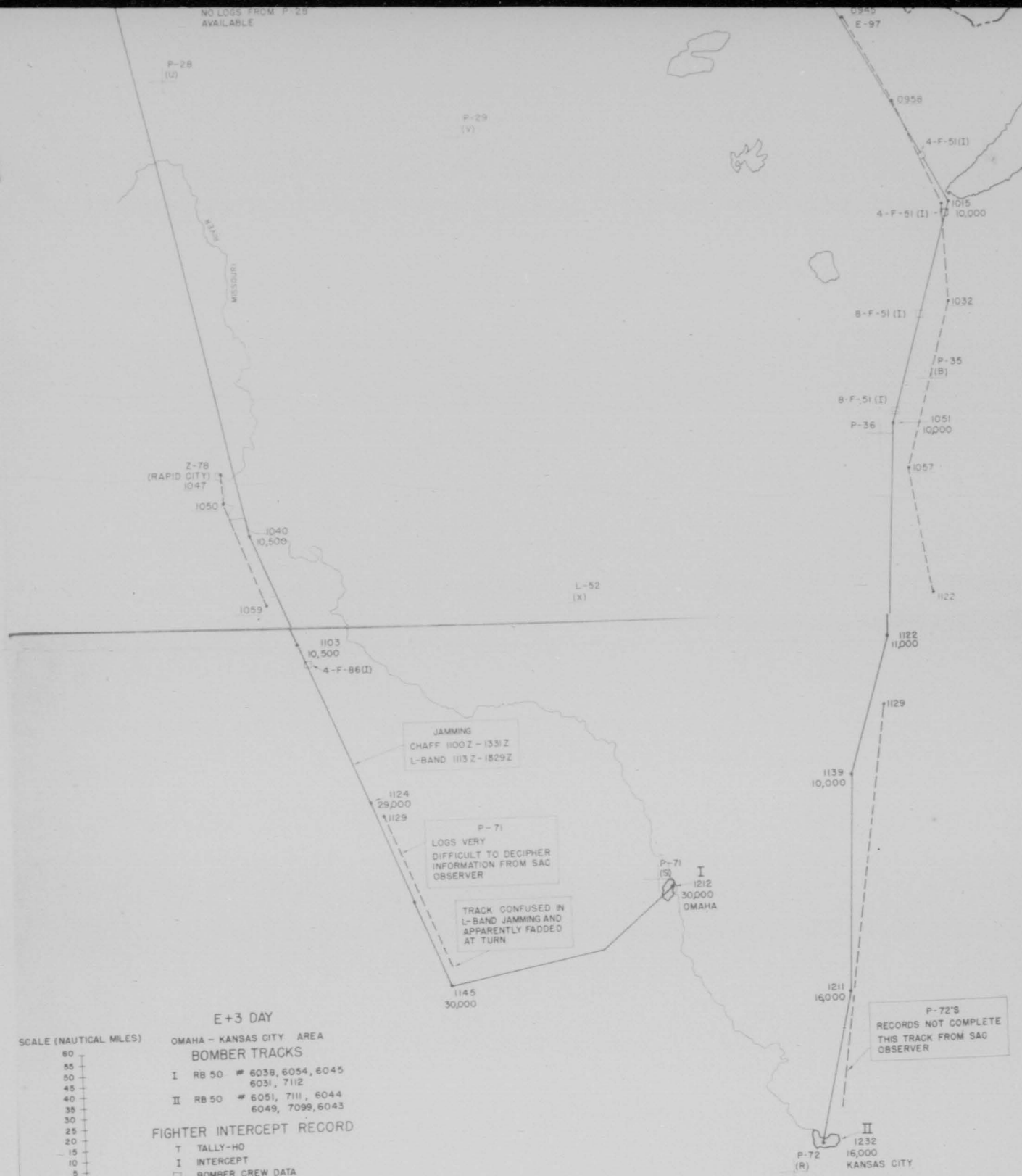
b. The Kansas City strike was not a low altitude penetration and repeated intercepts were made at the 10,000 foot level. The Omaha radar had picked up the Kansas City force by 1129 and tracked them almost to Kansas City BRL.

c. The disposition of ADC fighters at the perimeter with nothing left for target defense was critically reviewed by the ADC Command and the apparent relative success of the Omaha mission should be judged with non-availability of fighters-in-depth in mind. Weather alone was the primary factor in preventing intercept at the border.

d. ADC estimate of bomber kill by fighters.

Omaha strike none; Kansas City strike 33% before BRL, none after.


I
0926
10,500
FIRST DETECTION 0905
BY P-28 AT 51° 30' N
101° 50' W *
NO LOGS FROM P-28
AVAILABLE
P-28
(U)
P-29
(V)
II
0942
10,000
0945
E-97
0958
4-F-51(I)
1015
10,000
4-F-51 (I)
8-F-51 (I)
1032
P-35
(B)
8-F-51 (I)
P-36
1051
10,000
1057
1122
1122
Z-78
(RAPID CITY)
1047
1050
1040
10,500
1059
1103
L-52
(X)
MISSOURI
RIVER



E+3 DAY

OMAHA – KANSAS CITY AREA

SCALE (NAUTICAL MILES)

60
55
50
45
40
35
30
25
20
15
10
5
0

BOMBER TRACKS

I RB 50 # 6038, 6054, 6045 6031, 7112

II RB 50 # 6051, 7111, 6044 6049, 7099, 6043

FIGHTER INTERCEPT RECORD

T TALLY-HO

I INTERCEPT

□ BOMBER CREW DATA

○ GCI SITE DATA

▢ BOMBER CREW AND GCI SITE DATA

R 12/Y + 3

Seattle - Spokane

Plan:

a. 93rd to penetrate to Seattle and Spokane from northeast using low altitude to take advantage of shielding potential of Cascade mountains to delay detection until climb for bomb run; six IGI's in Seattle to be bombed with two strike forces of six aircraft each, three IGI's in Spokane by one strike force of six aircraft; to jam L-band, VHF, and drop chaff in target area only.

b. 100th to carry out diversion from west against Seattle with nine aircraft. To jam L-band, VHF and drop chaff starting 200 miles prior to target.

Execution:

1. One strike of four aircraft dropped on Seattle almost simultaneously four minutes early; the second strike of one aircraft dropped on Seattle six minutes late. Five aircraft struck Spokane over a seven minute period, the first aircraft reporting eight minutes late at target.

Tabulation of Activity (Refer to Map)

Strike	Track No.	No. Bombers	First Detect	First Intercept	No Fire Pre-DRL	Target Time	IGI
Seattle "1"	I	4 B-29	1035	1121	3	1211	All 1200-1329
Seattle "2"	II	1 B-29	1112	1235	2	1236	?
Spokane	III	6 B-50	1111	1210	5	1223	All 1207-1225
Diversion	IV	4 B-29	1105	1210	2	NA	Chaff 1105-1120
	V	4 B-29	1114		0	NA	?

E DAY + 3

Seattle - Spokane

2. Radar site P-44 picked up tracks heading NW at 210°, 208 miles at 0245Z and 205°, 220 miles at 0336Z and at 0505Z received telecom from P-46 estimating rendezvous point at 450 miles NW of P-44. (Mentioned because of its bearing on planning of future exercises.) SAC observer reports, and ADC logs confirm, the early detection of Seattle Strike I. It was picked up approximately one-half hour before the diversion force was detected. The strike force sizes were apparently fairly well estimated but the diversion force was never assessed at more than three aircraft. The diversion force appears to have made turn point times good, with some dog-legging close in. The early detection of the strike force was primarily attributable to the high base altitude flown by the strike forces and not to serious timing failures on the part of the 93rd MEW.

3. The high altitudes flown by the strike forces and the high abort rate of the 93rd MEW preclude solid assessment of the tactics as planned since this resulted in a serious timing failure relative to the diversion force. There is little evidence of successful L-Band or VHF jamming, and positive reports exist of chaff being read through successfully in the target areas. Whether chaff was a contributing factor in the serious under-estimation of the size of the diversion force cannot be definitely answered from information available but this under-estimate is of real interest from both ADC and SAC viewpoints. Failure of ADC to direct more fighters to the diversion force

SECRET

E DAY + 3

Seattle - Spokane

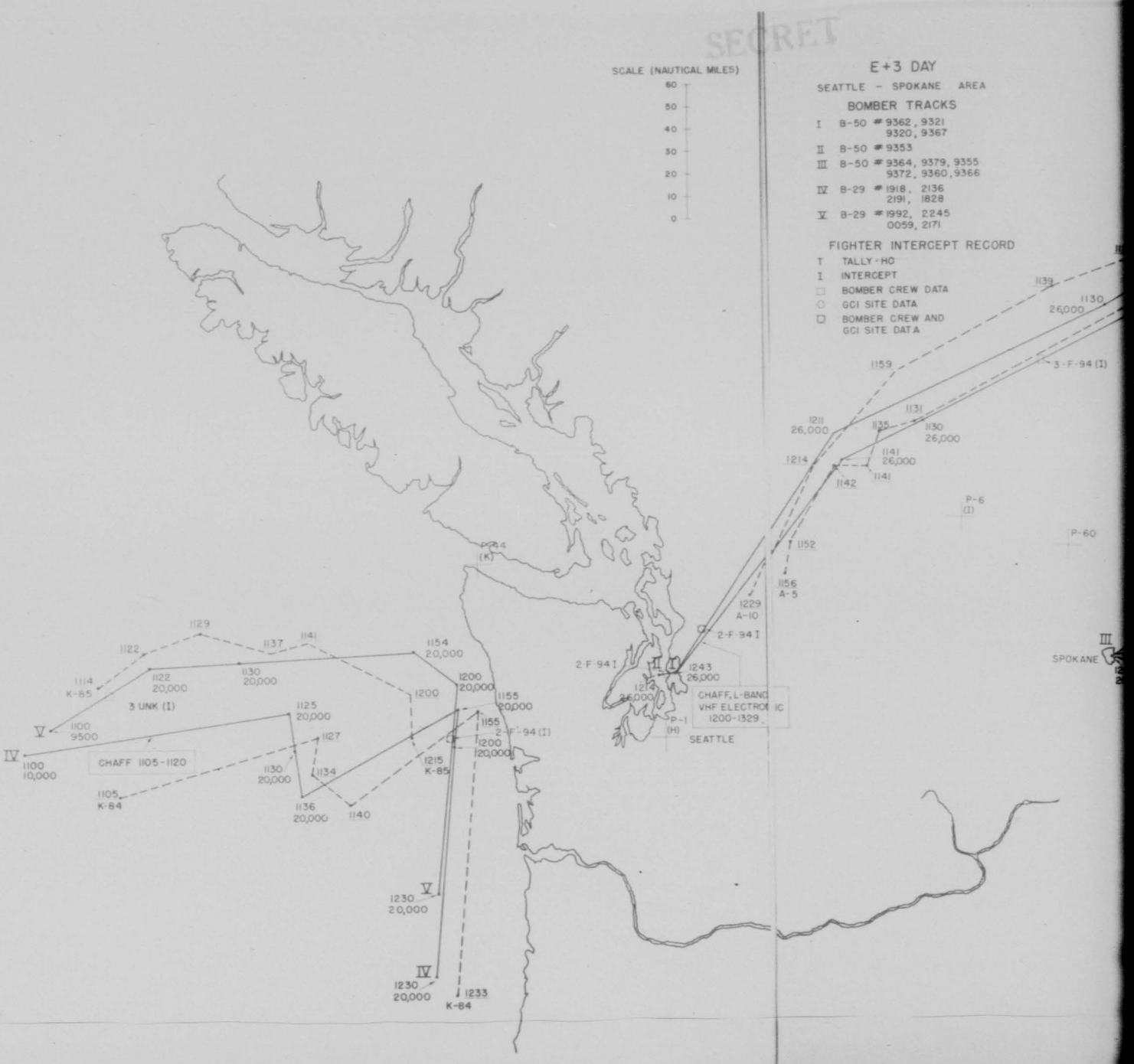
may be partly attributable to weather in the area, but it is believed that gross under-estimation of force size is the primary reason. Diversions should be planned to lead to over-estimation of the size of the force as well as insurance of properly timed detection. The 93rd force compression over Spokane resulted in a reported seven minute spread in target arrival times. Under certain wind conditions this spread would have insured cloud difficulties.

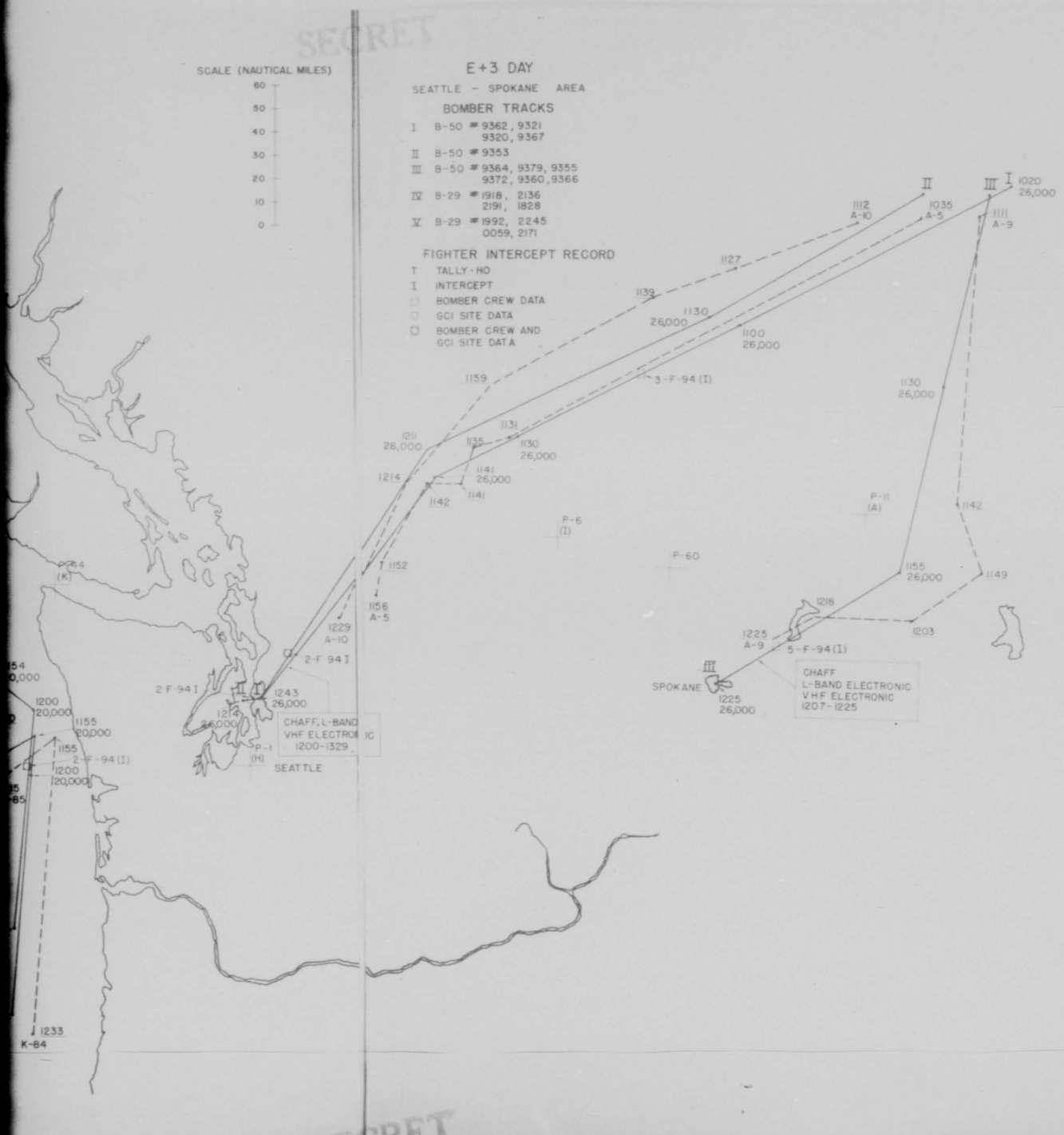
4. ADC's estimate of bomber kill by fighter are as follows:

Seattle strike - 28% before BRL, 11% after BRL, and 5% by AA.

Seattle diversion - 2% before control point and 0% after control point.

Spokane - 16% before BRL and 10% after BRL.





E DAY + 3

Los Angeles - San Francisco

Plan:

To simulate approach on coastal targets using bombers in medium high and support aircraft in medium low altitudes on one target area and reversing the relative positions of support and bomb carriers on the other target area, using

a. 9th Bomb Wing with three bomb carriers and three support aircraft on three DGZ's in San Francisco at 16,000 feet altitude. Jam I Band and VHF and drop chaff 200 miles prior to target.

b. 43rd Bomb Wing with three bomb carriers to attack three DGZ's at Los Angeles, 28,000 feet altitude. ECM same as in a.

c. 22nd Bomb Wing to support Los Angeles and San Francisco attacks with nine aircraft against each target area, 21,000 feet at Los Angeles and 26,000 feet at San Francisco. ECM same as in a.

Execution:

1. San Francisco. The 9th BW bombed with six aircraft, ten minutes later than scheduled, and nine support aircraft arriving as two cells of 5 and 4, and carried as separate tracks arrived at target nine and fifteen minutes late respectively.

2. Los Angeles. Three aircraft of the 43rd BW bombed Los Angeles in a reported twenty minute interval the first aircraft reporting over target on schedule. The nine support aircraft of the 22nd BW were carried as four tracks of three, two, two, and two aircraft each and

H DAY + 2

Los Angeles - San Francisco

due to failure of the primary radar during the most critical approach period could not be tracked. It appears that the tracks must have blended together and the support aircraft converged over the target area within a one-minute interval 1219-1220, about four minutes late of scheduled time.

Tabulation of Activity (Refer to Map)

	Track No.	No. Bombers	First Patent	First Intercept	No Fire Pre-DOL	Target Time	ECM
San Francisco, Strike	I	6	1-29	1130	1219	1225	All 1155-?
" , Support	II	5	1-29	1144	1230	1224	Chaff 1121-1329
" , "	III	4	1-29	1148	1226	1240	L 1145-1345
							VHF 1150-1320
Los Angeles, Strike	IV	3	1-50	1113	1214	1215	Chaff 1129-1400
" , Support*	V	3	1-29	"		-1235	L 1130-1245
							VHF 1144-1217
Los Angeles, Support*	VI	2	1-29	"		2 1219 to	Chaff 1109-1400
" , " "	VII	2	1-29	"	1154	1220	VHF 1135-1240
" , " "	VIII	2	1-29	"			

*Radar at Site 15 went out 1133 to 11528. Tracks were too close together to permit correlation with bomber overlays.

3. a. In the Los Angeles raid the failure of the primary radar and the apparent multiplicity of tracks created by the support force caused the ADC to go over to broadcast control. Observer reports indicate a smooth transition on the part of ADC and capable handling in the face of difficulties arising from the light conditions at that time of the morning. Here there was evidence of over-estimation of the bomber force size and the gaggle approach of the support forces

E DAY + 3

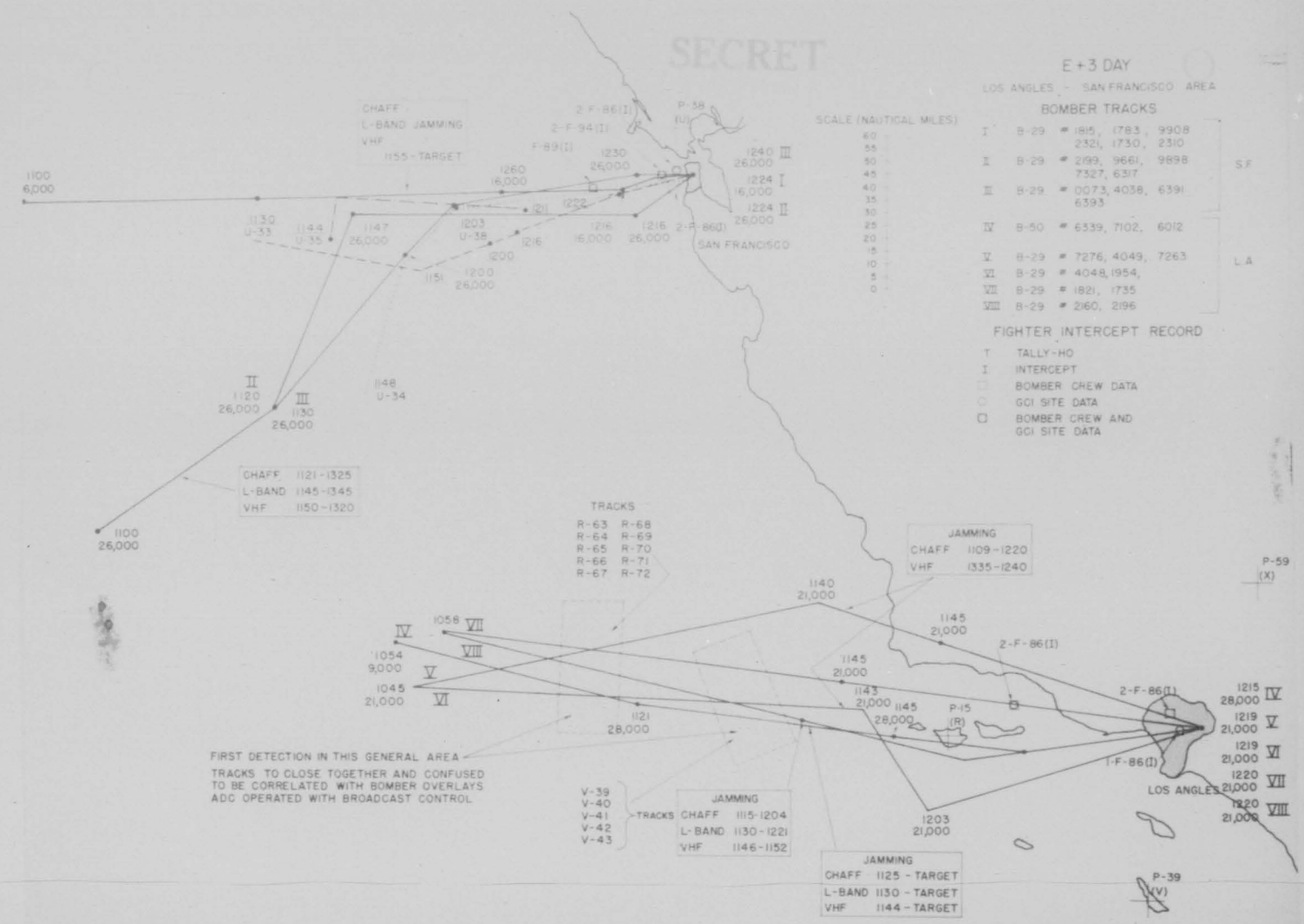
Los Angeles - San Francisco

created precisely the effect that would be desired of a truly diversionary force. In spite of other unidentified aircraft (not part of the planned raid) in the area, primary effort was directed to the strike forces. Intermittent electronic jamming was reported but was judged ineffective; VHF jamming was considered very effective on 136.26 m.c. (primary for control of fighters) and troublesome on 133.20 m.c. (secondary fighter control). How much this would have interfered with close control cannot be estimated since the radar failure was the primary reason for converting to broadcast control. Chaff was considered ineffective except that it added to confusion in separating and identifying tracks when the radar came back in operation just previous to target times.

b. In the San Francisco raid the formation flown by the support aircraft resulted in a situation where an approximately 70° sector was apparently judged as filled with attacking aircraft in a heavy mass raid, initial estimates of size being 20 or more aircraft, later pegged at 14 or 15 in spite of fairly heavy chaff streams. It appears that the radar sites maintained a satisfactorily clear picture of the situation but VHF jamming in the area (judged most severe they had ever encountered by ADC personnel) contributed markedly to the difficulties experienced by the ADC controller units. Some confusion in ADC control levels arose from lack of clear understanding of weather minimums applicable to some augmentation fighter units which refused

take-off because of light conditions and minima established by their parent commands. Communications jamming severely interfered with scramble orders for substitute units and take-off delays are directly attributable to this. Apparently no attempt was made to formally switch to broadcast control before target time.

c. In both raids, the tactics as planned and as executed would tend to draw fighters toward the direction of penetration and the number of returns tends to obviate under-estimation of the size of force, thereby increasing the allocation of fighters to the area. Close control on a multiplicity of tracks close together in time is apparently extremely difficult but this situation seems to be made to order for broadcast control. It appears that if the number of support aircraft is relatively small, they should either be incorporated in the bomber cell to take advantage of under-estimation of force size, or be used as essentially diversionary aircraft with an approach from a substantially different direction and different timing to insure scattering of defensive effort. Bringing support into the area from essentially the same direction as the bomber stream increases the allocation of fighters to the general area the bombers must penetrate. Further study should be made of the very effective VHF tactics used by the 9th BW and determination made of differences in this phase of ECM between the San Francisco and Los Angeles strikes. ADC's estimate of the bomber kill for this area is: San Francisco 4.5% before BRL and Los Angeles - 32% before BRL.



E DAY + 4

Boston - New York - Philadelphia - Washington

(Only those targets attacked on E + 3 Day are considered in this detailed study.)

Plan:

RB-36's and a RB-45 were to overfly the targets to obtain post-strike BDA. The RB-45 was to be over Boston at 0630 at 38,000 feet, two RB-36's over Washington, two over Philadelphia, two over Pittsburgh and two over New York, all at about 40,000 feet and at about 1130Z.

Execution:

The execution of the plan and ADC's reactions are given in the accompanying table. One RB-36 assigned to overfly New York did not accomplish the mission. It should be noted that all of the flights were tracked. Further they were all intercepted except the RB-45, the RB-36 to Washington and the RB-36 to New York.

Tabulation of Activity (Refer to Map)

Force	Track No.	No. Acft		First Detect	First Intercept	No Ftrs Pre-Int	Tgt Time	ECM
Boston	I	1	RB-45	0512	None	0	0630	Unknown
New York	II	1	RB-36	0952	None	0	1136	VHF, Chaff and L Band 1057 to target
Philadelphia	III	1	RB-36	0924	1015	5	1129	Unknown
Philadelphia	IV	1	RB-36	1047	1137	3	1224	Unknown
Washington	V	1	RB-36	0915	None	2	1111	Unknown
Washington	VI	1	RB-36	1048	1113	7	1204	Unknown

E + 4 DAY

BOSTON - NEW YORK - PHILADELPHIA - WASHINGTON

BOMBER TRACKS

I	RB 45	# 8034
II	RB 36	# 2713
III	RB 36	# 2705
IV	RB 36	# 2709
V	RB 36	# 2721
VI	RB 36	# 2711

FIGHTER INTERCEPT RECORD

T TALLY-HO
I INTERCEPT
□ BOMBER CREW DATA
○ GCI SITE DATA
▢ BOMBER CREW AND GCI SITE DATA

SCALE (NAUTICAL MILES)

60 55 50 45 40 35 30 25 20 15 10 5 0

P-13 (A)
P-50 (J)
P-30 (L)
P-10 (D)
P-45 (H)
P-54 (K)
77°
43°
66°
41°

I - BOSTON
II - NEW YORK
III, IV - PHILADELPHIA
V, VI - WASHINGTON

0630 38,500
0625
0613
0615 36,500
0547 35,500
0546
0855 8,000 III
0931 7,500 (START CLIMB) IV
0940 24,000 II
0820 8,500 (START CLIMB)
0526 34,500
0525
0512
0450 33,000 I

H-15
I-F80(T)
2-F94(T)
A-7-D
D-7
D-8
D-5
H-22
H-23
RECROWING
DEAD

SECRET

SECRET

E DAY + 4

Chicago - Detroit - Pittsburgh

Plan:

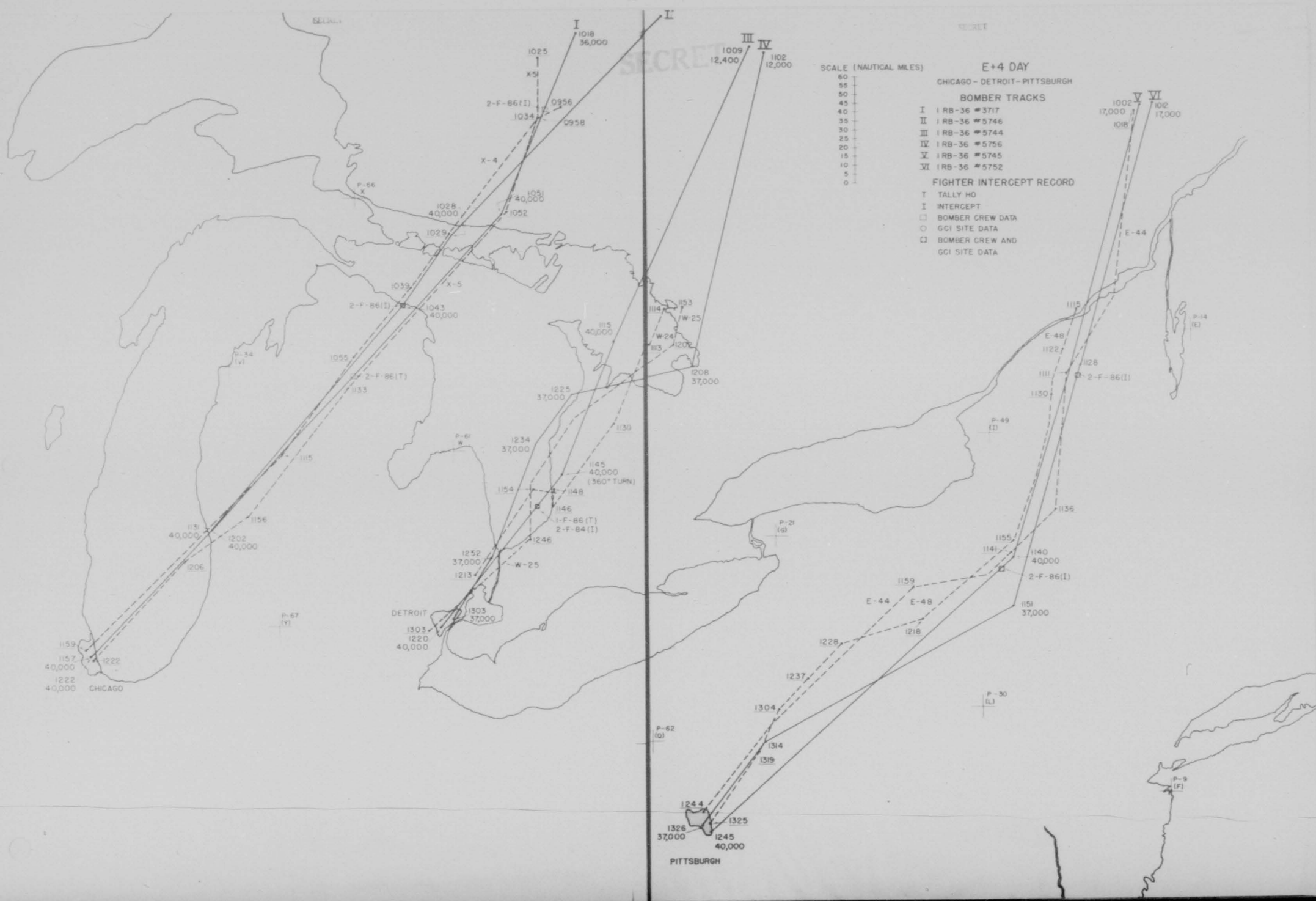
To accomplish post-strike reconnaissance of Chicago and Detroit with two RB-36's flying at 40,000 feet and to pass over the target areas 1115 to 1130%.

Execution:

The sorties all were over the target late. In the Pittsburgh case they were one hour late. All of the flights were tracked and all but one of the sorites on Detroit were successfully intercepted.

Table of Activity (Refer to Map)

Force	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs Pre-Tgt	Tgt Time	ECM
Chicago	I	1 RB-36	1025	1055	4	1222	Unknown
Chicago	II	1 RB-36	0956	1043	2	1157	Unknown
Detroit	III	1 RB-36	1114	1200	3	1220	Unknown
Detroit	IV	1 RB-36	1153	None	0	1303	Unknown
Pittsburgh	V	1 RB-36	1115	1148	2	1326	Unknown
Pittsburgh	VI	1 RB-36	1018	1132	2	1249	Unknown


SECRET
SCALE (NAUTICAL MILES)
60
55
50
45
40
35
30
25
20
15
10
5
0
E+4 DAY
CHICAGO - DETROIT - PITTSBURGH
BOMBER TRACKS
I 1 RB-36 #3717
II 1 RB-36 #5746
III 1 RB-36 #5744
IV 1 RB-36 #5756
V 1 RB-36 #5745
VI 1 RB-36 #5752
FIGHTER INTERCEPT RECORD
T TALLY HO
I INTERCEPT
BOMBER CREW DATA
GCI SITE DATA
BOMBER CREW AND GCI SITE DATA
I 1018 36,000
II 1025
X-5
2-F-86(I) 0956
1034 0958
X-4
P-66 (X)
1051 40,000
1028 40,000
1052
1029
X-5
1039
2-F-86(I) 1043 40,000
P-54 (V)
1055
2-F-86(T)
1133
1115
1115 40,000
1153
W-25
W-24
1113 1202
1208 37,000
1225 37,000
1130
P-61 (W)
1234 37,000
1145 40,000 (360° TURN)
1154 1148
1146
1-F-86(T)
2-F-84(I)
1246
1252 37,000
1213
W-25
1131 40,000
1156
1202 40,000
1206
P-67 (Y)
DETROIT
1303 37,000
1303
1220 40,000
1159
1157 40,000
1222
1222 40,000
CHICAGO
III 1009 12,400
IV 1102 12,000
V 1002 17,000
VI 1012 17,000
1018
E-44
1115
E-48
1122
1128
1111
2-F-86(I)
1130
P-14 (E)
P-49 (I)
1136
P-21 (G)
1155
1141
1140 40,000
2-F-86(I)
1159
E-44
E-48
1151 37,000
1218
1228
1237
1304
P-30 (L)
P-62 (Q)
1314
1319
P-9 (F)
1244
1326 37,000
1325
1245 40,000
PITTSBURGH

E DAY + 4

Seattle - Spokane

Plan:

To accomplish post-strike reconnaissance of the Seattle-Spokane targets at 40,000 feet at 1700Z.

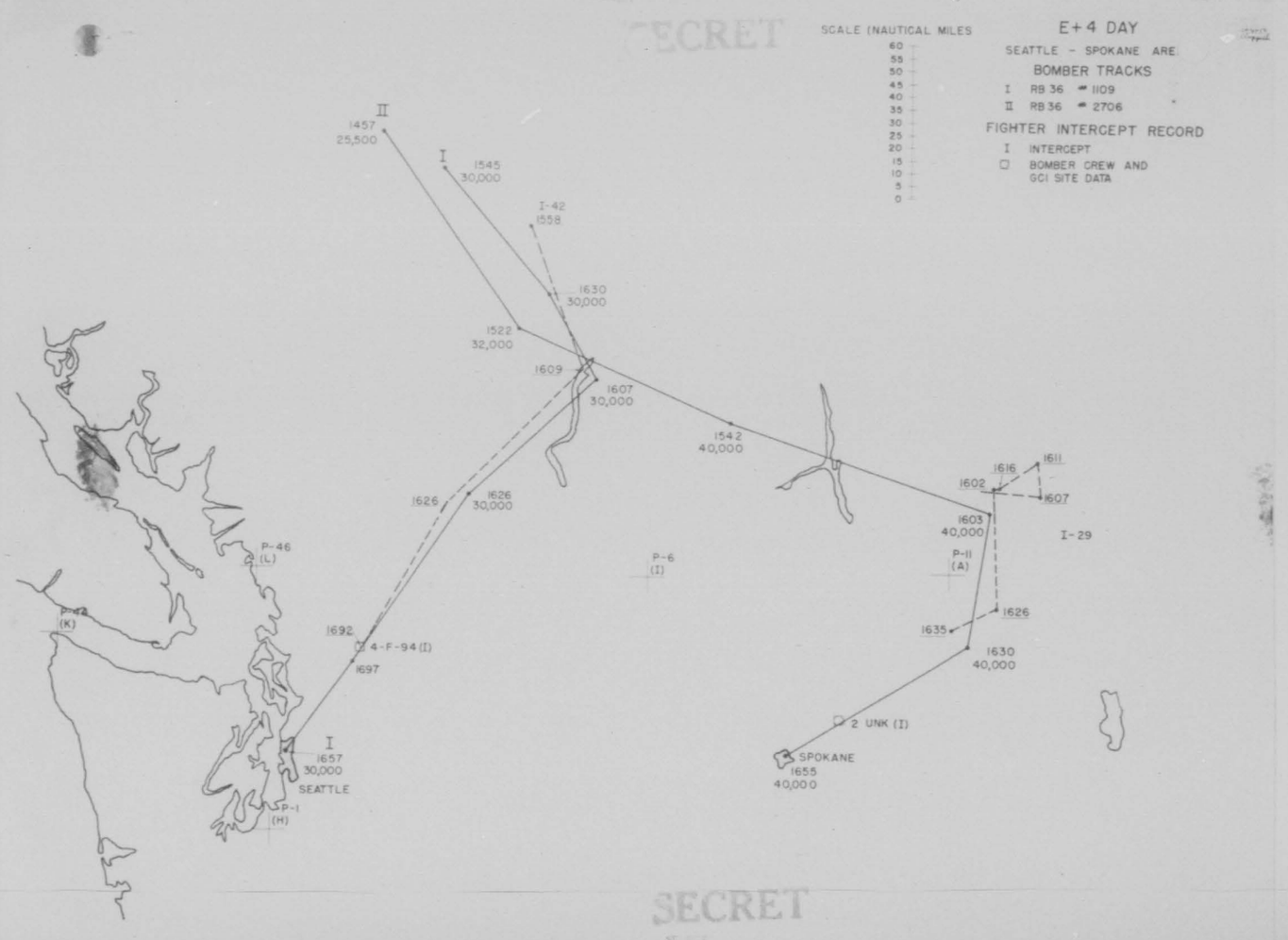
Execution:

The mission was flown as briefed except the Seattle sortie passed over the target at 30,000 feet. Both sorties were tracked and intercepted pre-target.

Table of Activity (Refer to Map)

Force	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs Pre-Tgt	Tgt Time	ECM
Seattle	I	1 RB-36	1558	1642	4	1657	None
Spokane	II	1 RB-36	1602*	1647	2	1655	None

*Apparently orbited in this area from 1602 to 1616Z.



E DAY + 4

San Francisco - Los Angeles

Plan:

Three RB-36's were to complete reconnaissance sorties over Los Angeles (1) and San Francisco (2) at 40,000 feet to simulate determination of strike damage. They were to be over their targets at 1700Z.

Execution:

The plan was executed except for one RB-36 which arrived over San Francisco twenty-eight minutes late. It should be noted in the accompanying table that all of the sorties were tracked and all of them were intercepted.

Table of Activity (Refer to Map)

Force	Track No.	No. Acft	First Detect	First Intercept	No. Ftrs Pre-Tgt	Tgt Time	ECM
San Francisco	I	1 RB-36	1632	1708	4	1728	Unknown
	II	1 RB-36	1622	1654	3	1700	Unknown
Los Angeles	III	1 RB-36	1644	1732*	2	1704	Unknown

*Post-Target Interception

SCALE (NAUTICAL MILES)
60
55
50
45
40
35
30
25
20
15
10
5
0

E+4 DAY

SAN FRANCISCO — LOS ANGLES AREA

BOMBER TRACKS

I RB-36 # 2712
II RB-36 # 2703
III RB-36 # 1099

FIGHTER INTERCEPT RECORD

T TALLY-HO
I INTERCEPT
□ BOMBER CREW DATA
○ GCI SITE DATA
□ BOMBER CREW AND GCI SITE DATA

APPENDIX A

RECOMMENDATIONS REGARDING PLANNING FOR
REPORTING AND ANALYSIS OF FUTURE EXERCISES

1. The idea of joint planning by SAC-ADC personnel of an exercise of this nature is good. Stricter delineation of what information is to be passed to units in each command and more detailed instructions as to reporting procedures with more emphasis on uniformity are desirable. The planning of the exercises should include the best of experimental design techniques in order to help insure maximum information from least command effort.

2. It is strongly recommended that the reporting procedures be established in detail and that provision be made for the following:

a. One "quicky" report to test reporting services and to give a quick summary of the situation.

b. Allow a reasonable time after the exercise for the participating units to accurately compile their required reports, tabulations, and maps. A standard technique of constructing such compilations should be spelled out in detail so that unit reports are uniform and complete. The ground observer team assigned to each geographical area involved should have no other duties until major questions of detail are resolved. It is believed that this procedure will yield essentially final reports for SAC within about the same time interval as was needed for the Interim Report on this exercise and further that the total man-hours required by both SAC and ADC

would be substantially reduced by more than half.

3. Reporting directions for the next exercise should include:

a. A detailed requirement for size and recording of information on overlays to facilitate handling.

b. A requirement for radar scope photos (with watches synchronized) at turn points, check points, and target in order to facilitate building of correct overlays.

c. With joint analysis effort by SAC-ADC personnel, all GCI logs pertinent to the analysis will be available through ADC channels to completely analyze the defense reaction. These should be supplemented with complete and accurate standard reports by ground observers at the sites. Care should be taken that the sites covered are chosen correctly to supply the information desired from the exercise. Rather detailed narrative summaries of activities should also be requested since it not only encourages alert observing, but also aids immensely in piecing together the information.

APPENDIX B

STATISTICAL TABLES AND GRAPHS

ABORT RATES BY TYPE AIRCRAFT
(Staging Missions Not Included) B

Type Acft	Scheduled	Ground Abort	Pre-Tgt Abort	Over Target	Post Tgt Abort	Completed as Scheduled
B-29	100	7.8	9.0	83.2	3.9	79.3
B-50*	100	16.0	14.0	70.0	8.0	62.0
B-36	100	2.4	7.1	90.5	7.1	83.4
RB-29	100	00.0	00.0	100.0	0.0	100.0
RB-50	100	33.3	00.0	66.7	0.0	66.7
RB-36	100	6.5	6.5	87.0	3.2	83.8
RB-45	100	7.1	14.3	78.6	0.0	78.6
KB-29	100	3.4	8.5	88.1	3.4	84.7
F-84	100	3.9	22.1	74.0	5.2	68.8
Total	100	6.7	12.1	81.2	4.7	76.5
Total Multi Engine	100	7.5	9.3	83.2	4.6	78.6

ABORT RECORD BY TYPE OF AIRCRAFT
(Staging Missions Not Included)

Type Acft	Scheduled	Ground Abort	Pre-Tgt Abort	Over Target	Post Tgt Abort	Completed as Scheduled
B-29	77	6	7	64	3	61
B-50*	50	8	7	35	4	31
B-36	42	1	3	38	3	35
RB-29	4	0	0	4	0	4
RB-50	3	1	0	2	0	2
RB-36	31	2	2	27	1	26
RB-45	14	1	2	11	0	11
KB-29	59	2	5	52	2	50
F-84	77	3	17	57	4	53
Total	357	24	43	290	17	273

*B-50 abort rate accounted for in great part by ground aborts caused by safety regulations covering conditions of use of the B-50's on long range missions.

DETAILED SUMMARY OF ATTACK PHASE

The following table presents a summary of the final attack phase of the missions for all three days. The table is a compilation of some of the numerical values presented on the maps in the discussion in Section III. A few items should be noted before studying the table.

a. In some cases it is evident that the GCI site did not scramble fighters near first detection time. In some cases there were fairly large delays no doubt to allow the bombers to come closer to the fighter bases. In some cases it is noted that scramble occurred before first detection. This may be due to erroneous recording of data or possibly a scramble ordered by another site.

b. The sites are not necessarily located adjacent to the targets. Hence, it is possible to have the interception range greater than the range of first detection.

c. In general the only day for which jamming reports are reliable is E + 3 Day. For the other days UNKNOWN may mean either no report or no jamming.

d. For the eastern section of the country and particularly for E + 3 Day, the flights were under surveillance by sites located at great distances from the target. The earliest detection time is given in these cases, but the details for detection and interception are given for the site charged with sector defense responsibility primarily

because the raids can be separated according to target area at this stage. It should be noted that the early detections of the RB-45's by Station 66 occurred while they were grouped rather closely together. Thus it is impossible to state definitely that all of the detections indicated were actual detections. In particular, note the Pittsburgh and Philadelphia mission.

e. This compilation represents the joining of many pieces of information which can easily lead to specific inconsistencies. Hence, the table should be utilized only to furnish a general picture.

REACTION SUMMARY
E + 4 (Reconnaissance)

SAC			ADC		FIRST DETECTION							SCRAMBLE		INTERCEPTION			JAMMING			TARGET	
AREA	Aircraft Type	No.	Site No. 1st Det	Type Radar	Time	Pre-Warned	Bearing	Distance	Est. No.	Alt by Bomber	Alt by Site	Time	No.	Time	Bearing	Distance	Alt	Chaff	L, S Band	VHF	Time	Alt
NEW YORK	RB-36	1	10	CPS6b	0952	No	110	180	1	30000	10000	1010	2	NONE				1057 -Targ.	------>		1136	40000
PHILA-DELPHIA	RB-36	1	45	FPS 3	1047	No	110	120	-	30000	12000	1058	5	1137	140	50	36000	UNKNOWN			1224	40000
PHILA-DELPHIA	RB-36	1	13	CPS6b	0924	No	130	180	-	10000	8000	-	-	1015	160	90	30000	UNKNOWN			1129	40000
WASHING-TON	RB-36	1	10	CPS6b	0915	No	140	140	-	18000	14000	NONE		NONE				UNKNOWN			1111	40000
WASHING-TON	RB-36	1	30	CPS6b	1048	No	110	220	-	30000	-	-	-	1113	30	190	38000	UNKNOWN			1147	40000
BOSTON	RB-45	1	45	FPS 3	0512	No	130	200	-	34000	-	NONE		NONE				UNKNOWN			0630	38500
PITTS-BURGH	RB-36	1	14	CPS6b	1018	No	350	130	1	14000	-	1113	2	1132	250	90	40000	UNKNOWN			1249	40000
PITTS-BURGH	RB-36	1	14	CPS6b	1115	No	290	70	1	25000	-	1124	2	1148	270	200	30000	UNKNOWN			1326	37000
DETROIT	RB-36	1	61	FPS 3	1114	No	50	140	1	40000	40000	1126	4	1200	130	50	-	UNKNOWN			1220	40000
DETROIT	RB-36	1	61	FPS 3	1153	No	50	140	1	37000	35000	1222	1	NONE				UNKNOWN			1303	37000
CHICAGO	RB-36	1	66	FPS 3	0956	No	70	120	1	40000	20000	1007	2	1043	150	70		UNKNOWN			1157	40000
CHICAGO	RB-36	1	66	FPS 3	1025	No	50	130	1	36000	20000	1034	2	1055	190	80		UNKNOWN			1222	40000
SEATTLE	RB-36	1	6	FPS 3	1558	No	340	150	1	30000	30000	1626	4	1644	250	130	30000	UNKNOWN			1657	30000
SPOKANE	RB-36	1	6	FPS 3	1602	No	160	140	1	40000	20000	1626	2	1647	40	100	30000	UNKNOWN			1655	30000
SAN FRAN-CISCO	RB-36	1	38	CPS6b	1622	No	280	170	-	38000	38000	1629	2	1654	240	50	38000	UNKNOWN			1700	40000
SAN FRAN-CISCO	RB-36	1	38	CPS6b	1632	No	290	190	-	32000	38000	1636	2	1708	270	60	40000	UNKNOWN			1728	40000
LOS ANGELES	RB-36	1	15	FPS10	1644	No	150	60	-	40000	28000	1649	2	1732 (Post Target)			40000	UNKNOWN			1704	40000

SUMMARY
E + 3

AREA	Diversion or Strike	SAC Aircraft Type	SAC Aircraft No.	ADC Site No. 1st Det	ADC Type Radar	FIRST DETECTION Time	Pre-Warned	Bearing	Distance	Est. No.	Alt by Bomber	Alt by Site	SCRAMBLE Time	No.	INTERCEPTION Time	Bearing	Distance	Alt	JAMMING TIME Chaff	L,S Band	VHF	TARGET Time	Alt
SEATTLE	Strike	B-50	4	11	FPS 3	1035	No	10	135	-	26000	16000	-	3	1121	20	70	26000	0911 -0914	0911-094	1200-1310	1214	26000
	Strike	B-50	1	11	FPS 3	1112	No	0	140	-	26000	16000	-	-	1240	240	150	26000	.....N O N E.....			1243	26000
	Diversion	B-29	4	44	FPS 3	1105	No	230	200	-	20000	20000	-	-	.....N O N E.....				1105 -1120	...N O N E..		No	20000
	Diversion	B-29	4	44	FPS 3	1114	No	250	180	-	20000	20000	C A P		1122	250	160	20000	-	-	-	No	20000
SPOKANE	Strike	B-50	6	11	FPS 3	1111	No	30	145	-	26000	16000	-	-	1207	100	150	26000	1207 -1324	1206 -1330	1205 -1327	1225	30000
SAN FRAN-CISCO	Strike	B-29	6	38	CPS6b	1130	No	260	200	1	16000	16500	1153	2	1218	240	40	16500	1155 to target	1155 to target	1155 to target	1224	16000
	Diversion	B-29	5	38	CPS6b	1148	No	230	180	1	26000	30000	1200	2	1226	160	15		1121 -1325	1145 -1340	1150 -1320	1224	26000
	Diversion	B-29	4	38	CPS6b	1144	No	240	180	1	26000	-	C A P		1230	270	15	26000	1121 -1325	1145 -1345	1150 -1320	1240	26000
LOS ANGELES	Strike	B-50	3	15	FPS10	1113	No	270	160	1	30000	25000	1205	1	1214	90	104	25000	1125 -1359	1130 -1245	1144 -1217	1215 -1235	30000
	Diversion	B-29	9	15	FPS10	1113	No	270	160	-	20000	25000	-	-	1154	180	20		1109 -1220	None	1135 -1240	1220 -1228	20000

SECRET

SECURITY INFORMATION

AREA	SAC Diversion or Strike	Aircraft Type	Aircraft No.	Site No. 1st Det	ADC Type Radar	ADC Time	FIRST Pre-Warned	FIRST Bearing	FIRST Distance	DETECTION Est. No.	DETECTION Alt by Bomber	DETECTION Alt by Site	SCRAMBLE Time	INTERCEPTION No.	INTERCEPTION Time	INTERCEPTION Bearing	INTERCEPTION Distance	INTERCEPTION Alt	JAMMING TIME Chaff	JAMMING TIME L,S Band	JAMMING TIME VHF	TARGET Time	TARGET Alt
NEW YORK				80(1)	FPS10	0951	-	-	-	-	-	-							1155	1012	1012	1225	
	Strike	B-50	6	9	CPS6b	1140	Yes	350	200	6	30000	25000	1213	2	1235	0	0	-	-1320	-1300	-1320	-1226	30000
	Diversion	B-29	6	9	CPS6b	1048	No	130	230	1	4000	18000	1110	4	1131	120	94	4000			1209 -1233	No	3000
PHILA-DELPHIA				80	FPS10	0935	-	-	-	-	-	-											
	Strike	B-50	5	30	CPS6b	1142	Yes	30	70	6	28000	35000	1149	2		N O N E			0940 -1312	1150 -1305	0937 -1145	1223 -1232	30000
	Strike	B-50	1				NOT	DETECTED															30000
	Diversion	B-29	8	9	CPS6b	1048	No	140	240	1	20000	25000	1113	4	1130	150	120	20000	N O N E				
				80	FPS10	0838	-	-	-	-	-	-										No	20000
WA[illegible] INGTON	Strike	B-29	4	30	CPS6b	1103	Yes	30	118	-	30000	17500	1118	-	1200	190	93		1137 -1210	1115 -1210	1130 -1215	1210	30000
	Strike	B-50	1				NOT	DETECTED EXCEPT POSSIBLY WITH B-29 STRIKE ABOVE														1210	30000
	Diversion	B-29	6	9	CPS6b	1055	No	140	140	-	20000		C A P		1106	140	130	20000	-	-	1045 -1257		20000
				80	FPS10	0831	-	-	-	-	-	-											
PITTS-BURGH	Strike	B-29	4	30	CPS6b	1003	Yes	30	190	5			1056	(CAP)	(1010 Z by earlier site)				1124 -1308	1030 -1335	1130 -1335	1217	30000
	Strike	B-29	1				NOT	DETECTED														1206	15000
BOSTON	Diversion	B-29	3	45	CPS6b	1027	No	140	150	1	4000	10000	1044	-	1106	70	90	-	N O N E			1150	10000
DE-TROIT	Strike	B-36	19	20	CPS6b	1451	Yes	62	193	20	40000	35000	1502	3	1520	60	90	40000	1400 -1627	1400 -1620	1416 -1625	1535 -1543	40000
	Escort	F-84	20			NO RECORD OF DETECTION OR INTERCEPTION																	
CHICAGO	Strike	B-36	19	66	FPS 3	1413	No	34	80	3	40000	25000	1418	2	1447	160	67	40000	None	None	1312 -	1544 -1548	40000
	Escort	F-84	35			NO RECORD OF DETECTION OR INTERCEPTION																	
KANSAS CITY	Strike	B-50	6	69	CPS 5	0945	No	315	72	2	10000	20000	0947	4	1010	213	39	13000	N O N E			1232 -1233	16000
OMAHA	Strike	B-50	5	28	FPS 3	0905	No	350	180	-	10000	-			..... N O N E				1100 -1331	1113 -1327		1207 -1219	30000

NOTE: On the Washington, New York, Philadelphia, and Pittsburgh strikes, the aircraft were under radar surveillance at least as early as the first first detection time given. The last first detection time given is that of the GCI station responsible for the final sector defense of that target.

SECRET

SECURITY INFORMATION

SUMMARY

E (Reconnaissance)

SAC			ADC	FIRST DETECTION					SCRAMBLE		INTERCEPTION				JAMMING			TARGET	
AREA	Aircraft Type	No.	Site No. 1st Det	Type Radar	Time	Pre-Warned	Bearing	Distance	Est. No.	Alt by Bomber	Alt by Site	Time	No.	Time	Bearing	Distance	Alt	Chaff	L, S Band VHF	Time	Alt
			66	FPS 3	1430	No	30	40	1												
NEW YORK	RB-45	1	21	CPS6b	1510	Yes	20	120	1	40000	40000	1500	2	1533	80	160	-	UNKNOWN		1602	42500
PHILA-DELPHIA	RB-45	1	66 21	FPS 3 CPS6b	1415 1448	No Yes	320 330	120 170	1	36000	24000	1500	2	NONE				UNKNOWN		1600	36000
WASHING-TON	RB-45	1	54	FPS 3	1610	No	310	100	1	35000	--	NONE		NONE				UNKNOWN		1637	35000
PITTS-BURGH	RB-45	1	66 21	FPS 3 CPS6b	1415 1448	No Yes	320 330	120 170	1	35000	24000	NONE		NONE				UNKNOWN		1606	35000
DETROIT	RB-45	1	21	CPS6b	1516	No	350	170	1	30000	30000	1500	2	1554	40	40	40000	UNKNOWN		1602	38000
DETROIT	RB-50	1	21	CPS6b	1452	No	350	110	1	30000	32000	1517	4	1543	30	60	30000	UNKNOWN		1600	30000
CHICAGO	RB-45	1	NOT DETECTED																	1440	35000
CHICAGO	RB-50	1	61	FPS 3	1404	No	30	150	1	30000	15000	1405	-	1455	10	80	30000	UNKNOWN		1600	30000
SEATTLE	RB-29	1	6	FPS 3	1706	No	30	120	1	25000	25000	1732	2	1745	40	50	25000	UNKNOWN		1804	25000
SEATTLE	RB-36	1	6	FPS 3	1704	No	340	190	1	40000	40000	1749	1	1750	30	110	40000	1753 -1810	UNKNOWN	1808	40000
SPOKANE	RB-29	1	6	FPS 3	1638	No	20	120	1	25000	16000	1815	2	1846	-	-	25000	1740 -1920	UNKNOWN	1920	25000
SPOKANE	RB-36	1	6	FPS 3	1534	No	340	170	1	35000	30000	1643	2	1729	90	180	30000	UNKNOWN		1822	35000
SAN FRAN-CISCO	RB-36	1	38	CPS6b	1647	No	290	250	1	-	-	CAP		1746	300	50	35000	1751 -1810	UNKNOWN	1805	35000
SAN FRAN-CISCO	RB-36	1	38	CPS6b	1749	No	280	220	1	40000	25000	1800	2	1825	230	80	38000	UNKNOWN		1841	40000
SAN FRAN-CISCO	RB-29	1	38	CPS6b	1700	No	290	250	2	25000	-	NONE		NONE				1712 -1909	1653 None -1943	1800	25000
LOS ANGELES	RB-36	1	15	FPS16	1722	No	240	170	1	40000	40000	1719	2	1748	230	60		UNKNOWN		1812	40000
LOS ANGELES	RB-29	1	15	FPS10	1713	No	230	160	1	25000	20000	1744	4	1810	90	70	24000	1800 -1830	UNKNOWN	1817	25000

CUMULATIVE DISTRIBUTIONS OF RANGE OF FIRST DETECTION AND TIME ELAPSED FROM DETECTION TO INTERCEPTION

The following graphs were constructed to give a graphic picture of the distribution of the ranges of first detection and the time elapsed from detection to interception. The figures on the sides of the graphs represent the cumulative percentage. Thus for all tracks, 50% of those detected were detected by 166 nautical miles, and for those intercepted, 50% were intercepted within 45 minutes after they were detected. These 50% points (medians) are indicated on three of the graphs. Other percentage values of the parameters may be obtained in the same way. In boxes above the graphs is given the code for the graphs and also the mean (which, it should be noted generally differs from the median defined above; a familiar analogy in bombing accuracy terms is CEP which is a median and CEA which is a mean) and standard deviation measures pertinent to the particular distribution. The mean (or average) is calculated as follows:

$$\text{Mean} = \overline{X} = \frac{\sum_1 x_i}{N}$$

where x_i is a typical sample value of the parameter concerned, $\sum$ indicates summation, i.e., $(x_1 + x_2 \text{ ---- } + x_N)$, and N is the number of cases in the sample. The standard deviations given are as follows

$$\text{standard deviation} = \sqrt{\frac{\sum_1 (x_i - \overline{X})^2}{N - 1}}$$

and

$$\text{standard deviation of mean} = \sqrt{\frac{\sum_1 (x_i - \overline{X})^2}{N (N - 1)}}.$$

The standard deviation gives an estimate of how much the data varies from the mean. For example, if the mean range of first detection is 157 nautical miles, and the corresponding standard deviation is 45 miles, it can be assumed that about 95% of the data will fall within ± 2 standard deviations (± 90 miles) from the mean. That is, 95% of the observations will lie in the interval from 67 miles to 247 miles. The standard deviation of the mean gives an estimate of how much the mean itself may vary in other samples of the same size. Thus, if the standard deviation of the mean is 6 miles, 95% of the sample means calculated from samples of the given size (50 in this case) will fall in a range of ± 2 standard deviations (12 miles) of the true mean. Thus the standard deviation yields a measure of the spread of the data, and the standard deviation of the mean yields a measure of the precision of the calculated mean.

Care should be taken in drawing conclusions from these data due to certain inherent uncertainties in the underlying data. Thus, for example, it was not possible in all cases to make sure that the radar sites had no previous detailed warning of the approach of a track. In fact in certain cases it is known that information had been forwarded from earlier sites which had picked up the track earlier in its history. It was not always possible to be certain that tracks coming in essentially at the same time were all detected. In these cases it was assumed that they were. Finally, in some cases the interceptions would have been made in less time had the fighters been scrambled as soon as

possible after the track had definitely been established as unfriendly. It should be noted that the average time to interception after detection were largest in the middle altitude group. This seems inconsistent since the higher the altitude the longer it was required to intercept the bomber. However, since in the averages computed no distinction was made between conventional and jet type fighters, it can be assumed that there were more jet interceptions at higher altitudes with consequent lower times to interception.

Finally, it must be remembered that these data are based on very small sample sizes. It was because of this that no statistical tests were applied. The information furnished has its greatest value in establishing order of magnitude type of conclusions along with suggesting areas in which more detailed testing might well be employed.

ALL TRACKS

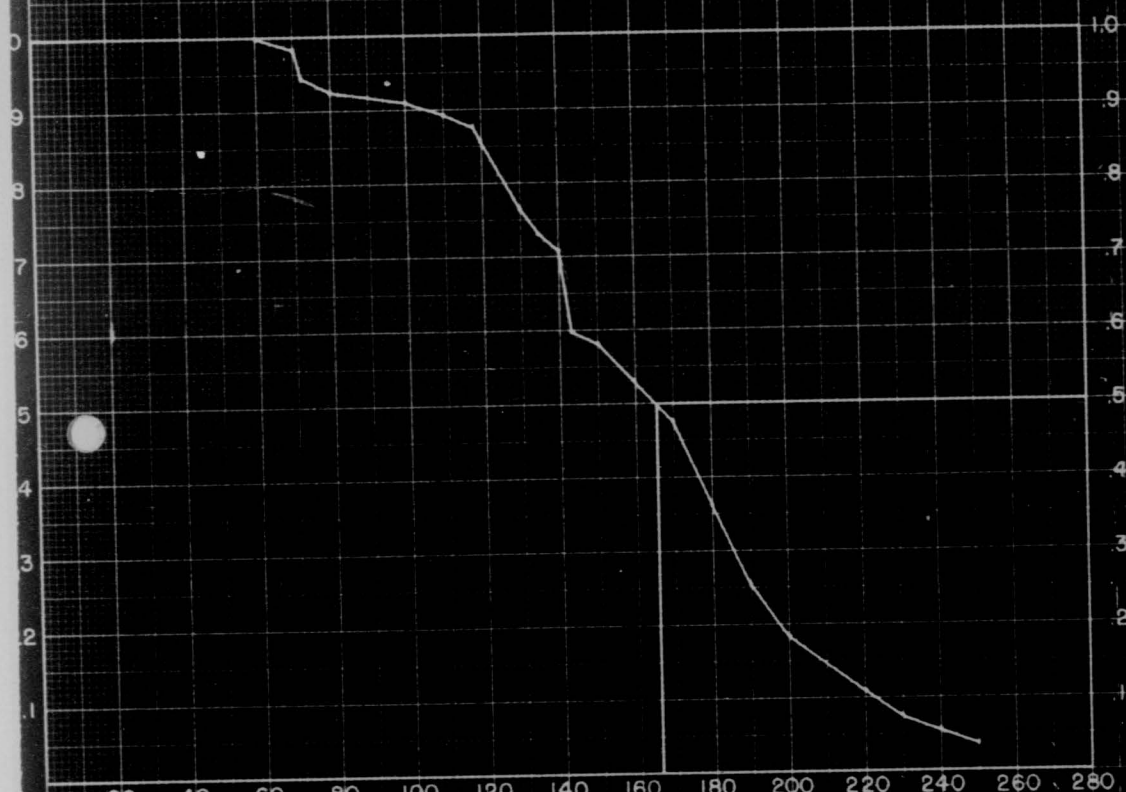
MEAN	STD DEV	STD DEV OF MEAN
157	45	6

(NAUTICAL MILES)

NO. OF TRACKS	NO DETECT	NO INTCP
58	55	44

MEAN	STD DEV	STD DEV OF MEAN
47	23	4

(NAUTICAL MILES)

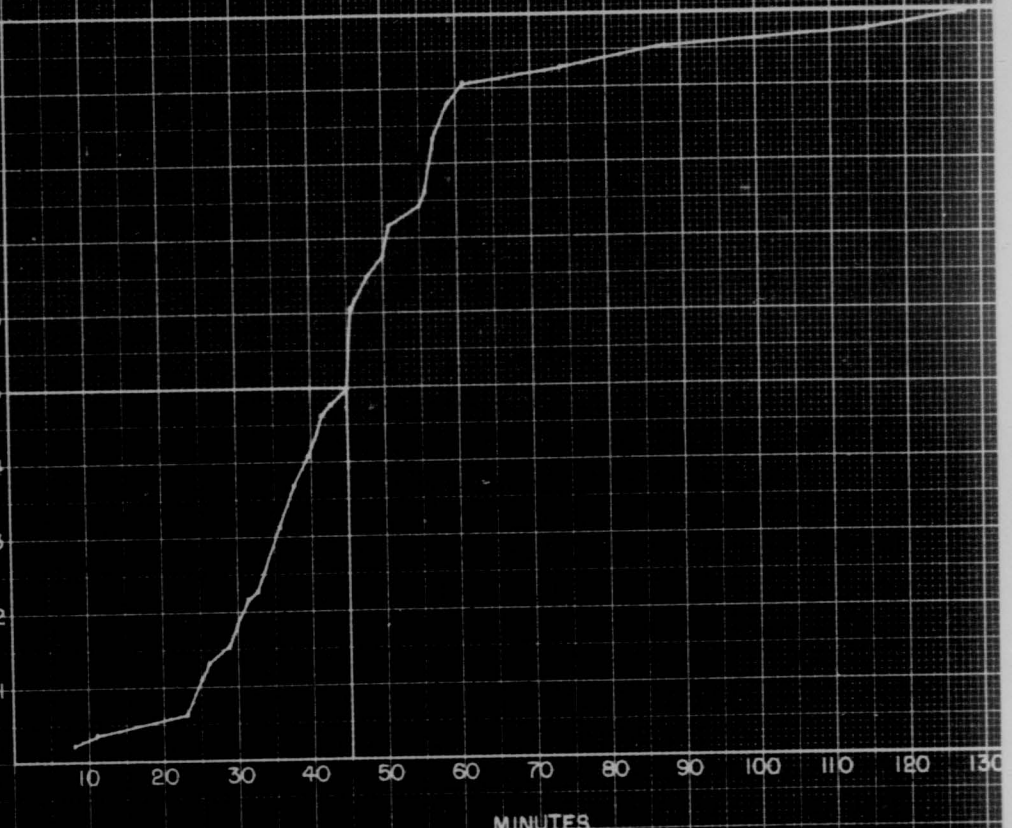


NAUTICAL MILES

RANGE OF FIRST DETECTION

(ALTITUDE SPREAD FROM 1,000-40,000 FEET MSL)

CUMULATIVE RELATIVE FREQUENCY



MINUTES

TIME ELAPSED FROM DETECTION TO INTERCEPTION

(ALTITUDE SPREAD FROM 1,000-40,000 FEET
INTERCEPTION BY BOTH CONVENTIONAL AND
JET TYPE FIGHTERS)

ALL DAYS

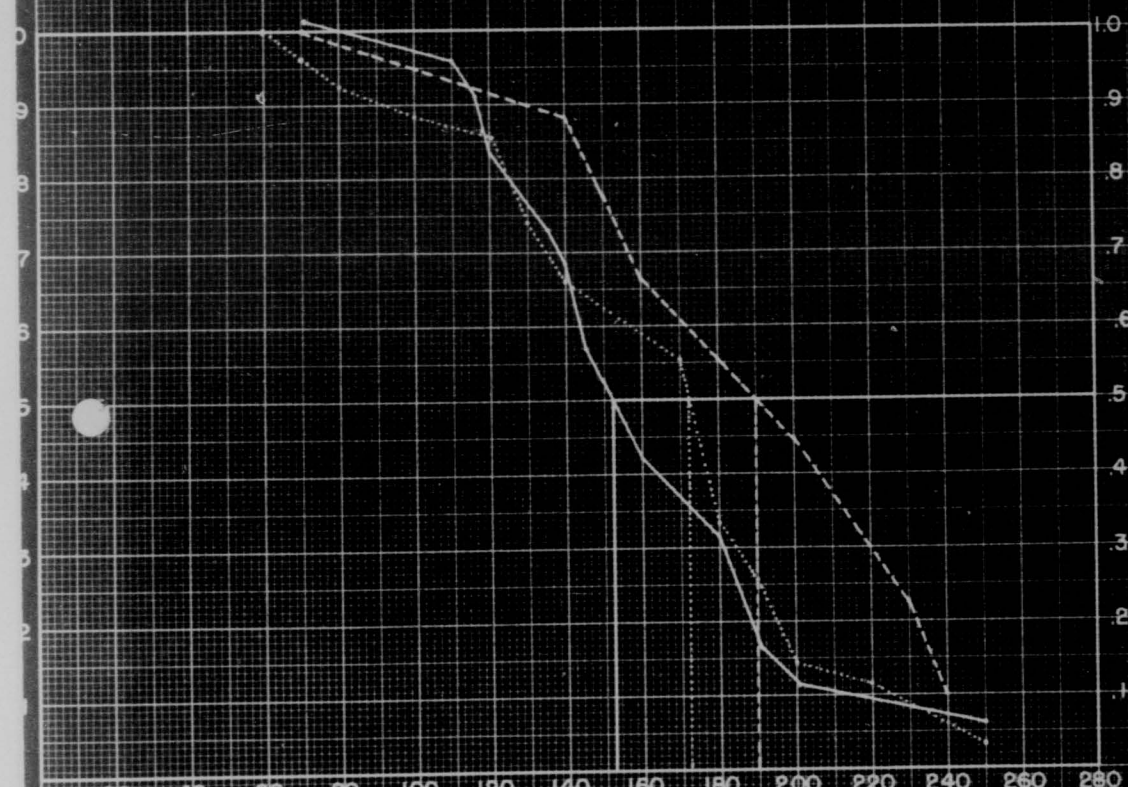
ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20000	175	51	17
20000 TO 32500	153	40	9
OVER 32500	155	47	9

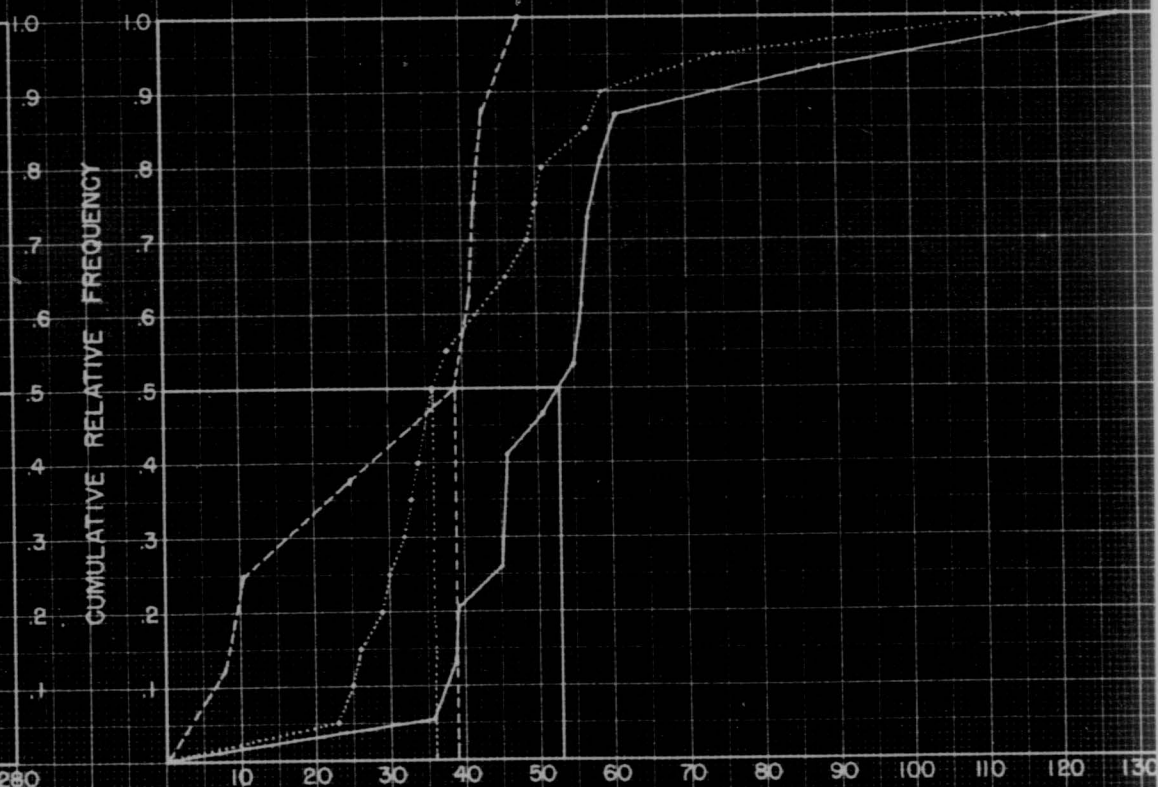
(NAUTICAL MILES)

ALTITUDE	NO. OF TRACK	NO DETECT	NO INTCP
LESS THAN 20000	10	9	8
20000 TO 32500	20	19	16
OVER 32500	28	27	20

ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20000	32	15	5
20000 TO 32500	57	23	6
OVER 32500	44	21	5

(NAUTICAL MILES)





E DAY

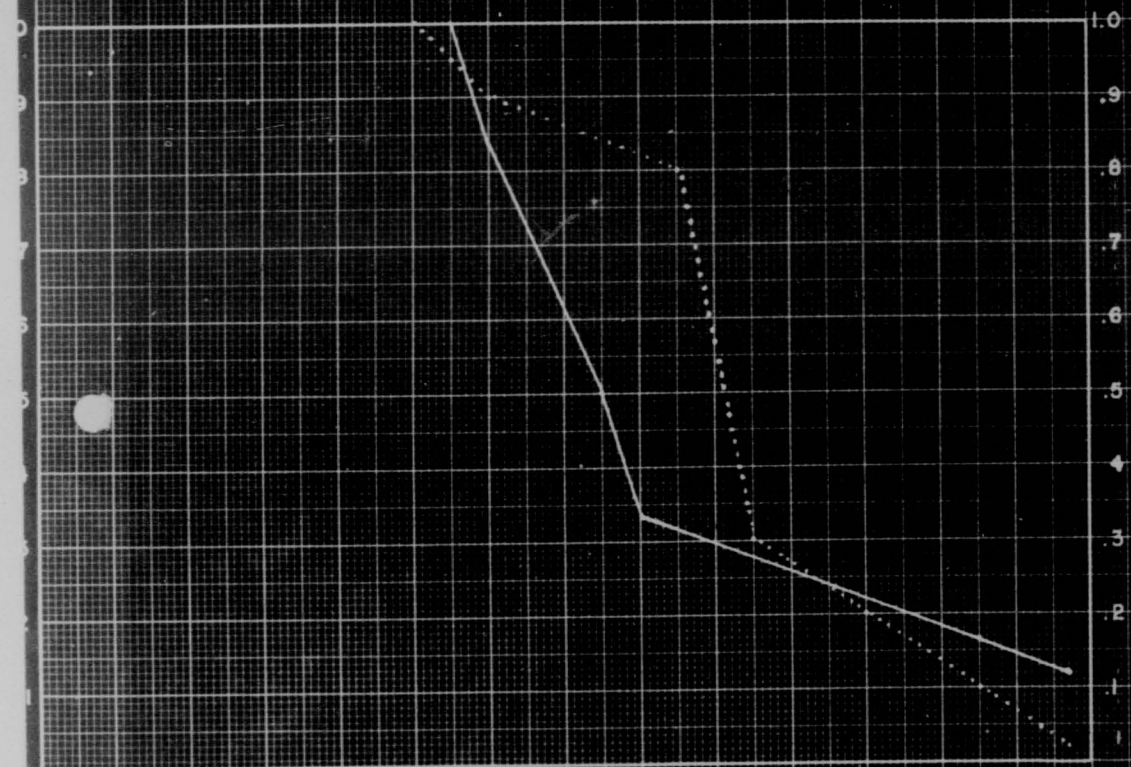
ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20000	—	—	—
20000 TO 32500	152	52	21
OVER 32500	173	43	14

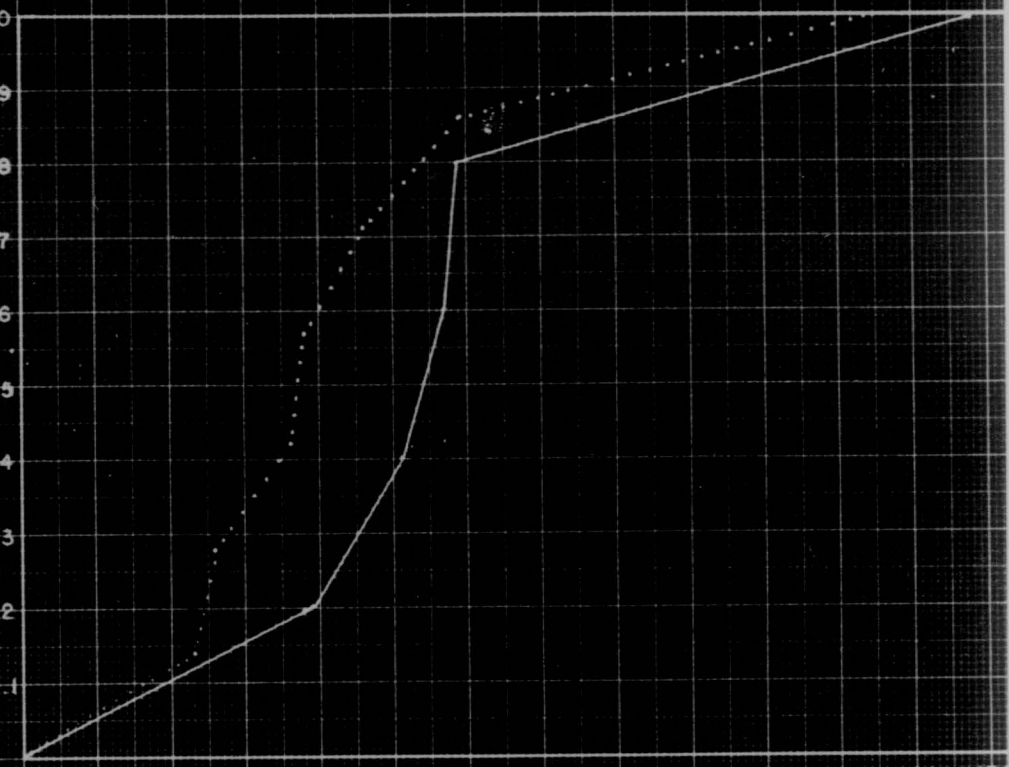
(NAUTICAL MILES)

ALTITUDE	NO OF TRACK	NO DETECT	NO INTCP
LESS THAN 20000	0	0	0
20000 TO 32500	6	6	5
OVER 32500	11	10	7

ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20000	—	—	—
20000 TO 32500	67	35	16
OVER 32500	49	32	12

(NAUTICAL MILES)





E+3

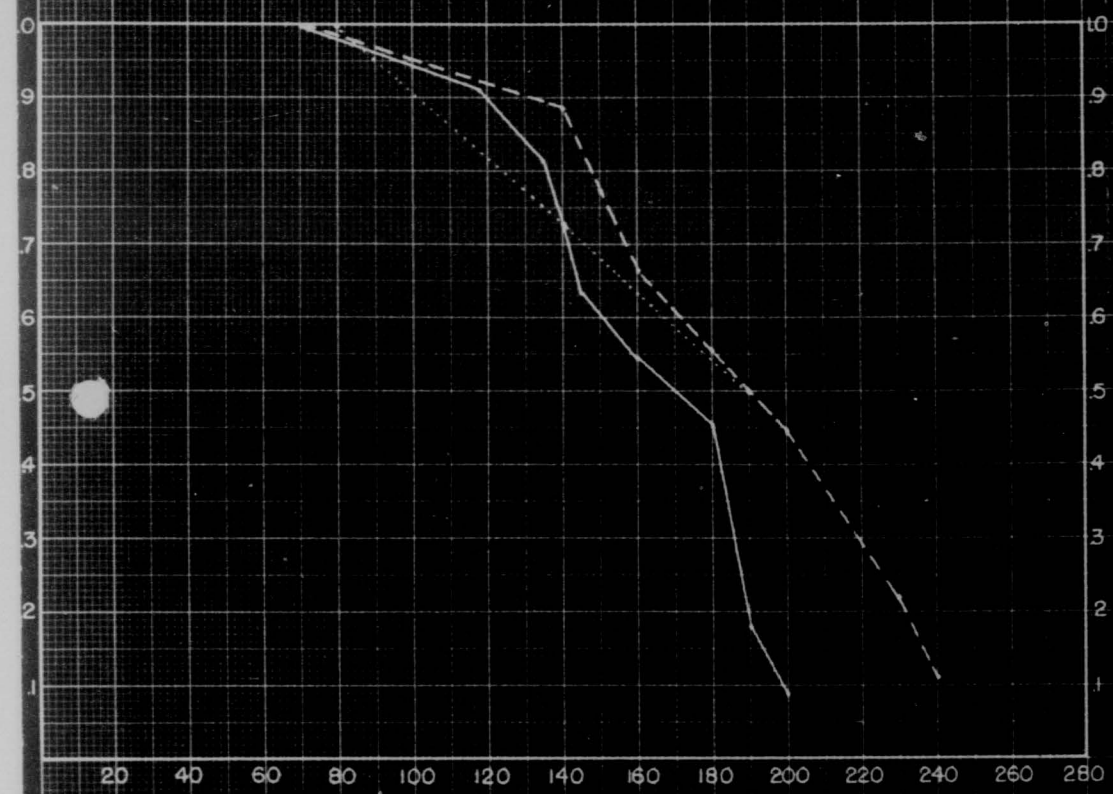
ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20000	175	51	17
20000 TO 32500	154	38	11
OVER 32500	137	80	57

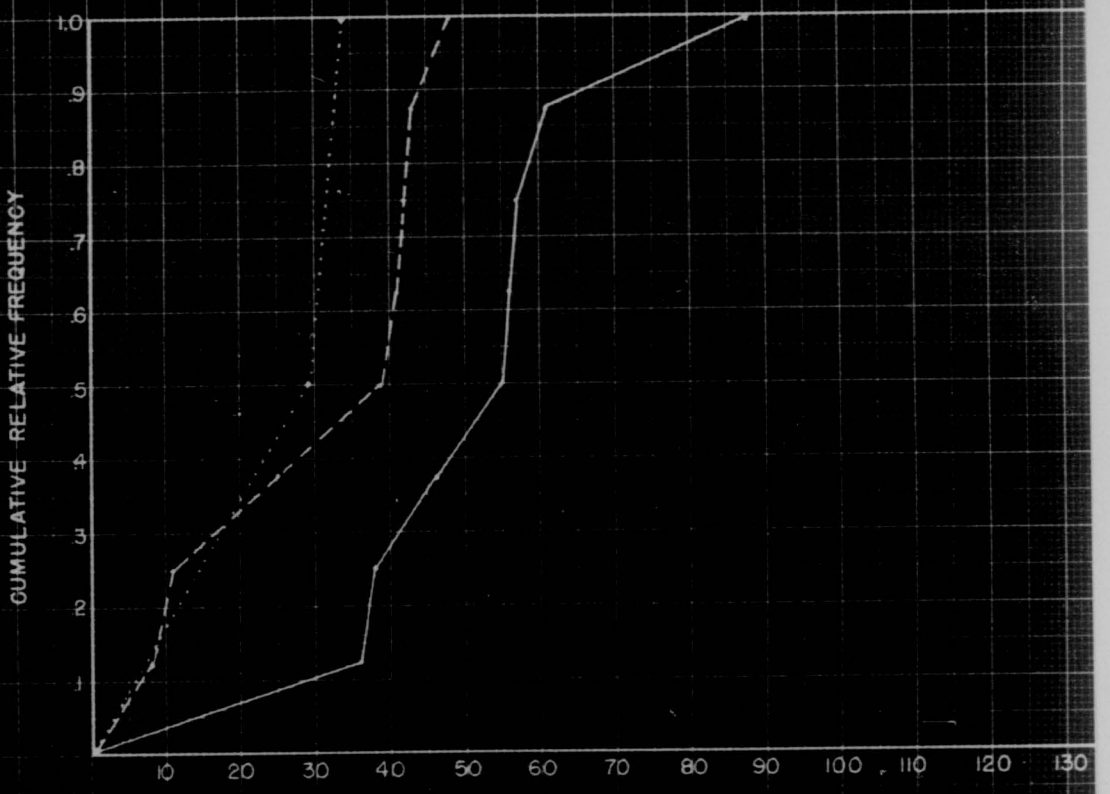
(NAUTICAL MILES)

ALTITUDE	NO OF TRACK	NO. DETECT	NO. INTCP
LESS THAN 20000	10	9	8
20000 TO 32500	12	11	9
OVER 32500	2	2	2

ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20000	32	15	5
20000 TO 32500	55	16	6
OVER 32500	32	3	2

(NAUTICAL MILES)





E + 4

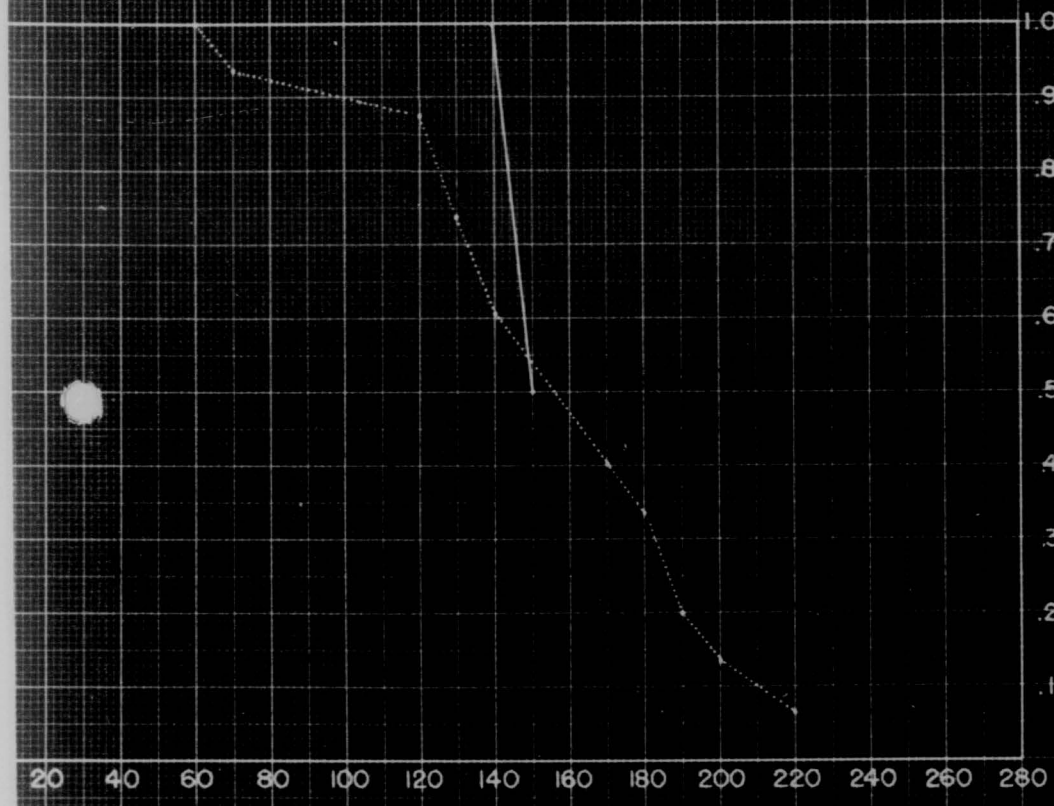
ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
SS THAN 20,000	—	—	—
000 TO 32500	145	7	5
VER 32,500	146	45	12

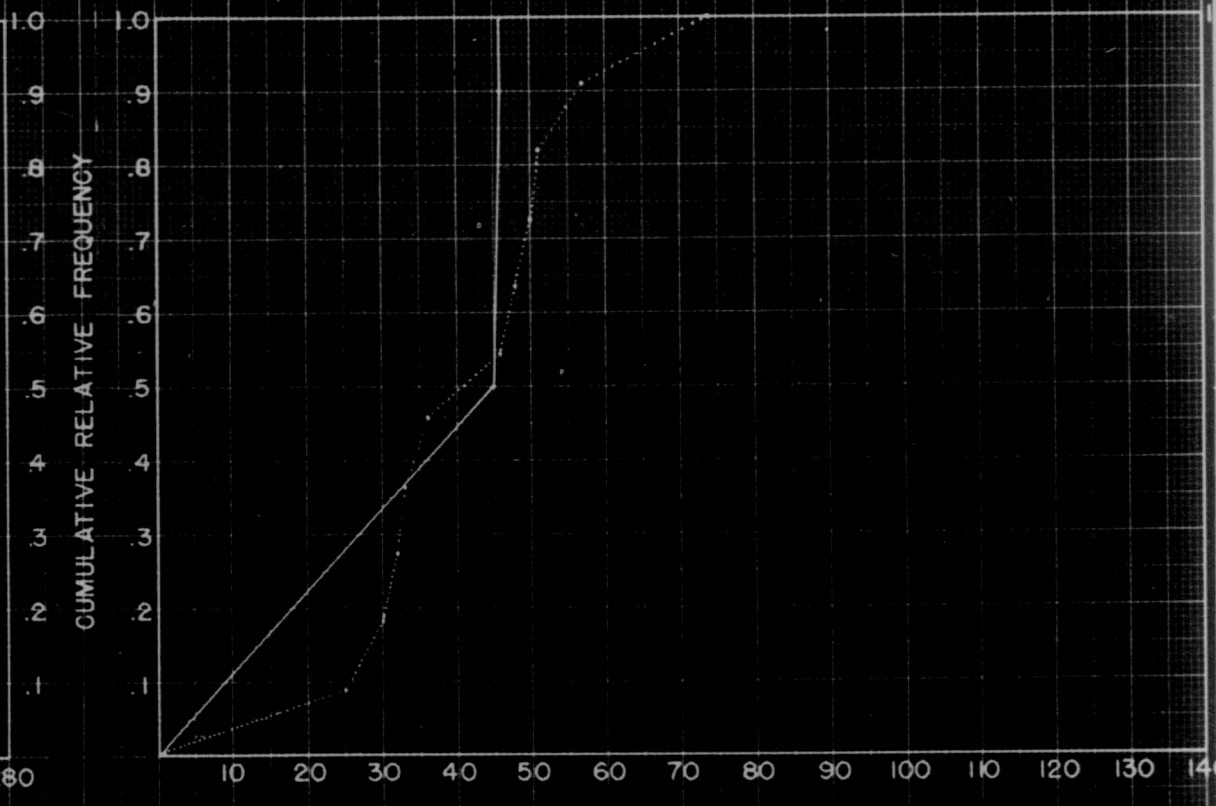
(NAUTICAL MILES)

ALTITUDE	NO OF TRACK	NO DETECT	NO INTCP
LESS THAN 20,000	0	0	0
20,000 TO 32,500	2	2	2
OVER 32,500	15	15	11

ALTITUDE	MEAN	STD DEV	STD DEV OF MEAN
LESS THAN 20,000	—	—	—
20,000 TO 32,500	46	—	—
OVER 32,500	44	14	4

(NAUTICAL MILES)



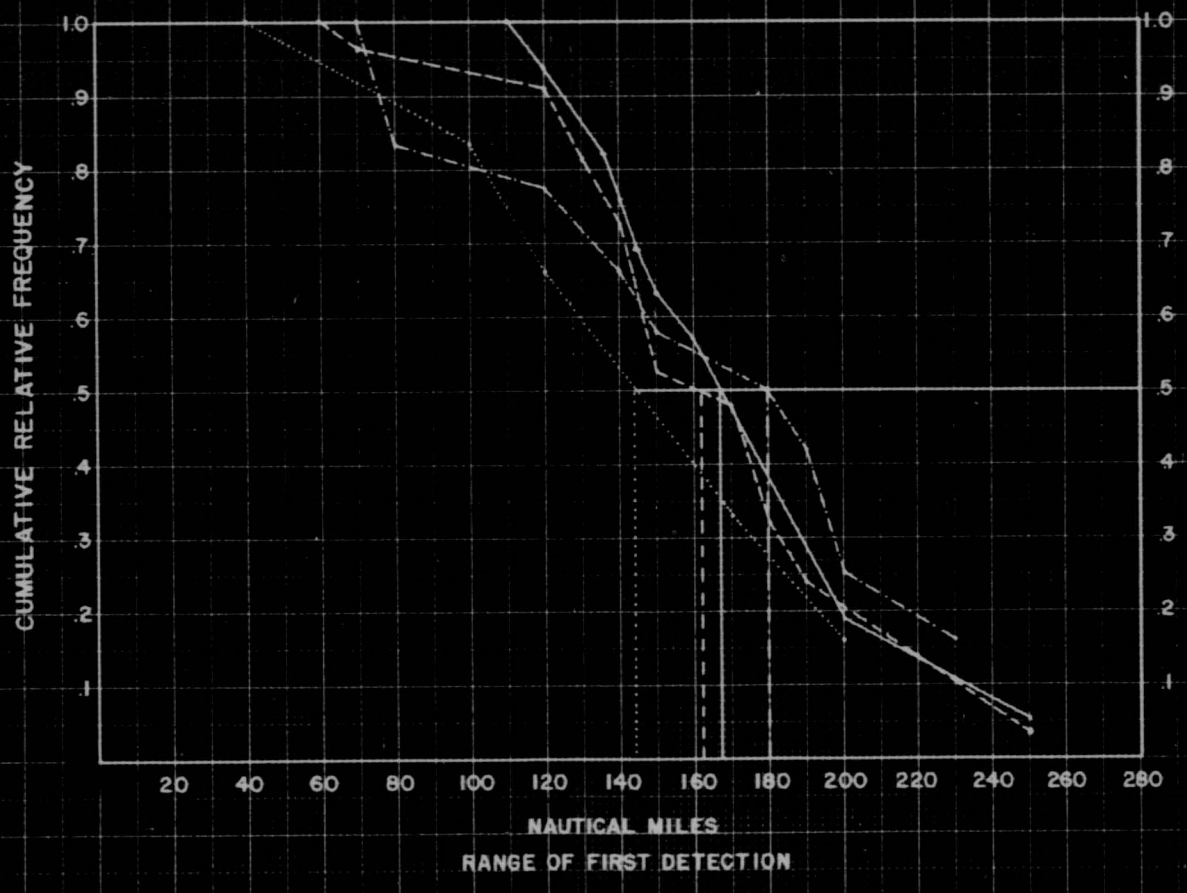


RANGE OF FIRST DETECTION BY TYPE OF AIRCRAFT

TYPE	MEAN	STD DEV	STD DEV OF MEAN
B-29 B-50	162	37	9
B-36	156	46	10
B-45	125	56	23
FORMATION	155	60	17

(NAUTICAL MILES)

TYPE	NO TRACKS	NO DETECT	NO INTCP
B-29 B-50	18	16	14
B-36	21	21	18
B-45	7	6	3
FORMATION	12	12	9

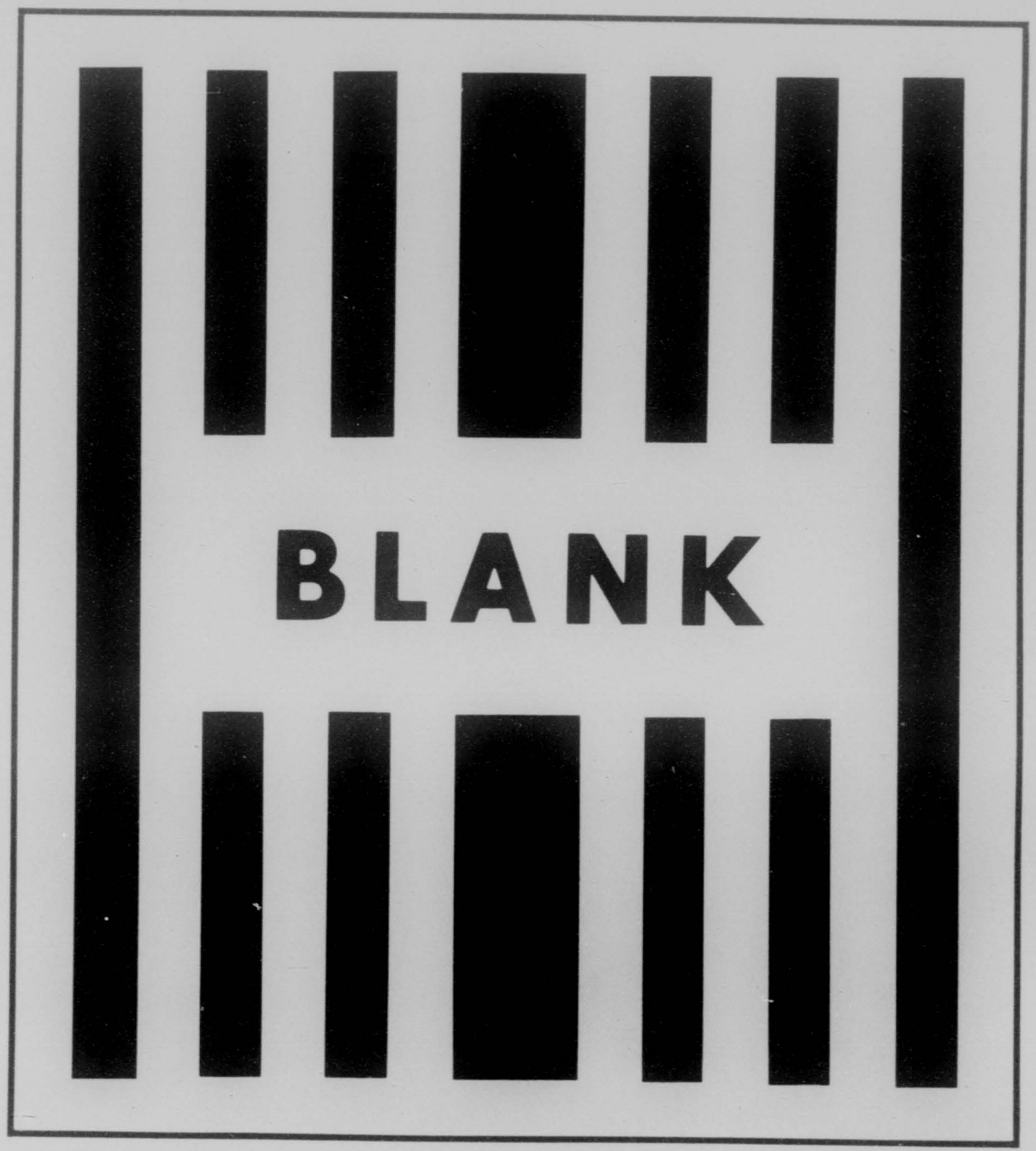


EFFECT OF JAMMING ON RAID SIZE ESTIMATION

For E + 3 Day fairly complete data are available on the time jamming occurred. Data were also available on the time of first detection and the estimate of the raid size. These are correlated in the following table. Thus, from the table we read that when chaff was dispensed and raid size estimates were given, in two cases the raid size was over estimated, in two cases it was correctly estimated, and in three cases it was underestimated.

E + 3 DAY			
	Over Estimate	Correct Estimate	Under Estimate
Chaff	2	2	3
No Chaff			6
L and S Band Jamming	2	2	3
No L and S Band Jamming			6

It appears that either chaff dispensing or L and S Band jamming will tend to increase the defense estimate of the size of the raid. It was further noted that there is a tendency for the defense to underestimate the size of the raid.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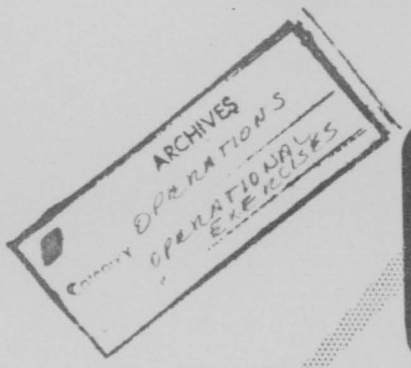

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OPERATIONS ORDER 60-52

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SECURITY INFORMATION

IRIS WORK SHEET

006 OLD REEL NUMBER

016 CALL NUMBER (30AN)

005 IRIS NUMBER (10AN)

026 OLD ACCESSION NUMBER (12AN)

018 MICROFILM REEL/FRAME NUMBER 00000381/31,000850

SECURITY WARNING/ADMIN MARKINGS

RD FRD CN SA WI NF PV FO FS

ORAL HISTORY CAVEAT
01 02 03 04

NO CONTRACT

PROPRIETARY INFO

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501 C

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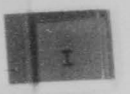

SECTION I

GENERAL

The 509th Air Refueling Squadron was directed by Eighth Air Force Operations Order 60-52 to support the 27th Fighter Escort Wing with in-flight refueling at designated positions on its route to a TDY base in Japan. E day was designated 3 October 1952.

Since the 509th Air Refueling Squadron had only recently returned from TDY in the UK and had not been performing practice refueling missions with the 27th, it was necessary in the short time remaining to avail the crews to be concerned with as much training as possible. By close telephone contact with the 27th and two conferences, the necessary coordination was effected to acquaint this organization with the requirements of the Operations Order and to gain the necessary practice.

On E - 2 ten tankers of the 509th ARS departed Walker AFB. The first one departing seven hours ahead of the main group was routed via Castle AFB to calibrate the AN 2B & 68 rendezvous equipment frequency meter with that to be used by the 91st ARS in tuning the Fighter equipment. This aircraft proceeded individually to Hickam AFB. Of the remaining nine aircraft, eight landed without incident and on schedule at Hickam. The ninth was forced to land at Travis AFB because of a rough running engine and communications failure, but arrived at Hickam seventeen hours after the main group.

All ten aircraft were in place and in good mechanical condition by the time scheduld for the first mission, E + 2. The C-97 assigned to support this unit departed Walker AFB on E - 3, via Travis AFB and was in place at Hickam with spare engines and flyaway bin on E - 2.

On E + 2 and again on E + 3, the 509th ARS was required to have six tankers over a geographical point between Hickam and Travis prepared to refuel any of the fighters requiring fuel. No change in plans was necessary and the aircraft were on station as briefed. On E + 2 radio contact was made with the first fighter flight at 200 nautical miles and on the APN 2B & 68 rendezvous equipment at 170 NM. No refueling of this flight was necessary. The second flight of 20 fighters were picked up on the rendezvous equipment at 200 NM and two fighters were vectored in for refueling; the homer on the surface vessel had become erratic and the ART 13 homers on the tankers were used for homing by the fighters. No signals were received on the APX-6 equipment. On E + 3 both fighter flights were picked up on the 2B & 68 equipment at 200 NM distance. The first flight again did not require any refueling and passed 50 miles to the south of the point. Of the second flight, four aircraft required refueling. Rendezvous and refueling operation were completed without difficulty. Again no signals were received on the APX-6 equipment.

On E + 5 all ten tanker aircraft departed Hickam AFB for Yokota AB, Japan via Midway. The additional stop was necessary because of

doubtful weather conditions in Japan caused by the activity of typhoon "Rose" and predicted high headwinds. One aircraft turned back with the internal failure of #4 engine 45 minutes out of Hickam; when #3 engine was lost 5 minutes later it was impossible to maintain altitude and an emergency landing was attempted on the small municipal field of Lihue, Island of Kauai, with major damage resulting to the aircraft but no personnel injuries were incurred. The other nine aircraft landed without further incident on Midway Island. Mechanical difficulties forced the delay at Midway of four of the tankers and one of the five which took off for Yokota on time returned with a feathered engine after one hour of flight. Four aircraft landed at Yokota on E ∕ 6, followed by two more on E ∕ 7 and two more on E ∕ 8. The ninth tanker lost an engine out of Midway on E ∕ 6 and returned to that base. Altogether, three engine changes and two jug changes were required at Midway, already over-committed with the presence of the nineteen tankers of the 97th ARS. The ninth aircraft of the 509th ARS was so delayed by AOCP that he could not have arrived at Yokota and become effective; he was therefore directed on E ∕ 9 to return to Walker AFB as soon as aircraft was ready.

The first flight of fighters Midway to Misawa was scheduled to take place on E ∕ 8 and to have consisted of 40 fighters; the operations were delayed 24 hours because of the high headwinds and weather over the refueling points. On E ∕ 9 48 fighters were then dispatched. To cover the additional fighters in the same ratio as previously used it was necessary to put seven tankers over the secondary refueling point. This requirement was met and all tankers were on station on time. Forty-seven figaters passed the secondary refueling point but none required refueling. A range of 200 NM was obtained on the AN 28 & 68 equipment. On E ∕ 10 the remaining 28 fighters were dispatched and five tankers were scheduled for refueling. One tanker was forced to return to the base shortly after take-off because of engine failure. The spare was dispatched to take his place and to stand by for any delayed fighter departures. Four aircraft were on station prior to fighter arrival. Of the first flight of 20 fighters, six required refueling. Rendezvous equipment did not function on this flight but a range of 50 miles was accomplished on the APX-6 equipment. Refueling was accomplished without difficulty. Of the second flight of eight fighters none required refueling but a rendezvous range of 200 NM on the 28 & 68 was received.

The required 75 fighter aircraft had passed the secondary refueling point and 75 landed safely at Misawa AB. This ended the refueling requirement of Operations Order 60-52.

On E ∕ 13 eight tankers departed Yokota AB direct for Hickam AFB. One was forced to return to Yokota when engine failure occurred shortly after take-off. On E ∕ 14 seven tankers arrived at Hickam and were scheduled for departure for Walker AFB on E ∕ 16. Five tankers took off on schedule, and arrived at Walker on E ∕ 17. Of the two tankers remaining at Hickam, one required two engine changes. Tanker delayed at Yokota arrived Hickam E ∕ 16. Two tankers departed on E ∕ 17 and they arrived Walker E ∕ 18. Tanker 4071, which got no further than

Midway, departed Hickam for Walker E ⁄ 13, but was forced to land with engine failure at McClellan AFB. He finally arrived at Walker on E ⁄ 20. The last tanker departed Hickam on E ⁄ 21 and arrived without further incident at Walker on E ⁄ 22.

The maintenance crews of these aircraft changed a total of ten engines of the twelve which failed and in addition, changed six jugs.

The support C-97 originally assigned to this organization required an engine change at Midway; the equipment carried on this plane was transferred to a C-97 attached to the 97th ARS and arrived at Yokota on E ⁄ 8. He departed Yokota on E ⁄ 12, picked up equipment remaining on Midway and arrived at Hickam on E ⁄ 14, departed Hickam on E ⁄ 17 and arrived at Walker on E ⁄ 18.

Commanders estimate of the degree of success of the mission as required by the Operations Order is 100 per cent.

En route support at Travis of tanker abort was excellent.

Support furnished at Hickam was considered adequate with excellent cooperation furnished by all parties concerned. The delay at this station was due to the requirement that the tankers be defueled of approximately 38,000 gallons of JP-4 fuel and the equipment was not adequate to accomplish the operation and maintain the schedule required by the Operations Order.

As previously mentioned, the support available at Midway was stretched too far and only by the maximum exertion by our maintenance personnel were the aircraft made ready for continuance of flight.

The support and cooperation of Air Refueling Detachment Four, attached to the 98th Bomb Wing at Yokota, which was assigned the liaison duties with the 509th ARS, were exceptional. All out effort was expended by this organization in the attempt to aid in every respect the successful accomplishment of our mission and they are to be commended for the spirit and friendliness with which their help was given.

SECTION II

PERSONNEL AND ADMINISTRATION

1. Number of Officers and Airmen involved in mission:

a. 46 officers
121 airmen
167 Total

b. Of the above total, the following is a breakdown per category:

1	Task Force Commander
1	Assistant Task Force Commander
1	Operations Officer
1	Staff Observer
1	Staff Communications Officer
1	Maintenance Officer
20	Pilots (10 A/C's, 10 Pilots)
10	Navigators
10	Radar Observers
10	Flight Engineers
10	Boom Operators
10	Scanners
10	Radio Operators
2	Flight Chiefs
1	Technical Supplyman
2	Clerks
76	Maintenance Personnel
167	Total

2. No ground safety hazards or major problems were encountered during period of TDY.

III

SECTION III

OPERATIONS AND TRAINING

1. Deployment.

a. No major deviations occurred on deployment from Walker AFB to Hickam AFB.

b. The deployment from Hickam AFB to Yokota AFB was delayed one day beyond the scheduled time because of inadequacy of defueling equipment to remove the 38,000 gallons of JP-4 fuel from tankers after the final refueling mission at Hickam. This defueling was conducted on a 24 hour a day basis and was completed on the tenth aircraft only a few hours before take-off on E ≠ 5. The presence of typhoon "Rose" and doubtful weather conditions en route and over Japan plus predicted headwinds precluded overflying Midway direct to Yokota.

c. Refueling and weather check stop was made at Midway.

d. Ten aircraft were in place and operational at Hickam on "L" Day. Four aircraft were in place and three were operational at Yokota on E ≠ 6. Six aircraft were in place and five were operational on E ≠ 7, eight were in place and eight were operational on E ≠ 8. One cylinder change was the only major maintenance required on aircraft upon initial arrival at Yokota. Cylinder changes on two additional aircraft were required after the first mission from Yokota.

2. Missions Accomplished.

a. The missions flown may be grouped into two major phases; the two secondary refuelings on Travis to Hickam leg on E ≠ 2 and E ≠ 3, and the two secondary refuelings on the Hickam to Misawa leg on E ≠ 9 and E ≠ 10.

b. The missions of E ≠ 2 and E ≠ 3 were flown as briefed and without incident. Six tankers were in position at rendezvous each day and refueled two fighters on E ≠ 2 and four fighters on E ≠ 3.

c. The missions of E ≠ 9 and E ≠ 10 were flown as briefed. The original fighter departure schedule from Midway was delayed 24 hours due to the effect of typhoon "Rose" and predicted headwinds. Seven tankers made rendezvous on E ≠ 9 with no refueling required. On E ≠ 10 five tankers made rendezvous as scheduled and accomplished a total of six refuelings without incident. In event of delayed fighter departures, the fifth aircraft was scheduled to remain on station until all fighters had cleared through.

IV

SECTION IV

LOGISTICS

1. Capabilities.

a. The 509th ARS is capable of functioning under the Mobility Plan and/or administrative order. No major deficiencies or difficulties were encountered.

2. Maintenance.

a. Maintenance difficulties were of the usual routine nature. However, due to the relatively short intervals between scheduled flights, these otherwise routine problems became difficulties which were only overcome by continuous and exhaustive efforts of maintenance personnel. It is anticipated that future operations will require more support aircraft and equipment if close scheduling of missions is directed.

b. Station kit equipment at bases utilized was considered to be basically adequate. Reference made to maintenance difficulties are attributed to a lack of time rather than facility.

c. Facilities at Hickam were adequate.

d. Facilities at Midway were inadequate and overtaxed by both the 97th ARS and aircraft of this organization on the field at one time. The only aircraft parts available were those in the fly-away kits. Only four crew chief stands were available and no adequate facilities were available for the performance of maintenance after dark or in inclement weather. Heavy rains soon after landing at Midway hampered maintenance. Insufficient transportation caused substantial delays.

e. Facilities at Yokota were excellent. The only difficulty encountered was that this organization could not use the built-up engines from the Yokota Field Maintenance because they were built up for hydra-matic props rather than electric.

f. At both Yokota and Hickam, there were no facilities to defuel tanker aircraft of JP-4 fuel in the time allotted by the operations order.

g. The following aircraft parts were transported by the support C-97:

ITEM	NO.
R-3350 Engines	4
Props	1
Superchargers	2
Cylinder Assemblies	3
Master Controls	3
Starter Assemblies	1

The above aircraft parts proved to be adequate when augmented by station kits. However, additional parts would be required at diversionary stations such as Midway.

V

SECTION V

RECOMMENDED ACTION TO BE TAKEN BY HIGHER HEADQUARTERS

1. General.

a. No recommendations submitted.

2. Personnel and Administration.

a. No recommendations submitted.

3. Operations and Training.

a. Sufficient time for proper maintenance was not allowed in the operations order in relation to the required flying time per aircraft. It is therefore recommended, should a similar operation be undertaken, that the following action be taken.

(1) Additional time be allowed in the operations schedule for maintenance at Midway and Yokota, or:

(2) The secondary refueling aircraft to be utilized on the Midway-Misawa leg be dispatched directly to Yokota and the refueling unit assigned the primary refueling mission out of Midway also perform the requirements of secondary refueling on the Travis-Hickam leg.

4. Logistics.

a. It is recommended that whenever a similar flight of tankers be dispatched from the ZI to TDY overseas thru stations that do not normally carry sufficient spares and parts to service the KB-29 tanker flights, the following be used as a guide based on the experience of the 509th ARS Fox Peter Two flight:

(1) Using the total overall distance and stops, and the missions as flown by the 509th ARS, it is recommended that one C-97 support aircraft per five KB-29 tankers be used and that each support aircraft carry 1/2 of the logistical requirement for the flight.

(2) It is further recommended that calculating the number of engines to be used en route that the planning sections devise the means whereby the total number of engines to be used is calculated by adding the total number of hours estimated to be flown per engine, divide this figure by the average engine life of that particular engine, the sum of which is believed to give a better figure on the number of engines used for the entire flight than what was recommended for the Fox Peter Two flight.

(3) The following indicates the number of support items taken and the number of items recommended for future operations of this type based on the experience of this detachment during Fox Peter Two:

Item	No. Taken	Recommended
R-3350 Engines	4	10
Props	1	2
Superchargers	2	4
Cylinder Assemblies	3	8
Master Controls	3	5
Starter Assemblies	1	3

(4) In addition to the maintenance equipment, it is highly recommended that additional crystals for VHF frequency be carried by each flight of three aircraft.

HOWARD E. JACKSON
Colonel, USAF
Commanding

V 9 0 8


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SAC OPERATION FOX PETER ONE HISTORY

WEATHER

Personnel: Staff Weather Officer -- Major Reed Lutz, 26-3 Weather Detachment, Turner AFB (C.O.) Attached to 31st FEW for this mission.

GENERAL: Weather conditions throughout this mission were good except over the first refueling point, WINK RADIO, San Angelo, Texas, and from Yokota to Misawa. [redacted], due to the deployment of the tanker aircraft from 7000 to 17000 feet altitude, some receiver aircraft had to take their fuel in and out of clouds. Also, turbulence caused some concern to the F-84 receiver pilots at low altitudes, making hookups difficult. It is pointed out that this difficulty was encountered because of the positioning of the tankers and was not due to any fault of the weather forecast. The tankers were to have been located at altitudes of 14 to 15-thousand feet, where there was no turbulence forecast. The weather was very changeable at refueling area.

First Leg -- Turner-Travis. Some weather was encountered on the first leg, at an altitude of between 35 and 37-thousand feet.

Second Leg -- Travis-Hickam. Weather at refueling altitude was very clear. Some difficulty was encountered in obtaining winds-aloft at the altitude of the fighters (35 to 37-thousand feet), since the winds report from RB-36 airplanes of the 14th Air Division were slightly incorrect, the winds reported being lighter than those actually encountered. This was true for all three flights on successive days, of the second leg, from Travis to Hickam. One RB-36 airplane was provided each day, covering the route to within 300-miles of Hickam. It is believed that some communication problem existed in reporting the information to F-84 aircraft, since the RB-36's reported headwinds of 85-knots for short portions of the leg, and this information apparently was not disseminated properly to the F-84 flight leaders.

Third Leg -- Hickam-Midway. The weather on the Hickam to Midway leg was very well reported, also the winds aloft. This was primarily due to the excellent work of the 57th Strategic Reconnaissance Squadron at Hickam.

Fourth Leg -- Midway-Wake. Winds forecast from Midway to Wake were an unimportant factor due to the shorter distance involved. The F-84 aircraft flew on instruments for a considerable distance of this leg (approximately 30 minutes). Winds aloft were light as reported by the weather reconnaissance aircraft.

Fifth Leg -- Wake-Eniwetok. The F-84 aircraft encountered weather on this leg, making most of the flight on instruments at altitudes of 35,000 to 37,000 feet. Communications difficulties were encountered on this and the previous leg because CW messages sent to ground stations were not disseminated to the aircraft from Midway and Wake ground stations. Voice messages by VHF were not disseminated by WAKE.

Sixth Leg -- Eniwetok-Guam. Winds forecast were very good, again due to the excellent work of the 57th Reconnaissance Squadron. Some F-84 aircraft flew approximately one hour on instruments on this leg at altitudes of 35,000 to 37,000 feet.

Seventh Leg -- Guam-Iwo Jima. No problems of weather were encountered on this flight. Weather reconnaissance aircraft sent CW weather report direct to the weather station for dissemination.

Eighth Leg -- Iwo Jima-Yokota. This was another good flight as far as weather was concerned, and there was no weather to speak of. Weather reconnaissance ship circled Yokota, route terminus, covering the Yokota area thoroughly and the weather for the landing was excellent.

CONCLUSION: Weather reconnaissance effort was a maximum one. WB-29 crews flew long missions with little rest, no rest in some cases, at altitudes in excess of the present safe limitations of their aircraft. Weather reconnaissance in advance of takeoff of F-84 aircraft provided information for planning forecasts. These missions were flown about 24 hours in advance of takeoff. Weather reconnaissance missions thus flown immediately in advance of the F-84 takeoffs provided the necessary margin of safety to make the mission a success.

MAINTENANCE HISTORY

The prime factor in the success of this mission was the exceptional performance of the four en-route maintenance teams:

Capt George Nix	309th Fighter Escort Sq	Pink Team
1st Lt Leon Pollock	307th Fighter Escort Sq	Green Team
CWO George Carle	308th Fighter Escort Sq	Brown Team
Capt Herman S. Beaty	C.O. 31st Maintenance Sq	Pickup Team

These teams were made up of the combat squadron personnel, the 31st Maintenance Sq, the 31st A and E Squadron and the 31st Operations Sq. The personnel were selected carefully for their proficiency in maintenance of the F-84 airplane.

These teams departed Turner AFB on 3 July 1952. Although no firm schedule of stops was fixed prior to departure, the teams made the following stops:

Green Team: Travis, Hickam, Eniwetok, Guam, Iwo Jima, Yokota, Misawa.

Brown Team: Travis, Hickam, Midway, Wake, Guam, Iwo Jima, Misawa.

Pink Team: Travis, Hickam, Midway, Eniwetok, Guam, Yokota, Misawa.

Pickup Team: All stops.

MAJOR MAINTENANCE: The maintenance teams accomplished seven engine changes en route. Two at Travis, two at Hickam and three at Guam. The Travis engine changes were accomplished because of failure of starter-generator, and failure of bendix control. The engine changes at Hickam were accomplished because of excessive temperature during in-flight emergency start, and Bendix master control (fuel) failure. The three engines changed at Guam were accomplished because of failure of starter generator on two engines, and failure of main fuel control on the third.

SUPPLY: Supply was adequate with the following exceptions. Tip tanks and pylon tanks were in short supply over most of the route. However, this condition perhaps resulted from the type of mission flown (long overwater legs which forced pilots to jettison in order to clean the aircraft for better performance when fuel ran low.) Primary cause of excessive tip tank and pylon tank changes was cracks in welds of tanks, leaky seams.

Maintenance officers feel that one additional aircraft should have been provided to pick up heavy spares and reparables.

FUEL: Maintenance personnel feel that there is a definite requirement for JP-4 fuel, both in tankers and in ground refueling setups. Pre-positioning of single-point refueling trucks along the route should be accomplished on any future similar mission. Midway Island should be eliminated as a stopping point because of the bird hazard and poor facilities (aircraft were towed individually to the bowser due to lack of tankers). In connection with bird hazard, maintenance officers suggest installation of retractable air inlet screens, as presently installed in F-8hF prototype.

GENERAL: Maintenance-wise, the mission is regarded as a complete success, mainly due to the fact that all airplanes arrived at destination in complete combat-ready condition. There were no corrosion problems as occurred in movement of similar wing previously by U. S. Navy Aircraft Carrier. Likewise, there were no hydraulic troubles and no electrical system troubles as were experienced after movement by aircraft carrier. There were no salt deposits throughout aircraft as in movement by carrier. There were no preservation problems before and after the movement.

Maintenance personnel feels that this was a dangerous mission as performed due to the improper functioning of the in-flight refueling system. Outstanding as a preparatory measure was the use of central point refueling at home station, which eliminated all possible malfunctions on the ground instead of waiting until the airplanes got into the air. No airplane was allowed to fly until absolute certainty was arrived at as to the perfect performance of the IFR system.

It was learned that a sheared pin in the receptacle of receiver aircraft during refueling is dangerous to the airplane because of the inability to continue refueling when pin is sheared and will not allow the aircraft to be towed.

MAINTENANCE RECOMMENDATIONS:

1. Low-level limit switches should be eliminated on all external fuel tanks. Recommend replacement with simple gauge that can be read in the cockpit. Principal reason for this suggestion was the numerous leaks which occurred in the low-level limit switch system.

2. It is recommended that a definite retro-fit program be accomplished in the F-8hC to provide the pilot with accurate information as to how much fuel there is in each and every tank.

3. Each fuel tank should be provided with a booster pump to eliminate the necessity for air pressure feeding.

4. Each pylon and tip tank should be modified to preclude the possibility of leaks, as previously recommended to AMC which non-concurred. Not enough bolts in tank seams.

5. The high-pressure oxygen system should be re-worked to provide one-point servicing facilities on F-84G 1 RE aircraft.

6. It is recommended that shear pins in the 1 FR locking mechanism of the refueling receptacle be eliminated and replaced with a hydraulic spring-system. Also in reference to the IFR locking mechanism, it is recommended that a hydraulic kick-out be installed to cope with emergency situation arising when locking pins are sheared.

7. It is recommended that the pilot be provided with a disengage button (receiver aircraft), located either on stick or throttle, with indicator lights in easy view of pilot, so he need not take eyes off tanker while maintaining position with reference to tanker during refueling operation.

8. There are too few holding and clamping devices on tip and pylon tanks. This results in lack of purchase, an inability to "put the torque" on during installation, leading to fuel leaks.

9. It is recommended as a morale factor, that the classified details of such an operation be revealed first to the personnel of the organization before release to general public through the press.

KEY PERSONNEL:

Green Team -- 1st Lt Leon Pollock, M/Sgt Aaron Bridwell, M/Sgt Homer Etheridge.

Pickup Team:-- Capt Herman Beaty, M/Sgt Andrew Lisewski, M/Sgt Lemual Ford, T/Sgt Roy Barnes, T/Sgt Robert Walters, S/Sgt Russell Cook, S/Sgt John Phillips.

Pink Team -- Capt George Nix.

Brown Team -- CWO George Carle, M/Sgt Allen F. Bunte.

10. It is recommended that a study be made by AMC of the feasibility of adding SAE 1010 oil to high octane fuel when used in jet aircraft. This practice would be desirable to provide minimum lubrication for the dual shut off valves which constantly stuck because of the lack of lubrication.

SAC OPERATION FOX PETER ONE HISTORY

SQUADRON COMMANDER'S STATEMENT: Major Robert J. Keen,
CO of 307th Squadron

GENERAL: This mission was a success as far as the 307th was concerned. The preparation of maps was particularly good. All were standard and all to the same scale. Pre-computed fuel consumption was very accurate, this function performed by 1st Lt Louis Setter of the 307th. This pre-computation of fuel paid off particularly on the first leg. Lt Setter's information was the basis for changes made on the spur of the moment along the way, primarily when, on the first leg, the tankers' fuel transfer information was not accurate. During the course of the mission, it was possible for the pilots to call in to Lt Setter and he was in a position to advise them how far they could go. This was possible as Lt Setter had an automatic pilot aircraft and could work with both hands in re-computations.

MAINTENANCE:

(1) The slave gyro could have performed better. These differed as much as four to five degrees much of the way. A few were known to be accurate and as the mission proceeded the pilots came to depend on these few. (The slave gyro is supposed to be accurate to within one degree.) It is a problem of precision swinging in maintenance. It should be possible to swing this compass at any point along the way if necessary.

(2) Gauges are needed for all tanks, especially on internal wing and tip tanks.

(3) JP-4 fuel lubricates the schultz valve. When high-octane gasoline is used the schultz valve lacks lubrication. When high-octane gasoline is used it should be possible to provide it with lubricating qualities by placing ten/10 lubricating oil in the gasoline.

OPERATIONS:

(1) All flight leaders of the 307th Sq were capable of taking the lead in case of an abort by the leader. All were sufficiently experienced to do this.

(2) With reference to navigational aids, these could have been dispensed with entirely should circumstances so dictate, if Lt Setter and other pilots should have the chance to perform a few more celestial navigation missions, and more practice in taking celestial readings. Lt Setter made several shots along the way which were very accurate.

(3) Weather penetration tactics were used effectively along the way with most pilots logging five to six hours of instrument flying along the trip. This involved penetration of Cirrus. It is recommended that when pilots lose radio contact with each other that they immediately assume differential altitudes rather differential headings. (Present SAC tactical doctrine calls for heading change when visual contact is lost.) With differential altitudes, in most cases we were able to rendezvous easily and quickly on the other side of the weather. This method is believed to be easier and more effective.

COMMUNICATIONS:

(1) Some trouble was encountered in contacting airborne Duckbutts until we were right on top of them. Some were very easily picked up and others very poor. On the other hand, signals for surface vessels were easily picked up with a strong and continuous signal. Also, the surface vessels had GCI radar, among them the Destroyer O'Brien, on the third leg, which gave us a very good signal. The surface vessel was a better check point than the airborne Duckbutts; however the signal from the Duckbutts was sufficient to allow rendezvous at close ranges.

(2) Transmission of weather and other information in the clear would have simplified the communication problem.

EQUIPMENT:

(1) The pulsating seat is a definite requirement for every flight leg above three-and-a-half hours, especially if more than one leg is flown in one day.

GENERAL: This type of mission is feasible for future deployment operations, because the airplanes have a high combat potential on arrival. Although inspection time is nearer for the maintenance people, the aircraft is in better shape than if it had been shipped by boat. The only limiting factor worth mentioning is the physical condition of the maintenance personnel. It is possible that they would be of limited use for a brief period after arrival due to the strain of preparation, movement, and the necessity to continue work under combat conditions.

Pilots were in good shape and were capable of going into combat immediately. As far as pilot strain is concerned, the pilots could have made the Travis-Hickam leg in one day and then could have gone on to Midway the next day. The pilots could have made longer legs without appreciable fatigue. However, more than 3,000 or 4,000 miles of flying in one day would be risky from a pilot fatigue standpoint.

Briefing facilities were limited at most places, ranging from good to poor. The timing of each preparatory phase (feeding, briefing, movement, take-off) was about ideal on this trip.

A definite requirement exists for each flight commander to have rendezvous equipment, automatic pilot and precision compass, APN-68. Each flight commander should have precision navigational equipment in view of the possibility that he might have to take command of the section or squadron.

After the completion of the first leg from Turner to Travis, and even though all refueling was not performed satisfactorily, there was a great deal less apprehension on the part of all pilots concerning the long overwater hop from Travis to Hickam. The pilots were confident they could make it as the result of the information gained on the first leg. They got the feel of the problem, and since they knew it was possible to get to Travis, they knew the next leg was possible also.

SAC OPERATION FOX PETER ONE HISTORY

SQUADRON COMMANDER'S STATEMENT: Lt Col Ray Hilliard
CO 308th Squadron

GENERAL: This mission was a success as far as the 308th was concerned. However, the following suggestions are mentioned as possible improvements on similar operations in the future:

(1) Pre-positioning of equipment -- Refueling equipment and fuel (JP-4) pre-positioned at stops along the route would have made the operation less difficult. It is recognized that economy is important, but the limited number of in-route support teams available made the maintenance job difficult, especially in view of the great amount of movement of these teams. A set-up similar to that utilized during Operation Fox Able Four might have worked more smoothly, circumstances permitting. If our own support teams had been augmented by extra personnel along the way, a great deal of strain could have been taken off the support teams. Although the maintenance was superb, a danger existed that exhaustion of the maintenance crews might have had an effect on the performance of our aircraft. (Need 7 teams - Dunham.)

(2) Tanker Force -- It is believed that the tanker force could have been relieved after the completion of the Travis-Hickam leg. The reason for this is that on all legs of 1,300 miles or under, the pilot has enough fuel consumption checks in the aircraft itself with pre-computed knowledge as to the fuel available at specific times either to return to his take-off base or to drop his tanks and make destination without committing himself to go down to the tanker level and thus risk getting fuel (he either has to get fuel or ditch).

(3) Metering System -- There should be some absolute system in the tanker that will give the pilot of receiver aircraft some positive indication of the amount of fuel transferred to him.

(4) Gauges -- Each auxiliary fuel tank should be equipped with a simple gauge to inform the pilot as to the exact amount of fuel in each tank.

OPERATIONS:

(1) It is recommended that all messages between ground control teams and flight leaders be "in the clear" and not coded, on routine deployment missions.

(2) It is possible that the Midway bird hazard could have been eliminated by taking off down-wind with the aid of JATO. All the gooney birds, terns and frigate birds were concentrated at the up-wind end of the runway.

PILOTS:

(1) On this mission almost all pilots were experienced. No troubles were encountered on take-offs, landings, or refuelings at any stage because of pilot error. However, it is believed that any group of pilots of average experience could have done as well, with a certain amount of training.

TRAINING:

(1) It is recommended that pilots be proficient in fuel transfers from tankers, experiencing as many wet hookups as possible. They should also be proficient in the planning and execution of long-range DR missions, in short field landings, and in maximum-performance take-offs.

AIRCRAFT PERFORMANCE:

(1) Aircraft performance was very satisfactory except for the guess-work in the tanker-to-receiver fuel transfer system and in the high-pressure oxygen system. With reference to the latter, many of our aircraft did not have gauges in the cockpit for the high-pressure system.

REFUELING OPERATION:

(1) The following is suggested as the possible improvement in the refueling operation over that practiced on the first leg of the mission. Reference is made to the positioning of the tankers, the timing of the arrival of the receiver aircraft, and the number of receiver aircraft in relation to the number of tankers at each refueling point. It is recommended that there be 12 tankers to each 10 receiver aircraft. Arrival of the receiver aircraft at the refueling point should occur in groups of ten, spaced 20 to 25 minutes apart, so that each receiver has a tanker of his own. Should any single F-84 aircraft have difficulty, leading to prolongation to the refueling operation, he should immediately disengage from the boom and attempt another hookup at one of the spare tankers which would be positioned off to one side. Thus, he would be out of the way of the next flight of ten receiver aircraft. Had this system been followed during the first leg of this mission, an average additional range of about 165 miles would have been afforded the squadron leader and flight leader

aircraft, which were forced to "hang around" while later elements completed their refueling, before resuming formation. The early-receiving aircraft was forced to burn up a lot of fuel while waiting for the last man of his flight to get off the boom. It is believed that this system would cut down the number of tankers employed and would get more F-8L's through.

PERSONAL EQUIPMENT: Capt Harry K. Barco, Assistant Operations and Training, Personal Equipment and Survival Officer

GENERAL: The amount of survival equipment should be reduced. A joint survival and dinghy kit must be developed, with inserts for special types of equipment needed for special types of flights. On this trip dinghys were used and pilots' pockets filled with a variety of equipment, all of which probably would have been lost if any had been forced to bail out. Survival suits were bulging with flares, shark repellent, dyes, rations, etc. A more carefully prepared kit would provide a better selection of items with less trouble.

The pulsating seat is a must. It changes the point of suspension and provides better back support, thus reducing pilot fatigue. With a pulsating seat it would be possible to fly longer legs and have fewer stops, thus accomplishing the mission faster and with fewer maintenance problems.

There is a definite need for a personal equipment flyaway kit. This would be used to repair personal equipment en route, to provide spares, patches, bail-out bottles, etc.

INCIDENTAL: On this trip, flight leaders held back when their elements fell behind. It is believed this is unnecessary. There is no need for concern should a pilot get separated because later airplanes are capable of coming in by themselves. They should not make the lead airplane wait.

SAC OPERATION FOX PETER ONE HISTORY

SUPPLEMENTARY STATEMENT FROM COLONEL DUNHAM:

SUPPLY: One of the main revelations of this mission was that it proved the necessity for some priority system in the normal requisitioning of parts and equipment that would segregate those necessary for operational deployment as against normal supply requirements. Some of the items which were not on hand were one man dinghys, immersion suits, JATO adaptors, etc. A system must be operated that will provide these items. At the last minute on this move, cargo airplanes were sent on long supply junkets at considerable expense, in order to secure a few vitally needed items which weighed only a total of fifty pounds. The normal system (routine, AOCP, ANFE, TO&E) did not get the job done in the case of this move. Flyaway kits were in good shape. However, the most difficulty was encountered in securing the smaller items not usually needed, but which are indispensable to a deployment.

OPERATIONS: Although the support facilities on Midway were limited, they are adequate and it is not recommended that Midway be eliminated as a stop. JATO equipment should be pre-positioned on the Island, however, so that the alternate runway could be used. This would allow the control officer at Midway to select the least hazardous runway, or the runway where the fewest number of birds are congregated. During the months when "gooney birds" are flying, the hazard will be greater. Although it is believed the hazard created by large numbers of terns constitutes a greater one than any that might be created by gooney birds.

MAINTENANCE: It is essential that a minimum of two experienced flight leaders be assigned to duties with the follow-up or pick-up crew. On most legs, the majority of aborts can be put back into commission in a very short period of time if the main body of aircraft have departed. If an additional flight leader could be made available, the abort aircraft could proceed on to their destination. This system was adopted by the 31st Wing with Capt Kuhlman and Col Dunham pick-up flight leaders. Also it is extremely necessary for the pick-up flight leader to be well qualified in the operation of the F-84-G fuel system and be capable of determining navigation and cruise-control data in the air. One aircraft with Auto Pilot is also a must for the pick-up crew.

Because of the length of this flight and the number of stops, it is recommended that future operations along this route should include a minimum of seven in-route support transport planes. Six of these would be primary support ships and the seventh pick-up transport.

CONCLUSIONS:

(1) This route is a very simple one to fly. If the organization is prepared for mass in-flight refueling and can be flown without any additional radio aids other than those presently existing.

(2) Tanks are needed on the first leg only of the overwater portion "Travis to Hickam," however it is recommended that a new route be established as follows: Travis to Hickam, to Midway, to Japan. An alternate route during periods when there is frontal activity in the Tokyo area, the alternate route should be established as follows: Travis to Hickam, to Midway, to Iwo Jima, to Japan. This will necessitate the placement of two weather ships to be put on the leg from Midway to Iwo to provide positive rendezvous with aerial tankers for primary and secondary refueling. With reference to the long distances involved, by dropping pylon tanks as they become empty, the F-84G has sufficient range to fly this leg with 1500 to 1800 pounds reserve at destination, provided no fuel malfunctions occur.

(3) The F-84G fuel system is not reliable. Fuel gauges are needed to determine whether or not present fuel tanks are feeding properly. Single-point refueling on the ground is mandatory even though in-flight refueling is not accomplished, to insure that the two-way schultz valve will operate. A type of fuel capable of lubricating the schultz valves is necessary.

(4) With a more satisfactory refueling system, missions can be planned past the point of no return, or beyond the target, with sufficient reliability. This will enable aircraft to arrive at the target area and not be excessively loaded with fuel, thus allowing better performance in combat. This is an extremely important item.

(5) Another "must" in the accomplishment of this type of a mission is to have a tanker force either assigned to the fighter organization, or which works with its own fighter organization all the time. A very good example of this necessity was observed on this flight in the smoothness and professional way in which the 307th Air Refueling Squadron performed its mission. The primary reason the 307th had this capability was because of its period of training with the 12th Fighter Wing. Pilots of the 31st Fighter Escort Wing state they would have no hesitancy in relaying on the boom operators of the 307th to give them fuel at any point in the world. The air to air refueling operation of the global fighter concept is one of the simplest phases of that concept. It is something that is a present-day actuality, something that can be practiced and at which proficiency can be achieved quickly.

(6) In connection with aerial tanker formation, the APM 2 aircraft should not have to stay in formation with the rest of the tanker force. This would facilitate the rendezvous problem and hasten contact. If the APM 2 aircraft is able to turn independently of the formation, though remaining within visual contact, the APM 2 operator can position the receiving fighters more easily. On the leg from Guam to Iwo Jima this was tried, with good results.

(7) In connection with supply, fighter organizations should not be forced to fight for supply of precision clocks, good sextants, automatic pilots and those other basic small items such as precision computers which should be available, in order to perform their missions. Only through the determined efforts of Col Schilling has enough of the above-mentioned equipment been secured to properly equip seven airplanes of the 31st. Some of the equipment was secured only through the personal expense of the pilots and a limited number of people who were able to see the problem the fighters were up against. With the proper navigational equipment, none of which is a weight factor, the fighter can go any place the bomber can go, with as much precision, though not gifted perhaps with as much versatility. Pre-timing is necessary, but the fighter can navigate as well as the bomber, any time, any place.

MAINTENANCE HISTORY

The prime factor in the success of this mission was the exceptional performance of the four en-route maintenance teams:

Capt George Mix	309th Fighter Escort Sq	Pink Team
1st Lt Leon Pollock	307th Fighter Escort Sq	Green Team
CWO George Carle	308th Fighter Escort Sq	Brown Team
Capt Herman S. Beaty	C.O. 31st Maintenance Sq	Pickup Team

These teams were made up of the combat squadron personnel, the 31st Maintenance Sq, the 31st A and E Squadron and the 31st Operations Sq. The personnel were selected carefully for their proficiency in maintenance of the F-84 airplane.

These teams departed Turner AFB on 3 July 1952. Although no firm schedule of stops was fixed prior to departure, the teams made the following stops:

Green Team: Travis, Hickam, Eniwetok, Guam, Iwo Jima, Yokota, Misawa.

Brown Team: Travis, Hickam, Midway, Wake, Guam, Iwo Jima, Misawa.

Pink Team: Travis, Hickam, Midway, Eniwetok, Guam, Yokota, Misawa.

Pickup Team: All stops.

MAJOR MAINTENANCE: The maintenance teams accomplished seven engine changes en route. Two at Travis, two at Hickam and three at Guam. The Travis engine changes were accomplished because of failure of starter-generator, and failure of bendix control. The engine changes at Hickam were accomplished because of excessive temperature during in-flight emergency start, and Bendix master control (fuel) failure. The three engines changed at Guam were accomplished because of failure of starter generator on two engines, and failure of main fuel control on the third.

SUPPLY: Supply was adequate with the following exceptions. Tip tanks and pylon tanks were in short supply over most of the route. However, this condition perhaps resulted from the type of mission flown (long overwater legs which forced pilots to jettison in order to clean the aircraft for better performance when fuel ran low.) Primary cause of excessive tip tank and pylon tank changes was cracks in welds of tanks, leaky seams.

Maintenance officers feel that one additional aircraft should have been provided to pick up heavy spares and reparables.

FUEL: Maintenance personnel feel that there is a definite requirement for JP-4 fuel, both in tankers and in ground refueling setups. Pre-positioning of single-point refueling trucks along the route should be accomplished on any future similar mission. Midway Island should be eliminated as a stopping point because of the bird hazard and poor facilities (aircraft were towed individually to the bowser due to lack of tankers). In connection with bird hazard, maintenance officers suggest installation of retractable air inlet screens, as presently installed in F-84F prototype.

GENERAL: Maintenance-wise, the mission is regarded as a complete success, mainly due to the fact that all airplanes arrived at destination in complete combat-ready condition. There were no corrosion problems as occurred in movement of similar wing previously by U. S. Navy Aircraft Carrier. Likewise, there were no hydraulic troubles and no electrical system troubles as were experienced after movement by aircraft carrier. There were no salt deposits throughout aircraft as in movement by carrier. There were no preservation problems before and after the movement.

Maintenance personnel feels that this was a dangerous mission as performed due to the improper functioning of the in-flight refueling system. Outstanding as a preparatory measure was the use of central point refueling at home station, which eliminated all possible malfunctions on the ground instead of waiting until the airplanes got into the air. No airplane was allowed to fly until absolute certainty was arrived at as to the perfect performance of the IFR system.

It was learned that a sheared pin in the receptacle of receiver aircraft during refueling is dangerous to the airplane because of the inability to continue refueling when pin is sheared and will not allow the aircraft to be towed.

MAINTENANCE RECOMMENDATIONS:

1. Low-level limit switches should be eliminated on all external fuel tanks. Recommend replacement with simple gauge that can be read in the cockpit. Principal reason for this suggestion was the numerous leaks which occurred in the low-level limit switch system.

2. It is recommended that a definite retro-fit program be accomplished in the F-84G to provide the pilot with accurate information as to how much fuel there is in each and every tank.

3. Each fuel tank should be provided with a booster pump to eliminate the necessity for air pressure feeding.

4. Each pylon and tip tank should be modified to preclude the possibility of leaks, as previously recommended to AMC which non-concurred. Not enough bolts in tank seams.

5. The high-pressure oxygen system should be re-worked to provide one-point servicing facilities on F-84G 1 RE aircraft.

6. It is recommended that shear pins in the 1 FR locking mechanism of the refueling receptacle be eliminated and replaced with a hydraulic spring-system. Also in reference to the IFR locking mechanism, it is recommended that a hydraulic kick-out be installed to cope with emergency situation arising when locking pins are sheared.

7. It is recommended that the pilot be provided with a disengage button (receiver aircraft), located either on stick or throttle, with indicator lights in easy view of pilot, so he need not take eyes off tanker while maintaining position with reference to tanker during refueling operation.

8. There are too few holding and clamping devices on tip and pylon tanks. This results in lack of purchase, an inability to "put the torque" on during installation, leading to fuel leaks.

9. It is recommended as a morale factor, that the classified details of such an operation be revealed first to the personnel of the organization before release to general public through the press.

KEY PERSONNEL:

Green Team -- 1st Lt Leon Pollock, M/Sgt Aaron Bridwell, M/Sgt Homer Ethridge.

Pickup Team:-- Capt Herman Beaty, M/Sgt Andrew Lisewski, M/Sgt Lamual Ford, T/Sgt Roy Barnes, T/Sgt Robert Walters, S/Sgt Russell Cook, S/Sgt John Phillips.

Pink Team -- Capt George Nix.

Brown Team -- CWO George Carle, M/Sgt Allen F. Bunte.

10. It is recommended that a study be made by AMC of the feasibility of adding SAE 1010 oil to high octane fuel when used in jet aircraft. This practice would be desirable to provide minimum lubrication for the dual shut off valves which constantly stuck because of the lack of lubrication.

SAC OPERATION FOX PETER ONE HISTORY

SQUADRON COMMANDER'S STATEMENT: Major Robert J. Keen,
CO of 307th Squadron

GENERAL: This mission was a success as far as the 307th was concerned. The preparation of maps was particularly good. All were standard and all to the same scale. Pre-computed fuel consumption was very accurate, this function performed by 1st Lt Louis Setter of the 307th. This pre-computation of fuel paid off particularly on the first leg. Lt Setter's information was the basis for changes made on the spur of the moment along the way, primarily when, on the first leg, the tankers' fuel transfer information was not accurate. During the course of the mission, it was possible for the pilots to call in to Lt Setter and he was in a position to advise them how far they could go. This was possible as Lt Setter had an automatic pilot aircraft and could work with both hands in re-computations.

MAINTENANCE:

(1) The slave gyro could have performed better. These differed as much as four to five degrees much of the way. A few were known to be accurate and as the mission proceeded the pilots came to depend on these few. (The slave gyro is supposed to be accurate to within one degree.) It is a problem of precision swinging in maintenance. It should be possible to swing this compass at any point along the way if necessary.

(2) Gauges are needed for all tanks, especially on internal wing and tip tanks.

(3) JP-4 fuel lubricates the schultz valve. When high-octane gasoline is used the schultz valve lacks lubrication. When high-octane gasoline is used it should be possible to provide it with lubricating qualities by placing ten/10 lubricating oil in the gasoline.

OPERATIONS:

(1) All flight leaders of the 307th Sq were capable of taking the lead in case of an abort by the leader. All were sufficiently experienced to do this.

(2) With reference to navigational aids, these could have been dispensed with entirely should circumstances so dictate, if Lt Setter and other pilots should have the chance to perform a few more celestial navigation missions, and more practice in taking celestial readings. Lt Setter made several shots along the way which were very accurate.

(3) Weather penetration tactics were used effectively along the way with most pilots logging five to six hours of instrument flying along the trip. This involved penetration of Cirrus. It is recommended that when pilots lose radio contact with each other that they immediately assume differential altitudes rather differential headings. (Present SAC tactical doctrine calls for heading change when visual contact is lost.) With differential altitudes, in most cases we were able to rendezvous easily and quickly on the other side of the weather. This method is believed to be easier and more effective.

COMMUNICATIONS:

(1) Some trouble was encountered in contacting airborne Duckbutts until we were right on top of them. Some were very easily picked up and others very poor. On the other hand, signals for surface vessels were easily picked up with a strong and continuous signal. Also, the surface vessels had GCI radar, among them the Destroyer O'Brien, on the third leg, which gave us a very good signal. The surface vessel was a better check point than the airborne Duckbutts; however the signal from the Duckbutts was sufficient to allow rendezvous at close ranges.

(2) Transmission of weather and other information in the clear would have simplified the communication problem.

EQUIPMENT:

(1) The pulsating seat is a definite requirement for every flight leg above three-and-a-half hours, especially if more than one leg is flown in one day.

GENERAL: This type of mission is feasible for future deployment operations, because the airplanes have a high combat potential on arrival. Although inspection time is nearer for the maintenance people, the aircraft is in better shape than if it had been shipped by boat. The only limiting factor worth mentioning is the physical condition of the maintenance personnel. It is possible that they would be of limited use for a brief period after arrival due to the strain of preparation, movement, and the necessity to continue work under combat conditions.

Pilots were in good shape and were capable of going into combat immediately. As far as pilot strain is concerned, the pilots could have made the Travis-Hickam leg in one day and then could have gone on to Midway the next day. The pilots could have made longer legs without appreciable fatigue. However, more than 3,000 or 4,000 miles of flying in one day would be risky from a pilot fatigue standpoint.

Briefing facilities were limited at most places, ranging from good to poor. The timing of each preparatory phase (feeding, briefing, movement, take-off) was about ideal on this trip.

A definite requirement exists for each flight commander to have rendezvous equipment, automatic pilot and precision compass, APN-68. Each flight commander should have precision navigational equipment in view of the possibility that he might have to take command of the section or squadron.

After the completion of the first leg from Turner to Travis, and even though all refueling was not performed satisfactorily, there was a great deal less apprehension on the part of all pilots concerning the long overwater hop from Travis to Hickam. The pilots were confident they could make it as the result of the information gained on the first leg. They got the feel of the problem, and since they knew it was possible to get to Travis, they knew the next leg was possible also.

SAC OPERATION FOX PETER ONE HISTORY

SQUADRON COMMANDER'S STATEMENT: Lt Col Ray Hilliard
CO 308th Squadron

GENERAL: This mission was a success as far as the 308th was concerned. However, the following suggestions are mentioned as possible improvements on similar operations in the future:

(1) Pre-positioning of equipment -- Refueling equipment and fuel (JP-4) pre-positioned at stops along the route would have made the operation less difficult. It is recognized that economy is important, but the limited number of in-route support teams available made the maintenance job difficult, especially in view of the great amount of movement of these teams. A set-up similar to that utilized during Operation Fox Able Four might have worked more smoothly, circumstances permitting. If our own support teams had been augmented by extra personnel along the way, a great deal of strain could have been taken off the support teams. Although the maintenance was superb, a danger existed that exhaustion of the maintenance crews might have had an effect on the performance of our aircraft. (Need 7 teams - Dunham.)

(2) Tanker Force -- It is believed that the tanker force could have been relieved after the completion of the Travis-Hickam leg. The reason for this is that on all legs of 1,300 miles or under, the pilot has enough fuel consumption checks in the aircraft itself with pre-computed knowledge as to the fuel available at specific times either to return to his take-off base or to drop his tanks and make destination without committing himself to go down to the tanker level and thus risk getting fuel (he either has to get fuel or ditch).

(3) Metering System -- There should be some absolute system in the tanker that will give the pilot of receiver aircraft some positive indication of the amount of fuel transferred to him.

(4) Gauges -- Each auxiliary fuel tank should be equipped with a simple gauge to inform the pilot as to the exact amount of fuel in each tank.

OPERATIONS:

(1) It is recommended that all messages between ground control teams and flight leaders be "in the clear" and not coded, on routine deployment missions.

(2) It is possible that the Midway bird hazard could have been eliminated by taking off down-wind with the aid of JATO. All the gooney birds, terns and frigate birds were concentrated at the up-wind end of the runway.

PILOTS:

(1) On this mission almost all pilots were experienced. No troubles were encountered on take-offs, landings, or refuelings at any stage because of pilot error. However, it is believed that any group of pilots of average experience could have done as well, with a certain amount of training.

TRAINING:

(1) It is recommended that pilots be proficient in fuel transfers from tankers, experiencing as many wet hookups as possible. They should also be proficient in the planning and execution of long-range DR missions, in short field landings, and in maximum-performance take-offs.

AIRCRAFT PERFORMANCE:

(1) Aircraft performance was very satisfactory except for the guess-work in the tanker-to-receiver fuel transfer system and in the high-pressure oxygen system. With reference to the latter, many of our aircraft did not have gauges in the cockpit for the high-pressure system.

REFUELING OPERATION:

(1) The following is suggested as the possible improvement in the refueling operation over that practiced on the first leg of the mission. Reference is made to the positioning of the tankers, the timing of the arrival of the receiver aircraft, and the number of receiver aircraft in relation to the number of tankers at each refueling point. It is recommended that there be 12 tankers to each 10 receiver aircraft. Arrival of the receiver aircraft at the refueling point should occur in groups of ten, spaced 20 to 25 minutes apart, so that each receiver has a tanker of his own. Should any single F-84 aircraft have difficulty, leading to prolongation to the refueling operation, he should immediately disengage from the boom and attempt another hookup at one of the spare tankers which would be positioned off to one side. Thus, he would be out of the way of the next flight of ten receiver aircraft. Had this system been followed during the first leg of this mission, an average additional range of about 165 miles would have been afforded the squadron leader and flight leader

aircraft, which were forced to "hang around" while later elements completed their refueling, before resuming formation. The early-receiving aircraft was forced to burn up a lot of fuel while waiting for the last man of his flight to get off the boom. It is believed that this system would cut down the number of tankers employed and would get more F-84's through.

PERSONAL EQUIPMENT: Capt Harry K. Barco, Assistant Operations and Training, Personal Equipment and Survival Officer

GENERAL: The amount of survival equipment should be reduced. A joint survival and dinghy kit must be developed, with inserts for special types of equipment needed for special types of flights. On this trip dinghys were used and pilots' pockets filled with a variety of equipment, all of which probably would have been lost if any had been forced to bail out. Survival suits were bulging with flares, shark repellent, dyes, rations, etc. A more carefully prepared kit would provide a better selection of items with less trouble.

The pulsating seat is a must. It changes the point of suspension and provides better back support, thus reducing pilot fatigue. With a pulsating seat it would be possible to fly longer legs and have fewer stops, thus accomplishing the mission faster and with fewer maintenance problems.

There is a definite need for a personal equipment flyaway kit. This would be used to repair personal equipment en route, to provide spares, patches, bail-out bottles, etc.

INCIDENTAL: On this trip, flight leaders held back when their elements fell behind. It is believed this is unnecessary. There is no need for concern should a pilot get separated because later airplanes are capable of coming in by themselves. They should not make the lead airplane wait.

SAC OPERATION FOX PETER ONE HISTORY

SUPPLEMENTARY STATEMENT FROM COLONEL DUNHAM:

SUPPLY: One of the main revelations of this mission was that it proved the necessity for some priority system in the normal requisitioning of parts and equipment that would segregate those necessary for operational deployment as against normal supply requirements. Some of the items which were not on hand were one man dinghys, immersion suits, JATO adaptors, etc. A system must be operated that will provide these items. At the last minute on this move, cargo airplanes were sent on long supply junkets at considerable expense, in order to secure a few vitally needed items which weighed only a total of fifty pounds. The normal system (routine, ACGP, ANFE, TO&E) did not get the job done in the case of this move. Flyaway kits were in good shape. However, the most difficulty was encountered in securing the smaller items not usually needed, but which are indispensable to a deployment.

OPERATIONS: Although the support facilities on Midway were limited, they are adequate and it is not recommended that Midway be eliminated as a stop. JATO equipment should be pre-positioned on the Island, however, so that the alternate runway could be used. This would allow the control officer at Midway to select the least hazardous runway, or the runway where the fewest number of birds are congregated. During the months when "gooney birds" are flying, the hazard will be greater. Although it is believed the hazard created by large numbers of terns constitutes a greater one than any that might be created by gooney birds.

MAINTENANCE: It is essential that a minimum of two experienced flight leaders be assigned to duties with the follow-up or pick-up crew. On most legs, the majority of aborts can be put back into commission in a very short period of time if the main body of aircraft have departed. If an additional flight leader could be made available, the abort aircraft could proceed on to their destination. This system was adopted by the 31st Wing with Capt Kuhlman and Col Dunham pick-up flight leaders. Also it is extremely necessary for the pick-up flight leader to be well qualified in the operation of the F-84-G fuel system and be capable of determining navigation and cruise-control data in the air. One aircraft with Auto Pilot is also a must for the pick-up crew.

Because of the length of this flight and the number of stops, it is recommended that future operations along this route should include a minimum of seven in-route support transport planes. Six of these would be primary support ships and the seventh pick-up transport.

CONCLUSIONS:

(1) This route is a very simple one to fly. If the organization is prepared for mass in-flight refueling and can be flown without any additional radio aids other than those presently existing.

(2) Tanks are needed on the first leg only of the overwater portion "Travis to Hickam," however it is recommended that a new route be established as follows: Travis to Hickam, to Midway, to Japan. An alternate route during periods when there is frontal activity in the Tokyo area, the alternate route should be established as follows: Travis to Hickam, to Midway, to Iwo Jima, to Japan. This will necessitate the placement of two weather ships to be put on the leg from Midway to Iwo to provide positive rendezvous with aerial tankers for primary and secondary refueling. With reference to the long distances involved, by dropping pylon tanks as they become empty, the F-84G has sufficient range to fly this leg with 1500 to 1800 pounds reserve at destination, provided no fuel malfunctions occur.

(3) The F-84G fuel system is not reliable. Fuel gauges are needed to determine whether or not present fuel tanks are feeding properly. Single-point refueling on the ground is mandatory even though in-flight refueling is not accomplished, to insure that the two-way schultz valve will operate. A type of fuel capable of lubricating the schultz valves is necessary.

(4) With a more satisfactory refueling system, missions can be planned past the point of no return, or beyond the target, with sufficient reliability. This will enable aircraft to arrive at the target area and not be excessively loaded with fuel, thus allowing better performance in combat. This is an extremely important item.

(5) Another "must" in the accomplishment of this type of a mission is to have a tanker force either assigned to the fighter organization, or which works with its own fighter organization all the time. A very good example of this necessity was observed on this flight in the smoothness and professional way in which the 307th Air Refueling Squadron performed its mission. The primary reason the 307th had this capability was because of its period of training with the 12th Fighter Wing. Pilots of the 31st Fighter Escort Wing state they would have no hesitancy in relaying on the boom operators of the 307th to give them fuel at any point in the world. The air to air refueling operation of the global fighter concept is one of the simplest phases of that concept. It is something that is a present-day actuality, something that can be practiced and at which proficiency can be achieved quickly.

(6) In connection with aerial tanker formation, the APM 2 aircraft should not have to stay in formation with the rest of the tanker force. This would facilitate the rendezvous problem and hasten contact. If the APM 2 aircraft is able to turn independently of the formation, though remaining within visual contact, the APM 2 operator can position the receiving fighters more easily. On the leg from Guam to Iwo Jima this was tried, with good results.

(7) In connection with supply, fighter organizations should not be forced to fight for supply of precision clocks, good sextants, automatic pilots and those other basic small items such as precision computers which should be available, in order to perform their missions. Only through the determined efforts of Col Schilling has enough of the above-mentioned equipment been secured to properly equip seven airplanes of the 31st. Some of the equipment was secured only through the personal expense of the pilots and a limited number of people who were able to see the problem the fighters were up against. With the proper navigational equipment, none of which is a weight factor, the fighter can go any place the bomber can go, with as much precision, though not gifted perhaps with as much versatility. Pre-timing is necessary, but the fighter can navigate as well as the bomber, any time, any place.

SAC OPERATION FOX PETER ONE HISTORY

WEATHER

Personnel: Staff Weather Officer -- Major Reed Lutz, 26-3 Weather Detachment, Turner AFB (C.O.) Attached to 31st FEW for this mission.

GENERAL: Weather conditions throughout this mission were good except over the first refueling point, WINK RADIO, San Angelo, Texas, and from Yokota to Misawa. ~~Disregard~~ Due to the deployment of the tanker aircraft from 7000 to 17000 feet altitude, some receiver aircraft had to take their fuel in and out of clouds. Also, turbulence caused some concern to the F-84 receiver pilots at low altitudes, making hookups difficult. It is pointed out that this difficulty was encountered because of the positioning of the tankers and was not due to any fault of the weather forecast. The tankers were to have been located at altitudes of 14 to 15-thousand feet, where there was no turbulence forecast. The weather was very changeable at refueling area.

First Leg -- Turner-Travis. Some weather was encountered on the first leg, at an altitude of between 35 and 37-thousand feet.

Second Leg -- Travis-Hickam. Weather at refueling altitude was very clear. Some difficulty was encountered in obtaining winds-aloft at the altitude of the fighters (35 to 37-thousand feet), since the winds report from RB-36 airplanes of the 14th Air Division were slightly incorrect, the winds reported being lighter than those actually encountered. This was true for all three flights on successive days, of the second leg, from Travis to Hickam. One RB-36 airplane was provided each day, covering the route to within 300-miles of Hickam. It is believed that some communication problem existed in reporting the information to F-84 aircraft, since the RB-36's reported headwinds of 85-knots for short portions of the leg, and this information apparently was not disseminated properly to the F-84 flight leaders.

Third Leg -- Hickam-Midway. The weather on the Hickam to Midway leg was very well reported, also the winds aloft. This was primarily due to the excellent work of the 57th Strategic Reconnaissance Squadron at Hickam.

Fourth Leg -- Midway-Wake. Winds forecast from Midway to Wake were an unimportant factor due to the shorter distance involved. The F-84 aircraft flew on instruments for a considerable distance of this leg (approximately 30 minutes). Winds aloft were light as reported by the weather reconnaissance aircraft.

Fifth Leg -- Wake-Eniwetok. The F-8h aircraft encountered weather on this leg, making most of the flight on instruments at altitudes of 35,000 to 37,000 feet. Communications difficulties were encountered on this and the previous leg because CW messages sent to ground stations were not disseminated to the aircraft from Midway and Wake ground stations. Voice messages by VHF were not disseminated by WAKE.

Sixth Leg -- Eniwetok-Guam. Winds forecast were very good, again due to the excellent work of the 57th Reconnaissance Squadron. Some F-8h aircraft flew approximately one hour on instruments on this leg at altitudes of 35,000 to 37,000 feet.

Seventh Leg -- Guam-Iwo Jima. No problems of weather were encountered on this flight. Weather reconnaissance aircraft sent CW weather report direct to the weather station for dissemination.

Eighth Leg -- Iwo Jima-Yokota. This was another good flight as far as weather was concerned, and there was no weather to speak of. Weather reconnaissance ship circled Yokota, route terminus, covering the Yokota area thoroughly and the weather for the landing was excellent.

CONCLUSION: Weather reconnaissance effort was a maximum one. WB-29 crews flew long missions with little rest, no rest in some cases, at altitudes in excess of the present safe limitations of their aircraft. Weather reconnaissance in advance of takeoff of F-8h aircraft provided information for planning forecasts. These missions were flown about 24 hours in advance of takeoff. Weather reconnaissance missions thus flown immediately in advance of the F-8h takeoffs provided the necessary margin of safety to make the mission a success.

HEADQUARTERS SAC

ROUTING SLIP

TO ➡ OFFICE & INDIVIDUAL IN TURN	DATE FORWARDED
1. D/O (approval ~~& sig~~)	
2.	
3.	
4.	
5.	

FOR ➡ FOLLOWING ACTION(S) AS CHECKED

	COORDINATION		NOTE AND RETURN		INFORMATION
	NECESSARY ACTION		RECOMMENDATION		FILE
	SEE OR PHONE ME		APPROVAL		SIGNATURE

COMMENT

Inclosed story on Fox Peter One has been read and only the two attached comments are deemed necessary.

FROM ➡	OFFICE & INDIVIDUAL	PHONE
	Horne Major Horne/DODF	2167

Hq SAC Form 15-140

SAC Offset AFB-1-9-49-45,000

HEADQUARTER STRATEGIC AIR COMMAND

ROUTING AND RECORD SHEET

TALLY NO.	07736
FILE NO.	

SUBJECT: Request for Review of Story 20 3647

TO: Special Assistant to the Commanding General

DATE 28 Aug 52

COMMENT No. 2
Major Horne/ld/2167

FROM: Director of Operations

1. Reference page 3, paragraph 2, the 31st FEW was not the first wing in the USAF, or in SAC, to become operational with mid-air refueling jet fighters.

2. Reference page 6, paragraph 4, recommend deletion, or changing, that part that states "two and one half minutes to be filled up in the air".

Andrew S. Low

ANDREW S. LOW
Colonel, USAF
Executive, Dir/Ops

1 Incl
n/c

SAC, Offutt AFB-2-21-49-5,000

O-0238

Hq SAC Form 10-71 (Rev. 16 Feb 48)

PAGE _____

USE BOTH SIDES OF SHEET

HEADQUARTER. STRATEGIC AIR COMMAND

ROUTING AND RECORD SHEET

TALLY NO.	D7736
FILE NO.	

SUBJECT: Request for review of story

TO: Directorate of Operations

DATE 22 Aug 52

COMMENT No. 1
Capt Wiley/4155/hp

FROM: Special Assistant to the Commanding General

1. It is proposed to offer this second story on Fox Peter One operation to a national magazine through Headquarters, USAF.

2. Request your activity review the story for security and accuracy and return with your comment.

3. As the time factor is important in placing such a story advantageously, it is requested that this be expedited.

Incl
Story

BEALE TILLEY
Lt. Col., USAF
Special Assistant

SAC, Offutt AFB-2-21-49-5,000

O-9238

Hq SAC Form 10-71 (Rev. 16 Feb 48)

PAGE _____

USE BOTH SIDES OF SHEET

HEADQUARTERS STRATEGIC AIR COMMAND

ROUTING AND RECORD SHEET

TALLY NO.	D7633
FILE NO.	

SUBJECT: Refueling Story for Boeing Airplane Company 2664

TO: Office of the Special Assistant to the CG DATE 21 Aug 52

FROM: Director of Operations COMMENT No. 2 Maj Horne/ld/2167

1. The attached article has been checked for technical accuracy only, and the following recommendations are submitted:

a. Page 1. There were three formations of tankers instead of two and the rendezvous point was Wink Radio, Texas, not San Angelo, Texas.

b. Page 2. Reference the sentence that reads: "The tricky business took just two and a half minutes." This appears to be a slight distortion of the facts. Recommend all references to the time involved on this practice profile be deleted.

c. Eliminate all references to San Angelo, Texas.

d. Page 3, paragraph 4. Recommend deletion of all times to in-flight refuel and all numbers of in-flight refuelings.

e. Page 8. Recommend that part which reads: "was ready to push the seat-catapult button," etc. be deleted. This is not a recommended procedure and in all probability would result in death to the pilot.

f. Page 9. Reference sentence: "Flying at 37,000 feet with my oxygen disconnected." Recommend deletion. Undoubtedly impressive but very improbable.

g. Reference last paragraph, the word "recent" in this paragraph might be misleading as it is believed this record crossing was made in 1950.

h. Reference the phrase: "Swiftly losing altitude" appearing in several places. Unless this phrase is needed for effect, recommend this wording be changed as the glide ratio of the F-84 is relatively high, approximately 1550 feet per minute rate of descent at best gliding speed.

Andrew J. Low

1 Incl
n/c

HEADQUARTER. STRATEGIC AIR COMMAND

ROUTING AND RECORD SHEET

TALLY NO.	D7633
FILE NO.	

SUBJECT: Refueling Story for Boeing Airplane Company

TO: Director of Operations

DATE 19 August 52

COMMENT No. 1

FROM: Office of the Special Assistant to the CG

1. Attached feature story concerning the refueling phase of the Fox Peter One Operation is forwarded for your concurrence and comment.

2. Subject story was written by Major Thomas W. Barbour, Information Services Officer at Travis Air Force Base, by special request of the Public Relations Director at Boeing.

Ralph W Bryant

RALPH W. BRYANT
Major, USAF
Chief, Public Information Division
Office of Special Assistant
to the Commanding General

SAC, Offutt AFB-2-21-49-5,000

O-0238

Hq SAC Form 10-71 (Rev. 16 Feb 48)

PAGE _____

USE BOTH SIDES OF SHEET

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Standing between his pilots in the lead tanker, the Squadron Commander leaned forward to check position on the folded map on the co-pilot's knees. He reached for the command microphone:

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The replies came quickly and tersely.

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The formation tightened as the tanker pilots closed in. A moment later, several pilots reported, simultaneously, ~~that their electronic rendezvous equipment indicated~~ the approach of the fighter formation.

By this time the tankers had reached the rendezvous point, and had started a slow turn, cruising the outer limits of their "holding pattern."

The radar operator in the command ship reported in with an estimate of the distance astern for the swiftly-closing fighters.

The squadron commander ordered the formation into a steeper turn, to bring the fighters directly astern and on course.

Two by two, the sleek, silvery jets moved in. On the leading edge of each plane's port wing root, two small doors popped open, revealing the refueling receptacle. Clancy, the boom operator, lowered the long, slender, telescopic boom. With the aid of dihedral vanes, he "flew" it into position. Snugly, the nozzle clicked into the receptacle, firmly held in place. The action closed a switch, and jet fuel began to flow, under high pressure, from the tanker through the single-point transfer system of the thirsty jet.

The tricky business took just two and a half minutes. When the tanks were filled, the jet pilot got a "pressure disconnect" and the boom was released. As each Thunderjet was refueled, he joined formation and proceeded on course.

Residents of San Angelo couldn't see what was going on, because of the cloud formations intervening. But history was being written that Fourth of July morning over Texas. This was Strategic Air Command Operation Fox Peter One. "Fox" was old phonetic alphabet for fighters. Peter for Pacific. One for -- well, this was the first operation of its kind in aviation history. The first time that a mass formation, an entire jet fighter-escort wing, would deploy from Turner Air Force Base, Albany, Georgia, across the country to Travis Air Force Base in California, thence across the broad Pacific to Japan.

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This was no flight by one airplane, or one squadron. ~~Sixty~~ All F-84G Thunderjet fighter-bombers were making the trip -- the full complement of SAC's 31st Fighter-Escort Wing. It was a test of mass fighter mobility. If successful, a new era would open for jet fighters. They would then be able to move as far and even faster than SAC's bombers. For years, the bombers had demonstrated their ability to move into action at a moment's notice, using air to air refueling, or staging from SAC bases around the world.

The second leg, from Travis to Hickam, was the critical one. Because of the long distance involved, and the altitudes at which air to air refueling could take place, there was grave danger.

The refueling rendezvous points would have to be plotted with meticulous care, and carried out with equal precision. An error of only a few miles either way would spell disaster. Fighter pilots would have a small margin for error, a small time period in which to make the all-important decision: if I have difficulty locating the tankers, difficulty refueling, or if I have a materiel malfunction, can I try again before I pass the point of no return? On the long jump from Travis to Hickam, the point of no return and the point of aerial refueling were perilously close together. A minor miscalculation either by the tankers or the fighters would mean disaster. Not only was the loss of airplanes involved, but this was a test. Any failure meant criticism of this mode of fighter-wing deployment.

In spite of the precarious nature of Operation Fox Peter One, it proved an outstanding success.

Vital statistics: Total elapsed time from Turner to Tokyo-- eleven days. Total average flying time -- 25 and a half hours. Number of airplanes on arrival -- 58. (One was forced to turn back for lack of oxygen just after the first air to air refueling on the Travis-Hickam leg.) Distance covered -- 10,670-miles. Longest overwater leg -- 2400-miles (from Travis to Hickam.) Number of in-flight refueling -- 111, at three points: -- San Angelo, Texas; at an unspecified location part way between Travis and Hickam; and at another undesignated point nearer to Hickam.

Actually, only two refuelings were scheduled over the first two locations. All others were on a standby basis, in case of need. Eight airplanes, including that of Colonel Schilling, took advantage of a second refueling on the Travis to Hickam leg. After that, there were no further air to air refuelings, although tankers of the ~~First, Second, 91st~~ and 93rd Air Refueling Squadrons, were spaced along the later legs of the route.

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Biography of 5 July 1952

COLONEL WILLIAM D. DUNHAM

Colonel William D. Dunham, 32, deputy commander of the 31st Fighter Escort Wing, Turner AirForce Base, Albany, Ga., was born in Tacoma, Washington.

After attending schools in Nezperce, Idaho, he entered the University of Idaho, which he attended for 2½ years. He then entered aviation cadet training and graduated from the Air Force advanced training school at Luke Field, Ariz. in 1940.

Following graduation his first overseas assignment was with the 53d Fighter Group in Panama from 1941 to 1943. In May 1943 Colonel Dunham joined the 348th Fighter Group of the 5th Air Force in the South Pacific with which he served until June 1946. During this time he flew 226 combat missions and was credited with 16 confirmed aerial victories. In addition, he is credited with the sinking of two 10,000 ton Japanese troop transports.

Following World War II, Colonel Dunham was assigned to the 56th Fighter Group at Selfridge Field, Mich. from 1946 to 1948. Subsequently he was assigned to the Director of Operations, Headquarters, Strategic Air Command. In June 1951 he joined the 31st Fighter Escort Wing.

Included in his decorations are the Distinguished Service Cross, this country's second highest award, the Silver Star with one cluster, Distinguished Flying Cross with three clusters, Air Medal with seven clusters, Presidential Unit Citation with one cluster, Asiatic-Pacific Theater ribbon with eight battle stars and Philippine Liberation Ribbon.

Colonel Dunham is married to the former Bonnie Harris of Moscow, Idaho. They have two daughters, Margo and Shelly.

Biography of
COLONEL DAVID SCHILLING 5 July 1952

Colonel David Carl Schilling 33, born at Leavenworth, Kansas. Parents, Mr. and Mrs. Carl F. Schilling of Kansas City, Mo. After attending the Public schools of Kansas City, he entered Dartmouth College, Hanover, New Hampshire, graduating in 1939. He was a member of the college boxing team. Volunteering for aviation cadet training immediately after graduation, he received his wings May 1940 at Brooks Field, Texas. He became a senior pilot in May of 1945. His first duty took him to Mitchell AFB, N.Y. as a fighter pilot flying wing man. Then came a year's duty as an acceptance test pilot at Buffalo, N.Y. He served as a flight commander with the 56th Fighter Group at Michell AFB from February to July 1942. His next station was Bradley AFB, Connecticut where he was a squadron commander from July 1942 until January 1943. During his tour of duty in England, from 1943 to May 1945, he rose from Squadron Commander to Commanding Officer of the 56th Fighter Group. After finally leaving the 56th Group in 1946, he served in various staff jobs with Headquarters USAF, eventually being named to the project which opened the North Atlantic for Jet flying. He has served as Commanding Officer of the 31st Fighter-Escort Wing since 1 May 1951, coming to that assignment from the Pentagon. During the war he shot down 23 enemy planes in the air, destroyed 10½ on the ground, damaged four in the air and 7 on the ground. He flew 132 combat missions and logged 360 combat hours coming home with 40 decorations. He wears the Distinguished Service Cross with an Oak Leaf Cluster; Silver Star with two Oak Leaf Clusters; Distinguished Flying Cross with ten Oak Leaf Clusters; Air Medal with 19 Oak Leaf Clusters; British Distinguished Flying Cross; French Croix De 'Guerre Avec Palm; Belgium Croix De 'Guerre Avec Palm; Chilien el Merito and the Distinguished Unit Citation with one Oak Leaf Cluster. His best combat day was 23 December 1944, when he shot down five German planes.

(OVER)

He is married to the former Miss Mary Eugenia Hunnicutt, of Raliegh, N.C., and has two sons, David Jr., 8, and Thomas, 3. The Schillings presently reside at Albany, Georgia.

In October 1951, Col. Schilling, was awarded the Harmon International Aviation Trophy by President Truman. The trophy was awarded for the Colonel Schilling's non-stop transatlantic flight in 1950.

PUBLIC INFORMATION OFFICE
Travis Air Force Ba
California

FOR IMMEDIATE RELEASE

July 5, 1952

FACT SHEET ON 31ST FEW TO FAR EAST

The 31st Fighter-Escort Wing, based at Turner Air Force Base, Albany, Georgia, is commanded by Colonel David C. Schilling, of Kansas City, Mo. The wing, now equipped with Republic F-84G Thunderjets, participated in all major European campaigns from North Africa to Germany during World War II. It is composed of more than 1,300 officers and airmen. Many of its pilots are veterans of Korea.

Colonel Schilling led the first flight of sixteen jets across the North Atlantic in 1948. In 1949, he recrossed the Atlantic, accompanied by Lt Col. Patrick Fleming, to deliver two Republic Thunderjets to England for modification and installation of an in-flight refueling system by In-flight Refueling, Ltd. He used the same plane in September 1950 to complete the history making, first non-stop, mid-air refueling flight in a jet plane westward across the Atlantic from Manston air base in England to Limestone, Maine, in ten hours and one minute. He received the coveted Harmon Trophy award from President Harry S. Truman in 1951 for the latter feat. Col. Schilling joined the Air Force in 1939, served with the 56th Fighter Group during World War II, and destroyed 24 enemy aircraft in the air and 10½ on the ground. He was awarded the DSC with one Oak Leaf cluster, the Silver Star with two clusters, the DFC with nine clusters and the Air Medal with 19 clusters.

Fighter Wing Mobility: With the growing mobility of jet units, the 31st Fighter-Escort Wing first moved intact to take part in Operation Portrex, a war exercise staged in Puerto Rico during 1949. At that time

MORE -

All men and planes moved by air from home base at Albany, Georgia, to Ramey Air Force Base, Puerto Rico.

Route of Movement to Far East: All Thunder jets departed from Turner Air Force Base, Georgia, on Independence Day, July 4, for Travis Air Force Base, California. They were refueled in-flight on the initial leg. They will depart for Hickam Air Force Base, Hawaii, on July 6, the longest leg of the 9,000-mile plus flight to the Far East. From Hawaii the Thunderjets will utilize an "island hopping" route to Tokyo.

Mission: Upon arrival in Japan, the 31st will be assigned to temporary duty according to a recent announcement by the Strategic Air Command Headquarters, Omaha, Nebraska. The move is in keeping with the policy of SAC to be prepared to conduct long-range operations to any part of the world, at any time.

Significant Facts: This is the first mass movement of fighter planes to span the Pacific Ocean, all the way.

It is the first mass movement of combat airplanes to employ in-flight refueling.

It is the longest airborne movement of a complete fighter wing and demonstrates the practicality of moving fighter wings to any corner of the free world.

Type of Planes: The Republic F-84G Thunderjet is a 600-mph-plus jet fighter-bomber of the type which has been smashing enemy installations in Korea and is in service with USAF fighter wings in Japan, Germany, and the U. S. It is also being delivered in undisclosed quantities to European countries participating in NATO (North Atlantic Treaty Organization).

MORE

It has a combat radius of action of 850 miles when equipped with two 230-gallon wing tip fuel tanks and a combat radius of 1000-miles when equipped with four external fuel tanks. Using mid-air refueling the F-84G has remained airborne for as long as 12 hours and 5 minutes. It has a service ceiling of more than 45,000 feet. It is powered by the Allison J-35 5200 pound thrust turbojet engine. Its fixed armament consists of six M-3 type machine guns (four firing from the nose and one each from each wing root). It is capable of carrying heavy loads of external armament such as 5-inch high velocity aircraft rockets, 500 and 1000-pound bombs, napalm tanks and various other types of armament.

LITTLE FRIENDS WITH LONG LEGS -- JETS ACROSS THE PACIFIC

by

COLONEL DAVID C. SCHILLING

The air was clear and smooth, seven miles above the Pacific Ocean. Fourteen hundred miles astern lay the California coast. It was a thousand miles to Hawaii, and I was running out of gas.

I glanced at my wing men, Thunderjet pilots of the 308th Fighter Escort Squadron, flying loose formation abreast, other elements spaced to the rear.

I pressed my mike button.

"Fox Peter Leader to formation. Give me a check."

One by one, each pilot reported in. All but two had sufficient fuel to reach Wickam Air Force Base. Those two could make it safely by dropping their empty wingtip tanks, greatly reducing the drag on the airplane, giving them greater range.

Unfortunately, a malfunction prevented release of two of my four auxiliary tanks. I was low on fuel for some reason unknown at the moment -- either thrcugh high altitude "boil off," because of a leak in tank connections, or because on the earlier air to air refueling, I had not received as much fuel as I needed.

I pressed the mike button again.

"Schilling to formation.--I can't clean my ship. I'll have to tap the standby tankers."

Quick replies came from my wing men.

"Okay chief. I could use a few pounds myself. Let's go." Another pilot, with similar sentiments, closed in as I peeled off to one side, and nosed down to reach refueling altitude.

It was a critical point in Operation Fox Peter One. A damaged part had forced me back to California the day before. If we failed to refuel properly this time, we were all through. There would be no place to go but into the drink. And a jet fighter plane sinks in about five seconds on the water.

Our fears didn't last long. At the right altitude, at the right place, at the right time, we spotted the most gorgeous sight a long-range fighter pilot can ever see -- a beautiful formation of KB-29 aerial tankers. Every one of those big fat airplanes was loaded with thousands of gallons of fuel, and they were eager to give it away. The 307th Air Refueling Squadron was on the ball.

We nosed in behind them. Down came the long booms. There was a very slight jar as the boom nozzle clicked into place. Clancy, the boom operator began pouring fuel into my thirsty Thunderjet.

It was over in two minutes. We pulled away, and with a dip of our wings and a wave to the tanker boys, we headed up to join the formation again. With plenty of fuel on board, we

increased our speed to catch up. We all landed together a couple of hours later on that big, 13,000-foot runway at Hickam Air Force Base, to be greeted with orchid leis from the Chamber of Commerce and a kiss from Beverly Rivera, Miss Hawaii of 1952. Beverly is beautiful, but so is my wife, and there's nothing in this world as thrilling as the sight of a whole squadron of flying gas stations when you need them.

They tell me that certain foreign diplomats were a bit startled when they first heard the news about Operation Fox Peter One -- the mass flight of 58 Thunderjets of the 31st Fighter Escort Wing across the Pacific from Georgia to Japan.

I can understand their surprise. I was a bit startled myself when I got the word from General Curtis E. LeMay, Commanding General of the Strategic Air Command, I was tapped to lead the mission.

It wasn't that we didn't have the experience. Back in 1948 we flew mission Fox Able, a flight of sixteen jets across the North Atlantic from Selfridge Air Force Base, Michigan to Furstenfeldbruck, Germany. And then there was my east to west non-stop jet flight from Manston, England to Limestone, Maine in 1950 which gained me the Harmon Trophy.

But Fox Peter One was different. It was vastly more difficult. The distance was enormous -- more than 10,000 miles. The overwater legs were longer -- one of them over 2600 miles, from the mainland to Hawaii. The air to air refueling problem was more critical, -- if anything went wrong and one of us couldn't accept fuel, this was one mission you couldn't walk home from. And believe me, that Pacific Ocean is awfully, awfully big.

We knew the Atlantic route. But nobody, as far as I knew, had ever been more than a few miles west of San Francisco in a jet fighter. And certainly not 2600 miles west of San Francisco.

So you can imagine the scramble to get ready when the ~~Gas~~ Operations order came down from General LeMay at Strategic Air Command Headquarters. We would have a week to prepare. Contrast that with the months of preparation that went into the Atlantic crossings. We would be taking not one flight or one squadron across. Everybody was going on this one. And when we got to the end of the line, we'd have to be ready to go into action, or the mission wouldn't be considered a success.

Well, we got there with 58 out of 60 F84G's, and we were ready. We reported to General O. P. Weyland at Far East Air Force Headquarters, and the next day he put us to work.

We covered 10,670 miles to get there, most of it over open ocean. The operations order spelled out the route. Turner Air Force Base, Albany, Georgia to Travis Air Force Base, California. Travis to Hickam. Hickam to Midway Island, Midway to Wake. Wake to Eniwetok. Eniwetok to Guam. Guam to Iwo Jima, and Iwo to Japan.

It was a long stretch, in terms of distance. But the average flight time for all our planes was less than 20 hours for the entire trip, although the actual time to complete the move was sixteen days by the calendar, 15 days actual time since we ~~LOST~~ one day at the International Date Line. Some of the delay en route was due to weather. On the jump from Travis to Hickam we preferred to fly one squadron across at a time. We delayed at Hickam and Guam to give our maintenance crews a rest.

Fox Peter One was no speed test. The next transpacific jet mission will make the trip in less than a week. We were the pioneers. What we learned will profit those who come after us. That's the way it is in aviation.

We've been told we made history with Fox Peter One. That may be so, but the pilots and maintenance men of the 31st Fighter Escort Wing were more interested in making Japan, period.

I was taking a shower at Maxwell Air Force Base after a classroom session at the Air University when I got the news. My deputy wing commander, Colonel "~~Dingy~~" Dunham was on the phone.

"~~Dingy~~ D.Ning"

"Chief," he said, "you'd better hop in the saddle and hustle back home right away. You're going places."

Dingy couldn't tell me much. The operation was classified Secret, for the time being. But he made it clear that we were moving, and moving fast, and that we were going a long, long way.

By the time I got back to Turner Air Force Base, the place was churning with activity. We've got the best fighter maintenance officers and men in the world, in the 31st Fighter Escort Wing, and they were turning to in great style. Captain Herman Beaty, Commanding Officer of the 31st Maintenance Squadron, was tooling up and down the flight line like a madman, making sure that nothing was overlooked in the rush to get our full complement of F-84G Thunderjets ready for the takeoff.

All of our major items were ready to go. The Strategic Air Command Mobility Plan was working to perfection. But no matter how carefully you plan in advance of such a move as this, there's always a shortage of certain hard-to-get small items you need at the last minute. Captain Beaty should get the 1952 Scroungers Medal, because he laid hands on more extra oxygen nozzles, high pressure oxygen bottles, and overwater survival equipment than we knew existed. Extra wingtip fuel tanks came flying in via transport planes from the supply depots. The effort our men put forth was something wonderful to watch, for those who had time to watch.

Support ships came from all directions. Big cargo planes of the Military Air Transport Service came winging in to load up crews and supplies. They would carry our en-route support teams to the island bases. Some of the stops lacked proper refueling equipment. Huge Strategic Air Command C-124 cargo planes loaded complete gasoline tankers into their cargo bays. Other MATS planes took off with control teams, key officers to prepare for our arrival at island bases. The entire administrative complement of the wing, 96 officers and men, took off for Japan via MATS over the Great Circle route to Alaska and Japan, to make certain our new base was prepared for immediate operations when we arrived.

Colonel "Pudge" Wheeler of San Jose, California, our operations officer, scheduled a series of air to air refueling missions for those pilots in the Wing who were lacking the finishing touches on midair refueling.

By the fourth of July, we were ready. At nine o'clock in the morning, ~~sixty-two jets were~~ airborne over Turner. The first transcontinental leg was set up as a training flight, with the aerial tankers positioned exactly as they would be on the second critical overwater jump to Hawaii.

One squadron ran into trouble at the refueling point, over Texas. Rapidly-changing weather conditions made the air turbulent at refueling altitude. The midair exchange of jet fuel was unduly

prolonged. Such a difficulty could lead to grave danger later on.

The lessons learned on the first leg resulted in quick changes in the flight plan, a change from theoretical tactics to tactics we knew would be absolutely sound.

By early afternoon of the Fourth of July, all our planes lined the parking ramp at Travis. There, we conferred with Brigadier General Dick Carmichael. He would divert three RB-36 reconnaissance planes from their regular missions, so they could fly weather reconnaissance for us over the Pacific.

"Dingy" Dunham flew down to a base in central California, where our aerial tankers were based. The changes in refueling tactics were discussed, and new plans made.

The Navy came through with survival suits for all our pilots, who were flown to Alameda Naval Air Station for precise fits. This was the first of many important contributions the Navy made to the operation. Navy cooperation was wholehearted, and gave us confidence.

Meanwhile, our ground maintenance crews were performing heroic feats. After working until four o'clock in the morning before takeoff at Turner, they worked another fourteen hours without letup at Travis, changing two engines in less than an hour, replacing leaky connections on the wingtip and pylon auxiliary tanks, refueling.

We were using what we call a four-tank configuration. Two wingtip tanks, two pylon tanks slung on the bomb racks under the Republic Thunderjet fuselages.

The 307th Squadron took off from Travis at nine o'clock, right on schedule with General Carmichael's weather ships giving us the green light. All the planes but two got past the first refueling point, located at a precisely-calculated spot over the Pacific. Mine was one of those forced back because of damage to my refueling receptacle.

Major "Bob" Keen, Commanding Officer of the 307th, continued on, leading the squadron, and landed safely at Honolulu. To him went the honor of being the first jet fighter pilot to cross 2h00 miles of the Pacific to Hawaii from east to west, the longest non-stop overwater jet flight with only one refueling en route.

On the seventh, as the 308th Squadron was preparing to take off, disaster nearly overtook us. While servicing one of the planes with oxygen, a nozzle burst, spraying an accumulation of jet fuel on the parking ramp. Spontaneous combustion caused a severe explosion. The jet fuel burst into flames. The oxygen tanks could have exploded and wrecked five or six airplanes, but they didn't. Captain Herman Beaty raced to the flaming oxygen cart, jumped aboard the attached flight-line tug, and drove the

rig into a nearby field. In my book, they just don't pay a man enough for that kind of service. Captain Beaty knew better than anyone else the danger, but he acted quickly and courageously.

All planes of the 308th Squadron, with me tagging along, got through without incident, except for the three of us who tapped the tankers at the second refueling point.

General LeMay flew down from SAC Headquarters to see the last squadron off, bidding goodbye and good luck to Colonel 'Chuck' Lenfest of Boise, Idaho, Commanding Officer of the 309th Squadron.

The ~~Gen~~ Operational Order called for us to fly 60 jets to Hawaii. To make sure we delivered, we ordered two spares aloft from Travis with the last squadron. Thus, 22 aircraft were airborne. One aborted due to failure to accept fuel from his tanker. 21 completed the first refueling, which gave us one extra, so we ordered him back to Travis. We acted too soon, because immediately thereafter, one other ship developed ~~fuel pump~~ oxygen trouble, and had to turn back. We ended up with 59 Thunderjets on the Hickam ramp, averaging about six hours for the crossing.

It was during the flight of the last squadron that 'Dingy' Dunham experienced a hair-raising experience. He was just tapping his tanker on first refueling, when his engine suffered a compressor

stall. Due to the slow speed he had to fly in order to hook onto the relatively slow-flying tanker, the ozone wasn't ramming through his engine fast enough. It quit on him, a "flameout."

Down below lay the interminable expanse of the Pacific Ocean. Unless he got his engine started, and started very quickly, Dingy Dunham was about to experience some more close association with the little rubber boat that gave him his nickname in World War Two.

As Colonel Dunham related the incident later: "I came off that tanker boom like I was shot from it, when my engine quit. I nosed her down, goosed the throttle and pushed my airstart button. With a Crrrrooooommmm the engine started and I was back in business again. I hooked onto the tanker, got a full load and rejoined the formation."

It was a close call, the first of several on Fox Peter One. Captain Tom Crull had more or less the same experience, but he, too, got an airstart again.

Then there was the case of Captain Bob Hopkins. He was one of the spare airplanes with the 309th Squadron. Due to a valve malfunction, he couldn't accept fuel. By the time he had tried it two or three times, his supply was over half gone. He had two minutes of fuel left when he got back to Travis.

Captain John Santry's oxygen connection came unstuck at 35,000 feet. He fixed it in time to keep from passing out.

The next major problem facing us after Hickam was the menace of Gooney Birds.

Midway Island is a bird refuge, so designated by the Department of the Interior. It's the only nesting place for the large Pacific albatross, whose young thickly populate the island at certain times of the year. Midway is also the home for swarming Terns and Frigate Birds.

The high-pitched whine of our jet engines roused them to great excitement as we landed. Most of them took to the air, as thick as any hive of bees.

We knew we had to fly right through the center of their swarm, at the upwind end of the Midway takeoff runway. Major Gene MacMurray had struck a bird on landing. It damaged one of his tiptanks so badly it had to be replaced. Suppose, on takeoff, a couple of birds should lodge in some pilot's air-scoop? They could block the flow of air, cause an immediate flameout. A disastrous water crash landing would result.

That night on Midway, our pilots checked the shark-repellent in their survival kits, to make sure it was still there.

The Navy was wonderful on Midway. They even had a crew of sweepers with hand brooms, brushing the coral dust off the runway, to prevent it from getting into our scoops. Unfortunately, there was no way to clear away the birds. During the night, despite a lack of equipment of the right type, Lieutenant Commander Jack Cruze and the Midway Navy refueling team filled our tanks and we were ready to go in the morning.

We were lucky on the birds. Most of the pilots struck them on takeoff, as many as six per airplane, many of them directly into the airscoops. But so shattering was the contact that the fairly small terns simply disintegrated. Only a few pilots hit the larger Gooneys. At the next stop, Wake Island, we cleaned bones and feathers from the intake screens. One pilot, Lieutenant John Ward of Lincoln, Nebraska, had to make the flight under instrument conditions because a gooney had plastered itself against his windshield and canopy, leaving him a small clear space to see through.

There were more close calls on the leg from Midway to Wake. Lieutenant Bob Dixon had one tiptank that wouldn't feed. We landed at Wake with fuel for two minutes of flying left.

We were flying at 475-miles an hour ground speed at ~~32-thousand feet,~~ halfway to Wake when Captain Homer Hayes cut in on the voice channel.

"Wayes to leader. I'm having some trouble here. No fuel pressure. Flameout." His fuel pump was out of commission.

Captain Virgil Sansing, his wingman, dropped back to stay with Wayes as he nosed down. In a calm voice, as though he were kibitzing a poker game, Sansing advised:

"Change your fuel transfer switch to your main forward tanks. But don't worry about starting your engine. She won't catch till you lose some altitude. Not enough oxygen in the air."

The blue Pacific was rushing up at Wayes. He ran through his emergency procedures, calmly talking the situation over with Sansing. At 18-thousand feet he pushed his airstart, and with a cough and a roar his engine came to life, the new momentum pushing him back against his seat and harness with a very comfortable feeling indeed.

Was he scared? Well, it was mighty lonely up there, except for Sansing. The destroyer USS O'Brien was positioned 80-miles away. But Wayes says he didn't get the shakes till the next day when he had time to think about it.

This is beginning to sound as if we were flying a bunch of broken-down crates across the ocean. That's not so. The Republic F-8hC Thunderjet is all you'd want in a long-range escort fighter. I wouldn't trade mine for seventeen cases of good whiskey. Once

you fill it up with gas, catch one air refueling, then first drop your pylon tanks, go for a while and drop your tiptanks, you can travel from now till breakfast with no sweat. It's a going airplane, and we're proud to be flying it.

Back in World War Two, bomber pilots dubbed the escort fighters "little friends," because they were mighty glad to see them show up to guard the formation. This F-8L/C is a little friend, an escort fighter, and it's one that has long legs -- the longest of any fighter in the world. That is how this operation gets its title. Fox Peter One handed us the job of covering the longest overwater legs of any air route in the world.

It was the airplane that got us to Japan. But it was our maintenance men who kept the airplanes flying, refueling them, fixing them when anything went wrong, changing engines when they needed changing.

How our en route support maintenance crews kept going throughout the sixteen-day period, I'll never know. They were magnificent. Besides the aforementioned Captain Herman Beaty, there was Captain George Nix, Lieutenant Leon Pollock, Warrant Officer George Carle and Master Sergeant Allen Bunte, to name only a few.

There's a man for you: Sergeant Bunte. He's a World War Two fighter pilot, having served with the RAAF in England when the

going was rough. He switched over to the Air Force, and when the funds were cut, he took a reduction to the rank of Master Sergeant to stay with us. It was a mighty fine feeling to know we had men like Bunte to take care of our planes for us.

And I've got to say a word for a lot of other people who helped out. All the way across, I've never seen people dig down so deep to come up with all they had to help out. MATS Pacific Division diverted numerous flights in order to make sure we had the men and the equipment at the right base at the right time. Pan American refueled us on the ground at Wake. Air Rescue put out maximum effort, to cover us all the way across.

There were at least two aspects about this mission we liked better than Fox Able One -- the first flight of jets across the North Atlantic. First, the water was warmer, in case we dunked. Second, the Navy turned out with ships galore, ships that just by odd chance happened to be along our line of flight when we passed over. Like having a paid-up insurance policy. We didn't need the Navy to fish us out of the briny, but we appreciated the full cooperation of Admirals Radford and Hoskins at Cincpac, Pearl Harbor.

After a one-hour stop at Wake for lunch and refueling, the next big hurdle to get over was the dangerously short runway at

Kwajalein. Not for landing, but for takeoff. The answer was JATO (Jet-assisted takeoff units) pressurized propellant in steel bottles slung in pairs under the fuselages of our P-51's. At the touch of a firing switch in the cockpit, with a bang and a roar, the rocket-like propellant cuts loose and you rise like a homesick angel on 2000 pounds of extra thrust.

There was just one difficulty. So powerful was the JATO, added to the normal rush of hot air from our tailpipes, that it ripped up huge chunks of the macadam topping from the runway, sending them cascading through the air to the rear. We spaced our takeoffs to give the propellant fog time to clear away, along with the flying debris, and although Lieutenant Lou Setter had to take off on instruments through the [redacted] mist, and Lieutenant Jim Carson lost a JATO bottle on takeoff, everybody made it to Guam safely.

Brigadier General Robert Wimsatt met us as we rolled up, and once again our refueling crews and maintenance men swarmed over the airplanes. We remained on Guam one extra day to let them rest up, and on the morning of July 15th at nine o'clock, we headed north for Iwo Jima.

On that barren little island where so many other Americans died, we lost an outstanding officer, Lieutenant Colonel Elmer G. ~~Larosa~~ De Rose of Sacramento, California. En route to Iwo, ~~Larosa~~ De Rose reported

a "funny whine" in his engine, but he said he thought he could make it okay. If his engine had held together for another two minutes, or if it had failed five minutes sooner, he would have been able to get out when she blew up. But he was on his initial landing approach, at an altitude of only 400-feet when an explosion rocked him, causing him to veer off, then flip over into a steep dive. He successfully worked his seat-ejection gear, tossing himself clear of the airplane, but he was much too low for his chute to open. There wasn't enough of the airplane left to clue us as to exactly what happened. It was an accident of a type that has occurred before and probably will happen again, as long as jet engines run at speeds over 7000 revolutions a minute, and fly at 500 miles an hour.

Naturally we were all depressed over the death of Colonel Darosa, and we wanted to push on, since we were so close to our destination. The next stop would be our new base in Northern Honshu, Japan. But the weather was socked in tight there. We were stuck at Iwo unless we could get permission to land at one of the many bases around Tokyo.

On the morning of July 16th, Colonel Warren in Far East Air Force Operations waved us on in, with permission to land at Yokota Air Force Base if the weather remained poor at Misawa, our new home. We landed the entire group at Yokota at 1:26 Tokyo time,

and General O. P. Weyland, Commanding General, Far East Air Force, was there to welcome us.

We didn't have much time to think about the political aspects of a flight like this. Reporters asked me why we chose this mode of movement. They had the impression it would have been less expensive to move by aircraft carrier. I feel the problem was a lot like buying a new car in Detroit. You can have it shipped out and pay the freight, or you can drive it out, and not only save the freight costs but also get it home a lot sooner.

The way things are in the world today, there's no substitute for speed of movement, especially when we're guarding a perimeter that encompasses the entire world.

The significant fact is this: the airplanes arrived at their destination in combat condition. There was no delay for "pickling" the airplanes, no salt in the hydraulics, no moisture in the electrical systems.

It was billed as a training mission, and that is exactly what it was. We learned as much on the first three days as we had during the entire previous year of training. We learned new tactics that were proved sound as they were devised. Fox Peter One will pay off handsomely in the years to come. Where the bombers can go, now the fighters can go also. The Strategic Air Command can deploy its fighters right along with the bombers, and to any spot on the face of the free world.

I've got a lot of confidence in the future. I know that when you're up against a tough situation, like we were in crossing the Pacific in jet fighters for the first time, there're always a lot of people who want to help.

Take the skipper of that Pan American Stratocruiser. He was inbound from Honolulu to the mainland on the morning of July eighth. Lieutenant Colonel "Chuck" Lenfest, Squadron Commander of the 309th, had just received a position check from Ocean Station Uncle, when another voice cut in on the VHF channel.

It said: "This is Panam nine five zero. I'm at four three zero west and two eight three north. How's it going, boy?"

Lenfest radioed back: "My tail is tender, but my tanks are full."

"I'd sure like to be riding with you. But it's kinda rugged, isn't it?"

"Yeh, we're cutting it close on this one, but we're gonna make it okay. No sweat."

"If you have any trouble, just gimme a call. Just gimme a call."

That Panam skipper would have turned his ship around and circled all day, tossing out emergency gear, if anybody had been forced down at sea.

That's the way it was all the way across. The Coast Guard, the Army at Eniwetok, the Navy at Cincpac and Midway, the Aerial Tanker Squadrons, the Air Force Air-Sea Rescue, the Marines. Everybody wanted to help out, on Operation Fox Peter One.

With that kind of support, we couldn't fail. With that kind of spirit, America can go a long, long way in this pioneering business.

Aug 44

LITTLE FRIENDS WITH LONG LEGS -- ... ...TER ACROSS THE PACIFIC

by

COLONEL DAVID C. SCHILLING

It was a helluva place to run out of gas!

Fourteen hundred miles astern lay the California coast. A thousand miles ahead was sunny Hawaii. I was zooming along in clear, smooth air seven miles above the blue Pacific Ocean and running out of gas!

I glanced at my wing men--Thunderjet pilots of the 308th Fighter Squadron of the Strategic Air Command's 31st Fighter-Escort Wing--flying loose formation abreast, with other elements spaced to the rear.

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One by one, each pilot reported in. All but two had sufficient fuel to reach Hickam Air Force Base. Those two could make it safely by dropping their empty wing-tip tanks, greatly reducing the drag on the airplane and giving them greater range.

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It was over in two minutes. We pulled away and with a dip of our wings and a wave to the tanker boys, we headed up to join the formation again. With plenty of fuel aboard, we increased our speed to catch up. We all landed together a couple of hours later on that big 10,000-foot runway at Hickam Air Force Base, to be greeted by Beverly Rivers, Miss Hawaii of 1952. [redacted]

They tell me that certain foreign diplomats were a bit startled when they first heard the news about Operation Fox Peter One--the mass flight of 58 Thunderjets of the 31st Fighter-Escort Wing across the United States from Georgia and across the Pacific to Japan.

I can understand their surprise. I was a bit startled myself when I got the word from General Curtis E. LeMay, Commanding General of the Strategic Air Command. I was tapped to lead the mission.

It wasn't that we didn't have the experience. Back in 1946, we flew Fox Able, a flight of sixteen jets across the North Atlantic from Selfridge Air Force Base, Michigan, to Furstenfeldbruck, Germany. And then there was my East to West non-stop jet flight from Manston, England to Limestone, Maine, in 1950 which gained me the Harmon Trophy.

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Fox Peter One was different. It was vastly more difficult. The Distance was enormous---more than 10,000 miles. The overwater legs were longer--one of them over 2,400 miles, ffom California to the mainland of Hawaii. The air-to-air refueling problem was more critical--if anything went wrong and one of us couldn't accept fuel, this was one mission you couldn't walk home from. And believe me, that Pacific Ocean is awfully, awfully big.

We knew the Atlantic route, But nobody, as far as I knew, had ever been more than a few miles West of San Francisco in a jet fighter. And certainly not 2,400 miles West of San Francisco.

So you can imagine the scramble to get ready when the Operations Order came from from General LeMay at Strategic Air Command Headquarters in Omaha, Nebraska. We would have something like nine days to prepare. Contrast this with the

months of preparation that went into the Atlantic crossings. We would be taking not one flight or one squadron across--everybody was going on this one. And when we got to the end of the line, we'd have to be ready to go into action, or the mission wouldn't be considered a success.

Well, we got to Japan with 56 F-80s and we were ready. We reported to General Otto P. Weyland, Commanding General of the Far East Air Force, and the next day, he put us to work.

We covered 10,670 miles to get there, most of it over open ocean. The operations order spelled out the route. Turner Air Force Base, Albany, Ga. to Travis Air Force Base, California. Then over ocean hops to Hawaii, Midway, Wake, Eniwetok, Guam, Iwo Jima and Japan.

It was a long stretch, in terms of distance, but the average flying time for all our planes was less than 20 hours for the entire trip. The actual time to complete the move was 16 days by the calendar, 15 days actual time since we lost one day at the International Date line. Some of the delay was due to weather. On the jump from Travis to Wickam, we preferred to fly one squadron across at a time. We delayed at Wickam and Guam to give our maintenance crews a rest.

Fox Peter One was no speed test. The next trans-Pacific jet mission will make the trip in less than a week. We were the pioneers. What we learned will profit those who come after us. That's the way it is in aviation.

We've been told we made history with Fox Peter One. That may be so, but the pilots and maintenance men of the 31st Fighter-Escort Wing were more interested in making Japan, period.

At this point, I think it would be appropriate to explain why our trans-Pacific mission was called Fox Peter One. Fox was old phonetic alphabet for Fighters. Peter for Pacific. One for the first attempt to cross the Pacific in jet fighters.

I was taking a shower at Maxwell Air Force Base in Montgomery, Ala., after a classroom session at the Air University when I got the news. My Deputy Wing Commander, Colonel "Dingy" Dunham was on the phone.

"Chief," he said, "you'd better hop in the saddle and hustle back home right away. You're going places."

The operation was classified "Secret" at that time, so "Dingy" couldn't say anymore, but he made it clear that we were moving, moving fast and going a long, long way.

By the time I got back to Turner AFB, the place was churning with activity. We've got the best fighter maintenance officers and men in the world and everybody in the 31st Fighter-Escort Wing was working long hours to make our mobility plan click. The effort our men put forth was something wonderful to watch for those who had time to watch.

Support ships came from all directions. Big cargo planes of the Military Air Transport Service came winging in to load crews and supplies. They would carry our enroute support teams to the island bases. Some of the stops lacked proper refueling equipment. Flying Strategic Support Squadron C-124s loaded complete gasoline tankers into their cargo bays. Other MATS planes took off with control teams which would prepare for our arrival at different island bases. The entire administrative complement of the Wing took off for Japan via MATS over the Great Circle route to Alaska to make certain our new base at Misawa was prepared for immediate operations when we arrived.

By the Fourth of July, we were ready. At 9 o'clock in the morning, our entire Wing was airborne over Turner AFB. The first leg--the trans-continental hop from Albany, Ga. to California--was set up as a training flight with the aerial tankers positioned exactly as they would be on the second critical over water jump to Hawaii.

One squadron ran into trouble at the refueling point over Texas. Rapidly changing weather conditions made the air turbulent at refueling altitude. The mid-air exchange of jet fuel was unduly prolonged, and such a difficulty could lead to grave danger later on.

The lessons learned on the first leg resulted in quick changes in the flight plan, a change from theoretical tactics to tactics we knew would be absolutely sound.

By early afternoon of July 4th, all of our planes were on the parking ramp at Travis AFB. There, we conferred with Brigadier General "Dick" Carmichael. He would divert three RB-36 reconnaissance planes from their regular missions so they could fly weather reconnaissance for us over the Pacific.

"Dingy" Dunham flew to a base in California where our aerial tankers were based and discussed the changes in refueling tactics.

The Navy came through with survival suits for all our pilots. We flew to Alameda Naval Air Station for precise fits. This was the first of many important contributions the Navy made to the operation. Navy cooperation was whole-hearted and gave us confidence.

Meanwhile, our ground maintenance crews were performing ~~[illegible]~~heroic feats. After working until 4 o'clock in the morning before take-off at Turner, they worked another 14 hours without let-up at Travis replacing leaky connections on the wing-tip and pylon auxiliary tanks and refueling.

The 307th Fighter Squadron took off from Travis at 9 A.M. on July 6 after General Carmichael's weather ships gave us the green light. All the planes except two got past the first refueling point which was located at a precisely calculated spot over the Pacific. Mine was one of those force back because of damage to my refueling receptacle.

Major "Bob" Keen, Commanding Officer of the 307th, took over when I turned back and led the squadron to Hawaii. To him went the honor of being the first jet fighter pilot to cross 2,400 miles of the Pacific to Hawaii from East to West--the longest non-stop over water jet flight with only one refueling enroute.

On [redacted] July 7 as the 307th Squadron was preparing to take off, disaster nearly overtook us. While servicing one of the planes with oxygen, a nozzle burst, spraying an accumulation of jet fuel on the parking ramp. Spontaneous combustion caused a severe explosion. The jet fuel burst into flames. The oxygen tanks could have exploded and wrecked five or six airplanes, but they didn't. Captain Herman Beaty, Commanding Officer of the 31st Maintenance Squadron, jumped aboard the attached flight line tug, and drove the rig into a nearby field. In my book, they just don't pay a man enough for that kind of service. Captain Beaty knew better than anyone else the danger, but he acted quickly and courageously.

When we reached Japan, I promptly recommended him for the Soldier's Medal.

All planes of the 307th Squadron, Commanded by Lt. Colonel Ray Millard, got through without incident, except for the three of us who tapped the tankers at the second refueling point. I tagged along with this squadron.

General LeMay flew to Travis AFB from SAC Headquarters in Omaha, Nebraska, to bid the last squadron good bye. He was out on the line when Lt. Colonel "Chuck" Lanfest, the 300th C.O. zoomed down the runway on July 6.

We ended up with 50 Thunderjets on the Hickam ramp, averaging less than six hours for the crossing.

It was during the flight of the last squadron that Colonel "Dingy" Dunham experienced a hair-raising experience. He was tapping his tanker on first refueling when his engine suffered a compressor stall. Due to the slow speed he had to fly in order to hook onto the relatively slow-flying tanker, the ozone wasn't rerring through his engine fast enough. It quit on him, a "flame-out."

Down below lay the interminable expanse of the Pacific Ocean. Unless he got his engine started and started very quickly, "Dingy" was about to experience some more close association with the little rubber boat that gave him his nickname in World War II.

As Dunham related the incident later: "I came off that tanker boom like a shot when my engine quit. I nosed her down, goosed the throttle and pushed my airstart button. With a Crrrroooorrr the engine started and I was back in business again. I hooked onto the tanker, got a full load and rejoined the loose formation."

The next major problem facing us after Hickam was the menace of Gooney birds on Midway Island. The island is designated a bird refuge by the Department of Interior. It's the only nesting place for the large Pacific Albatross, whose young thickly populate the island at certain times of the year. It is also the base for swarming terns and frigate birds.

The high-pitch whine of our jet engines roused them to great excitement as we landed. Most of them took to the air and were as thick as any hive of bees.

We knew we had to fly right through the center of their swarm at the up-wind end of the Midway take-off runway. Suppose on take-off a couple of birds should lodge in some pilot's air scoop? They could block the flow of air, cause an immediate flame-out and a disastrous water crash would result.

That night on Midway, our pilots checked the shark repellent in their survival kits to make sure it was still there.

The Navy was wonderful on Midway. They even had a crew of sweepers with hand brooms brushing the coral dust off the runway to prevent it from getting into our scoops. Unfortunately, there was no way to clear away the birds. During the night, despite the lack of equipment of the right type, Lieutenant Commander Jack Cruse and the Navy refueling team filled our tanks and we were ready to go in the morning.

We were lucky on the birds. Most of the pilots struck them on take-off, as many as six per airplane and many of them directly into the air scoops. So shattering was the impact that the fairly small terns simply disintegrated. Only a few pilots hit the larger Gooneys. At the next stop, Wake Island, we cleaned bones and feathers from intake screens.

After a one-hour stop at Wake for lunch and refueling, the next big hurdle to get over was the dangerously short runway at Eniwetok. There was no sweat landing there, but the take-off posed a different problem for our heavily-loaded planes.

The answer was JATO (jet assisted take-off units) which is pressurized rocket-like propellant in steel bottle slung in pairs under the fuselage of our F-84s. At the touch of a firing switch in the cockpit--with a bang

and a [redacted] roar, the propellant cuts loose and you rise like a homesick angel on 2,000 pounds of extra thrust.

Brigadier-General Robert [redacted] Winsatt met us as we rolled up at Guam and once again, our refueling crews and maintenance men swarmed over the airplanes. We remained on Guam an extra day to let them rest up, and on the morning of July 15th at 9 o'clock, we headed North for Iwo Jima.

On that barren little island where so many other Americans died, we lost an outstanding officers, Lt. Colonel Elmer C. DeRosa, of Sacramento, Calif. Enroute to Iwo, DeRosa reported a "Funny whine" in his engine, but said he thought he could make it okay. If his engine had held together for another two minutes, or if it had failed five minutes [redacted] sooner, he would have been able to get out when she blew up. He was on his initial landing approach at an altitude of only 400 feet when an explosion rocked him, causing him to veer off, then flip over into a steep dive. He successfully worked his seat-ejection gear, tossing himself clear of the airplane, but was much too low for his 'chute to open. There wasn't enough of the airplane left to clue us as to exactly what happen. It was an accident of a type that has occurred before and probably will happen again as long as jet engines run at speeds of over 7,000 revolutions per minute and fly at 500 miles per hour.

Naturally, we were all depressed over the death of Colonel DeRosa, but we wanted to push on [redacted] since we were so close to our destination. The next stop would be our new base at Misawa, Japan, but the weather was socked in tight in Northern Honshu.

On the morning of July 16th, Colonel Warren of [redacted] Far East Air Force Operations, waved us in with permission to land at Yokota AFB if the weather remained poor at Misawa. We landed our entire Wing at Yokota at 1:26 P.M. (Tokyo time) [redacted] General Otto P. Weyland, Commanding General of the Far East Air Force ,

and Brigadier-General Delmar T. Spivey, Commanding General of the Japan Air Defense Force, were there to greet us.

We didn't have much time to think about the political aspects of a flight like this. Reporters asked me why we chose this mode of movement. They had the impression it would have been less expensive to move by aircraft carrier. I feel the problem was a lot like buying a new car in Detroit. You can have it shipped out and pay the freight, or you can drive it out and not only save the freight costs, but also get it home a lot sooner.

The way things are in the world today, there's no substitute for speed of movement, especially when we're guarding a perimeter that encompasses the entire world.

The significant fact is this: The airplanes arrived at their destination in combat condition. There was no delay for "Pickling" the airplanes, no salt in the hydraulics and no moisture in the electrical systems.

It was billed as a training mission and that is exactly what it was. We learned as much on the first three days as we had during the entire previous year of training. We learned new tactics that were proved sound as devised. Fox Peter One will pay off handsomely in the years to come. Where the bombers can go, now the fighters can go also. The Strategic Air Command can deploy its fighters right along with bombers to any spot in the free world.

There were at least two aspects about this mission we liked better than Fox Able One--the first flight of jets across the North Atlantic. First, the water was warmer in case we dunked. Second, the Navy turned out with ships galore, ships that just by odd chance happened to be along our line of flight when we passed over. It was like having a paid-up insurance policy. We didn't need the Navy to fish us out because nobody ditched, but we appreciated the full cooperation of Admirals Radford and Hoskins at Cincpac, Pearl Harbor.

Sheet #12

The Republic F-84G Thunderjet proved to be all you'd want as a long-range fighter-escort. I wouldn't trade mine for 17 cases of good whiskey. Once you fill it up with fuel, catch one air refueling, then drop your pylon tanks, then your wing tanks, you can travel from now until breakfast with no sweat. It's a going airplane and we're proud to be flying it.

Back in World War II, bomber pilots dubbed the escort fighters, "little friends" because they were mighty glad to see them show up to guard the formation. This F-84G is a little friend that has the longest legs of any fighter in the world. That is how this operation gets its title.

It was the airplane that got us to Japan, but it was our maintenance men who kept the airplanes flying, refueling them and fixing them when anything went wrong. How our ground support maintenance crews kept going throughout the 16-day period, I'll never know.

And I've got to say a word for a lot of other people who helped out. All the way across, I've never seen people dig down so deep to come up with all they had to help out. MATS Pacific Division diverted numerous flights in order to make sure we had the men and equipment at the right base at the right time. Pan American refueled us on the ground at Wake. Air Rescue put out maximum effort to cover us all the way across. The Marines and Army also helped out at various stops.

I've got a lot of confidence in the future. I know that when you're up against a tough situation, like we were in crossing the Pacific in jet fighters for the first time, there're always a lot of people who want to help.

Take the skipper of that Pan American Stratocruiser. He was inbound from Honolulu to the mainland on the morning of July 8th. Lt. Colonel Lenfest, Commanding officer of the 309th Fighter Squadron, had just received a position check from Ocean Station Uncle, when another voice cut in on the VHF channel.

It said: "This is Panam 0-5-0. I'm at 2-3-0 West and 2-3-3 North. How's it going, boy?"

Lenfest radioed back: "My tail is tender, but my tanks are full."

"I'd sure like to be riding with you, but it's kinda rugged, isn't it?"

"Yak, we're cutting it close on this one, but we're gonna make it okay with no sweat."

"If you have any trouble, just gimme a call, just gimme a call."

That Panam skipper would have turned his ship around and circled all day, tossing out emergency gear, if anybody had been forced down at sea.

That's the way it was all the way across. The Coast Guard, the Army, the Navy, the Aerial Refueling Squadrons, the Air Force Air-Sea Rescue, the Marines. Everybody wanted to help out on Operation Fox Tater One.

With that kind of support, we couldn't fail. With that kind of spirit, the United States will go a long, long way in this aerial pioneering business.

Suggested black type insert
for 31st FEW story

"The deployment of the 31st Fighter-Escort Wing to Japan by using in-flight air refueling is the culmination of several years of development by the Air Force and enables Strategic Air Command fighters at last to join our larger aircraft with full global mobility."

CURTIS E. LeMAY
Commanding General
Strategic Air Command

Sheet #1 wiley/

Global mobility of both fighters and bombers is now a reality in the Strategic Air Command.

SAC's flexible fighters joined big bombers in the global mobility ranks in July when the 31st Fighter-Escort Wing was deployed from its home station at Turner Air Force Base, Albany, Ga., to Japan in just 11 days.

It was a 10,600-mile deployment with in-flight refueling used on two legs--Turner to Travis AFB, California and Travis to Hawaii. After reaching Hawaii, the F-84G Thunderjet-equipped Wing island-hopped to Midway, Wake, Eniwetok, Guam, Iwo Jima and into Japan.

Shortly after General Curtis E. LeMay became Commanding General of the Strategic Air Command in late 1948, he called for global mobility of SAC's bombers.

About this time an Air Force project on in-flight refueling techniques was making great strides towards giving bombers longer range, so General LeMay and his staff decided that in-flight refueling was the answer for global mobility of the World War II vintage B-29s and B-50s.

After much experiment and practice, the system was so well developed that a SAC B-50 medium bomber took off from Carswell AFB, at Fort Worth, Texas, and flew around the world non-stop by using in-flight refueling.

The bomber was the Lucky Lady II. It left Texas on February 26, 1949, and circled the globe on a 23,452-mile hop in 94 hours. Refueling points were in the Azores, Saudi-Arabia, the Philippines and Hawaii.

When in-flight refueling had proved itself for bombers, work was started to develop equipment and techniques that would enable fighter-escort planes to have similar global mobility.

The Air Force project to refuel fighters in the air was headed by Colonel Dave Schilling, of Kansas City, Missouri, a World War II fighter ace with 34 German planes to his credit and a pioneer ocean flyer in jet fighters.

Colonel Schilling led the first flight of USAF jet fighters across the North Atlantic and into Germany in 1948. The jets were Lockheed F-80 Shooting Stars and they made several refueling stops along the route.

Later, Schilling made the first non-stop jet flight across the North Atlantic from Manston, England, to Limestone, Maine, in September of 1950, employing in-flight refueling.

For the Manston-to-Limestone hop in which two Republic F-84G Thunderjets left England and only Colonel Schilling made it to United States soil, he was awarded the Harmon International Trophy, emblematic of the outstanding aviator in the world.

Schilling's flight across the North Atlantic proved the feasibility of manufacturing jet fighters with in-flight refueling mechanism, so it wasn't long before F-84G Thunderjets were being delivered to the Air Force.

Later, Colonel Schilling became commanding officer of the 31st Fighter-Escort Wing at Turner Air Force Base ~~and his Wing became the first Air Force unit to become operational~~ with the rugged mid-air refueling jet fighters.

In June of this year when USAF directed General LeMay to deploy a fighter-escort wing to Japan, the 31st Fighter-Escort Wing was ready for the first practical demonstration of showing that jet fighters could be moved anywhere in the free world with great speed.

Operation Fox Peter One was written into an operations order at Strategic Air Command Headquaters in Omaha, Nebraska and dispatched to Turner AFB.

The code designation of Fox Peter One was selected for the deployment because under the old phonetic alphabet "Fox" designated fighters; "Peter" was for Pacific and "One" meant it was the first time jet fighters had attempted to span the Pacific.

The operations order reached the Georgia base on June 25, and it gave the 31st FEW just nine days to prepare for the initial hop from Albany to Travis AFB, California, on July 4.

The 31st FEW mobility plan went into effect minutes after the operation order reached Albany.

Every unit of the Strategic Air Command has a mobility plan made months in advance in case of a sudden deployment. The essence of the plan is to have the four basic requirements to do the job (personnel, supplies, equipment and facilities) in position and ready for use at any time. To facilitate deployment to advance bases, the personnel, equipment and supplies necessary to initial operations

are kept in a constant state of combat readiness, poised for immediate deployment.

The plan calls for enough spare parts of engines, food, supplies and everything needed by a unit to keep it at a prepare advanced base so as to participate in sustained combat operations for a period of 30 days completely within its own resources, if necessary.

To expedite the mobility plan, Colonel Thayer S. Olds, commanding officer of the 40th Air Division, which is located at Turner AFB, ordered the base on a 6 A.M. to 6 P.M. work day.

Shortly after the Fox Peter One operations orders reached Turner until the Thunderjets took off on the first leg on July 4, transport planes from Strategic Support Squadrons and Military Air Transport Service hauled supplies and personnel [redacted] associated with the deployment away from the base.

Some of the stops along the route to Japan lacked proper refueling equipment, so huge C-124s loaded complete [redacted] fuel trucks into their gaping cargo bays. Control teams made up of [redacted] officers whose job was to complete preparations for the arrival of the ocean-hopping Thunderjets at various island bases departed early in MATS planes. The necessary administrative complement of the wing was transported to Misawa, Japan, via MATS to make sure ~~the~~ THE unit could begin immediate combat operations, if required.

The big day was July 4, and hundred of base personnel and dependents of the departing unit were on hand when Colonel Schilling advanced the throttle of his heavily-loaded Thunderjet to 100 percent, roared down the runway and sped over Albany. He was followed by three squadrons and the mission was under way.

The first leg to Travis AFB was by design similar to the second leg--the hazardous 2,400 miler over-water jump from California to Hawaii. Aerial tankers were positioned as they would be over the Pacific.

Refueling took place over Texas and it proved successful, although some valuable lessons were learned that resulted in changes in the original over-the-Pacific refueling plan.

The new tactics were worked out thoroughly with the crews of the tankers by Colonel "Dingy" Dunbar, Deputy commanding officer of the 31st TFW.

Colonel Dunbar made the flight out into the Pacific with the tankers when the first squadron of Thunderjets departed Travis on July 6, to observe the new tactics in operation. Completely satisfied, he returned to Travis and flew a jet to Hawaii on July 8.

Colonel Schilling led the first squadron that departed California, but damaged a vital piece of refueling equipment on his fighter during an attempt to make the hook-up and had to return to Travis. Major Robert J. Keen, of Jacksonville, Fla., commanding officer of the 307th Fighter Squadron, assumed command when Schilling turned back and guided the fighters safely to Hawaii.

Five hours and 27 minutes after leaving California, Major Keen's squadron landed at Hickam AFB. Colonel Schilling brought the 308th Squadron across on July 7, and Colonel Dunbar led the 309th into Hawaii on July 9.

As a safety precaution, the ~~[illegible]~~ Boeing KB-29 aerial tankers were stationed at a spot on the route to Hawaii ~~[illegible]~~ within the point of no return to Travis, so the 31st pilots could return to California if they experienced any trouble.

The flying tankers also were stationed a t a spot much closer to Hawaii so the jet jockeys could top their tanks for a safe trip into Hickam AFB, but only a few of the aircraft took on additional fuel at this second refueling point.

Sixty-one Thunderjets left California and only two turned back because of minor difficulties.

Colonel Schilling knew he had the project licked when the planes arrived at Hawaii without anybody ditching in the blue Pacific. It was a 2,400-mile leg--almost twice as far as any of the remaining island-hopping distances and the only over-water leg on which in-flight refueling was considered necessary.

The in-flight refueling technique for fighters has been perfected to such a high degree now that it only requires a contact ~~of two and a half minutes~~ of a few minutes to be "filled up" in the air.

All of the 31st FEW pilots flew the Pacific in survival suits borrowed from the Navy. The pilots flew [redacted] to Alameda Naval Air Station, California, for precise fits.

The survival suit is a close-fitting rubber outfit, complete with rubber shoes and is water proof. A Mae West life vest, shark repellent and small life rafts were "must" equipment in every plane.

On July 10, the entire Wing hopped to Midway Island, making the 1,141 mile hop in two hours and 55 minutes. A great deal of concern was expressed by Air Force officials at Hickam over the presence of thousands of "gooney" birds, terns and Albatrosses which populate Midway.

They feared the birds would be sucked into the air scoops of the jets and cause severe damage. The birds were out in full force and did cause concern, but did no damage.

The wing departed Midway on July 11 and zoomed to Wake Island--a distance of 1,030 miles--in one hour and 55 minutes. Two ships had "gooney" birds pass through their air scoops on take-off without damage to the planes.

Refueling at Wake impressed Colonel Schilling and his pilots since Pan-American employees were eager to assist regular Air Force refueling crews.

The wing did not remain over-night at Wake, but pushed on to Eniwetok Atoll, covering the scant 536 miles in one hour and 10 minutes.

From a ground crew stand point, the highlight of the deployment came when the jets left Eniwetok. The runways were too short for a safe take off, so it was necessary to employ Jato (Jet assist take off) as an assist in their take off.

After rolling down the runway at a good speed from the thrust of their own engines, the Thunderjets left the ground with a Fourth of July effect when the pilots touched a firing switch in the cockpit that cut loose 2,000 extra pounds of thrust from the Jato bottles.

Two Jato steel bottles were attached under the fuselage of each jet fighter. Each bottle contained a substantial charge of rocket propellant.

The flight from Eniwetok to Guam, a distance of 1,066 miles, required three hours and eight minutes as the aircraft were throttled back due to turblence.

At Guam, there was a lay-over of one day to rest the pilots and ground crews. Chief concern throughout the mission was the physical strain on the maintenance crews. They had been working all day on their aircraft and then boarding a transport plane to follow the jets to their next stop and perform more maintenance.

Sheet #2 - wiley/

Fifty-nine Thunderjets roared off the Guam runway on July 15 and headed for Iwo Jima, but only 58 planes landed at the destination. Their one loss: Lt. Colonel Elmer G. DeRosa, of Sacramento, California, was killed when his plane crashed as a result of an explosion in the engine compartment as it was coming in to land at Iwo Jima.

The last leg--a 650-mile hop into Japan--took only one hour and 56 minutes and was completed on July 16. General Otto P. Weyland, Commanding General of the Far East Air Force, was at Yokota AFB, to greet Colonel Schilling and his pilots as was Brigadier General Delmar T. Spivey, Commanding General of the Japan Air Defense Force, under whose command the 31st Fighter-Escort Wing will serve while on temporary duty in the Far East.

Many of the 31st FEW pilots were returning to familiar territory since more than half of them were veterans of the air war over Korea.

For the entire flight from Albany, Ga. to Japan, the average flight time per plane was slightly less than 29 hours.

Colonel Schilling predicted that the next trans-Pacific jet mission will go across in less than a week by utilizing the information compiled by the 31st.

Before the 31st blazed the sky trail to the Far East, all fighter-type aircraft of USAF was moved into the Pacific by loading them aboard aircraft carriers and cargo ships.

During a news conference in Japan, Colonel Schilling pointed out that there is no substitute for speed of movement in getting airplanes into a trouble area in a hurry.

The 31st got its jet fighters to Japan in 11 days after leaving Georgia and the planes arrived in combat condition. Movement by ship involves delay for "pickling", also gets salt in the plane's hydraulic syster and moisture in the electrical system.

Colonel Schilling said the flight proves that the Strategic Air Command can deploy its fighters right along with its bombers to any point in the free world.

The 31st FEW, in setting many new records, accomplished the following:

First mass jet flight to span the Pacific.

First mass mid-air refueling movement of jet fighters.

Longest mass movement of a complete wing by air.

Longest mass non-stop over-water in-flight refueling flight by jet fighters. (2,400 miles from Travis AFB to Hawaii)

Colonel Schilling directed much of the credit for the successful deployment to the determination and loyalty of the 31st Maintenance Squadron crews. "I think we have the outstanding maintenance men in the Air Force," he said, "and I'm sure they would have worked right around the clock until they dropped from exhaustion to make our mission a success."

The Colonel called halts in the deployment at Hawaii and Guam to give the mechanics well-deserved rests.

Colonel Schilling described Fox Peter One as an "all-service show" which ranks with the greatest demonstrations of inter-service co-operation in recent years.

Aircraft from four SAC aerial refueling squadrons participated in the operation in order to spread the experience around as much as possible. These squadron furnished Boeing KB-29s and KB-97s for air refuelings over Texas and on the California to Hawaii leg.

SAC RB-36s flew weather reconnaissance across the Pacific.

Military Air Transport Service airlifted spare engines, parts and personnel to Japan.

Air Force Air Rescue Service and MATS had rescue planes patrolling the Pacific on the route from California to Japan.

The Navy also provided search and rescue planes as well as surface vessels along the route. Navy personnel at Midway Island worked side-by-side with 71st men to refuel the Thunderjets and even swept the runway there to keep excessive coral dust from getting into air scoops.

The Marines helped out at Midway by furnishing guards for the supply planes. The Coast Guard had surface vessels available in case some planes had to ditch, and Pan-American ground personnel helped refuel at Wake Island.

Warm words of praise for the cooperation of Admirals Radford and Hoskins at Cincpac, Pearl Harbor, and the Navy and Coast Guard, in general, were spoken by Colonel Schilling.

The Air Force and Strategic Air Command learned much about the swift deployment of a fighter wing from Fox Peter One. An interesting conclusion from the movement was that the machine had been developed to a point where it exceeded the limit of comfortable human endurance.

All pilots agreed that automatic pilots are a "must" on the long, over-water hops and all suggested the pulsating seat is a definite requirement for every flight of more than three and a half hours. This information, along with maintenance and refueling data compiled will enable the next deployment to be even more efficient.

Street #11 wiley/ 6 9

The most important aspect of Fox Peter One was that a major obstacle to the advancement of military aviation had been overcome. No longer would the deployment of [redacted] 600 mile-per-hour fighters be limited to the speed of surface ships!


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DOCUMENT TO ROLL INDEX

FRAME NUMBER	CLASSIFICATION NUMBER	DATE PERIOD	VOL	PT	TITLE	SECURITY CLASSIFICATION	REMARKS
6	01057302	01/79-06/79			HQ 1st Combat Evaluation Group	Uncl	
111	01057303	07/79-12/79			" " "	Uncl	
201	01057304	07/80-12/80			" " "	Uncl	
296	01057305				Special Exercise; Mixed Units	Uncl	
334	01057306	06/47-07/47			Report; 7th Bombardment Gp. (Maneuvers)	Uncl	
439	01057307	07/48-10/48			HQ 28th Bombardment Gp (TDY Mission Report	Conf	
538	01057308	09/48-11-49			43rd Task Gp (Operation Combine III Maneuver)	Uncl	
596	01057309				Operation "CHECK-OUT"	Secret	
636	01057310				Operation "CHECK-OUT" Final Report	Secret	
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