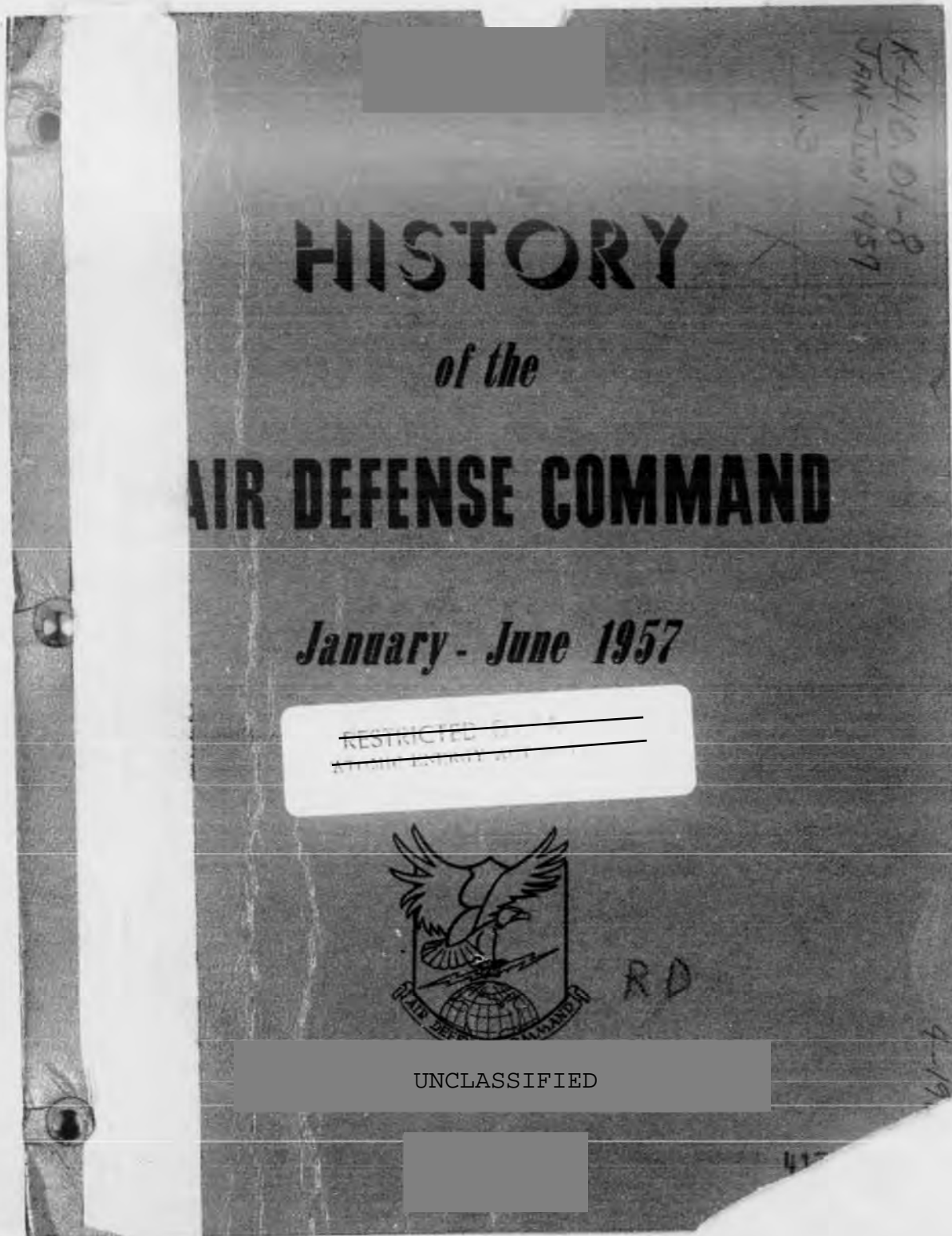


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NUMBER 310
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COMDR
5 VC Adjt
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6 ADJ 1957

COORDINATOR
Write Last Name and Street Date Coordinate
ADDC Willard
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PRIORITY W09 X AF AFCAV (2 Apr 57)

OTHER AIRS ARE AYS COLO
CCVS TRAF WARRDC

[REDACTED] ADCOP-C 01110

PER AFCAV. This message in three parts. PART ONE. YOUR AFCAV, 2 Apr 57. As a result of reduced monetary funds for the flying hour program, all phases of flying within ADC are seriously impaired. The severity of this reduction leaves us with extremely limited flexibility relative to the type and number of flying hours we allocate. We are especially concerned over the operational readiness state of inter-ceptor crews and the potential flying safety hazard for the next three months. There are only sufficient hours left to provide an average of eleven hours a month for the fighter pilots. To help provide this limited flying time, we have suspended all rocketry training at the air weapons center for this quarter. The loss of essential aircrew training and operational readiness will be drastically reduced by July 1957. PART TWO. We have had to decrease the airborne early warning radar coverage almost fifty per cent in order to reduce expenses from the flying hours. The calculated risk involved

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP
A-7005 20 700040Z

DISPATCHED
19 APR 1957
A.D.C.

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Furnished 10 APR 1957
(Date) (Initials)

H. J. TOSO
Capt, USAF
ad Adj

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BY (and typist's initials) <u>WJ3</u>	OFFICE CODE: <u>ADDOOP-C</u>	DATE: <u>15 Apr 57</u>	TEL NO: <u>2602/2603</u>	FANFOLD NUMBER AND SUSPENSE DATE: <u>4-3-54</u>
ADC HQ (14730)	FORM 11 (14730)	PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE	MEMO FOR RECORD: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SEE REVERSE	

2632

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APR 23 1957

COMER ADC ENT AFB COLO

6 YRS
 5 YRS
 4 YRS
 3 YRS
 2 YRS
 1 YR
 90 DAYS
 PERMANENT

DESTRUCTION AFTER: PERMANENT

the loss of early warning capability is difficult to estimate.
PART THREE. We cannot ignore the effect on the morale of rated officers within the Air Force as a result of this cut in flying hours. GWT pilots within ADC will receive minimum pilot time for flight pay qualification during the next three months. Because the flying hours for support type aircraft were severely reduced, only the most essential missions can be flown in support of our bases.
PART FOUR. In summary, the entire air defense mission will be jeopardized by the loss of tactical aircrew training and necessary proficiency flying. This loss could be further accentuated by increased hazards to flight safety.

4 - PARAPHRASE NOT REQUIRED EXCEPT PERM
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REMOVE ALL INTERNAL REFERENCES BY DATE
THE SECRETARY OF DEFENSE CLASSIFICATION.

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This correspondence is classified CONFIDENTIAL SECRET TOP SECRET or para 30, U.S.C., AR 200-1, or for reason(s) stated.

2

COMDR	
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COFS	
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COORD PREC	Write Last Name and Show Date Coordinated

75-2

OFFICE CODE:	DATE:	TEL NO:	FANFOLD NUMBER AND SUSPENSE DATE:
ADOOP-C	15 Apr 57	2602/2603	

ADC HQ FORM 11 15 MAR 57 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE MEMO FOR RECORD: NONE SEE REVERSE

0648

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ION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

ACTION COPY

Act-ComptR
Info-IG, #CP, DM, DO, PA
Susp-8 APR 57 FIS.
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APR 57

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RR RJEABL RJEDST RJEDEN RJEDMH RJEDUP RJEFFF RJEPLG RJEPOW RJEYB
DE RJEPHQ 96
R 021538Z ZEX
FM HEDUSAF WASHDC
TO ALMAJCOM

[REDACTED] IS A BOOK MSG//
FROM AFCAV. ALMAJCOM 672/57. REFERENCE
YOUR REVISED FY 57 OPERATIONS AND MAINTENANCE APPROVED FINANCIAL
PLAN BASED ON YOUR 31 JANUARY REVISION. YOUR HELP IS NEEDED TO
PROVIDE SPECIFIC INFORMATION ON OUR CURRENT POSITION TO PRECLUDE IS
RECURRENCE. YOUR PERSONAL APPRAISAL OF THE IMMEDIATE AND RESIDUAL
OPERATIONAL IMPACT OF CURRENT FLYING HOUR REPROGRAMMING IS DESIRED
SOONEST.

BT
02/1540Z APR RJEPHQ

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.

msg. to OSME
16-10-57

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0649

CONFIDENTIAL

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MAY 10 1957

162 378

FILE NUMBER 310.10

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP

0-104-08 08/2200Z

DESTROY AFTER: 1 YR, 2 YRS, 3 YRS, 4 YRS, 5 YRS, 6 YRS, PERMANENTLY

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A PHRASE NOT REQUIRED EXCEPT FIRST TO CATEGORY B ENCRYPTION - PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE TIME GROUP PRIOR TO DECLASSIFICATION.

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Not requested, not furnished
Furnished 8 MAY 1957
(Date) (Initials)



156-1X

Handwritten signature

H. I. KOPP
Capt USAF
Joint Operations Staff

UNCLASSIFIED

Form with fields: OFFICE CODE: AIRMAC-CA, DATE: 8 May 57, TEL NO: 2500, NAME: CAPT STREIB/14J, ABC HQ FORM 11, PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE, MEMO FOR RECORD

UNCLASSIFIED

DOC 163 APR 57

FILE NUMBER 310

MAY 16 1957

DESTROY AFTER: 30 DAYS 1 YR 2 YRS 3 YRS 4 YRS 5 YRS PERMANENT

ADOOP-C

SUBJECT: Recommended Flying Hour Program, FY 1958

TO: Director of Operations
Headquarters USAF
ATTN: Operations Program Division
Washington 25, D. C.

1. In compliance with AFR 27-7, the attached ADC Flying Hour Program for FY 1958 is submitted.
2. The 6th Air Division flying hour requirements are included in the ADC program.
3. Generally, flying hour rates per aircraft will remain the same through FY 1959. The rates for new types of aircraft programmed to enter the ADC inventory during FY 1959 are contained in FF 59-1.

FOR THE COMMANDER:

ROY A. HARRIS
Lt Col, USAF
Ass't Command AdP

1 Incl
ADC Flying Hour Program
(2 cys)

M/R: (SECRET) We have slipped the F-104A and F-104B program to 3/58 based on latest information from P&R and DCS/M. Sufficient flying hours are contained in this program to provide approximately 20 hours per month per aircrew. The RC-121 flying hours are based on 24-hour station coverage for a total of 8 stations.

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This correspondence is classified _____ para 30.b. AFR 205-1, or for reason(s) stated.

WRITER (and typist's initials) *WJG* OFFICE CODE: *ADOOP-C* DATE: *9 May 1957* TEL NO: *2602/2603* FANFOLD NUMBER AND SUSPENSE DA

Captain Willard D. Ingram/djs

ADC HQ FORM 11 (4730) 18 MAR 57 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE MEMO FOR RECORD: NONE SEE REVERSE

0651

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168-2
2-88
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RECOMMENDED FLYING HOUR PROGRAM

Current program
1958

TYPE MODEL AND SERIES	MISSION	ASSIGNMENT CODE	YEAR 1958												TOTAL FLYING HOURS
			1ST QUARTER			2ND QUARTER			3RD QUARTER			4TH QUARTER			
			Avg seft	Rate	Flying hours	Avg seft	Rate	Flying hours	Avg seft	Rate	Flying hours	Avg seft	Rate	Flying hours	
B-57E	Tow target	CC	39	90	3510	39	90	3510	39	90	3510	39	90	3510	14,040
TB-29	Radar eval	CC	17	174	2958	17	174	2958	20	174	3480	20	174	3480	13,876
TB-25	Radar eval	CC	7	150	1050	7	141	987	7	141	987	7	150	1050	3,974
F-104A	Ftr day	CC							16	45	720	58	51	2950	3,670
F-104B	Ftr day	CC							4	45	180	16	51	816	996
F-102A	Ftr Intep	CC	360	60	21,600	471	60	28,260	562	60	33,720	614	72	44,198	137,778
TF-102A	Ftr Intep	CC	29	60	1,740	44	60	2,640	54	60	3,240	55	72	3,960	11,580
F-101B	Ftr Intep	CC							2	45	90	18	45	810	900
F-94C	Ftr Intep	CC	100	72	7,200	100	66	6,600	100	66	6,600	88	72	6,336	26,736
F-89D	Ftr Intep	CC	100	69	6,900	52	66	3,432	25	66	1,650	25	69	1,725	13,707
F-89H	Ftr Intep	CC	116	72	8,352	116	66	7,656	116	66	7,656	116	72	8,352	32,016
F-89J	Ftr. Intep	CC	159	72	11,448	203	66	13,398	256	66	16,896	265	72	19,080	50,832
F-86D/L	Ftr Intep	CC	821	72	59,112	675	66	44,550	550	66	36,300	500	72	36,000	175,962
RC-121C	AEW&CON	CC	8	330	2,640	8	330	2,640	8	345	2,760	8	345	2,760	11,800
RC-121D	AEW&CON Tee Unit	CC	53	504	26,712	53	504	26,712	53	531	28,143	53	531	28,143	109,310
C-47	Support Tee Unit	CP	5	240	1,200	5	225	1,125	5	225	1,125	5	240	1,200	4,650
C-119	Support Tee Unit	CP	51	99	5,049	51	99	5,049	51	99	5,049	51	99	5,049	20,196
T-33	Support	CP	240	165	39,600	237	150	35,550	234	150	35,100	231	145	34,115	144,365

AF Form 1484, 15 Oct 58

UNCLASSIFIED

0652

UNCLASSIFIED

168-3

RECOMMENDED FLYING HOUR PROGRAM

Current program
PF 59-1

Command
ADC

FISCAL YEAR 1957

TYPE MODEL AND SERIES	MISSION	ASSIGNMENT CODE	1ST QUARTER				2ND QUARTER				3RD QUARTER				4TH QUARTER				TOTAL YEARLY FLYING HOURS
			Avg scft	Rate	Flying hours		Avg scft	Rate	Flying hours		Avg scft	Rate	Flying hours		Avg scft	Rate	Flying hours		
B-66	Combat Crew Training	TC	17	70	1,201	17	70	1,201	17	70	1,152	16	70	1,152	1,752				
B-66	Combat Crew Training	TC	3	87	261	3	87	261	3	87	261	3	87	261	1,014				
T-33	Combat Crew Training	TC	8	171	1,368	8	171	1,368	8	171	1,368	8	171	1,368	5,472				
T-25	Opnl Support	CS	10	120	1,200										1,200				
C-119	Opnl Support	CS	2	270	558	2	270	558	2	270	558	2	270	558	2,214				
C-117	Opnl Support	CS	51	240	12,240	51	225	11,475	50	225	11,250	53	240	12,720	47,735				
P-117	Opnl Support	CS	9	270	2,430	9	240	2,160	9	240	2,160	9	270	2,430	9,180				
P-150	Opnl Support	CS	22	117	2,574	22	105	2,310	22	135	2,970	22	117	2,574	10,428				
P-151	Opnl Support	CS	21	180	3,780	21	159	3,339	21	159	3,339	21	180	3,780	14,238				
F-33	Opnl Support	CS	20	171	3,420	20	171	3,420	20	171	3,420	20	171	3,420	13,680				
C-110	Opnl Support	CS	25	120	3,000	25	120	3,000	25	120	3,000	26	120	3,120	12,120				
C-131B	Admin Pool	AD	2	225	450	2	225	450	2	225	450	2	225	450	1,800				
C-51B	Admin Pool	AD	1	150	150	1	150	150	1	150	150	1	150	150	600				
C-51D	Administrative	AD	2	180	360	2	180	360	2	180	360	2	180	360	1,440				
W-51D	Hq ADC	AD	1	180	180	1	180	180	1	180	180	1	180	180	720				
C-51E	Administrative	AD	2	180	360	2	180	360	2	180	360	2	180	360	1,440				
C-118A	Coal Post U.S. MIL	CS	1	225	225	1	225	225	1	225	225	1	225	225	900				
C-117	Coal Post U.S. MIL	CS	1	150	150	1	150	150	1	150	150	1	150	150	600				

AP Form 1284, 15 Oct 56

2-15 MAY 1957

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168-821

RECOMMENDED FLYING HOUR PROGRAM

Current program PF 59-1

Command ADC

1957

APR 27-7

TYPE MODEL AND SERIES	MISSION	ASSIGNMENT CODE	FISCAL YEAR 1958												TOTAL YEARLY FLYING HOURS
			1ST QUARTER			2ND QUARTER			3RD QUARTER			4TH QUARTER			
			Avg acft	Rate	Flying hours	Avg acft	Rate	Flying hours	Avg acft	Rate	Flying hours	Avg acft	Rate	Flying hours	
T-31	Special Mission	CM	1	150	150	1	150	150	1	150	150	1	150	150	600
L-20A	Special Mission	CM	29	135	3915	29	120	3480	29	120	3480	29	135	3915	14,790
H-21B	Special Mission	CM	9	72	648	9	72	648	9	72	648	9	72	648	2,592
SH-19B	Local Rescue	CM	19	60	1140	19	60	1140	19	60	1140	19	60	1140	4,560
H-11	Special Mission	CM	5	33	165	5	33	165	5	33	165	5	33	165	660
H-5	Special Mission	CM	8	21	192	8	21	192	8	21	192	8	21	192	768
TR-25	Special Mission	CM	2	165	330	2	135	270	2	135	270	2	165	330	1,200
SA-16	Special Mission	CM	2	120	240	2	96	192	2	96	192	2	120	240	864

AF Form 1484, 15 Oct 56

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0654

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FILE NUMBER 310.10

COMOR

VC

COFS

ADJ

Write Last Name and Show Date Coordinate

ADCO-W
10 JUN 57

TOSO
10 June 57

TOSO
10 June 57

10 JUN 1957

10034Z

MESSAGE TRANSMITTED

WITH FOR

2-31-11

COMER ABC

COMER 4750 AMN VIKERY AFB ARIZ

COMER 4756 AMN TYDALL AFB FLA

COMEBACK COPY

Not requested, not furnished

Furnished 10 JUN 1957

(Date) (Initials)

FROM ADCOO-W

YEAR FOR AFTER, MAJ R H KRAPP. THIS COMMAND WILL BEGIN A MISSILE FIRING PROGRAM IN JULY 1957. THE SIX MONTH SCHEDULE OF UNIT DEPLOYMENT TO AIR WEAPON EMPLOYMENT CENTERS FOR MISSILE FIRING IS AS FOLLOWS: JULY, 1 SQUADRON; AUGUST, 2 SQUADRONS; SEPTEMBER, 2 SQUADRONS; OCTOBER, 3 SQUADRONS; NOVEMBER, 3 SQUADRONS; DECEMBER, 3 SQUADRONS. IT APPEARS THIS INITIAL EFFORT WILL BE SUPPORTED SOLELY BY A TORPEDO EFFORT. THE BROSE SQUADRON PRESENTLY LOCATED AT VIKERY AFB IS SCHEDULED FOR MOVEMENT TO TYDALL AFB IN JULY 57; THEREFORE, BROSE SUPPORT FOR THE ABOVE PROGRAM IS DOUBTFUL. AS TOR WILL BE USED, THIS COMMAND HAS AN URGENT REQUIREMENT FOR NO-5 BISTATIC TARGETS. THIS IS THE ONLY AVAILABLE TARGET HAVING THE BISTATIC REFLECTIVITY THAT IS NECESSARY FOR MISSILE FIRING. IT IS ESTIMATED THAT 40 TARGETS ARE

10 1512

JUN 1957

ROR

N/R

ADCOO-W

D/D ITEM

DC Policy 20

H. J. TOSO
Capt USAF

AFR 205-100's Command

30c

AFR 205-100's Command

DISPATCHED 10 JUN 1957 A.D.C.

WRITER (and typist's initials) Capt W. C. OLIFEN/cd

OFFICE CODE: ADCOO-W

DATE: 10 Jun 57

TEL NO: 2398

FANFOLD NUMBER AND SUSPENSE DATE

MEMO FOR RECORD: NONE SEE REVERSE

ADC HQ FORM 11 14750 18 MAR 57 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

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0655

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JUN 2 1957

COMER ADC

REQUIRED TO SUPPORT EACH FIRING UNIT, OR A TOTAL OF 560 TARGETS FOR
THE SIX MONTH PERIOD. THIS COMMAND HAS NO MC-5 TARGETS IN THE
INVENTORY; THEREFORE, URGENTLY REQUEST PROCUREMENT ACTION BE
EXPEDITED TO OBTAIN TARGETS TO SUPPORT OUR PROGRAM UNTIL SUFFICIENT
PRODUCTION QUANTITIES BECOME AVAILABLE.

A PARAGRAPH NOT RECORDED IN THIS FILE
TO CATEGORY B-EXEMPTION - PHYSICALLY
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TIME GROUP FROM THIS CLASSIFICATION

ABOCO-W

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DOC 165 ADCHR 57A



1. PURPOSE: To advise the recipient of the status of the message and to advise the recipient of the status of the message and to advise the recipient of the status of the message.

2. TO: [Redacted]

3. FROM: [Redacted]

4. SUBJECT: [Redacted]

5. DATE: [Redacted]

6. TIME: [Redacted]

7. PRIORITY: [Redacted]

8. HANDLING INSTRUCTIONS: [Redacted]

9. DISTRIBUTION: [Redacted]

10. COMMENTS: [Redacted]

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP 042351Z

ADUCO-W 01581

THE NO-1 VEHICLES WITH STOWED OR DISMOUNTED WEAPONS WILL NOT BE MADE AVAILABLE FOR THIS RANGE TRAINING. THESE ITEMS, INCLUDING WITH TACTICAL RANGE GAMES, FUSES, AND ROCKET MOTORS, CONTAINED THE WEAPONS RANGE WHICH WILL BE FIRED AT A WEAPON EMPLOYMENT CENTER ONLY. RANGE AIRCRAFT IN AN NO-1 EQUIPPED SQUADRON IS AUTHORIZED TO FIRE TWO ROUNDS PER YEAR. RANGE PLANS ARE TACTICAL RANGE GAMES, FUSES, AND ROCKET MOTORS. WEAPONS WITH ASSOCIATED COMPONENTS WILL BE WITHDRAWN FROM THE INVENTORY AND SHIPPED TO THE WEAPON EMPLOYMENT CENTER. CONTAINERS THESE ITEMS WILL BE KEPT BY THE STORES OFFICER CONTROL TRAINING CENTER/HEADQUARTERS, THIS HEADQUARTERS.

DISPATCHED
4 JUN 1957
A.D.C.

COMEBACK COPY

RECORDS DISPOSITION: PERMANENT DESTROY AFTER: 30 DAYS

ROR D/D ITEM N/R Not requested, not furnished

ADUCO-W DO Policy 20 *ole* Furnished (Date) (Initials) 4 JUN 1957

133-1
This correspondence is
WRITER (and typist's initials) Maj J. K. Moore/CS
ADUCO-W
H. J. TOSO
Capt USAF
Asst Command Adj
AFR 205-1, or for reason(s) stated.

ADUCO-W 31 May 57 TEL NO: 2398 PANFOLD NUMBER AND SUSPENSE: 46361 31 May

ADUCO-W 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE MEMO FOR RECORD: NONE SEE RE

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1957

JUN 6

ADC A 059
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DE RJWPSB 63A
M 222320Z
FM COMWADF HAMILTON AFB CALIF
TO COMADC ENT AFB COLO SPRGS COLO

OCO
ACT ~~211100~~ 31 May
HW 22 21 5315. 46361
Info - MCP
118

BT
UNCLAS FROM WDMAC-AA 08398.
REQUEST ADDITIONAL INFORMATION ON DUMMY ROCKET WARHEAD TYPE MA-1 AND
SPOTTING AND DEMOLITION CHARGE TYPE MA-1 REFERRED TO IN MESSAGE
ADOCO-W 22677. 14 MAY 57. WILL THESE ITEMS BE AVAILABLE FOR USE
BY FIS FOR HOME BASE ROCKETRY? IF AFFIRMATIVE, REQUEST STOCK NUM-
BERS, PRIME DEPOT, ICC CLASSIFICATION, STORAGE GROUP, QUANTITY
DISTANCE CLASS, NUMBER EACH PILOT IS AUTHORIZED FOR ANNUAL EXPENDI-
TURE, INSTRUCTIONS FOR USE AND ANY OTHER PERTINENT INFORMATION.
BT
22/2340Z MAY RJWPSB

4

01581

Recharge to ADOCO
My Moore

ACTION COPY

FROM:	ATM
TO:	ADAG
Non-Record:	
Temp-File:	
Action:	msg to WADF
Signed:	Way J Moore

C

TO: CA = CA/C

FILE: _____

ACTION: _____

SIGNATURE: _____

UNCLASSIFIED

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0658

UNCLASSIFIED

FILE NUMBER 310,10

COMMON
VC
COFS
ADJ

With Last Name and Short Data Coordination

ADDCO
Des/6
ADHAA
Toco
17 May

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP 180005Z
3-26-18

ADDCO-M 0140

PARAPHRASE NOT REQUIRED EXCEPT TO CATEGORY B ENCRYPTION - PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE TIME GROUP PRIOR TO DECLASSIFICATION.

MESSAGE IN 3 PARTS. YOUR AF00P-02-A 31099, 30 APR 57, IS QUOTED FOR YOUR INFORMATION: QUOTE: CONFIDENTIAL, INRCE 0005.

ACTION TAKEN WITH SAC TO EFFECT TRANSFER OF W-166 TO ADC HAS MET WITH NEGATIVE CONSEQUENCE. THE FOLLOWING SAC MESSAGE, DATED 13 MAY 57, IS QUOTED FOR YOUR INFORMATION: QUOTE: CONFIDENTIAL, INRCE 0005.

SUBJECT: (U) TRANSFER OF CONTROL OF W-166. THIS MESSAGE IN TWO PARTS. PART I. THE LOCATION OF AN ADC WEAPONS EMPLOYMENT CENTER AT MACBELL AFB MUST BE CONSISTENT WITH THE DEVELOPMENT OF LIKE FACILITIES IN SUPPORT OF A STRAT MED WING AND AEWGS, WHICH MUST VACATE FACILITIES AT MACBELL AFB. THEREFORE, THE PROGRAMMED MOVE OF THIS ADC UNIT MAY NOT BE REALISTIC. PART II. SINCE COMMAND JURISDICTION OF MACBELL AFB WILL BE RETAINED BY SAC, IT IS LOGICAL FOR THE HOST TO RETAIN CONTROL OF SUBJECT WEAPONS AND RANGE SCHEDULES. THEREFORE, THIS COMMAND CANNOT FAVORABLY CONSIDER YOUR REQUEST. UNQUOTE. PART II. THIS

COMEBACK COPY

ADDCO-M

Capt [redacted] 2398

3-1

correspondence is e

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306

AFR 2054 (Person(s) stated)

DISPATCHED 17 MAY 1957 ADC

15 2148
MAY 1957

DO Policy 20
M/R
H. J. TOSO
Capt USAF
AF Command

WRITER (and typist's initials)
Capt W. C. (LIEB)/ca

ADDCO-M

DATE: 15 May 57

TEL NO: 2398

FANFOLD NUMBER AND SUSPENSE DATE
B-4791 16 May 57

FORM 11 MAR 57 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

MEMO FOR RECORD: NONE SEE REVERSE

2877

0659

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MAY 21 1957

COMER ADE

WEAPON CENTER DOES NOT CONFER WITH THE HOST ORGANIZATION RETAINING
CONTROL AND SCHEDULING OF THIS RANGE. THE HIGH INTENSITY OPERATION
PROGRAMMED FOR THIS RANGE MAKES IT IMPERATIVE THAT THE WEAPON CENTER
COMMANDER MAINTAINS FULL JURISDICTION AND SCHEDULED CONTROL IF TRAINING
COMMITMENTS ARE TO BE MET. IT IS THE UNDERSTANDING OF THIS COMMAND
THAT W-168 WAS ORIGINALLY ENLARGED TO ACCOMMODATE ADC REQUIREMENTS;
AND, UPON OCCUPANCY OF THE NOW DEFUNCT BUCKINGHAM WEAPON CENTER, THE
RANGE WOULD BE TRANSFERRED TO ADC CONTROL. AS MACBILL AFB IS TO
BECOME OUR SECOND WEAPON EMPLOYMENT CENTER, W-168 REQUIREMENTS ARE
THE SAME THAT WOULD APPLY FOR BUCKINGHAM; THEREFORE, CONTROL OF THIS
RANGE SHOULD BE TRANSFERRED TO THIS COMMAND UNDER THE ORIGINAL
CONCEPT AND UNDERSTANDING. PART III. REQUEST YOU TAKE ACTION TO
TRANSFER CONTROL OF W-168 TO THIS COMMAND. TRANSFER SHOULD COINCIDE
WITH OCCUPANCY OF MACBILL AFB BY ADC UNITS. YOUR CONCURRENCE AND
ASSURANCE OF ADC W-168 CONTROL IS SOLICITED.

UNCLASSIFIED

ADCO-W

2 2

183-2X

0 6 6 0

UNCLASSIFIED

M/R: Message AFOP-OS-A 31099 recommended that action to transfer ~~XXXX~~ be coordinated with SAC. The quoted message is SAC's reply to our efforts to effect this transfer.

RECEIVED
HQ, ADI

MAR 17 1961

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COPY OF INCOMING CLASSIFIED MESSAGE
SEE CRYPTO SECTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

FILE NUMBER 316.10

DOC 167 ADDR 574

-E 011
A-709-27
RR RJEJEN
DE RJEJEN SE
R 211739Z
FM COFS USAF
TO COMDR ADC
BT

ACC 000 31 May 57

1200 18 NR 5200

DO
RPR

27 May 57

[REDACTED] (VINCENT AFB ATTN 4003 ADW) FROM
AFOP-OS-A CITE 38542. FOR ADC ONLY. REFERENCE YOUR MESSAGE CONFIDENTIAL
ADOCO-W 21403, DATED 18 MAY 1957. FOR ADC AND SAC. DESIRE THAT ACTION
TRANSFERING CONTROL OF W-108 BE DELAYED UNTIL SUCH TIME MOVEMENT
DIRECTIVES ARE PUBLISHED ASSIGNED ADC WEAPONS EMPLOYMENT CENTER.
MACDILL AFB. TRANSFER OF W-108 TO ADC CONTROL WILL BE EFFECTED
UNDER ORIGINAL CONCEPT.

BT
07/1745Z MAY RJEJEN

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C. 168 ADCHR 57A

Re AEGC, HNSPR, 15 Jan 57, Subj: Supersonic Tow Target Development Program

AH000-W

1st Ind

16 FEB 57

Hq Air Defense Command, Ent AFB, Colorado Springs, Colorado

TO: Commander, 4750th Air Defense Wing (Weapons), Vincent Air Force Base, Yuma, Arizona

1. Attached is a copy of supersonic target systems deployment programs proposed by AEGC for various fighter and interceptor aircraft. It is desired that these programs be carefully studied and comments and recommendations be forwarded to this headquarters not later than 15 March 1957.

2. Two major factors should be considered in evaluating these proposals. These are:

a. It is not anticipated that any home base programs will involve the firing of any Falcon, Sidewinder, or MB-1 missile. Target systems for home base firing will be limited to those required for short range unguided rockets (such as the 2.75" FFAR) and guns.

b. Weapons Employment Centers will require a supersonic target system for all weapons in the ADC inventory in the very near future.

3. Paragraph 2.a. above indicates that it will not be necessary to develop a towed target system for use at home bases for interceptors which have only a Falcon, Sidewinder, and/or MB-1 delivery capability. Therefore, it seems unnecessary to develop a UE tow capability for F-106 or F-101B interceptors. UE supersonic towed target systems will be required for the F-102A (which is not covered in the attached document) and the F-104.

4. The proposed system for the F-101A appears quite promising for use at Weapons Employment Centers. Major A.L. Taylor of AEGC indicated informally that there is a possibility of acquiring about 30 F-101A's for this purpose. Your comments relative to the suitability of this aircraft to meet supersonic tow requirements in the high density programs conducted at Weapons Employment Centers are particularly solicited.

BY ORDER OF THE COMMANDER:

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Major Sporn/Sjs

11 February 57
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RD&PR

15 January 1957

SUBJECT: Supersonic Tow Target Development Program

TO: Commander
Air Defense Command
Ent Air Force Base
Colorado Springs, Colorado

1. The inclosed abbreviated development plans are forwarded for your review and coordination. These plans are based on the results of exploratory studies conducted by BEACH Aircraft Corporation and Radioplane Company.

2. The abbreviated development plans call for the prime aircraft manufacturer to develop and furnish that quantities of the tow components i.e., tow reel, targets, and scorers as CFE items. This approach is recommended in lieu of a CFAE development program in an effort to provide your command with a supersonic tow capability with UE aircraft at the earliest possible date.

3. Since Tactical Air Command and Air Training Command requirements must be considered, your comments regarding the abbreviated development plans will be included in revised plans or included in the letter of transmittal to Headquarters USAF for their consideration.

FOR THE COMMANDER:

5 Incls

1. Dev Pln F-104A (C) 3 cys
2. Dev Pln F-101B " "
3. Dev Pln F-101A " "
4. Dev Pln F-100C/D " "
5. Dev Pln F-106A " "

P.C. ANDERSON
Lt. Colonel, USAF
Chf, Research & Target Sys Div

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DOC 169 ADGHR 57A

PRIORITY
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RDZPR-2-24-E
20 Feb 57

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COMDR ARDC BALTO MD

INFO: OOPS USAF WASH DC

RECEIVED TRANSMITTED
WITH FOLLOWING DATE TIME GROUP
5 Mar 57
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FROM ADOCO-W

FOR AFDRQ AT USAF: Your RDZPR-2-24-E, 20 Feb 57, and your letter,
Subject: Supersonic Tow Target Development Program, 15 Jan 57. The
following comments comprise ADC analysis of the ARDC Development
Programs forwarded by referenced letter. This message in V parts.
Part I: No U.S. tow capability will be required for long range
guided or unguided weapons since limited allocations of these weapons
will preclude any home base firing program. U.S. supersonic tow
capability will be required for F-104 and F-102 interceptors to per-
mit conducting home base training programs with 2.75" FFAR's and 20
mm cannon. For these weapons approximately 5,000 feet of cable will
be required. Tow reels should be internally stowed and should have
an airborne target launch and retrieve capability. The possibility
of using electrically driven reels should be considered as this

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MAJOR J. K. MOORE/ah
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Capt, USAF
Act Comdr ADC

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would require a minimum of aircraft modification and permit the aircraft to be returned to its combat configuration with a minimum of time and effort. Targets can be either dart-type or spin stabilized shaped type. Targets will require monostatic radar reflectors for X-band radars. No infrared source will be required for these targets. Adequate visibility of target must be achieved since a large proportion of intercepts will be visual lead pursuit. It does not appear that proximity scorers of the hit or miss type will be adequate. An integrated scorer based on radar-optic principles would be adequate for scoring rockets while perhaps stereo cameras could be developed in conjunction with tracer ammunition to score the 20 mm projectiles. Part II: First choice of a supersonic tow vehicle for weapons employment centers is the F-106. Second choice is the F-101A. These tow systems will require a 25,000 foot cable capability to permit firing long range guided missiles. A hit or miss proximity scorer with a radius of coverage of approximately 30 foot or the radar-optic scorer developed by AFPC at Eglin AFB appears to be most feasible for scoring Falcon and Sidewinder weapons. Bi-static radar reflectivity and an infrared source will be required of the targets. The possibility of using electrically driven reels should be studied. The further possibility of using air driven reels, extended from missile bays at subsonic speeds, for launch and recovery of the target, should be investigated. It may also prove to be possible to use the Northrop Bee Jay target system, internally stowed in missile bays and extended at subsonic speeds for target launch and recovery. System developed should be capable of airborne

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target recovery rather than parachute recovery. This target must be scored for guns and rockets as well as guided missiles. An important factor in the development program which was not mentioned was the tow cable. Available information indicates that at the speeds being considered with 25,000 feet of cable, the strength and drag characteristics of cables currently being used will be unsatisfactory. Part III. A factor apparently overlooked was the assessment of the MB-1 weapon. This weapon could be fired at a towed target with about 15,000 feet of cable. It does not appear feasible to score this weapon with proximity scorers to the required distance of 3,000 feet ahead of the target. Since target attrition will be nearly zero with this weapon and because shorter cable lengths can be used with this weapon, it appears feasible to use a more sophisticated type of target. The possibility of scoring with cameras from either the target/and/or the interceptor should be studied, as this appears to be the only feasible approach to this problem. Part IV: It appears that the proposed development programs will entail a substantial duplication of effort by several contractors. Further, it will result in the development and procurement of several types of reels, launchers, and targets with approximately the same characteristics. To preclude such duplication of effort and to permit procurement of a standard item, it is recommended that a single agency undertake the development program. Part V. It must be emphasized that the ADC cannot afford delay in the development of supersonic tow target systems. It is necessary that the target systems be available as the weapons systems are received in the ADC inventory.

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3103

United States Air Force
 Rocket Air Force Base
 Fann, Arizona

DOC 170 ADCHR 57A

SECRET

SUBJECT: Report of Drone Landings

Inspector
 17th Air Defense Group (Weapons)
 Air Operations Officer
 Rocket Air Force Base
 Fann, Arizona

1. In accordance with letter, Headquarters, 17th Air Defense Group, subject as above, 1 February 1957, see following for a summary of drone launches for the period 11-12 February 1957.

a. Monday, 11 February 1957

Flight Number	Purpose of Flight	Launch Alt.	Flight Time	Type of Recovery
24-57	Rocket Firing	17,000 feet	10 min	Level Flight

(1) Q-2 Drone number 4792 was launched at 09:00 AM and climbed to 17,000 feet. Rate of climb from 15,000 feet to 17,000 feet was 1,000 feet per minute at 100% RPM. True airspeed during climb was 300 to 350 knots.

(a) Eight (8) flight legs were flown. Seven (7) of these legs were 30 miles long, one (1) leg was 10 miles long.

(b) True airspeed in level flight at 17,000 feet was 350 knots, 350 knots, at 70%.

(c) Maximum altitude attained was 17,000 feet.

(d) Drone recovered four (4) miles W of field.

(e) Damage to drone on recovery was minor.

(f) Summary of flight passes: Twelve (12) flight passes, eight (8) firing passes. South SWD Squadron piloted these satisfactorily.

b. Tuesday, 12 February 1957

Flight Number	Purpose of Flight	Launch Alt.	Flight Time	Type of Recovery
25-57	Rocket	17,000 feet	10 min	Level Flight

M-687-1

ADO-ORO, 4754th Drone Sq, Vincent AFB, Tusa, Ariz, Subj: Report of Drone Launchings, 11 - 15 Feb 57

(1) Q-2 Drone Number 4756 was launched at 95% RPM and climbed to 30,000 feet. Rate of climb from 15,000 feet to 20,000 feet was 3,000 feet per minute at 102% RPM; from 20,000 feet to 30,000 feet was 2,500 feet per minute. True airspeed during climb was 300 to 320 knots.

- (a) Six (6) flight legs were flown. Each of these legs were 30 miles long.
- (b) True airspeed in level flight at 20,000 feet was 325 knots, .62 mach, at 95%.
- (c) Maximum altitude attained was 30,000 feet.
- (d) Drone recovered 20 miles SW of Colfred.
- (e) Damage to drone on recovery was above average. Drone landed in mountainous terrain.
- (f) Summary of fighter passes: Five (5) fighter passes, one (1) firing pass. 86th ADGW Squadron painted the drone satisfactorily.

c. Wednesday, 13 February 1957:

<u>Flight Number</u>	<u>Purpose of Flight</u>	<u>Launch Alt.</u>	<u>Flight Time</u>	<u>Type of Recovery</u>
26-57	Rocket Firing	15,000 ft	44 min	Command Chute

(1) Q-2 Drone Number 4763 was launched at 96% RPM and climbed to 30,000 feet. Rate of climb from 15,000 feet to 22,000 feet was 3,500 feet per minute at 102% RPM; from 22,000 feet to 30,000 feet was 2,000 feet per minute.

- (a) Seven (7) flight legs were flown. Each of these legs were 35 miles long.
- (b) True airspeed in level flight at 25,000 feet was 415 knots, .67 mach, at 96%.
- (c) Maximum altitude attained was 30,000 feet.
- (d) Drone recovered three (3) miles S-SE of Colfred.
- (e) Damage to drone on recovery was minor.

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FORM 1

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Q-2, 475th Drone Sq, Vincent AFB, Texas, AFB, 341st Report of
Drone Launchings, 11 - 15 Feb 57

(f) Summary of fighter passes: Flight (5) passes,
five (5) firing passes. 864th AEW Squadron painted drone satisfactorily.

<u>Flight Number</u>	<u>Purpose of Flight</u>	<u>Launch Alt.</u>	<u>Flight Time</u>	<u>Type of Recovery</u>
27-57	Rocket firing	15,000 ft	34 min.	Command

(1) Q-2 Drone Number 4789 was launched at 964 RPM and
climbed to 22,000 feet. Rate of climb from 15,000 feet to 22,000 feet
was 5,000 feet per minute at 1024 RPM. True airspeed during climb was
175 to 190 knots.

(a) Six (6) flight legs were flown. Four (4) of these
legs were 35 miles long, two (2) legs were 20 miles long.

(b) True airspeed in level flight at 22,000 feet was
150 knots, .55 mach, at 964.

(c) Maximum altitude attained was 22,000 feet.

(d) Drone recovered two (2) miles SE of Gulfport.

(e) Damage to drone on recovery was minor.

(f) Summary of fighter passes: Flight (5) passes,
five (5) firing passes. 864th AEW Squadron painted drone satisfactorily.

e. Friday, 15 February 1957:

<u>Flight Number</u>	<u>Purpose of Flight</u>	<u>Launch Alt.</u>	<u>Flight Time</u>	<u>Type of Recovery</u>
28-57	Rocket firing	15,000 ft	49 min.	Command chute

(1) Q-2 Drone Number 4792 was launched at 964 RPM and
climbed to 22,000 feet. Rate of climb from 15,000 feet to 22,000 feet
was 4,000 feet per minute at 1024 RPM; from 22,000 feet to 30,000 feet
was 3,000 feet per minute. True airspeed during climb was 100 to 160
knots.

(a) Eight (8) flight legs were flown. Five (5) of
these legs were 35 miles long, three (3) legs were 20 miles long.

(b) True airspeed in level flight at 22,000 feet was
150 knots, .74 mach, at 964. OM DJOTNA7

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AVG-100, 477th Drone Sq, Vincent AFB, Yuma, Ariz, Subj: Report of
Drone Launchings, 11 - 15 Feb 57

- (c) Maximum altitude attained was 32,000 feet.
- (d) Drone recovered three (3) miles SE of Colfred.
- (e) Damage to drone on recovery was minor.
- (f) Summary of fighter passes: Nine (9) fighter
passes, three (3) firing passes. 86th ACGW Squadron painted drone
satisfactorily.

JAMES V. BROWN
Major, USAF
Commander

AVG-100

1st Ind

477th Air Defense Grp (weapons), Vincent Air Force Base, Yuma,
Arizona, 15 February 1957

TO: Commander, 477th Air Defense Wing (weapons), Vincent Air Force
Base, Yuma, Arizona

Forwarded for your information.

FOR THE COMMANDER:

WESLEY S. PARR JR
Captain, USAF
Adjutant

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DOC 171 ADCHR 57A

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RR RJEDEB
DE RJEPHQ 101
R 211554Z
FM HEDUSAF WASH DC
TO COMAIRDEFCOM 101 (AFR 0010)

*Action: PFR Host
Info: IG, OOP, DM, OIE.
1852-F*

*Susp: 27 Feb 57
USAF Susp 15 March 57*

FROM AF00P-03-5 52628

ING TO INCREASE PRODUCTION RATE OF Q-2
PRODUCTION WILL THEN BE INCREASED TO 25 PER MONTH BEGINNING IN OCTOBER 1957,
APRIL 1958, 35 PER MONTH IN MAY AND JUNE 1958 AND 40 PER MONTH IN
JULY 1958. PRODUCTION INCREASE IS BASED ON ADC REQUIREMENTS IN
SUPPORT OF UNIT TACTICAL TRAINING. DEFICIENCIES IN RADAR REFLECTIVITY,
GCI TRACKING AND AN FEI OR NDI SYSTEM SHOULD BE ALLEVIATED IN NEXT
12-18 MONTHS. ARE PRESENTLY BEING QUERIED AS TO THE ESTIMATED
AVAILABILITY DATE FOR MINIMUM CAPABILITY IN THESE AREAS. DESIRE

PAGE TWO RJEPHQ 101
YOUR HEADQUARTERS RE-EVALUATE ADC QUANTITATIVE REQUIREMENTS FOR Q-2
DRONES WITH CONSIDERATION BEING GIVEN TO THE FOLLOWING: (A) EXISTING
QUALITATIVE DEFICIENCIES IN THE Q-2 DRONE, (B) QUESTIONABLE SUIT-
ABILITY OF THE YUMA RANGE FOR MISSILE FIRING AND DRONE OPERATIONS,
(C) 4750TH DRONE SQUADRONS LIMITED LAUNCH CAPABILITY OF 10 PER WEEK,
(D) ANTICIPATED USE OF MANEED TOM SYSTEMS FOR MISSILE TRAINING.
BASED ON THESE CONSIDERATIONS, DESIRE THIS HEADQUARTERS BE FURNISHED
THE FOLLOWING INFORMATION BY 15 MARCH 1957. (A) CAN ADC USE THE
MINIMUM CAPABILITY IN RADAR REFLECTIVITY, GCI TRACKING AND SCORING
ACCEPTABLE TO YOUR COMMAND? (C) WHAT EFFECT WILL INCLUSION OF A
TOM CAPABILITY FOR MISSILE FIRING (B-57E) HAVE ON ADC Q-2 QUANT-
ITATIVE REQUIREMENTS? (D) BASED ON PRESENT Q-2 DEFICIENCIES, ADC
LAUNCH CAPABILITY AND RANGE LIMITATIONS, AT WHAT RATE CAN Q-2 DRONE
BE EFFECTIVELY USED? IF ADC CANNOT USE THE Q-2 IN ITS PRESENT
CONFIGURATION AND IN QUANTITIES PROGRAMMED, ACTION WILL BE TAKEN
TO DELAY PRODUCTION INCREASE UNTIL MINIMUM REFLECTIVITY, RTRACKING
AND SCORING CAPABILITY ARE AVAILABLE.
BT
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4750th Drone Squadron (ADC)
United States Air Force
Vincent Air Force Base
Tusa, Arizona

DOC 172 ADCHR 57A

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BT 455 000

SUBJECT: Report of Drone Launchings

To: Commander
4750th Air Defense Group (Weapons)
Operations Officer
Vincent Air Force Base
Tusa, Arizona

1. In compliance with letter, Headquarters, 4750th Air Defense Group (ADC), subject as above, 2 January 1973, the following is a summary of drone launchings for the period of 17 - 22 February 1973.

a. Monday, 17 February 1973, first flight. No observations, time undetermined. Started normally on ground after launch.

b. Monday, 17 February 1973, second flight. Drone flew out at 10:50, after six (6) starts. Flight was normally on ground and up.

c. Tuesday, 18 February 1973, first flight. Drone would not transfer to internal power; battery circuit breaker had popped.

d. Tuesday, 19 February 1973, second flight. Drone would not gain initial lift-off. Parachute switch self-activated.

e. Wednesday, 20 February 1973, first flight:

<u>Flight Number</u>	<u>Purpose of Flight</u>	<u>Launch Alt.</u>	<u>Flight Time</u>	<u>Type of Recovery</u>
29-57	Socket firing	10,000 ft	02 min	Test carrier

(1) Q-2 Drone Number 1789 was launched at 1025 UTC and climbed to 35,000 feet. Rate of climb from 10,000 feet to 15,000 feet was 4,000 feet per minute at 1025 UTC; from 15,000 feet to 35,000 feet was 4,000 feet per minute. True airspeed during climb was 300 to 400 knots.

(a) Four (4) flight legs were flown. Two (2) of these legs were 35 miles long, two (2) legs were 20 miles long.

(b) True airspeed in level flight. Drone did not maintain level flight.

(c) Maximum altitude attained was 35,000 feet.

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 HQ-200, 1750th Drone Sq, Vincent AFB, Ind, Ariz, Subj: Report of
 Drone Launchings, 18 - 22 February 1957

(d) Drone recovered 15 miles SW of Colfred.

(e) Damage to drone on recovery was minor.

(f) Summary of fighter passes: No fighter passes.

f. Wednesday, 20 February 1957, second flight:

<u>Flight Number</u>	<u>Purpose of Flight</u>	<u>Launch Alt.</u>	<u>Flight Time</u>	<u>Type of Recovery</u>
30-57	Rocket firing	12,000 ft	55 min	Command

(1) Q-2 Drone Number 4796 was launched at 96% RPM and climbed to 35,000 feet. Rate of climb from 12,000 feet to 20,000 feet was 4,000 feet per minute at 102% RPM; from 20,000 feet to 35,000 feet was 1,500 feet per minute. True airspeed during climb was 360 to 410 knots.

(a) Seven (7) flight legs were flown. Each of these legs were 35 miles long.

(b) True airspeed in level flight at 35,000 feet was 420.4 knots, .72 mach, at 96%.

(c) Maximum altitude attained was 35,000 feet.

(d) Drone recovered one and one half (1½) miles S of Colfred.

(e) Damage to drone on recovery was minor.

(f) Summary of fighter passes: One (1) fighter pass.
 No firing.

g. Thursday, 21 February 1957: Mission cancelled due to rain. Excessive water collected in aft section of drone grounding a part of the recovery circuit.

h. Friday, 22 February 1957: No mission scheduled, due to holiday.

James H. Hix
 JAMES H HIX
 ON C. 1/27/57
 Colonel



DOC 173 ADCHR 57A

ROUTE

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COMM AIR

COMM W/AF WASH DC



FROM AF000-W

00688

12 Mar 57

YOUR CLASSIFIED #000-45-5 50620, 21 FEB 57. THE FOLLOWING INFORMATION IS SUBMITTED: (A) ADC IS UTILIZING THE Q-2A IN ITS PRESENT CONFIGURATION. ITS USE IS LIMITED, HOWEVER, BY RESTRICTIONS ON FERRIS FALCON MISSILES BECAUSE OF MISSILE SECURITY CLASSIFICATION AND THE DEFICIENCIES OF Q-2A INERTS. (B) FOR THE COMMAND TO EFFECTIVELY UTILIZE THE Q-2 INERTS WE MUST BE CAPABLE OF MAINTAINING POSITIVE INERT FLIGHT CONTROL OVER PROGRAMMED WEAPON RANGES (W/309, W/168, W/158, AND W/470); WE MUST BE CAPABLE OF MONITORING INERT POSITIONS OVER THESE RANGES EITHER BY RADAR OR REFLECTIVE RETURN; THE MONOSTATIC AND BISTATIC REFLECTIVITY OF THE INERT MUST BE COMPATIBLE WITH AI AND MISSILE RADARS (DESIRABLE REFLECTIVITY IS THAT OF B-47 TYPE AIRCRAFT); AND THE SCORING SYSTEM SHOULD BE CAPABLE OF SCORING FALCON SERIES MISSILES AND SIDEWINDER MISSILES. (C) ENHANCEMENT OF TOW CAPABILITY FOR MISSILE FIRING WILL INCREASE THE INERT REQUIREMENTS ORIGINALLY ANTICIPATED BY ALL FIELD

AF000-W

Capt 2908



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OTHER ARE

WERE MADE AGAINST BOMBERS. WE INTEND TO USE BOTH TORPEDO AND MISSILE SYSTEMS IN OUR MISSILE FIRING PROGRAMS. IT IS ANTICIPATED THAT IN THIS MANNER THE LAUNCH RATE SHOULD NEVER EXCEED 20 BOMBERS PER WEEK. BOMB EXPENDITURE SHOULD INCREASE AS MORE EFFECTIVE MISSILES ARE INTRODUCED INTO THE AIR FIRING PROGRAM. THIS INCREASE IN OUR BOMB REQUIREMENTS SHOULD NOT OCCUR UNTIL AFTER APR QTR FY 1996. IT IS SUGGESTED THAT Q-2A PRODUCTION INCREASE BE DELAYED UNTIL 1ST QTR FY 1999. (B) EVEN CONSIDERING ALL Q-2A DEFICIENCIES THIS BOMB CAN BE UTILIZED BY AWC IN OUR WEAPON FIRING PROGRAM. THE ONLY FACTOR PREVENTING THE 4750TH BOMB SQUADRON FROM CONTINUALLY LAUNCHING 10 BOMBERS PER WEEK HAS BEEN THE FAILURE OF THE BOMBERS TO ALWAYS PASS THE AIRBORNE PRELIMINARY FLIGHT CONTROL TEST AFTER SUCCESSFULLY PASSING ALL GROUND CHECKS. APPROXIMATELY 50 PER CENT OF THE BOMBERS UNDERGOING THE AIRBORNE CHECK ARE REJECTED. 2.75" ROCKETS HAVE BEEN FIRED AT THE Q-2A BOMB. AUTOMATIC FIRING SEQUENCE HAVE CLOSELY PARALLELS THAT WHICH HAS BEEN ACHIEVED AGAINST TORPEDO TARGETS. NO BOMBERS HAVE BEEN HIT BY ROCKETS TO DATE. DUE TO ITS HIGH SPEED AND ALTITUDE COMPARED TO THAT WHICH HAS BEEN ACHIEVED BY TORPEDO TARGETS THE Q-2A BOMB HAS PROVIDED A NEW REALISTIC TARGET FOR ROCKETRY. WE DO NOT PLAN TO CONTINUALLY USE THE Q-2A BOMB FOR ROCKETRY, AND THE USE OF THE BOMB FOR THIS PURPOSE HAS BEEN INDICATED BY THE SECURITY RESTRICTIONS WHICH HAVE STOPPED OUR MISSILE FIRING ACTIVITIES.

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1052 21 Feb 57

FM HEDUSAF WASH DC
TO COMADC ENT AFB COLO

CONFIDENTIAL/FRON AF00F-08-8 52620. This hq is planning to increase production rate of Q-2 drones from 10 per month to 25 per month beginning in Oct 57. Production will then be increased to 30 per month during Mar and Apr 58, 35 per month in May and Jun 58 and 40 per month in Jul 58. Production increase is based on ADC requirements in support of unit tactical training. Deficiencies in radar reflectivity, GCI tracking and an FCI or CDI system should be alleviated in next 12-18 months. ADC presently being queried as to the estimated availability date for minimum capability in these areas. Desire your hqs re-evaluate ADC quantitative requirements for Q-2 drones with consideration being given to the following: (A) existing qualitative deficiencies in the Q-2 drone, (B) questionable suitability of the Yuma Range for missile firing and drone operations, (C) 4750th Drone Squadrons limited launch capability of 10 per week, (D) anticipated use of rammed tow systems for missile training. Based on these considerations, desire this hqs be furnished the following information by 15 Mar 57: (A) Can ADC use the Q-2 drone in its present configuration? (B) If not, what is the minimum capability in radar reflectivity, GCI tracking and scoring acceptable to your command? (C) What effect will inclusion of a tow capability for missile firing (B-578) have on ADC Q-2 quantitative requirements? (D) Based on present Q-2 deficiencies, ADC launch capability and range limitations, at what rate can Q-2 drone be effectively used? If ADC cannot use the Q-2 in its present configuration and in quantities programmed, action will be taken to delay production increase until minimum reflectivity, retracking and scoring capability are available.

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DOC 174 ADCHR 57A

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ORIGIN

OFFICE OF THE SECRETARY OF DEFENSE

00863

REF: AD00-V _____

28 Mar 57

FOR AFOSR-OS-3, your classified letter subj: (Status) TH-61A Missiles for ADC Unit Tactical Training, 18 Mar 57. Considering that the performance of the TH-61A is comparable to that of the 4-21, the most important factor affecting our concern is cost of the modification program. Request this information be furnished plus clarification of the following points: (A) What will be the disposition of the missiles if they are not modified to target configuration? (B) Does TAC desire to utilize these target flights for training purposes? (C) Will the 43 guidance and control technicians be made available over and above ADC's present manpower limitations? (D) Has AFOSR been queried relative to use of these TH-61A's in support of the DEWLINE 1957 and ADC missile squadron unit training? (AFOSR has agreed to operate dummy targets in support of ADC missile squadron tests.)

Handwritten initials

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Mar

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CAPT EDWARDS/OS
2506

APR 1957

DATE	APR 1957
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AFOSR OS 1957-1

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D.C.

AFOOP-05-8

18 March 1957

SUBJECT: (U) TM-61A Missiles for ADC Unit Tactical Training

TO: Commander
Air Defense Command
Ent Air Force Base
Colorado

1. (CONFIDENTIAL) There are 147 TM-61A missiles available for use as "One Time Flight Targets". It is the intention of this Headquarters to offer these missiles as targets for training of air defense crews.

2. (CONFIDENTIAL) The following information concerning the TM-61A is submitted for planning purposes:

a. The TM-61A is capable of approximately 500 knots at 40,000 feet. Mission profile includes level-off at about 38,000 feet with constant "G" climb to 42,000 feet. Approximately 45 minutes are available at altitude.

b. X-band augmentation can be provided using production Q-2 bistatic reflectors. Whether or not the inherent missile reflectivity plus the Q-2 reflectors will provide a completely satisfactory target for interceptors is not known.

c. GCI tracking can be assured through inclusion of an APX-6 type beacon.

d. Ground handling and test equipment will be made available. Operation from only one site will be considered.

e. Approximately 60 trained guidance and control technicians will be available.

f. Modification of the TM-61A's for one-time flight operations at Holloman, Eglin, or Patrick would entail the following, which is considered the bare minimum necessary to provide an acceptable and operable target:

- (1) Additional APW-11 (for range safety).
- (2) Q-2 bistatic reflector pods.
- (3) Modification of autosyn positioner and original APW-11 to permit 15° turns (necessary for racetrack operations).
- (4) Modifications of 12-0 range safety box to include 30 second destruct system.

ltr to ADC, Subj (U) TM-61A Missiles for ADC Unit Tactical Training

- (5) Inclusion of APL-6 for GCI tracking.
- (6) Compliance with Safety of Flight T.O.'s, ECP's and repairs.

3. (CONFIDENTIAL) Estimated availability of missiles is as follows:

<u>FY 58</u>				<u>FY 59</u>				<u>TOTAL</u>
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
				30	30	30	33	147
3 21								

4. (CONFIDENTIAL) A preliminary analysis of possible operating location indicates that the Egin complex appears desirable for several reasons. Ground guidance equipment is available and, with the establishment of Tyndall as an ADC base, both training and test support could conceivably be conducted utilizing only one set of ground equipment and one TM-61A crew. In addition, limited systems evaluation exercises could be conducted within the Gunter SAGE Subsector.

5. (CONFIDENTIAL) Firing Error Indicators and/or range instrumentation, other than that already available in the Egin area, cannot be provided. It is desirable to collect all information possible should a suitable plan be submitted for use of these missiles. However, since there is little or no evaluation equipment available, no attempt will be made to completely evaluate the weapon systems.

6. (CONFIDENTIAL) It appears desirable to employ F-89H/J and F-102A aircraft equipped with GAR's against the TM-61A's. No GAR's can be furnished above the amounts authorized for training in accordance with AFR 50-22. Maximum number of assigned tactical crews and aircraft actually assigned to fighter-interceptor squadrons should be scheduled to participate in the firings.

7. (UNCLASSIFIED) Due to Air Force wide modification requirements, FY 58 P-160 funds are critical and will be committed only to those programs considered essential to the over-all mission of the Air Force.

8. (UNCLASSIFIED) If ADC desires to use the TM-61A's, with the above limitations, full and complete justification by your Headquarters will be required. Consideration should be given to the possibility of supplementing your Q-2A requirement, or utilizing the TM-61A in lieu of the Q-2A during this time period.

9. (UNCLASSIFIED) It is desired that your Headquarters submit information requested with least possible delay. Prompt action is necessary in order that appropriate action by this Headquarters can be taken.

BY ORDER OF THE CHIEF OF STAFF:

VERNON L. STINTZI
Colonel, USAF
Chf, Ops Support Division
Directorate of Ops, DCS/O

UNCLASSIFIED

COPY OF INCOMING CLASSIFIED MESSAGE
ON BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

FILE NUMBER 310.3

DOC 175 ADCHR 57A

15 Apr 57

Handwritten notes:
1700
1420
27, Dec
=783

AC-812
A-531-13
HQAW21
PP-RJEWYB/RJEPYC
DE RJEPYC
P 151448Z
FM HQ USAF WASHINGTON
TO ZEN/COMAFAC
INFO: RJEEDW/COMAFAC
RJEPYB/COMAFAC
ZEN/COMAFAC
RJEDEN/COMAFAC
RJEPIC/COMAFAC
ZEN/BUAER DEPT OF

BTH
(10 CONT ED SRT)
THIS MESSAGE IN ITSELF...
30 JAN 57, INFO...
AFDRQ-SC...
RADIOPLANE COMPANY...
PART I, REQUEST...
PLANE ROCKET...
DURATION...
TAC...
ATION SHOULD...

UNCLASSIFIED

ADC CA FORM 22 (Rev) 1962

PAGE TWO REPORT ON THE INITIAL EVALUATION OF CON-
 CEPT, SCOPE OF PROGRAM, EQUIPMENT, AND SUPPORTING
 REQUIRED, DISTRICT, AND EXTENT
 PRACTICAL. THE REPORT SHOULD INCLUDE THE FOLLOWING:
 RELATIVE PRIORITY AND APGC

PART II. THE REPORT SHOULD BE DESIGNED TO DETERMINE IF
 A RELATIVELY LOW-COST, HIGH-PERFORMANCE TARGET
 HAVING SUITABLE CHARACTERISTICS AND A SIMPLE MEANS OF
 ASSESSMENT CAN BE DEVELOPED AND OPERATIONAL SUPPORTED
 AS A TRAINING TARGET FOR THE USE OF MISSILES. IT IS
 PLANNED THAT THE TARGET WILL BE DEVELOPED USING
 TOWED TARGETS. THE TARGET SHOULD BE DOCUMENTED BY
 GOR 159, 2 APR 62. THE TARGET SHOULD BE DEVELOPED MISSILE
 CHARACTERISTICS SHOULD BE DETERMINED AND REPORTED SATIS-
 FACTORY IN THE REPORT. THE REPORT SHOULD
 SPECIFICALLY POINT OUT THE TARGETS WHICH MUST BE CHANGED
 TO PROVIDE A DETAILED REPORT ON THE TARGETS WHICH
 SHOULD BE CHANGED TO PROVIDE A DETAILED REPORT WITH THE
 TRAINING MESSAGE. THE REPORT SHOULD INCLUDE ALL
 OPTIMUM NUMBER OF TARGETS WHICH SHOULD INCLUDE ALL

PAGE THREE REPORT ON THE INITIAL EVALUATION SPECIFIC
 POSSIBLE ATTACK TECHNIQUES, SUPPORTING EQUIPMENT, AND RELATIONS
 RECOMMENDATIONS AND SUPPORTING EQUIPMENT AND RELATIONS
 TO GOR 159.
 BT
 15/14352 APR 62/62

A--PARAPHRASE NOT REQUIRED. PARAPHRASE AND ENCRYPTION--
 PHYSICALLY PARAPHRASE AND ENCRYPTION BY DATE-TIME GROUP PRIOR
 TO DECLASSIFICATION.

UNCLASSIFIED

SEE CRYPTO SECTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

0682

UNCLASSIFIED

PARAPHRASE NOT REQUIRED EXCEPT FROM TO CATEGORY B ENCRYPTION. PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION.

FILE NUMBER: 310.3

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP: 120047Z

ADRRQ-B 01664

COMEBACK COPY

Not requested, not furnished
Furnished 11 JUN 1957
(Date) (Initials)

FOR ADVIS. FOLLOWING COMMENTS FURNISHED IN REPLY TO LETTER APPROX 17 MAY 57 SUBJECT REPORT BY AD-EDC GROUP ON TARGET DRONES, REMAINDER OF MESSAGE IN TWO PARTS, PART I, REFERS TO SECTION 3, 3.1 AGREE ON METHOD OF LAUNCH, 3.2 AGREE ON ALTITUDE REQUIREMENTS, 3.3 DO NOT FULLY AGREE ON SPEED, ADC BELIEVES IT SHOULD BE MADE 1.2 AND 1.5 BY THE TIME TARGET DRONES ARE IN INVENTORY, 3.4 AGREE, 3.5 AGREE, ADC WOULD LIKE SON DEVICE ON TARGET, 3.6 AGREE, 3.7 DO NOT AGREE ON 10 MINUTE DURATION AS SUFFICIENT TIME FOR A DRONE THAT IS TO BE FIRED ON BY BOMBARD, DO NOT AGREE ON REASONING IN REFERENCE TO FIELD FIRE, ADC EXPERIENCE AT VINCENT FOR OPERATIONAL USE REQUIRES MAINTENANCE FIELD FIRE ON SAME RUN, 3.8 AND EXPERIENCE WITH RECOVERY AND MESSAGE RATE OF 5 PLUS PER TARGET DRONE, PART II, REFERS TO SECTION 6, CATEGORY 1 AGREE, CATEGORY 2 SPEED SHOULD BE MADE 1.2 TO 1.5, ALTITUDE SHOULD BE 80 THOUSAND FEET BY TIME DRONE ENTERS INVENTORY.

ADRRQ-B

(COPY OF INCLOSURE TO B/L NOT NECESSARY FOR COMD ADJ FILE)

H. I. TOSO
Capt USAF
Asst Commandant

DISPATCHED 11 JUN 1957 A.D.C.

WRITER (and typist's initials) L/Col Foley/m

DE: ADRRQ-B

DATE: 11 Jun 57

TEL NO: 2003

FANFOLD NUMBER AND SUSPENSE DATE: H-32119 11 Jun 57

MEMO FOR RECORD: NONE SEE REVERSE

RECORDS DISPOSITION: PERMANENT 10 DAYS 1 YR 2 YRS 3 YRS 4 YRS 5 YRS

156-1

UNCLASSIFIED

14730 18 MAR 57

JUN 1 1957

ADREQ-3

ENDURANCE: MINIMUM OF 15 MINUTES FOR ADC USE ON BOMARS. PROPELLION
 SYSTEM: ADC PREFERENCES SOLID PROPELLANT DUE TO HANDLING REQUIREMENTS.
 HOWEVER DO NOT BELIEVE CASTING OF THIS SIZE PROPELLANT PRACTICABLE.
 PAYLOAD: AGREE AND WOULD ADD DEVICE TO INFORM TIDE BOMARS FUSED IN
 REFERENCE TO MISS DISTANCE SCORING. LAUNCHING: AGREE. DO NOT
 AGREE ON ACCEPTING LOW ENDURANCE. RECOMMENDATION 1 STRIPPED DRONE
 COULD NOT BE EMPLOYED FOR TRAINING BY ADC. RECOMMENDATION 5 AGREE
 ON CONTRACTOR INVESTIGATION OF PROPOSED DRONE. RECOMMENDATION 6
 AGREE. RECOMMENDATION 7 DO NOT AGREE. Q4 IS OPERATIONAL. BOMARS
 IS DOMINANT AND THIS TARGET DRONE IS BEST VEHICLE IN INVENTORY TO
 TEST BOMARS. RECOMMENDATION 8 DO NOT AGREE. Q5 DUPLICATES THREAT
 OF 1962 FOR ADC PURPOSES. INVESTIGATION OF PRODUCTION REDESIGN TO
 MAKE Q5 CHEAPER UNIT. RECOMMENDATION 9. ADC DOES NOT HAVE USE FOR
 THIS TYPE DRONE. RECOMMENDATION 10 ADC NEEDS TO DUPLICATE THE
 THREAT. OBSOLETE DRONE AIRCRAFT DO NOT HAVE PERFORMANCE OF THREAT.
 RECOMMENDATION 11 HEADQUARTERS USAF POLICY NOT TO DRONE FIRST LINE
 AIRCRAFT PREVENTS ACCEPTANCE OF THIS RECOMMENDATION. RECOMMENDATION
 12 AGREE. LOAD CARRYING DRONE WAS PREDICATED ON PUTTING DEVICES OF
 VARIOUS FREQUENCIES IN DRONE TO SIMULATE RADAR JAMMING IN MANY BANDS.
 RECOMMENDATION 13 AGREE. RECOMMENDATION 14 AGREE. RECOMMENDATION
 15 AGREE FOR CONTRACTOR USE ONLY. RECOMMENDATION 16 AGREE.
 RECOMMENDATION 17 AGREE.

ADREQ-3

2 2

156-2X

UNCLASSIFIED

APR 29 1957

MEMO, By HQAF, (Uncl), Subject: Modification of F-33A Type Aircraft
IAW AFM 97-4 (Uncl)

A8908-2

9th Ind (Cont'd)

5. One limitation of the stereo system using F-6 cameras with the fragile target is that the vertical dimension of the target cannot be determined. This vertical dimension is required to determine the range from interceptor to target at impact so that the proper size of F-30 silhouette may be superimposed on the rocket pattern to determine the number of hits. However, if it is essential to achieve results and esprit de corps to know whether or not actual hits were obtained, the 300 yard F-30 silhouette can be used for all intercepts. In some cases, the relative rocket run may exceed 300 yards and in some cases it may be less. Over a period of time these errors will average out, and accurate over-all information is obtained even though on particular passes the evaluation may be erroneous.

6. Difficulty with controls at high altitudes will be encountered with any type of sensing technique which uses cameras and is not a particular deficiency of the stereo system.

7. The accuracy limitations of the stereo system are recognized and every effort is being expended to develop and test a satisfactory alternative equipment. The MAG camera and the Pal Mar D-3008 are presently being tested at the 4750th Air Defense Wing (Shannon) and appear very promising. Until availability of better equipment, stereo systems will have to be used in spite of their deficiencies.

8. Using the methods outlined in paragraphs 4 and 5, above, it is felt that satisfactory results can be achieved to meet the objectives stated with fragile systems and stereo cameras. Because of this and because it is not financially desirable to procure several different systems to perform the same functions, this headquarters cannot favorably consider the attached proposal at this time.

9. This headquarters wishes to commend the aggressiveness of your organization in attempting to arrive at workable solutions to problems which concern us all. This headquarters does not wish to discourage the submission of possible solutions since only by the concerted and united efforts of everyone can our most pressing problems be resolved.

2 Encls
w/c

ROY H. LYNN
Major General, USAF
Vice Commander

Copies furnished:
w/c Encls

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CHIEF

Cy did not use M file

UNCLASSIFIED

112-2X

UNCLASSIFIED

FILE NUM 310.3

DOC 171 ADCHR 57A

11 JUN 1957

Dear Don:

One of the most perplexing problems facing me is the one of determining the proficiency of my aircrew and measuring the effectiveness of the command. The ability to do this depends on timely availability of target and scoring systems. A problem requiring immediate solution is the scoring of long range air-to-air rockets, both guided and unguided. We intend to begin firings of the GAR-1, GAR-2, GAR-3 and NB-1 as soon as these missiles become available. We cannot initiate this training until a suitable target and scoring system is available at the Weapons Employment Centers.

At the conference on target and scoring systems held at Headquarters USAF on 18 and 19 March 1957, it was indicated to members of my staff that the improved Q-2 drone would offer us our earliest and best capability for firing and scoring. I also understand that an operational towed target and scoring system can be available to us by early calendar year 1959.

I urge you to place the utmost priority on these two items. It is extremely desirable for us to receive these systems as soon as possible, and acceleration of the development program would be an assist to us.

I have taken this opportunity to express to you my personal concern with this problem and to indicate my full support of the two programs discussed above. In addition, my staff is completing

GROUP 1 EXCLUDED FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION

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Headquarters Air Defense Command

a review of all Qualitative Operational Requirements for drones, target systems and scoring systems. Our requirements will be condensed and consolidated so that development effort can be aligned in a more manageable direction.

Sincerely,

J. H. ATKINSON
Lt General, USAF
Commander

Info Cy:

AFDRD
AFDRQ-SC/T, ATTN: Maj Baker
ARDC, ATTN: ROYSL (Maj Frost)
DET 1, ARDC, ATTN: RDESK
(L/Col Beckman)
WADC, ATTN: WCLCE
EADP
CADF
WADF
4750th Air Defense Wg

Lt General D. L. Putt
Deputy Chief of Staff, Development
Headquarters USAF
Washington 25, D. C.

SEARCHED
SERIALIZED
INDEXED
FILED

UNCLASSIFIED



CONTINENTAL AIR DEFENSE COMMAND
 8th AIR FORCE BASE
 COLORADO SPRINGS, COLORADO

313-7
 179 ADCDR 59A

OFFICE OF THE COMMANDER-IN-CHIEF

7 January 1957

MEMORANDUM FOR: Lt General Atkinson, Commander, ADC

1. At George AFB on Saturday morning I talked to the Division Commander, General Rouse, and to the Squadron Commander, Lt Colonel Rigney, concerning the 327th FIS. This unit has been in the process of conversion since April or May of last year. It has practically all of its tactical aircraft with big tails and has no two-seaters. It was declared operational as of the first of January and it starts on 15 January to carry out its alert commitment.
2. I concur in the desirability of having it take over the alert and believe that there is much to be gained by following this procedure.
3. However, the conversion of this unit from F-86D's to F-102's has brought out some very serious deficiencies in the over-all F-102 conversion program. I recognize that this squadron is the pioneer in the program and that it has been saddled with many additional functions which would normally be avoided. Nevertheless, the conversion has taken a very long time and the squadron is in reality non-operational.
4. There are the most serious deficiencies in ground handling and test equipment. This particular airplane needs a vast array of supporting gear and all too little of it is on hand. Some of the equipment has not yet been purchased.
5. A special arrangement was set up by ADC with the Kelly Depot to reduce the AOCF-ANFE rates but little improvement since last summer can be noted. Last Saturday, there were five 102's AOCF for one reason or another.

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[REDACTED]

Memo for Lt General Atkinson, Comdr, AFG

6. Radar maintenance is giving them a great deal of trouble, and while this is to be expected, it stems in considerable part from the fact that they do not have available the air-conditioning equipment necessary to cool and heat the gear on the ground.


7. It came as a surprise to me that the 327th does not enjoy first priority on F-102 equipment. Just how this works, I am not certain, but the squadron seems to think that Duluth has the first priority at the present time.

8. The squadron feels that its capability with the Falcon is good and they base this opinion on the results of tests run at Eglin Field. However, no one at George has fired the Falcon nor in fact has any armament been fired to date by the squadron. Just what capability the unit has with the Falcon missile, I do not know.

9. The aircraft was designed to carry 2-inch rockets and is now being modified with tubes capable of holding the 2.75 rocket. The conversion is being carried out by mechanics sent from the depot, the time consumed is excessive, and the number of aircraft out of commission for this conversion is also far greater than the squadron should be called upon to provide. Based on meager observations in the hanger, it would seem to me that it would be possible to do the modification of the rocket doors at the factory and provide the unit with an interchangeable door, but perhaps this is not possible. The system is presently being modified by holding the aircraft out of commission while mechanics reinsert new and larger tubes in the doors themselves *over the* on horses adjacent to the aircraft.

10. Several aircraft were out of commission for high tailpipe temperature. There is probably a fix for this, but I certainly didn't get a clear picture of the situation at the squadron. They assure me that in case of emergency they could operate these aircraft but that due to the downgrading of their tailpipe temperature to stay within limits, the high speed and high altitude performance would be degraded.

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Memo for Lt General Atkinson, Comdr, ADC

11. All in all, I came away with the very firm conviction that the Air Force is failing to provide the necessary support for the 102 conversion program and that in all probability the F-102, like the F-86D, will approach obsolescence before the fundamental deficiencies of this weapons system can be solved.

12. If there is something I can do to speed the process of bringing these units to an operational status, please let me know what it is.


E. E. PARTRIDGE
General, USAF
Commander-in-Chief

Info: DCS/P&O, CONAD
C/S, CONAD

UNCLASSIFIED

313.7

DISPOSITION FORM		SECURITY CLASSIFICATION (if any)
		DOC. 180 ADCHR 57A
FILE NO.	SUBJECT Deficiency Areas Affecting Support of F-102	
TO Chief of Staff	FROM DCS/M	DATE 16Jan57 COMMENT NO. 1
<p>1. Reference General Atkinson's request for notes and briefing on F-102 ground support equipment deficiencies, there are ten critical items that are deficient. They are:</p> <ul style="list-style-type: none"> Item 1 -- MC-1 Motor Generator, FSN 6125-669-6755 Item 2 -- MA-7 Air Conditioner, FSC 4120-203-3712, SE0960-803, SE0960-805 MA-8 Air Conditioner, FSC 4120-640-5775, SE1011 Item 3 -- MC-1 Heater, P/N SE-0973 Item 4 -- Test Unit Armament, 7CAC-801377 Item 5 -- Test Stand, MG-10 AFCS, HAC-486400-110 Item 6 -- Inter-Communication Set, 7CAC-801319-1288 Item 7 -- Test Set, Radar, AN UPM-33, 7CAC-801319-215783 Item 8 -- Test Set, Radar, UPM-10A, 7CAC-801319-22362 Item 9 -- Weapons System Evaluator Item 10 - Armament System Test Stand <p>These items fall in the category which the Command had reason to believe would be deficient for the first four or five Fighter-Interceptor Squadrons by reason of program PINCH. Other reasons for deficiencies at this time are generally due to failure of the item to pass functional tests precluding immediate delivery, or, as in the case of the weapons system evaluator, requirement for item was recently established.</p> <p>2. Generally, get well dates for these deficiencies are within the next 60 days with the exception of the weapons system evaluator. A little more detailed information on each deficient item is attached. Attention is also invited to a critical J-57 engine which shortage is anticipated. Detailed information is attached under Item No. 11.</p>		
<p><i>file copy</i></p> <p><i>Sidney A. Ofstun</i> SIDNEY A. OFSTUN Colonel, USAF DCS Materiel</p>		
1 Incl Deficiency Areas		

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DEFICIENCY AREAS
AFFECTING
SUPPORT OF F102 WEAPON

UNCLASSIFIED

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ITEM 1. MC-1 Motor Generator, FSM 6125-669-6755.

San Antonio Air Material Area advised on 29 November 1957 that delivery of this item was not proceeding as expected and that support would be marginal. They requested our concurrence in supplying four each per twenty-five aircraft. (Total authorized: nine organizational and one field). We agreed, provided additional gas driven generators (MD-3's) were provided. Sacramento Air Material Area has been queried regarding additional units. No reply to date.

Convair had a contract for 31 units for ADC but failure to pass functional tests precluded their immediate delivery. To date, 10 of the 31 have been made available for Air Force pick-ups. Remaining units will be available by end of January 1957.

These generators will be of little value if adequate base electrification and/or diesel back power is not made available.

Handwritten: LEB, Serial 8777
ITEM 2. MA-7 Air Conditioner, FSC 4120-203-3712, SED760-803, SED760-805
MA-8 Air Conditioner, FSC 4120-640-5775, SE1011

Only 37 of 221 units on contract have been delivered. Original contractor (Recony) produced unsatisfactory units. 115 units will be delivered from acceptable contractor during January and February. Only 37 units are currently available to tactical units.

Handwritten: ✓
ITEM 3. MC-1 Heater, P/N SE-0273.

These heaters appear to have adequate delivery promised, if attained. Total of 10 each have been shipped to tactical units with 40 more promised during January. If the fire control concept of utilizing heaters as blowers is accepted, requirement for a large percentage of air conditioners will be precluded.

Handwritten: ✓
ITEM 4. Test Unit Armament, TCAC-PO1377.

Original item not satisfactory and is being replaced by new item, Convair Part number SA-776-805. Estimated delivery of first item to Convair is 15 February 1957. Thirty production units will be available in March. Follow-on production will continue at the rate of

ITEM 5. Test Unit, R-10 AFCS, SAC-486400-110.

It is due to distribution. No estimated delivery date available at present.

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ITEM 6. Inter-Communication Set. 7CAC-801319-1222

Estimated delivery date - March 1957.

ITEM 7. Test Set, Radar, AN/UPM-33. 7CAC-801319-215763.

Estimated delivery date not known.

ITEM 8. Test Set, Radar, UPM-10A. 7CAC-801319-22362.

Estimated delivery date - January 1957.

ITEM 9. Weapons System Evaluator.

This item is required as a means of testing the complete fire control, missile and armament systems in flight. Sixteen pre-production items are due for delivery by 31 January 1957. Delivery of production item due to commence in August 1957.

ITEM 10. Armament System Test Stand.

This quick go-no-go tester is required to check out the fire control system during turn rounds or pre-flight inspections. Initial delivery expected January 1957.

ITEM 11. J-57-P23 Engine.

It is considered that engines will be a major deficiency area as the program progresses. ADC requires 13 engines per squadron. For the entire number of F102 aircraft on contract, only 302 spare engines have been procured. These requirements are for ATC, NEAC, AAC, Weapons Employment Centers, intransit pipeline and depot overhaul as well as ADC squadrons. If ADC were to use the entire assets shown, ADC will be short 10 engines alone and this does not include other agencies.

This matter was presented to SAAMA in April 1956, to USAF and AMC in November 1956 and at recent meeting at this headquarters, chairmanned by Colonel Ross, AMC Engine Management Group.

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DGC 181 ADCHR 57A

COMADC

TO: COFS USAF WASH D C

 FROM ADHCR 00776

20 Mar 57

Initial inspection required in accordance with TO 1F-102-618,
13 Mar 57, has revealed eighty per cent of the 102 fleet grounded
AOCF for Engine Mounted Gear Box. Supply and Maintenance sources reveal
no replacement gear boxes and no interim fix. Your efforts in assis-
ting to resolve this problem are solicited.



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ACTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

DOC 112 ADCHR 37A

22 Mar 57

AC 325

A-1393-23
PP RJEDEN
DE RJWMB 54V
P/M 22223Z
FM COMDR SAAMA KELLY
TO COMDR ADC ENT
INCO CSAF WASHDC
COMDR AMC WPAFB
COMDR OCAMA TINKER

ACT. DMM
Info IG (HCR)
Sump 27 MAR
2450-B

FROM SMTAF-834. YOUR ADICX 00176,20
13 MAR 57, HAS BEEN REPLACED BY TO
1F-152-613, DATED 20 MAR 57. THIS LATEST TECHNICAL ORDER INCLUDES
MODIFICATION OF AIRCRAFT OIL SYSTEM PLUMBING, INSPECTION OF GEAR
BOX OIL PORT THREADS AND DETAILED PROCEDURES FOR INSTALLATION OF
GEAR BOX FITTINGS. IT IS RECOGNIZED THIS ACTION WILL ONLY PARTIALLY
ALLEVIATE THE PRESENT HIGH GEAR BOX AOCIP RATE. A FIX WHICH HAS THE
CONCURRENCE OF WADC HAS BEEN DEVELOPED FOR REPAIR OF THOSE GEAR
BOXES WHICH DO NOT MEET THE INSPECTION REQUIREMENTS OF TO 1F-152-
613, DATED 20 MAR 57. FIX WAS HAND CARRIED TO OCAMA 21 MAR 57.

SINCE REPAIR IS DEPOT LEVEL, OCAMA WILL ESTABLISH AN EXPEDITED
PROGRAM FOR GEAR BOX REPAIR. IN ORDER TO PRECLUDE TRANSMISSION
DELAYS, REQUEST CORRESPONDENCE RELATIVE TO GEAR BOX REPAIR SCHEDULE
AND/OR AVAILABILITY OF SERVICEABLE GEAR BOXES BE SUBMITTED
DIRECT TO OCAMA WITH INFORMATION COPY TO THIS AMA. TOP PRIORITY
HAS BEEN ASSIGNED THIS PROGRAM AND MAXIMUM EFFORT IS BEING EXERTED
TO PROVIDE SUFFICIENT QUANTITIES OF SERVICEABLE GEAR BOXES AS SOON
AS POSSIBLE

BT
22/2243Z
AC-PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION-
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DTG PRIOR
TO DECLASSIFICATION - NO UNCLASSIFIED REFERENCE IF DTG IS QUOTED

UNCLASSIFIED

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313.7

SEE CRYPTO SECTION BEFORE
DECLASSIFYING
PARAPHRASE IS NOT REQUIRED

DOC 183 ADCHR 57A

COPY OF INCOMING CLASSIFIED MESSAGE

hist

28 Mar 57

AG 089
A-1307-29
HQADIA
RR RJEDWP RJEDEN
DE RJEPHO 216
R 282215Z
FM HEDUSAF WASHDC
TO RJEDWP/COMAMC WPAFB OHIO
RJEDEN/COMAMC ENT AFB COLO
INFO XEN/COMSAAMA KELLY AFB TEX

3190 E
9-2100 DM
info 16-HCP

[REDACTED] FROM AFMME-AC 2114
"STRUCTURAL REPAIR", THIS MESSAGE IN TWO PARTS
PART I FOR AMC. THIS HEADQUARTERS FMAS BEEN ADVISED THAT NOT FLESS THAN
SEVENTEEN F-102 AIRCRAFT HAVE BEEN REPORTED FOR STRUCTURAL REPAIRS
WHICH ARE BEYOND BASE LEVEL CAPABILITY. THIS NUMBER IS OF CONCERN
TO THIS HEADQUARTERS IN THAT IT REPRESENTS APPROXIMATELY 10 PERCENT OF THE
TACTICAL INVENTORY AS OF THIS DATE. IT IS DESIRED THAT YOUR REPAIR
PROGRAM BE ADJUSTED TO RAPIDLY RETURN THESE AIRCRAFT TO OPERATIONAL
STATUS. REQUEST THE FOLLOWING INFORMATION BE FURNISHED THIS HEAD-
QUARTERS, ATTENTION AFMME-AC, WITH INFO TO ADC: (1) AS LISTING BY
SERIAL NUMBER OF ALL F-102 AIRCRAFT WHICH HAVE BEEN REPORTED TO AMC

PAGE TWO RJEPHO 216
DEPOTS FOR STRUCTURAL REPAIRS WHICH ARE BEYOND BASE LEVEL CAPABILITY.
(2) DATE OF DAMAGE, (3) PRESENT LOCATION, (4) CAUSE OF DAMAGE,
(5) AREA OF DAMAGE, (6) REPAIRING AGENCY, (7) ESTIMATED MANHOURS
TO REPAIR, (8) ESTIMATED DATE OF RETURN TO OPERATIONAL STATUS,
(9) A BRIEF SUMMARY OF ANY UNUSUAL DELAYS.
REQUEST THE ABOVE INFORMATION BE REPORTED AS OF 1 APRIL 1957 AND
FORWARDED TO THIS HEADQUARTERS NOT LATER THAN 20 APRIL 1957.
FURTHER REQUEST THAT THE INFORMATION IN THE SAME FORMAT BE MADE A
CONTINUING AGENDA ITEM FOR THE F-80WEAPONS SYSTEM PHASING GROUP
MEETINGS. PART II FOR ADC. REQUEST YOUR HEADQUARTERS TAKE ACTION TO
INSURE, (1) THAT ALL AIRCRAFT WHICH REQUIRE REPAIR BEYOND BASE LEVEL
CAPABILITY ARE PROMPTLY REPORTED TO THE APPROPRIATE AMC AGENCY, (2)
THAT A POSITIVE FOLLOW-UP ON THE STATUS OF REPAIR OF EACH AIRCRAFT
BE MADE PERIODICALLY AND (3) THAT APPARENT DEFICIENCIES BE REPORTED
TO THE APPROPRIATE AMC PRIME AIR MATERIEL AREA WITH INFO COPY TO
THIS HEADQUARTERS, ATTENTION AFMME-AC.
BT
28/2237Z MAR RJEPHO

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE TIME GROUP PRIOR
TO DECLASSIFICATION.

UNCLASSIFIED

UNCLASSIFIED

COPY OF INCOMING CLASSIFIED MESSAGE

SEE COPY TO SECTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

DGC 184 ADGHR 57A

cls *MDM*

312.7

AG-002
A-39-02
HQA021
PP RJEDEN RJEDWP
DE RJEPHQ 127
P R 911645Z
FM HEDUSAF WASH DC
TO RJEDWP/COMANC USAFB GWID
INFO RJEDEN/COMA1RETCOM ENT AFB COLO
ZEN/CONSAANA KELLY AFB TEX
ZEN/ AIR FORCE PLANT REPRESENTATIVE CONVAIR SAN DIEGO CALIF

ACT MDM
Info IIB

4395-

1 May 57

[REDACTED] FROM AFMDC-1 55553. PERSONAL TO RAWLINGS FROM IRVINE. THIS MESSAGE IN TWO PARTS. PART I: REFERENCE IS MADE TO THE F-102 PROBLEM IN GENERAL, AND SPECIFICALLY MY PERSONAL TO YOU OF 26 MARCH ON THIS SUBJECT. I KNOW THAT YOU HAVE STUDIED ADJUSTMENT IN F-102 PRODUCTION RATES AND HAVE NOTED THAT THERE HAS BEEN NO SUBSTANTIAL IMPROVEMENT IN SUPPLY SUPPORT. I HAVE AUTHORIZED THE CONTRACTOR TO SHIP ITEMS FROM PRODUCTION LINE DIRECT TO THE BASES WHEN REQUESTED BY THE BASES. MR. WASH AND MR. SHERRON OF

PAGE TWO RJEPHQ127
CONVAIR HAVE AGREED TO THIS PROCEDURE ON AN INFORMAL BASIS WHETHER OR NOT AT THIS TIME THERE ARE FORMALIZED CONTRACTS TO COVER SUCH CONTINGENCIES. GEN ODOM HAS ADVISED GEN BONDLEY THAT IF CERTAIN CRITICAL ITEMS SUCH AS STARTERS ARE FURNISHED TO BASES THAT THE AIRCRAFT PRODUCTION LINE WOULD HAVE TO BE STOPPED. I SHOULD LIKE TO KNOW WHEN THE F-102A WILL BECOME LOGISTICALLY SUPPORTABLE AND WHETHER OR NOT WE SHOULD SLOW DOWN THE F-102A PRODUCTION PROGRAM. PART II: REFERENCE IS MADE TO YOUR MESSAGE MCG-4-34-E. I REGRET THAT THE F-102 SUPPORT PROBLEMS HAVE GENERATED SO MANY MESSAGES. I FELT THAT MUCH OF THE INFORMATION REQUESTED WOULD BE READILY AVAILABLE AT YOUR HEADQUARTERS. I AGREE TO WAIT YOUR RESPONSES TO MY MESSAGES IN THE SCHEDULED PRESENTATION OF 3 AND 13 MAY.

BT
01/1650Z MAY RJEPHQ

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
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FILE NUMBER 313.7

MESSAGE TRANSMITTED
WITH FOLLOWING DATE-TIME GROUP
0-56-04 04/0020Z

DOC 185 ADCHR 57A

DESTROY AFTER: 1 YR 2 YRS 3 YRS 4 YRS 5 YRS PERMANENT

TO: [REDACTED]
FROM: [REDACTED]
INFO: [REDACTED]

DISPATCHED
8 MAY 1967
A.D.C.

01261

GENERAL COMMENT: Information to General Justice and General Holdings.
Subject is C-130 Hercules aircraft #111111 in the 37th TFWA aircraft.
Reference my message 0041 1040, 24 April 1967, and your answer 004-4-21-2, 30 April 1967, same subject. On 1 May another aircraft failure occurred at Hurler AFB resulting in severe damage to the aircraft.
Preliminary investigation revealed that the shaft failed at the shear point. Subsequent failure of the centrifugal over-speed switch allowed the starter to over-speed and disintegrate. This failure at Hurler further strengthens our position that we must have the new improved over-speed switch for retrofit immediately. Up to now, since *N* starter failures have occurred and eight *N* of these disintegrated due to subsequent over-speed switch failure. Subject with further details.

COMEBACK COPY

142-1
W/O C L Davis/jtv
2480

Not requested, not furnished
3 May 67
[Initials]
E. J. TOSO
Capt USAF
Asst Command Adj

UNCLASSIFIED

WRITER (and typist's initials) W/O C L Davis/jtv
OFFICE CODE: AIMAC-DA
DATE: 3 May 57
TEL NO: 2480
FANFOLD NUMBER AND SUSPENSE DA: None
ADC HQ FORM 11 18 MAR 57. PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE
MEMO FOR RECORD: NONE SEE REVERSE

1	ADMAC
2	ADMAC
3	ADMAC
4	ADMAC
5	ADMAC
6	ADMAC
7	ADMAC
8	ADMAC
9	ADMAC



MAY 7

... will be delivered this month, the standard type 100, will be delivered in June, and another 200, type 100, in July, all depending on the approval of the contract. In view of the critical situation with which we are faced, the earliest start possible. The sufficient quantity from May, June, and July production be directed directly to the units for field service. This will result in possible start up of General Motors Corporation production line and completion of the delivery will start to incorporate the new contract. Such extraordinary action be immediately taken to provide an approved switch for field service. Information from Radio, Voice, New York, indicates this could not be started until the last of June and not completed until July or August. One of these two actions is necessary to provide our units with the approved overhead switch. Such action will reduce the starter failure problem.

A PARAPHRASE NOT REQUIRED EXCEPT PORTION TO CATEGORY B. IN OPTION - PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE TIME GROUP PRIOR TO DECLASSIFICATION.

AMAS-DA

2 2

UNCLASSIFIED

142-2

MAY 7 1957



HEADQUARTERS
AIR DEFENSE COMMAND
UNITED STATES AIR FORCE
ENT AIR FORCE BASE, COLORADO

TEL: MELROSE 2-5511
EXT. 2212

DEPUTY CHIEF OF STAFF MATERIEL

3 May 1957

MEMORANDUM FOR THE CHIEF OF STAFF

SUBJECT: F/TF-102A Starter Failures

1. This command has had a total of eight (8) combustion starter failures. The most recent fix after first four (4) failures was ITO 1F-102A-615 and 615A, dated 3 and 6 February 1957. Since compliance with this technical order we have had four (4) additional failures, two of which were directly attributable to maintenance error. The last two failures, one at McChord AFB, 10 April 1957, was caused by a faulty ignition relay and one at Suffolk AFB, 23 April 1957, was caused by shaft failure. In both cases, failure of the centrifugal overspeed safety switch resulted in starter disintegration. There are four additional modifications which are being accomplished on this starter which should result in a qualified starter by June. The modification consists of a new centrifugal overspeed switch, a new combustion head, a new clutch to be installed on shaft near the turbine and an improved engagement dog. In all failures of the starters which resulted in disintegration, the overspeed switch has failed in conjunction with some other component failure.

2. A message was forwarded to SAAMA 24 April 1957 (Tab A), personal to General Odum, stating that this command can no longer accept the cost in dollars and loss of combat strength caused by continued starter failures and recommending to General Odum that immediate field installation of the new overspeed switch be accomplished. (General Odum's reply to Colonel Ofsthun, SAC-4-21-E, 30 April 1957, is attached as Tab B.)

3. On 1 May another starter failure and disintegration occurred at McChord AFB and resulted in severe aircraft damage. Preliminary investigation revealed that the shaft sheared at the shear point and subsequent failure of the centrifugal

01261

01

UNCLASSIFIED

142-3

MAY 7 1957

Memo for C/S, 3 May 57, Subj: F/TF-102A Starter Failures

overspeed switch caused starter disintegration. Information from Bendix, Utica, New York, (Mr. Fagan), indicates that 150 type 12B starters are scheduled for delivery this month, 100 type 14A in June, and another 100 type 14A's in July, all having the improved centrifugal overspeed switch. Two actions are possible:

a. Divert sufficient starters to ADC from production to field retrofit assigned aircraft. This will result in slow-up of Convair production line and delayed aircraft deliveries to ADC.

b. Take extraordinary action to provide an improved overspeed switch for immediate retrofit of ADC aircraft. Bendix, Utica, New York, has indicated that such a switch modification could possibly be started in June and completed in July or August. The outgoing DCS/M message, personal to General Odum, information to Generals Irvine and Rawlings, has been prepared to outline the two possible actions.

2 Incls
1. Tab A
2. Tab B

Sidney A. Ofsthun
SIDNEY A. OFSTHUN
Colonel USAF
Deputy Chief of Staff, Materiel

FILE NUMBER 314.6

DESTROY AFTER: 1 YR, 2 YRS, 3 YRS, 4 YRS, 5 YRS

APR 29 1957

DEFENSE
DEFENSE
COMSEC

COMM. SALES BUREAU AND THE
INFO. COMM. AND DIST. 1 WPAFB OHIO

ADMAC-02 01157 For SAC/AF at SACM, For F-302

INFO at ADAC. Reference your message SACM-4-23-57 dated 27 Apr 57
request you take extraordinary action to accomplish the Air Data
Computer portion of Rights MFR CMCA on as many aircraft as
possible during the current SACM and program. Information
available to this headquarters indicates that without this
notification that the F-302 has little or no capability with
the 2,75 inch rocket.

COMEBACK COPY

Not requested, not furnished
Furnished 25 APR 1957
(Date) (Initials)

A PARAPHRASE NOT REQUIRED EXCEPT PRIOR
TO CATEGORY B ENCRYPTION - PHYSICALLY
REMOVE ALL INTERNAL REFERENCES BY DATE
TIME GROUP PRIOR TO DECLASSIFICATION.

RECORDS DISPOSITION: PERMANENT

108-1X

Mag A H Allred

H. J. TOSO
Capt USAF
Asst Command Ad

This correspondence is classified Secret per para 30b, APR 205-1, or for reason(s) stated.

WRITER (Name/Initials) OFFICE CODE: DATE: TEL NO: FAIRPLAY NUMBER AND SUPPLY THE DATE:
Mag A H Allred/mt ADMAC-CB 22 Apr 57 2594 Mag 36906 25 Apr 57

ADC HQ FORM 16 MAR 57 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE MEMO FOR RECORD: NONE SEE REVERSE

COMM	
VC	
COFS	
ADJ	
COORD	Write Last Name and Show Date Coordinated
1	ADMAC-D <i>[Signature]</i>
2	ADMAC-A Dahlman 25 April
	ABRSE Palmer 24 April 57 ADHAA 25 April To 30

WITH FOLLOWING DATE TIME GROUP
B. 367.25
051700Z

DISPATCHED
25 APR 1957
A.D.C.

UNCLASSIFIED

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ACTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

FILE NUMBER 314.6

DOC 187 ADCHR 59A

03-02
RJEJEDEN BJCENP
C RJEJEDEN 123
RJEJEDEN
C RJEJEDEN WASH DC
C RJEJEDEN/COMNAVIC WPAFB OHIO
C RJEJEDEN/COMSAMA KELLY AFB TEX
C RJEJEDEN/COMADC ENT AFB COLO

*Action in
info 26.6108
B+k 2 May 57*

FROM AFMME-AS 85613.

RE MESSAGE SACCA-4-128-1, DATED 24 APRIL 57, AND SAFETY OF FLIGHT
TECHNICAL ORDER 17-128A-1CM, DATED 28 DEC 56. THE PRIORITY OF MAKING
THE F102A IN ADC OPERATIONALLY READY WITH 2.75 INCH FFAR DICTATES THAT
EXTRAORDINARY MEASURES BE TAKEN TO INSTALL RCP 1165R11 (BLAST DEFLECTORS)
ON ALL ADC F102A A/C. THIS CAPABILITY IS CONSIDERED ESSENTIAL TO THE
DC MISSION. REQUEST THAT YOUR COMMAND EXERT MAXIMUM EFFORT TO
ACCOMPLISH THE FOLLOWING ACTIONS:
A) ACCELERATE MIT DELIVERY SCHEDULE TO INSURE EARLIEST POSSIBLE
2.75 INCH FFAR CAPABILITY.

REF TWO RJEJEDEN 123

B) DEPOT TEAMS BE DISPATCHED IMMEDIATELY UPON AVAILABILITY OF MOD
KITS TO ADC BASES FOR INSTALLATION OF 2.75 INCH FFAR BLAST DEFLECTORS
RCP 1165R11 ON F102A A/C.

C) COORDINATE ACTIONS WITH ADC TO INSURE MAXIMUM COMPATIBILITY
WITH THEIR TACTICAL MISSION REQUIREMENT.

UNDS FOR INSTALLATION BY AMC DEPOT TEAMS ARE AVAILABLE IN F-168
Y 1957 UNDER CONTROL SYMBOL NUMBER 97-121-F-128A-11. FUNDING
POLICY SET FORTH IN USAF LETTER DATED 3 APRIL 1957. SUBJECTS
FUNDING FOR CONTRACT TEAM LABOR APPLIES. IS IT DELIVERY IS THE
LIMITING FACTOR CONTRACTOR OVERTIME IS AUTHORIZED TO THE EXTENT
NECESSARY TO MEET BEST POSSIBLE INSTALLATION SCHEDULE. FURTHER
REQUEST THAT THIS HQ AFMME, BE ADVISED OF YOUR PLAN OF
ACCOMPLISHMENT NLT 8 MAY 57.

BT
2/17352 MAY RJEJEDEN

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RA--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.

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MESSAGE ADMITTED
 WITH FOLLOWING DATE TIME GROUP
 240038Z

FILE NUMBER 3146

URGENT
 URGENT
 COMMA AIR
 COMMA MAY
 COMMA 25
 COMMA 27

DISPATCHED
 23 MAY 1957
 A.D.C.

01472

COMDR	
VC	
COFS	
ADJ	
COOP/PIEC	Write Last Name and Date Coord
ADMA	3 May
ADMA	2 May
ADMA	23 May
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ADMA	23 May

10 May 1957. Subject 27-3281 Subject Radio Reflector Installation.
 This installation has required serious effort by USAF engineers
 in this installation to ensure air material was included with
 location of existing, etc./ to accomplish 27-3281 as soon as possible.
 Any delay or lack of experts to implement this installation would be
 extremely damaging to this effort. It is felt that few or no
 work out of conclusion at any one time for this installation is not
 available. No objection to plan to existing through proper sub-
 ing, completion of 27-3281 in conjunction with aircraft out for
 supply and heavy logistical assistance, thus reducing the overall
 number of aircraft out of conclusion at any one time. Changes in
 equipment installation for the 307th Fighter Interceptor Squadron has

COME BACK COPY

110-1
 Not requested, not furnished
 G. F. HUMPHREYS
 Major, USAF
 357
 1 APR 305-1, or for reason(s) stated.

ADJ G. J. DAVIS/jw	ADMIC-DA	23 May 57	2480	FAIRFOLD NUMBER AND SUSPENSE DA	B-1996	27 May 57
MEMO FOR RECORD: <input type="checkbox"/> NONE <input type="checkbox"/> SEE REVERSE						

UNCLASSIFIED

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From [REDACTED] in the decision to accomplish [REDACTED] as soon as possible on the aircraft assigned to the 337th Fighter Interceptor Squadron, therefore it is not considered advisable to delay the accomplishment of [REDACTED] based upon the changes which may be required in the Air Data Computer. In view of the preceding, this headquarters recommends that modification of the aircraft assigned the 337th be accomplished as scheduled. With reference to accomplishment of this modification on aircraft assigned to the 337th Fighter Interceptor Squadron, this headquarters will monitor modification schedule to assure that in the event kits are not available until aircraft are scheduled for release to IRAN that subject modification will be accomplished during the F-4E Red/IRAN program. The modification kit delivery schedule and priorities were established in required order and normally follows the F-4E activation schedule. Because this is the priority in which squadrons are required to be operationally ready, change in the delivery schedule is not recommended.

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TOM BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

ACTION COPY

AG 589
A-62R-28
SBA116DMC031
RR RJEDEN RJWPDM RJWJJB
DE RJWPSB 264C
R 201900Z
FM COMDR WADF HAMILTON AFB CALIF
TO RJEDEN/COMDR ADC ENT AFB COLO SPRGS COLO
INFO RJWPDM/COMDR 25TH ADIV DEF MCCHORD AFB WASH
RJWJJB/COMDR 27TH ADIV DEF NORTON AFB CALIF
BT

*Action Dm
Info 26 OCO
4996*

Supp 22 May 57

*July 10
only*

[REDACTED] / FROM WDCVC 7C1433.
TOR MODIFICATION F-102 AIRCRAFT.
REFERENCE MESSAGE ADMAC-DA 21334 (CONFIDENTIAL), MESSAGE 27TH ADIV,
27DM03852, 11 MAY AND MESSAGE ADMAC-DA 23157, 18 MAY 57. REQUEST
YOUR HEADQUARTERS RECONSIDER MANDATORY MODIFICATION OF F-102 AIR-
CRAFT ASSIGNED 327TH FIS AND 317 FIS FOR FOLLOWING REASONS:
AIRCRAFT OUT FOR SUPPLY AND HEAVY UNSCHEDULED MAINTENANCE ARE
JEOPARDIZING FLYING HOURS NEEDED FOR CREW TRAINING BEFORE DEPLOYMENT
OF UNITS. ADDITIONAL MODIFICATION OF ROCKET FIRING SYSTEMS AT THIS
TIME WILL FURTHER JEOPARDIZE FLYING HOURS. WHEN THE DEBRIS DEFLECTOR

PAGE TWO RJWPSB 264C
MODIFICATION IS COMPLETE, THE ROCKET HIT POTENTIAL IS DEGRADED
DUE TO REQUIRED DESIGN CHANGES OF THE AIR DATA COMPUTER. TESTS OF
RE-DESIGNED COMPUTER PRESENTLY UNDERWAY BY ARDC. THE IMPORTANCE OF
GAINING FLYING HOURS TO TRAIN COMBAT READY CREWS OVERRIDES THE
IMPORTANCE OF INEFFECTUAL ROCKET FIRING BEFORE DEPLOYMENT. RECOMMEND
FOLLOWING ACTION: 1. ECP 1165R1, DEBRIS DEFLECTOR MODIFICATION,
BE DEFERRED FOR 317TH FIS AND FOR 327TH FIS PROVIDED PUBLISHED
DEPLOYMENT DATES ARE NOT CHANGED. 2. RECOMMEND MODIFICATION BE
COMPLETED DURING IRAN CYCLE OF 327TH /317TH ZYSFAAUPA AIRCRAFT. 3.
RECOMMEND KIT RECEIPT PRIORITY BE CHANGED TO 310TH FIS MCCHORD AFB
AND 493TH FIS, GEIGER FIELD, RESPECTIVELY.
BT
26/21032 MAY RJWPSB

N
A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
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TO DECLASSIFICATION--

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UNCLASSIFIED

DOC 189 ADCHR 57A

ROUTINE

I AF I

COMADG

COMOPM 34/104 37/111 47/112

COMOPM 34/104 37/111 47/112

[REDACTED] Personal from General Lynn
 to General Ode and General Anderson. On 21 January 1957 a letter
 was sent to your headquarters, Subject: M-111 RCS Modifications.
 This letter listed all the MCP's we considered required to bring
 the systems to the M-111 production configuration and requested
 that they be included in the F-102A RCS program. The information
 from your headquarters dated 4 Feb 57 indicates all but nine of the
 MCPs are applicable and will be incorporated during the Fast Tail
 and Dart Tail modification program. One of the MCPs to be
 incorporated is 0081. During a recent visit to Hughes Aircraft
 Company, I was informed that a problem exists with MCP 0080 in that
 no new units and modification kits have been placed on contract. I
 also understand that there is a six months production lead time

ADMIN

COLONEL S A OSTROM

2242

CONFIDENTIAL

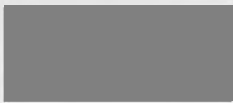
M 636 1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

UNCLASSIFIED

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MEMO



MEMO _____ Cont'd,

for these items. You can understand my concern in that among other things EOP OOSD will give us Snap-Up capability and an incorporated system live missile test. I would appreciate your personal attention to this matter and expediting it if possible.

4. PARAPHRASE WHAT YOU WROTE
TO CATEGORY 3 ENCLOSURE. SPECIFICALLY
PLEASE ALL INTERPRETATION BY DATE
TIME GROUP PRIOR TO DEPARTURE

UNCLASSIFIED

2008
FANFOLD NO

ADON

2 2



M-636-2

DISPOSITION FORM		SECURITY CLASSIFICATION (if any)
FILE NO.	SUBJECT (U) Follow-up of Conference at Hughes Aircraft	
TO ADHVC THRU: C/S	FROM DCS/W	DATE 11 Feb 57 COMMENT NO. 2
<p>1. The NEM referred to in Comment 1 has now been redesignated a Weapon System Evaluator (WSE).</p> <p>2. The latest status of WSE is as follows:</p> <p style="margin-left: 40px;">a. Twenty-one pre-production WSE's are on contract with Hughes. Three of these are scheduled for Vincent; the rest to test agencies. The original date for first deliveries was 18 January 1957. Due to manufacturing difficulties encountered with the production of all GAR missiles, there has been a slippage in production. The production of the WSE is predicted on final fixes developed for the GAR. A tentative schedule for the first six WSE's is as follows: One in February, two in March and three in April 1957.</p> <p style="margin-left: 40px;">b. Hughes is presently negotiating a contract for 147 each WSE's. This contract is for 35 pre-production and 112 production models. Quantities of both the IR and the radar version are included in this contract. Pending early contractual coverage and a satisfactory solution to the missile production problem, deliveries of the pre-production models will start in July 1957 and of the production models in January 1958.</p> <p>3. We believe this project is progressing satisfactorily and will continue to watch it closely.</p> <p>4. To date the official copy of ECP OORO has not been received for this Headquarter's approval. A letter dated 21 January 1957, Subject: AG-10 AWCS Modifications, was sent to Commander SAAWA and an information copy to Commander WRAMA listing all the ECP's (OORO included) required to bring the F-102A's to the 354th production configuration. This letter requested that they be included in the F-102A IRAN program. In SAAWA's first indorsement dated 4 February 1957, it was stated all but nine of these ECP's were applicable and are being incorporated during the Test Tail and Duct Tail modification program. ECP OORO is one of 48 ECP's to be included. However, the latest information from Hughes (as of 7 Feb) is that no new units and mod kits for OORO have been placed on contract. The lead time for these kits and units is six months. It is recommended that the accompanying message be sent to General Odum and General Anderson requesting their help in expediting the procurement of these kits.</p> <p>5. To date no action has been taken to request a revision of AFR 5-47. This situation is being studied and a letter will be sent to Headquarters USAF as soon as possible.</p>		
1 Attachment: Proposed message to Gen Odum and Gen Anderson		20213 STANLEY A. OSTHUN Colonel USAF Deputy Chief of Staff, Materiel

DD FORM 96

REPLACES GPO FORM 96, 1 OCT. 45, WHICH MAY BE USED

16-54800-2

U. S. GOVERNMENT PRINTING OFFICE: 1955 O-272227

M-636-3

<h1>DISPOSITION FORM</h1>		<small>SECURITY CLASSIFICATION (if any)</small>
<small>FILE NO.</small>	<small>SUBJECT</small> (U) Follow-up of Conference at Hughes Aircraft	
<small>TO</small> DCS/Material	<small>FROM</small> ADHVC	<small>DATE</small> 4 Feb 57 <small>COMMENT NO.</small> 1
<p>1. During our recent conference at Hughes, you will remember we agreed to push the test set program where it needed pushing, particularly the MEM. Also, to look into ECP 0080, particularly the test set for live missile test on the 1st to 354th aircraft undergoing modification at SAAMA.</p> <p>2. Another matter mentioned was the establishment of a maintenance concept of fire control systems by a revision of AFR 5-47. Will you please advise me on the results of your actions on these matters.</p>		
		<p>ROY H. LYNN Major General, USAF Vice Commander</p>
<p>DD FORM 1300 1 FEB 50 96 REPLACES NME FORM 89, 1 OCT. 48, WHICH MAY BE USED 16-54801-2 U. S. GOVERNMENT PRINTING OFFICE: 1950 O 410361</p>		

UNCLASSIFIED



COPY OF INCOMING CLASSIFIED MESSAGE

(If this message in whole or in part is prohibited without approval of action office)

SEE CRYPTO SECTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

FILE NUMBER 314.6

034
R-776-24
MIADSSW 02
PI WJEDW
DE RJEOWP 13K
P 232038Z
FM COMDR AMC SPAFB OHIO
TO COMDR ABC ENT AF BASS (COM) 03055 COLO

DOC/90 ADCHR 57A

Info
RPR
16
27 Apr
23 Apr 57

FROM: MCPIC-1320 FOR ADNSI-A SUBJ: (U) F-102A
ITEM.

REFERENCE YOUR CLASSIFIED MESSAGE NUMBER 21069 OF 17 APRIL, SAME
SUBJECT. LATER DEVELOPMENTS CAUSED CANCELLATION OF 17 APRIL MEETING
AT HQ, USAF. COORDINATION BETWEEN AFOP-CC AND NMPP-AC-2 INDICATES
F-102A WILL NOT BE ACCEPTED FOR DEPLOYMENT PRIOR TO INCORPORATION OF
MANDATORY EOP'S. FIRST DELIVERY OF MODIFIED F-102A'S SCHEDULED FOR
LATE OCTOBER, WITH COMPLETE REQUIREMENT AVAILABLE DURING NOVEMBER.
ALSO, AGREEMENT WAS REACHED WHEREBY FIRST SQUADRON OF F-102A'S WILL
BE AVAILABLE FOR FACTORY PICKUP PRIOR TO 15 AUGUST. CAUTION IS

PAGE TWO RJEOWP 13K

ADVISED, HOWEVER, IN THAT CONVAIR REQUIRES OVERTIME TO ACCOMPLISH
THIS SCHEDULE FOR F-102A'S ANDAS BY THIS DATE OVERTIME HAS NOT BEEN
APPROVED. IF IT IS NOT APPROVED FIRST F-102A SQUADRONS (2) WILL NOT

BE AVAILABLE UNTIL SEPTEMBER. THIS OFFICE HAS TAKEN ACTION TO SECURE
HQ USAF APPROVAL FOR OVERTIME.

BT
23/2145Z APR RJEOWP

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY 3 ENCRPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.

UNCLASSIFIED

UNCLASSIFIED

314.6

DOC 191 ADCHR 57A

2400

8 JUN 1957

Major General Jarrod V. Crabb
Commander
Central Air Defense Force
Richard-Gebaur Air Force Base
Grandview, Missouri

Dear Jimmy:

With reference to your letter of 13 May 1957 on F-102A afterburner problems, information concerning this subject was forwarded your headquarters on 16 April 1957 by Air Defense Command message ADMAC-AC 17090. There are several modifications scheduled into the engine which will materially affect aircraft performance, however, the most significant changes affecting afterburner operation are as follows:

a. Pratt & Whitney Engineering Change Proposal 67128, Recountured Tail Cone and Flame Holder. Technical Order 2J-57-547 is presently being written and will provide instruction for accomplishment. Request has been made for initial delivery of 10% of items in June 1957 and 10% each month thereafter.

b. Pratt & Whitney Engineering Change Proposal 69120, Afterburner Recirculating and Igniter Valve. This change has been approved and will provide constant recirculation of valve to provide fuel for afterburner ignition rather than single shot type we now have. This Engineering Change Proposal constitutes a change from the J-57P-23 to the J-57P23A engine and will provide better relights at altitude. These engines are not interchangeable. Pratt & Whitney will begin delivery of the J-57P-23A engines in June.

There are other changes which will be incorporated in the engine such as Pratt & Whitney Engineering Change Proposal 6119, Installation of Constant Speed Recirculating Valve, and 73209, New Flood Valve Governor Setting. Deputy Chief of Staff, Materiel has assured me that their maintenance personnel are monitoring these changes.

View Commander's Homeback Copy

W/O

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Letter to Maj Gen J. V. Crabb

We have asked San Antonio Air Materiel Area assurance that new design refinements, which materially affect aircraft performance, be incorporated through early retrofit rather than waiting for scheduled Inspect and Repair as Necessary periods for incorporation.

Sincerely,

ROY E. LYNN
Major General, USAF
Vice Commander

UNCLASSIFIED

0715

3-247

FILE NUMBER 3146

MESSAGE TRANSMITTED
WITH FOLLOWING TIME GROUP
8-50-14 142346Z

<input type="checkbox"/> 8 YRS	<input type="checkbox"/> 7 YRS	<input type="checkbox"/> 6 YRS	<input type="checkbox"/> 5 YRS	<input type="checkbox"/> 4 YRS	<input type="checkbox"/> 3 YRS	<input type="checkbox"/> 2 YRS	<input type="checkbox"/> 1 YR	<input type="checkbox"/> 90 DAYS	<input type="checkbox"/> PERMANENT
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COMDR
VC *PH*
ADJ

Write Last Name and Show Date Coordinated

PRIORITY
PRIORITY I AF AFOOP-OC-2/3 56834

COVER ADC

COFS USAF WASH DC

INFO: COMR AFFTC EDWARDS AFB CALIF

ADRSI-a 112015

A PARAGRAPH FROM THIS MESSAGE IS BEING RECLASSIFIED TO CATEGORY B EN ROUTE TO BE REMOVED FROM ALL INTERNAL RECORDS BY DATE TIME GROUP 142346Z

For AFOOP-OC-V, USAF; For PTFAD, AFFTC. Reference your message AFOOP-OC-2/3 56834. Subject: RB-57 ECM Modification. This message in two parts. Part I. The ADC position concerning the relative priority to be accorded Class V Aircraft Modifications now pending is that the F-102 modifications be accorded first priority and the RB-57 ECM modifications be accorded second priority over all other Class V aircraft modifications. Part II. The total time monthly that ADC averages with nine each B-25 and nineteen each B-29 assigned to craft is 1443 hours. This average was accomplished prior to flying time curtailment.

DISPATCHED
14 JUN 1957
A.D.C.

COMEBACK COPY

Not requested, not furnished
Furnished: 14 JUN 1957
(Date) (Initials)

ADRSI-a
Mary Dumire
M Dumire/lr
2665 1

UNCLASSIFIED

ROY A. HARRIS
Lt Col, USAF
Ass't Command Adj

1	ADRSI								
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REC'D
13 JUN 57

ADC HQ FORM 11 14 MAR 57 (4720) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

MEMO FOR RECORD: NONE SEE REVERSE

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JUN 18 1957

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AGT RPR SMO 10 June 57
INFO JB NO 5494
DM
OCO

AG 026HQ027
RP RJEDEN
DE RJEPHQ 110
R 051549Z
FM HEDUSAF WASHDC
TO COMAIRDEFCOM ENT AFB COLO
BT

FROM AF00P-OC-F/3 56834
THIS HEADQUARTERS BE NOTIFIED OF RELATIVE
PRIORITY OF RB-57 ECM MODIFICATION COMPARATIVE TO OTHER ADC CLASS V
AIRCRAFT MODIFICATIONS. PART 2. REFERENCE ADRSI-A 01457. REQUEST
TOTAL TIME THIS CATEGORY ADC AVERAGES WITH PRESENTLY ASSIGNED AIR-
CRAFT.

BT
051636Z JUN RJEPHQ
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PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
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TO: AG - AG-C

FILE: 24-1

ACTION: Twx Reply
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REFANFOLD: 15-MERSE

SIGNATURE: Ma Dammie



306

DOC. 193 ADGHR 57A

5	COMOR
4	VC
3	COFS
6	ADJ
Write in Name and Date Coord.	

ADRSI-A

17 APR 57

SUBJECT: (U) Re-equipping of Operational Units

TO: Chief of Staff
Headquarters USAF
Washington 25, D. C.

1	AORSI
2	AOPRF

1. During the past year, the Air Defense Command has undertaken several major conversion programs to modernize the manned weapons systems in inventory. To date, these new weapons systems have not increased to the anticipated and necessary level, the operational potential of the Air Defense Command. This is due primarily to the fact that new weapons systems have been delivered before they were fully developed and functionally proven. As a specific example, the F-102A has been in inventory for almost a year without a functionally proven combat capability. In addition, the recovery date for this weapons system has not been determined.

2. Conversion programs which have already been undertaken are continuing; this Command is forced to take a calculated risk that eventually these weapons systems will have a combat capability in accordance with the stated operational requirements. The F-102A, F-80F and F-80J weapons systems now represent a significant portion of the total Air Defense Command inventory. Until such a time as the major deficiency and problem areas affecting these manned weapons systems are solved, this Command is faced with a drastically reduced combat potential. These reductions in total air defense capability cannot be allowed to continue.

3. The Commander-in-Chief, Continental Air Defense Command, has forwarded to the Air Defense Command a policy statement that weapons systems will not be accepted for active inventory until they are



FANFOLD NUMBER 57A

SECRET

OFFICE CODE: ADRSI-A DATE: 15 Apr 57 TEL NO: 2573

MEMO FOR RECORD



71 01

ADRSI-A, Rq ABC, Subject: (U) Re-equipping of Operational Units

fully developed and functionally proven. These instructions have been disseminated to the Air Defense Command staff. A copy of the letter received from the Commander-in-Chief, Continental Air Defense Command, is included for your information.

1 Incl
Ltr fr CINCOMAD,
subj as above
(S)

J. H. ATKINSON
Lieutenant General, USAF
Commander

Copies Furnished:
Comdr ARDC
Comdr ABC

Incl not required for Comd Adj file



LABORATORY
15 JUN 54

APR 23 1967

FILE NUMBER 306

194 57A

DESTROY AFTER: 30 DAYS 1 YR 2 YRS 4 YRS 8 YRS PERMANENT

ADRSI-A

23 APR 1967

SUBJECT: (U) Re-equipping of Operational Units

TO: Commander-in-Chief
Continental Air Defense Command
3rd Air Force Base
Colorado Springs, Colorado

1. Your letter COMOP, subject as above, dated 4 April 1967, has been received and implementing actions have been initiated by this Command.

2. It is agreed that the Air Defense Command has not been able to maintain the desired high level of combat potential, particularly during the past year. Further degradation of the operational potential by replacing combat ready, though obsolete, weapon systems with new systems which are not functionally proven is unacceptable.

3. The staff of this headquarters has been instructed to take all necessary actions to insure that weapons systems will not be delivered until they are combat ready. Inclosed for your information is a memorandum stating this policy to the Air Defense Command staff. This headquarters is taking action to inform Headquarters USAF of this policy.

4. This headquarters is in full agreement with paragraph 6 of your letter which states that all Century Series aircraft, except the F-104 should have an atomic capability. We have accomplished this objective with the exception of the F-102A. Extensive effort has been expended to obtain an atomic capability in the F-102; however, Headquarters USAF has decided that it is not feasible to incorporate an atomic capability in the F-102A. We will do everything within our power to insure that all future interceptor aircraft

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Incls not required for Comd Adj file

Not requested, not furnished
Furnished 22 APR 1967
(Date) (Initials)

196-1
M. M. Hnatio
SECRET

WRITER (and typist's initials) L/C M. M. Hnatio/mm	OFFICE CODE: ADRSI-	DATE:	TEL NO: 2573	FANFOLD NUMBER AND SUSPENSE DATE
ADC HQ FORM 18 MAR 57 14730	PREVIOUS EDITIONS OF THIS	per page 30b	AFR 205-1, or for reason(s) stated.	MEMO FOR RECORD: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SEE REVERSE

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23 1957

ADRSI-A, Hq ADC, Subj: (U) Re-equipping of Operational Units

possess an atomic capability as primary armament. For your information attached as Inclosure 2, is a memorandum on atomic capability which has been disseminated to the staff of this headquarters. Similar information has been provided to subordinate echelons of this Command.

2 Incls

1. Memo, Subj:
(U) Dev of
Wpas Sys (S)
2. Memo, Subj:
(U) Atomic Air-
to-Air Capa-
bility (S)

J. H. ATKINSON
Lieutenant General, USAF
Commander

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196-2X

0721

314

MESSAGE TRANSMITTED
WITH FOLLOWING TIME

DOC 195 ADCHR 57A

ROUTINE X AF GIB
ROUTINE
COMADG INT AFB GORD

COMMANA HOSKILLAN AFB CALIF

INFO: COMMAF STUART AFB TX

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REMOVE ALL ORIGINAL REFERENCES BY DATE
AND GROUP PRIOR TO DECLASSIFICATION

FROM ADMAC-CC 00326. The following message from
RAIF, RAMAC-5 0119, is quoted: Quote. Following message from New
York Air Defense Sector is quoted for your information and action
deemed necessary. Quote. HIASB-6-0816 WMR. The following
report relative to the general condition of Data Link equipped air-
craft received 601 GARDQ from Project ADOP-674 Follow-On, is for-
warded in 4 parts for your information and action. PART I, General
situation: A requirement was recently placed upon 601 GARDQ to pro-
vide a maximum of 4 aircraft, data link ready for special test pro-
gram. With the assistance of 2 program engineers and 1 technical
rep provided by the General Electric Co. it was necessary to work
on a total of eight F66s to be able to realize 2 aircraft which
could be termed data link ready and be applied towards the test
program. PART II. Group of aircraft data link equipped is as
follows.

Wing Mustang 2011AC-D+

FEB 1957

H-12180



INDEX AND APPENDIX

<u>Page No.</u>	<u>Title</u>	<u>Date Recd.</u>	<u>Description of Document</u>
1-10	Machine	Machine	Soft wiring card - data link do writer and copier
1-11	Machine	Machine	Soft wiring card, no 11, with data link do writer to data link copier
1-12	Machine	Machine	Machine cards, no digital output
1-13	Machine	Machine	Data link card with printer output and data link receiver
1-14	Machine	Machine	Data link receiver with printer output and data link receiver
1-15	Machine	Machine	Data link receiver with printer output and data link receiver
1-16	Machine	Machine	Data link receiver with printer output and data link receiver
1-17	Machine	Machine	Data link receiver with printer output and data link receiver
1-18	Machine	Machine	Data link receiver with printer output and data link receiver
1-19	Machine	Machine	Data link receiver with printer output and data link receiver
1-20	Machine	Machine	Data link receiver with printer output and data link receiver

Part III. One card condition as reflected above, it is the nature of this hardware that data is 1001 using a data link card. It is generally understood that reference to the data link card wiring errors are not a problem and that the machine is subject to being repaired, or no card means up to essentially no 101 storage. This is because it is possible to correct any unfavorable condition, support machine. The condition outlined above is not satisfactory. Request your services for immediate correction actions. Further request this subject be filed as an appendix item at 100 on May 13-1 Feb 57.



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DOC 196 ADCHR 57A

ROUTINE

I AF SAC OORS

comdr AXC 087 APR 0460

COMB WAMA WOLLELLAN APR CALIF

[Redacted]

REF: 00490 1271657
References, LAC message

ADAC-OC 00326 and WAMA message 00-0055. The reasoning used in your reply to my 00326 does not indicate complete understanding of the nature of the deficiencies described in the message from Commander, New York Air Defense Sector. If removal of components from aircraft for performance of normal maintenance, and reinstallation will cause a change in the aircraft terminal wiring, an extreme unsatisfactory condition exists. The AXC representative to the Dayton Detachment conference mentioned that one unit, the 62nd FIS, O'Hare Intl Apt had removed such equipment, due to lack of ground environment. This fact is not true of the activity at McGuire AFB. In view of your reply indicating your belief of deficient conditions AXC is requesting all units receiving F-86L aircraft to submit reports in accordance with T.O. 00-350-5.

13 1000
703 1957

ADAC-OC

W/O L. E. BOWELL
8705-2212

FAIRFOLD NO. 3000

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1426 9 Feb 1957

FILE NUMBER

FM COMSAMA MCCLELLAN AFB CALIF
TO COMADC ENT AFB COLO

CONFIDENTIAL/CITE SMO 0088. Your message ADMAC-CC-00326. Investigation of contractor and depot facilities show no deviations to applicable handbook or instructions regarding data link equipment and adequate quality control. Components are bench checked prior to installation. "Power-On" ground checks to insure correct wiring and operation are accomplished in the aircraft. Flight test requirements were deleted by WADC due to non-availability of ground environment stations. It was reported at Data Link conference at Dayton AFB, 22 Jan 1957 that some organizations including McGuire AFB have been removing Data Link equipment due to lack of ground environment. This together with fact that discrepancies reported are terminal wiring errors indicate re-installation as possible cause. This item will be entered on agenda of weapon systems phasing group meeting 13 and 14 Feb current. Continued emphasis will be maintained at Depot and contractor facilities to insure quality product.

9 Feb 57

[REDACTED]

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PRIDMKT

COMAD

CCPS WASH D C

15 Mar 57



00784

Personnel from Gen. Lynn to Maj Gen Reeves.

In answer to your telephone request of 13 March and in accordance with my best understanding of your desires, there follows in this message a series of situations which are a matter of record in this command. These situations are intended to illustrate the degradation upon our capability due to the influence of non career minded officers and airmen who have not developed the technical ability which is required in this command. An attempt has been made to arrange these examples in any order of priority. PART I. 60th Fighter Interceptor Squadron, Otis AFB. Average combat readiness rate for the period July through Dec 1956 was 43 per cent. This percentage is attributed to the shortage of qualified crew personnel and a lack of skilled airmen in the radar maintenance field. PART II. 130th Fighter Interceptor Sq, Stewart AFB. Combat readiness rate for period July through Dec 1956 was 31 per cent. This low average represents a continual shortage of

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<p> [REDACTED] </p> <p> aircraft systems officers and seven level fire control technicians. </p> <p> PART III. 337th Fighter Interceptor Sq, Westover AFB. Combat readiness rate for Dec 1956 was 98 per cent. Ineffectiveness was due to the fact that only 39 per cent of authorized seven level airmen who are the supervisors and backbone of the maintenance functions were assigned to this unit. </p> <p> PART IV. The following applies to the 30th Air Div of 82AF and pertains to the execution of air defense intercept missions involving the combined operation of Fighter Squadrons and ACMF Squadrons. During a period of six months in this division 3770 intercepts were attempted. Of these, 1563 were unsuccessful for reasons directly related to lack of skill with the following breakout: Director error 751. Air Crew error 363. </p> <p> 82AF V. The Commander of the 30th Air Div makes the following comment on the Air Defense Unit at Presque Isle AFB. If 90 per cent of the seven skill level airman were assigned in the aircraft maintenance function at Presque Isle, the average monthly Fighter Sq sortie rate could be increased as much as 30 per cent. Around the clock operational ready rates could be improved by 20 per cent. </p> <p> PART VI. The Commander of the 39th Air Div describes a situation in one of his Fighter Squadrons as follows: On 1 Nov 1956, ten fighter interceptor pilots who had completed their tour of obligated service separated the Air Force. This loss reduced the operational effectiveness of the 444th FIS </p>		
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<p>[REDACTED]</p> <p>from 93 to 70 per cent. The same Division reports that one ACW Sq recently was declared non operational for 21 days due to radar malfunction which would not have occurred if qualified maintenance personnel had been assigned. It became necessary to obtain a General Electric radar team for technical assistance before this squadron was able to isolate and repair the radar difficulty.</p> <p>PART VII. The following pertains to an ACW Sq on the night of 20 May 1956. This squadron was noted to be operating below minimum requirements. The radar set was shut down for emergency maintenance. The mechanics on duty isolated the difficulty in the form of a fault suggestion. Due to their inexperience, they removed this component with a pair of pliers in lieu of the specified spacer wrench and in so doing, damaged the system to the extent that the radar set was inoperative for a period of 13 hours. An experienced mechanic would have corrected the difficulty in a maximum period of one to two hours. This ACW station was committed to air defense of the Chicago complex.</p> <p>PART VIII. During the week of 12 - 15 January 1957 the radar maintenance performed by an ACW Squadron was accomplished by two J0152 and three J0132 level airmen with the following results:</p> <p>Of 32 quality control samples taken the results are as follows:</p> <ol style="list-style-type: none"> a. Average quality control figure 80 per cent. b. Average radar coverage 130 nautical miles 	
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<p><u>SECRET</u>.</p> <p>c. 17 hours off the air for unscheduled maintenance.</p> <p>To remedy this situation two 30378 level airmen were relieved from all other assigned duties and added to the maintenance crew for a continuous 48 hour period on the 18th and 19th of January. The week of 19 - 25 January 1957 the crew personnel as above mentioned continued to perform the maintenance with the following results:</p> <p>34 quality control samples were taken with results as follows:</p> <ul style="list-style-type: none"> a. Average quality control figure 95 per cent b. Average radar coverage 104 statistical miles c. Total of 13 minutes off the air for unscheduled maintenance. <p>PART II. In a three month period a fighter squadron in AEC flew a total of 604 flights. Of these flights a total of 596 used the fire control system. Of these flights 314 or 52 per cent were unsuccessful due to radar malfunctions. One-half of the malfunctions were determined to be caused through improper maintenance by inexperienced crew and could readily have been prevented. PART I. A recent intercept mission involved two M4 aircraft which were being directed by an ACW Squadron. Under practically clear air conditions, the aircraft concerned were in effect run out of gas by an inexperienced aircraft director. One pilot made a successful dead stick landing, but the other pilot who was less experienced was forced to abandon his aircraft. PART II. As a result of the conditions which are described by the above examples, the Commander of AEC has been</p>		
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forced to take drastic measures in the application of his defense capability. He has adopted a policy which concentrates his best qualified personnel in those Air Defense units which defend the most critical targets in the United States. In so doing some less critical but still important areas are left relatively unprotected on a calculated risk basis. This measure was adopted as the direct result of the inability of this command to maintain an adequate corps of stable and technically trained personnel. PART III. AEC is now equipped with atomic armament. This weapon was introduced into the Air Defense Inventory on 1 Jan 1957 and is the first step in implementing the program whereby all Air Defense weapons systems will have an atomic weapon as a first mode of armament. The Commander AEC has been forced to select only the most qualified and well trained personnel to man units now armed with this weapon. Adequately trained and professional personnel are an absolute must to the employment of atomic armaments in Air Defense. The results of mistakes by inexperienced personnel could prove catastrophic. As our conversion program progresses and as more units receive this type of armament we will rapidly deplete our resources of adequately trained specialists. At some period in this progression there appears no alternative to committing short tour personnel to this activity.

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DOC 198 ADCHR 59A

22 JAN 1957

ABAC-24

SUBJECT: J-57-P-23 Engine Requirements

TO: Commander
 Air Materiel Command
 ATTN: MCBM
 Wright-Patterson Air Force Base
 Ohio

1. A meeting held at this headquarters 7 January 1957, with Lt Colonel Ross and Mr. Roggenkamp, Headquarters Air Materiel Command, revealed that a total of three hundred and two (302) spare J-57-P-23 engines are being procured to satisfy stockage objective and all other segments of the pipeline for all commands.

2. Utilizing USAF methodology as outlined in Technical Order CO-25-126, dated 1 January 1956, for computation of the authorized stockage objective, to include war reserves, a total quantity required for Air Defense Command stockage objective is ninety-eight (98) engines for FY 57. This quantity is increased to one hundred seventy-four (174) engines by 31 March 1958, to include additional activations, Alaskan Air Command and Northwest Air Defense Force. These quantities were arrived at by obtaining the wartime utilization rate from Appendix H, W/C 57-1-11, and utilizing the Engine Life Expectancy for FY 57 and FY 58 obtained from the USAF Engine Life Expectancy Table dated 18 September 1954.

3. In addition to the quantities outlined above, the Air Defense Command Weapons Employment Center at Tyndall Air Force Base, Florida, will be required to support three (3) squadrons of aircraft equipped with this engine. This additional requirement will increase the overall stockage objective by thirteen (13) engines, for a total of one hundred eighty-seven (187) engines required by 31 March 1958.

4. Air Defense Command computations also indicate a requirement for approximately eighty-six (86) engines to adequately support JWS pipelines at a total of twenty-three (23) bases. This requirement is based on the following facts, assumptions and computations:

a. All of [REDACTED] hours, based on FY 57
 FY 58 ELS.

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ADMAG-04, Sq 04, Subject: J-57-P-73 Engine Requirements

b. Initial ratio of two (2) field repairs per overhaul, increasing as APL or IIA increases.

c. Planned time per J-57 field repair of approximately fifteen (15) working days, based on recommendations made by all commands during the November 1956 J57M pipeline meeting at Headquarters Air Materiel Command.

d. Twenty-two (22) working days per month.

e. Based on the above, it is estimated that an average of approximately three (3) engines would be in some phase of field repair at all times on a single F-107 squadron base, and five (5) engines on a dual squadron base.

f. Total of eighty-six (86) engines, based on:

17 Single-squadron bases	83 equals	51
6 Dual-squadron bases	85 equals	30
Lyndell (Weapons Employment Center)	85 equals	5
		86

Any reduction in the quantity of engines available to support the J57M pipeline requirements would have an adverse effect on the J57M program, and a corresponding effect on APL and combat readiness of F-107 equipped units. Based on USAF/AMC stockage and AMC J57M requirements computations, the total stockage objective and J57M requirements for AIC, MAF and Alaskan Air Command will total two hundred seventy-three (273) engines by 31 March 1958. It is self-evident that the remaining twenty-nine (29) engines can hardly support the load of interior pipeline, and also support the Air Training Command, depot overhaul facilities, and long pipelines to the Alaskan Air Command and Northwest Air Defense Force.

5. It should be emphasized that both the stockage objectives and the J57M pipeline requirements outlined above are based on the current and projected EIA's, which are considered optimistic by this command. This belief is based on the following:

a. Inability to meet first and second year EIA's in the past.

b. Extended reduction in J-57 J57M capability, due to lack of tools, spares, test facilities, etc.

6. This deficient area has previously been pointed out in my classified message ADMAG-04 07197, dated 9 November 1956. My classified message ADMAG-04 02608, dated 4 December 1956, recommended that a singly deployed F-107 squadron be authorized to maintain and work through thirteen (13) each engine of that squadron base should be

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AMRL-81, Hq DC, Subject: J-57-3-21 engine requirements

authorized to maintain and work through twenty-four (24) such engines. Utilizing these figures to include the Weapons Employment Center at Tyndall Air Force Base, a total quantity of three hundred twenty (320) engines is required by Air Defense Command units located in the zone of interior. This headquarters still stands on the above as the ultimate requirement.

7. This command does not agree with the policy that one-half of the engines in major overhaul should be considered as serviceable assets at all times. This is based on the belief that this command must be able to fight the first sixty (60) days of a war with assets available on base at the outbreak of hostilities.

8. If the price escalation of this command is to be effectively carried out, it is of utmost importance that immediate action be taken to procure additional engines in support of the entire J-57 program.

FOR THE COMMANDER

AMRL-81
Colonel USAF
Deputy Chief of Staff, Interior

Copy furnished
Director of Supply Services,
Hq USAF

[REDACTED]

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DOC 199 ADGHR 57A

2860

AIRLO

18 FEB 1957

SUBJECT: (U) Inclusion of Aircraft Engines in Mobilization Reserve Materiel (MRM) Program

TO: Director of Supply and Services
Headquarters, USAF
Washington 25, D. C.

1. Air Defense Command's capability to survive the initial critical phase of a major conflict is dependent to a high degree upon our ability to maintain an adequate on-base back-up stock of aircraft engines.

2. Present Air Force policy provides, in principle, that sufficient aircraft engines to satisfy a requirement generated during thirty days of war will be in place at all Air Force Bases. Although this policy appears satisfactory, it is negated in actual practice and application by the fact that sufficient engines are not being purchased. This adverse condition appears to be caused by the present method of computing over-all engine requirements. Formerly, engines were purchased, based on the number of aircraft in the inventory on D-Day, to support the first sixty days of war. Currently, engines are procured based on the estimated average number of aircraft in the inventory during the first sixty days of war. This will not provide sufficient engines since it considers attrition. This is contrary to the USAF Wartime Capabilities Plan (WCP 57-1-II) which implies that each unit will accomplish the prescribed number of sorties without regard to attrition.

3. It is the position of this command that:

a. In view of Air Materiel Command's stated inability to furnish any support during the initial critical phase of war, sufficient engines, together with after-burners and quick engine change kits, must be in place on base to support the total number of sorties directed by USAF planning documents during the first thirty days of war.

a. This level must be maintained at all times.

Lt. Col. R. S. Williams/blg 2430

11 Feb 57

30-B

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ADMLO, Hq ADC, Subject: (U) Inclusion of Aircraft Engines in Mobilization Reserve Materiel (MRM) Program

c. This required number of engines must be augmented with sufficient additional engines to provide a total large enough to satisfy the requirements of the various stations in the base channel through which engines normally circulate, such as engine build-up and tear-down, minor repair, run-up, and built-up engines ready for installation.

4. The Mobilization Reserve Program has been established to maintain stocks of equipment and supplies to meet mobilization requirements. During a recent meeting of the MRM Review Board it was pointed out to the board that the Congress has consistently approved money for MRM items that could be purchased. In fact, it was stated that all requests for MRM in this category have been approved each year.

5. Our present engine position would limit our war effort to a few days operation. These considerations warrant the inclusion of engines in the MRM program as an item to be supported and it is, therefore, recommended that a sufficient number of aircraft engines to fight the first thirty days of war be included in the "Night Life" portion of the Mobilization Reserve Materiel Program.

FOR THE COMMANDER:

MARSHALL S. BETH
Major General, USAF
Chief of Staff

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FILE NUMBER 313.10

JUN 6 1957

MESSAGE TRANSMITTED
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FROM ADMV-E

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TIME GROUP PRIOR TO DECLASSIFICATION.

For AFHQ-CP-1. Reference telephone conversation Major Wolfe and Mr. Alexander, this headquarters, this date, following CINCSAC message is quoted for your information. "Secret INCL 5266. Subject (U) Project Wooden Indian, Part 1. To Headquarters AMC. Reference my message INCL 17031 dated 1 March 1957. Review of the proposed ADC base stocking increase on SAC bases has caused considerable discussion in Headquarters USAF, and an air staff conference has been tentatively scheduled for late this month or early April to resolve the facilities and base utilization problems. Resolution of problems will be sought in the forthcoming conference to be attended by representatives of the interested commands. Part 2 to Headquarters ADC. Conference and implementation of the subject project is being held in abeyance pending decisions reached at above referenced conference. Forwarding to Substa reply to your message, this message dated 6 March 1957,

COMEBACK COPY

Not requested, not furnished

ADMV-E

Not furnished

JUN 1957
(Date) (Initials)

H. J. YOOB
Capt USAF
Asst Command Ad

DISPATCHED
4 JUN 1957
A.D.C.

UNCLASSIFIED

306

ADDITIONAL INFORMATION: 16 Col R. E. Blumhardt, SAC
OFFICE CODE: ADMV-E
DATE: 4 Jun 57
VAL No: 2006
FORM NO. 10-5553
ADDITIONAL INFORMATION: 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE
REMO FOR RECORD: COPY FILE

0736

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JUN 6 1953

URGENT 12Z 06JUN 53

subject supply support of project Wooden Tullam.

01579

ADNEY-K

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DOC 201 ADCHR 57A

18 Mar 57

NR 224
B RUEHN
21 MARCH 1957
R 122517
FM HQ EAST STEWART AFB NY
TO TAMDOR AND INT AFB COLO
BT

1. THE ETC 24000 2054, PERSONAL FROM MCCASLEY TO ATKIN ON, SUBJECT IS SHORTAGE OF TACTICAL AIRCRAFT. IN NOVEMBER 1955, OUR MESSAGE, EA0310240 1224, ADVISED YOUR HEADQUARTERS OF THE CRITICAL NATURE OF THE SHORTAGE OF AIRCRAFT WAS HAVING ON OUR COMBAT OPERATIONS. IN THE REPLY, YOUR HEADQUARTERS MESSAGE, ADMAC-00 240310 240310, INDICATED THAT NORMAL SCHEDULING WOULD RETURN OUR TACTICAL AIRCRAFT STRENGTH TO A MINIMUM OF 20 AIRCRAFT PER SQUADRON BY THE END OF DECEMBER 1956. HOWEVER, IN THEORY, AND THE NUMBER OF AIRCRAFT PER SQUADRON HAS CONTINUED TO DECREASE TO THE POINT THAT ON 1 MARCH 1957, THIS COMMAND HAS 14 SQUADRONS, INCLUDING UNITS CONVERTING,

FROM TWO SQUADRONS EACH

THAT POSSESSED LESS THAN 20 AIRCRAFT, ONE OF THESE UNITS POSSESSED ONLY 11 AIRCRAFT AND SEVERAL UNITS HAD 13 AND 14 AIRCRAFT EACH. THIS EXTREME SHORTAGE OF AIRCRAFT IS CONSIDERED TO BE A MAJOR CONTRIBUTING FACTOR IN OUR OVERALL DECREASE IN PILOT PROFICIENCY. THIS IN TURN HAS CREATED A SERIOUS FLYING SAFETY HAZARD. WHILE I APPRECIATE THE NECESSITY FOR OUR MODIFICATION PROGRAM, I FEEL WE MUST MAINTAIN A REASONABLE NUMBER OF AIRCRAFT WITHIN OUR TACTICAL UNITS TO MAINTAIN COMBAT EFFECTIVENESS.

WITH RESPECT TO PROJECT FOLLOW-ON, MODIFICATION CENTERS ARE NOT PROVIDING F-36-L OUTPUTS ACCORDING TO SCHEDULE. REFERENCE ENCLOSURE 2 TO AOC LETTER, ADMAC-00, 18 OCT 56, SUBJECT: AOC IMPLEMENTATION OF PROJECT FOLLOW-ON. I STRONGLY URGE A RE-APPRAISAL OF OUR ENTIRE MODIFICATION PROGRAM AND RECOMMEND A POLICY BE ESTABLISHED WHICH WILL PRECLUDE TACTICAL AIRCRAFT STRENGTH FROM FALLING BELOW 20 AIRCRAFT PER SQUADRON.

BT
18/22517 MAR RUEHN

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0738

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SEE CRYPTO SECTION BEFORE
CLASSIFYING
A PHRASE IS NOT REQUIRED

DOC 202 ADCHR 574

COPY OF INCOMING CLASSIFIED MESSAGE

19 Mar 57

AG 02
A-947-20
RR RJEDEH
ZOV RJEPHO
WPS12

Action - DM
2798

INFO-16

RR RJEPHO

Suspense: 25 MAR

DE RJEDEH 0X
R 191413Z
FM HQ AMC WPAFB OHIO
TO RJEDEH/COMBR ADC ENT AFB COL
INFO RJP/PHL/COMDR GOAMA HILL AFB UTAH
BT

CSDDC-836. REF PART II YOUR CLASSIFIED MSG
ADMAC DD 23713 DTD 14 MAR 57. F-39J ACFT ON ADC 6F-435 ARE SKED AS
FOLLOWS: 13 ACFT IN MAR, 23 IN APR, 23 IN MAY, 22 IN JUN, 3 IN JUL,
IN AUG, 15 IN SEP, 25 IN OCT, 25 IN NOV, 25 IN DEC 57, 25 IN JAN,
AND 20 ACFT IN FEB 1958. ABV SKED REPRESENTS TOTAL QTY OF 282
F-39J ACFT FOR ADC FR WOP5F-672. ALTHOUGH DELIVERY OF F-39J ACFT
TO NEAC WAS INDEFINITE, IT HAS NOW BEEN DETERMINED ACFT W/B FURNISHED
NEAC. TWO (2) ACFT APP

IED ON AMCF-373 FR MAR OUT-PUT W/B TRANSFERRED
YOUR COMMAND UPON COMPLETION OF TESTS.

BT
19/1613Z MAR RJEDEH

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.

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ADC Hq-O-AG-Form 22
9 April 53

This document consists of ___ pages
This is copy No. ___ of ___ copies

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3071

DOC. 203 ADCHR 57A

16 APR 57

ADOCF-C

Brigadier General James W. McCauley
Commander
Eastern Air Defense Force
Stewart Air Force Base
Sudburgh, New York

Dear Mac:

Your concern over the shortage of F-86 type aircraft possessed by tactical units is well founded. This situation is not restricted to your command however. It is prevalent throughout ADC and has reduced our operational capability to an alarming degree.

It was our firm belief that this condition would be alleviated to some extent by December 1956 when each squadron would have had a minimum of 20 F-86B/L's. Unfortunately, developments over which we have had no control have extended the period of reduced capability. For example, continued slippage in the availability of F-104's has forced us to equip additional units with F-86L's. Also, adverse weather conditions at the modification centers have delayed the testing and acceptance of modified aircraft.

Once initiated, it is difficult and uneconomical to revise the input schedule of a modification program of this magnitude. We are therefore committed to furnishing aircraft for the modification centers as previously agreed to even though it reduces our capability to an undesirable level.

I have personally reviewed the present "follow-on" schedule. Barring any unforeseen delays, it appears that by the 15th of May 1957, each F-86B/L fighter interceptor squadron within ADC will have a minimum of 20 WE aircraft. Every attempt will be made to control the scheduling of aircraft into future modification programs to avoid a serious reduction in operational capability.

Sincerely,



J. E. SPENCER
Lieutenant General, USAF
2002/2603

Major Frank V Phillips/djs

ADOCF-C

UNCLASSIFIED

100-1X

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0722592

DOC 204 ADGHR 57A

PRIORITY

X AF

COMM ADG

CCPS WMAP WASH DC

Mtn 5-1

~~SECRET~~ FROM AIRNL-4

01919

For AIRNL (Col Halls). Reference Northrop proposal to modify F-89H aircraft to F-89J configuration. This Command was briefed on the Northrop proposal on 3 June 1957 by Northrop representatives. Careful analysis of the proposal indicates that further modification of F-89 series aircraft cannot be justified for the stated time period for the following reasons: Century Series weapons systems having an NB-1 capability will be introduced in the same approximate time period. Shortage of modification funds: It is considered more profitable to expend these funds on F-102 and other Century Series modification programs which have a superior performance capability over the F-89 weapons system. Programming of additional NB-1 facilities on F-89H bases cannot be realized in the given time period. This is particularly critical since these squadrons are scheduled to convert to F-101B and facilities to support these units are presently on an extended programming basis. In addition, a number of F-102 squadrons are

DISPATCHED
7 JUN 1957
A.D.C.

AIRNL-4

Lt Col Hmatic/lis
2665

1 2

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H. J. TOSO
Capt, USAF
Asst Command Adj

included for conversion to F-204 type weapons system. An interim
 conversion to F-89 type aircraft would require additional storage
 facilities for a relatively short period of time, i.e., F-89-200-1,
 F-204/20-1. Further, the F-204 and F-204 weapons systems should be
 available in the same approximate time period. Conversion of units
 to F-89 type aircraft in a time period when Century Series weapons
 systems are programmed is not advisable from a total air defense
 ground interceptor viewpoint. Major squadron organizational impact
 as a direct result of converting from single-place to two-place and
 back to single-place is impracticable in view of a shortage of radar
 observers and other critical skills.

01613



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AERSI-A

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315.6

DATE 205 WMO 57A

DEFENSE

I

AF

I

COMM ABC

COMM NEW STREET AFB NY

COMM NEW HAMILTON AFB CALIF

COMM CAMP RICHARDS OGDON AFB MO

FROM AOCY-3 01667

Reference standard tactics for F-89J aircraft. Pending publication of the revised ABC Manual 55-5, the following will apply for employment of the F-89J/MS-1 aircraft. This is in large part excerpts from new manual. F-89J/MS-1 aircraft will scramble in flights of two, establishing a 15-mile separation between aircraft and 40 miles between flights. A 90-second interval between takeoffs will closely approximate a 15-mile separation for T.O. climb schedule and a 4-minute interval will approximate a 40-mile separation. F-89J aircraft, although in combat trail will be individually controlled throughout the scramble, climb and interception portions of the sortie. Recovery may be made in close formation if desired. When considering the speed and altitude capability of the F-89J, it is apparent that the



5 2738E
Jun 57

AOCY-3

Maj Pedigo/mk

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TIME GROUP REFER TO COMMUNICATION

H. J. TOSO
Capt, USAF
Asst Command Adj

UNCLASSIFIED

0743

UNCLASSIFIED



ADDET-8

comparative speed and altitude of the target becomes critical in determining the type of attack to be made. If these factors will allow, the most productive attack is a co-altitude, lead collision course, quartering head-on attack (110° LOP). However, if interceptor performance or target position and speed precludes an attack of this type, a head-on, co-altitude, snap-up, or climbing attack will be employed. Techniques and escape maneuver will be accomplished as outlined in T.O. IF-394-23-1. Since only one MB-1 can be fired at a time, the Director should always consider re-attack possibilities, if not against the same target, then against a following target. Detailed tactics are outlined in revised ADG manual 55-5. Desires dissemination to all units of your command. The above applies only to combat tactics and does not affect current alert requirements.

A PARAPHRASE NOT REQUIRED EXCEPT PRIOR
TO CATEGORY B ENCRYPTION - PHYSICALLY
REMOVE ALL INTERNAL SECURITY DATE
TIME GROUP PRIOR TO

01600

ADDET-8



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UNCLASSIFIED

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DOC 206 ADCHR 57A

10 Jun 57

FM COMADC
TO AIR DEFENSE FORCES
64th ADiv
4750th ADW
4756th ADG

10 Jun 1957

SECRET FROM ADOCO-W 01641

To achieve acceptable hit probability for Falcon M,ssiles it has been determined that full salvos should be fired. It is, therefore, desired that procedures be established to insure that aircrews flying F-102A and F-89H aircraft fire a full salvo of missiles at any intercepted hostile targets during combat situations.

UNCLASSIFIED

0745



DOC 107 ADGHR 519

DEFINED

UNIT: ADC

CLASIF: STOWA'S AFF: STOWA'S SE

CLASIF: STOWA'S AFF: STOWA'S SE

CLASIF: STOWA'S AFF: STOWA'S SE

CLASIF: STOWA'S AFF: STOWA'S SE

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Family complete distribution of technical order 19-004-00-1, the following recommended usage whenever for F-89B aircraft when flying the A-101 mission is recommended for distribution to all units possessing or scheduled for F-89B aircraft. Note: At the instant the A-101 is launched: 1. Immediately roll the aircraft to a bank angle between 30° and 60° away from the wing from which the A-101 has been launched. This nullifies the rolling tendency imparted by the launching. If the A-101 is launched in a snap-up attack, the pilot must get the F-89B above and to at least an attitude level with the horizon while banking. Flight tests indicate that bottom rudder opposes the aircraft roll. Additional positive load factor must not be acquired when the nose reaches the horizon level. 2. As the nose reaches

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22	57

REPRODUCED FROM

SAI V. H. Redigo

2/27 1



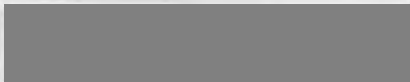
GENERAL AEG

horizon level, positive load factor of 3.0 g's or buffet, whichever is less, is attained as soon as possible. This load factor must be at least 1.4 g's. For a snap-up attack, the airspeed should not be more than 190 knots. 3. During the escape maneuver, the speed should be brought to and maintained between Mach 0.70 and Mach 0.78. To achieve this speed, bank angle or throttle is varied as necessary. 4. Throughout the first part of the maneuver (prior to the blast shock wave arrival), the load factor should be maintained as near 3.0 g's or buffet as possible, and Mach number maintained between 0.70 and 0.78. Airframe should be maintained as near neutral as possible at shock wave arrival. Small airframe corrections to maintain speed are permissible. 5. The blast shock wave arrives at the aircrew between 10 and 20 seconds after the M-1 is destroyed. Shock arrival will produce a large, almost instantaneous increase in load factor. This "jolt" will be easily recognized by the pilot and radar operator. Airframe must be near neutral at shock arrival time. After the shock wave arrives, the load factor, if available, may be increased to the structural limits. If desired, the bank angle may be decreased as low as 15° after shock arrival to achieve a climbing turn. 6. The turn must be continued to at least 90° from launching heading, after which the escape maneuver may be terminated. Note: Secure this information be disseminated at the earliest possible date.

ARMY-8

2 2

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COPY OF INCOMING CLASSIFIED MESSAGE
ON BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

0211 C/S

12 March 1947
ACTION - 00P
INFO 16, DO
SUSP - 18 MARCH
2547 EF

AG016
870-1216402
A-433-13
RR RJEDEN
DE RJEPQW 163C
EM CONAC
TO COMDR ADC
INFO COS USAF
BT

DOC 201 ADCHR 57A

[REDACTED] FROM CNTPL 33, USAF ONLY; FOR AFOOP.
SUBJECT IS GREATER PITTSBURGH. REFERENCE PD 38-1-1, REQUEST YOUR CONCURRENCE IN ESTABLISHING 31 MARCH ON 956 AS TARGET DATE FOR TRANSFER OF GREATER PITTSBURGH TO JURISDICTION OF THIS COMMAND. FURTHER DESIRE TO KNOW IF YOU PROPOSE TO DESIGNATE A SUBORDINATE COMMAND TO CONDUCT TRANSFER NEGOTIATIONS. UPON RECEIPT OF ABOVE INFORMATION, COMMANDER FIRST AIR FORCE WILL BE DESIGNATED TO ACT AS THE CONAC REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PLANNING FOR AND EXECUTION OF TRANSFER AGREEMENT.

BT
12/2259Z MAR RJEDEN

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY 1 ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION.

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302.7



DOC 208 ADCHR 579

26 February 1957

Brigadier General Monroe MacCloskey
Commander
Western Air Defense Force
Hamilton Air Force Base, California

Dear Mac,

Attached is a letter received from General White on the subject of Portland. General Atkinson has asked me to inform you of this decision.

I am at a loss to know what concrete action can be taken, inasmuch as we have been working toward solving our relations with the Portland International Airport authorities for the past two or three years, and really have not arrived at a good solution to the problem. Nevertheless, General White directs that we continue our efforts to this end.

Sincerely,

Incl
Secretary 15 Feb 57,
Gen White to Gen
Atkinson, re Portland

MARSHALL S. ROTH
Major General, USAF
Chief of Staff

Cy Incl not nec for AAG Files



FMA7

M/Gen M. S. Roth/bld	2316
26 Feb 57	H-21068

4-636-1

UNCLASSIFIED

0749

FILE NUMBER 382

OSID, Hq 68th FG, 7 Mar 57, Subj: Operational Problems caused by Space Limitations

ADCOF-C M Ed 17 MAY 1957

Hq Air Defense Command, Hqt AFB, Colorado Springs, Colorado

TO: Commander-in-Chief, Continental Air Defense Command, Hqt Air Force Base, Colorado Springs, Colorado

1. The situation as outlined in preceding increments has been aggravated by continued slippage of the overseas deployment of the 497th Fighter Interceptor Squadron. This unit is presently programmed to deploy from Geiger during 4th Quarter FY 1958.
2. There is no possibility of constructing any additional facilities at Geiger to alleviate this problem. It is also impossible to move the 497th Fighter Interceptor Squadron prior to 4th Quarter FY 1958.
3. It is our understanding that HAVFORCOMAD has requested that all matters concerning use of Navy facilities by COMAD units be submitted through their office.
4. In view of the above, we request that an investigation be conducted to determine whether action outlined in paragraph 6.a., basic letter, is possible.

FOR THE COMMANDER:

1 Incl (Not nec for AG files)
m/c

HAROLD W. GRANT
Major General, USAF
DCC/Operations

COMEBACK COPY

Not requested, not furnished
Furnished 17 MAY 1957
(Date) (Initials)
C-7-976

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29	ADCOF-C
30	ADCOF-C

DESTROY AFTER: 90 DAYS 1 YR 2 YRS 3 YRS 4 YRS 5 YRS 6 YRS
 RECORDS DISPOSITION: PERMANENT

103-1

Major Frank V Phillips/djs
ADC HQ

OFFICE CODE: ADCO DATE: 17 MAY 57 TEL NO: 2602/2603

FANFOLD NUMBER AND SUSPENSE DATE: H-29098-A -- 22 May 57

FORM 19 MAR 57 11 PREVIOUS EDITIONS OF THIS FORM OBSOLETE

FOR RECORD: NONE SEE REVERSE

UNCLASSIFIED

[REDACTED]

OSIC, Hq 84th Fl, 7 Mar 57, Subject: Operational Problems Caused by
Space Limitations

WDCDR

2nd Ind

72 APR 1957

Hq Western Air Defense Force, Hamilton Air Force Base, California

TO: Commander, Air Defense Command, Ent Air Force Base, Colorado
Springs, Colorado

1. Forwarded for your information and consideration.
2. This headquarters is cognizant of the reasons for delay in the deployment of the 487th Fighter Interceptor Squadron and movement of the 322nd Fighter Interceptor Squadron.
3. It is requested that your headquarters assist in the solution to this critical space requirement by (a) Review of the Fighter Interceptor Program and (b) Negotiation for permanent or temporary use of the portion of the Navy area described in Paragraph 6a, basic.

1 Incl:
n/c

HUGH A. PARKER
Major General, USA
Commander

29094

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[REDACTED]

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[REDACTED]

CSIO, Hq 84th FGRUAIRDEF, 7 Mar 57, Subj: Operational Problems
Caused by Space Limitations

9CDR

1st Ind

Hq 9th Air Division (Defense), Geiger Field, Spokane, Washington

TO: Commander, Western Air Defense Force, Hamilton AFB,
California

1. Deferral of the movement date of the 497th Fighter-Interceptor Squadron has generated problems which will seriously affect the operational capability of the 84th Fighter Group (AD).
2. Delay in construction of the aircraft shelter and of the organizational hangar, both programed in fiscal year 1958, should not be considered as a solution to the problem. Construction should definitely proceed on schedule when and as money is available.
3. On this basis, then, additional space must be secured. I indorse both proposals in paragraph 6, basic letter. I recommend:
 - a. That the 497th be moved in the 1st quarter of fiscal year 1958--
 - (1) In accordance with original program; or
 - (2) To Walker AFB in place of the 322d Fighter-Interceptor Squadron; then deploy 322d during 3d quarter of fiscal year 1958 in place of the 497th; or
 - (3) To Fairchild AFB.
 - b. Also, that action be taken to negotiate for the permanent use of the portion of the Navy area discussed in paragraph 6b, basic. If this fails, then negotiate for the temporary use of that portion, until departure of the 497th.

1 Incl
n/c

SAM W. AGEE
Brigadier General, USAF
Commander

103-3

UNCLASSIFIED

0752

FOR OFFICIAL USE ONLY

Bldg 164 -- Dormitory

Bldg 165 -- Dormitory

Bldg 730 -- Base maintenance shops

Although the organizational hangar is an urgent requirement for complete fulfillment of the mission, it is obvious that the 84th Fighter Group cannot operate two squadrons from the base even temporarily while hangar construction is underway.

5. It is apparent that if operations continue as they are now planned, we must accept the fact that each squadron on this base will be extremely limited in capability for performing its mission. The operation will be costly - aircraft maintenance work will be inefficient, operational hazards will increase, costly modifications and temporary planning will continue, crowding and inefficiency will cause lowered morale. Construction of the much needed organizational hangar will have to be postponed, while construction of alert shelters can be accomplished only with extreme difficulties.

6. This headquarters recommends that some action be taken for relief of this situation. Either of the following suggestions might provide relief:

a. Ask Headquarters USAF to negotiate for Air Force use of a portion of the Navy area. The southwest Navy hangar and all ramp space southwest of this hangar would be needed. Recent reductions in scope of Naval reserve activities on the base indicate that they might be able to fully accomplish their mission with the remaining area. The base has occasionally been allowed to park planes temporarily on the Navy ramp, but this headquarters cannot negotiate an agreement for permanent or long-term use of any of the Navy area.

b. Adhere to date originally programmed for transfer of one fighter squadron. This would allow for major construction projects to proceed on schedule. Temporary adjustments already made by the base allow for operation of two squadrons for a few months.

FOR THE COMMANDER:

1 Incl
Map

LORNA V. KUBLI
Lt Colonel, USAF
Adjutant

103-4

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4. Another factor that adds to difficulties is construction programmed during the next year:

a. Rehabilitation and extension of the main runway will allow use of only one secondary runway for an eight-month period; the NS runway for the first three months, then the EW runway for the last five. Planes must operate without runway overruns or adequate crash barriers.

b. A four stall aircraft shelter is scheduled for contractual award in July 1957. The shelter is essential for operation of F-102s, because of complicated electronics equipment, meticulous ammo loading requirements, and the amount of servicing required. Yet the shelter cannot be built without undergoing serious violations of aircraft parking criteria. Examination of ramp area on attached map shows that parking of only one squadron plus base flight planes requires violation of criteria and encroachment on hangar access areas. Aircraft shelter construction can be attempted only by closing the NS runway for aircraft parking, which still would involve violations of runway clearance criteria.

c. An organizational hangar is required for adequate maintenance. Both this hangar and an infirmary are in the FY-56 MCP. The existing temporary infirmary must be torn down for the hangar to be built. ADC dental surgeon recently advised the dental surgeon at this base to ask the base planning board to designate a building which can be used as a temporary infirmary during construction of the permanent infirmary and hangar. While this could possibly be done, it does not solve other big problems in connection with hangar construction. This construction will require removal of: (Attached map)

Bldgs 214, 216 and 217 - Dispensary, dental clinic and infirmary

Bldg 221 - Dormitory and personal equipment

Bldg 220 - Maintenance and technical representatives offices

Bldg 269 - Recently converted maintenance facility

Bldg 268 - Recently converted maintenance facility

Bldg 734 - 498th FIS operations building

Bldg 733 - Squadron personal equipment

Bldg 702a - Supply

Bldg 727 - Paint and dope storage

103-5

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8th FIGHTER GROUP (AIR DEFENSE)
 United States Air Force
 Geiger Field, Spokane, Washington

OSIC

MAR 7 1957

SUBJECT: Operational Problems Caused by Space Limitations

TO: Commander
 9th Air Division (Defense)
 Geiger Field
 Spokane, Washington

1. Deferral of movement date of the 497th Fighter Interceptor Squadron has added to existing problems to the extent that the 84th Fighter Group cannot possibly carry out its mission as presently planned for the next year.

2. Conversion of one squadron to F-102s has already seriously affected the capability of the group for operating with the limited base facilities.

a. F-102s require twice as much organizational hangar space as the F-86. The field maintenance activity requires increased space to handle two types of planes. Existing hangar space is inadequate for just one squadron, and much of the field maintenance activity is pushed out on the open ramp.

b. F-102s require 50 per cent more pieces of ground power equipment, all of which is bigger and more complicated than equipment for the F-86D. There is no adequate space for maintenance and storage of this equipment.

c. The F-102 squadron is authorized ninety-seven (97) more men than the F-86 squadron. Totally inadequate living quarters that have outlived their designed usefulness is a serious problem.

d. Requirements for plane parking space are greatly increased with F-102s. Adequate clearance between planes and other structures cannot be maintained.

3. Extensive study of problems involved has led to multiple moves, conversions, and construction designed to keep the group in operation during the summer months while the 498th is building up and the 497th phasing out. Changes necessary for this included construction of two buildings, conversion of five buildings to different uses, and modification of four buildings, at overall cost of about \$40,000. These changes allowed for brief summertime operation only - they do not provide capability for protracted operations through the winter. The base has sub-zero temperatures, wind, and snow equivalent to arctic weather for several months each winter, and this precludes outside maintenance.

103-4

Incl 1 - 12/2/57

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(U) Operational Problems Caused by Space
Limitations

ABOOF

ADAIR

29Apr57
Mr Everett/2680/gc

1. The attached correspondence relating to operational difficulties at Oaiger is transferred for your action per telephone conversation with Major Phillips.
2. Statements made concerning lack of facilities to support 2 FIB at the airport are true. Since our squadron is scheduled for deployment we have been unable to program facilities for the unit.
3. Reference is made to paragraph 3(b), 2nd Indorsement. Attached for your information is a copy of letter from Headquarters 9th Air Division, dated 9 March 1956, Subject: Acquisition of Spokane Naval Air Station, with 4 Indorsements. Since this correspondence was written HAFFORCOMAD has requested that all matters concerning use of Navy facilities by COMAD units be submitted through their office. Recommend this correspondence be submitted to COMAD requesting permanent or temporary use of the Naval area or any available part thereof.

MERRILL E DE LONGE
Colonel, USA
Director of Real Property
ACS/Installations

2 Encls

1. Dir 9th Ftr Gp, 29Mar57,
w/2 Encls (CONFID)
2. Dir 9th AD, 9 Mar 56,
w/4 Encls (UNCLAS)

When Encl 1 is withdrawn the classification
on this D/T is cancelled.

103-7

UNCLASSIFIED

0756

UNCLASSIFIED

DOC 211 ADGHR 57A



Message of Galt to M. I. Sawyer

CM

17 Apr 57

ADGHR
ADGHR
ADGHR
ADGHR
ADGHR

1. Your attention is invited to the attached notes.
2. RABV request for waiver is disapproved.
3. Please take appropriate action.

COMEBACK COPY OF STAFF

J. Adams
a/c

MARSHALL S. ROTH
Major General, USAF
Chief of Staff

UNCLASSIFIED

Manning of Units at K.I. Sawyer AFB

Commander
 WMS: DMS/O
 Asst for Programming
 Chief of Staff
 Vice Commander

DMS/P

6 Mar 57
 Maj G V Jackson/act/DMS

1. The 484th Fighter Interceptor Squadron has been activated at K.I. Sawyer AFB, Michigan since 9 June 1956, but for the reasons stated below it has never been equipped:

a. After a visit there, General Partridge directed a delay in equipping until more adequate personnel facilities were available.

b. At a later date, Eastern Air Defense Force expressed a desire to proceed with a controlled build up in personnel and subsequently equipping the squadron with 50% of authorized US aircraft. This was based on the desire to utilize WA-1 rocket facilities at K.I. Sawyer AFB.

c. Subsequently, Lt WAF informed us that K.I. Sawyer AFB was programmed for SAC dispersal and so would be unable to operate during the construction of SAC facilities. In view of this, it was decided to delay the SAC operation until the SAC facilities were completed.

d. The most recent information available indicates that K.I. Sawyer AFB has been deleted as a SAC dispersal base, and that the 484th Squadron is now programmed to fully equip with F-89 aircraft in the 2d Qtr of FY 58 (November 1957).

2. Based on the latest program, Eastern Air Defense Force is requesting a waiver to AFM 30-6, Standards for Aircraft Personnel Facilities, in order to proceed with a full personnel build up necessary to support the full equipping schedule.

3. Information obtained from the Assistant Chief of Staff, Installation is that 100 units of equipment housing are available. Design is in progress but construction contracts have not been let. Therefore, it does not seem possible to provide the necessary housing by September 1957. This office is strongly opposed by a waiver of AFM 30-6 in this case, since it would place the unit personnel in an unacceptable position with regard to housing and personnel facilities.

4. Unless overriding operational considerations dictate otherwise, this office will not favorably consider the Eastern Air Defense Force request for

UNCLASSIFIED

Manning of Units at K.I. Sawyer AFB

Commander

DCS/T

6 Mar 57

(contd)

and/or (of AFM 30-5). Further, it is recommended that equipping of K.I. Sawyer AFB be delayed until the construction of adequate facilities can be assured.

JOHN R. KILMAN
Colonel, USAF
Director, FMS
Rm 2302/2700

G. R. GREEN, JR.
Colonel, USAF
DCS/Personnel
Rm 2248/2249

1 Above
Cy of RPTL 5849

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UNCLASSIFIED



107 Meeting of Staff at H.I. Chapter 375
108
109
110

The following information is being furnished to you for your information. It is requested that you advise the undersigned of any comments you may have on this information.

1. The undersigned is pleased to advise that the current system program will be completed by the end of the month of May. It is requested that you advise the undersigned of any comments you may have on this information.

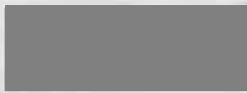
2. The undersigned is pleased to advise that the current system program will be completed by the end of the month of May. It is requested that you advise the undersigned of any comments you may have on this information.

1 attached
w/s

JOHN A. PARKER
Major General, USAF
DCI/Operations



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I Alchut
a/c

DOLF E. WUNDERMAN
Supt. General, WAAF
Asst. C/S, Programming



(U) Manning of Units at K. I. Sawyer AFB

c/s

ADAIR

12Apr57
Mr Everett/2620/gcXX
4

1. Facilities Completed:

<u>ITEM</u>	<u>SCOPE</u>
Airmen Dorms	600 MH
Airmen Mess	700 MH
Officers Quarters	26 MH
Officers Mess & Club	6,500 SF
Chapel	150 SE

2. Facilities Under Contract:

<u>ITEM</u>	<u>SCOPE</u>	<u>BOD</u>
Infirmary	6,109 SF	Jan 58
Cold Storage	1,683 SF	"
Airmen Dorm	200 MH	"
Commissary Store	7,589 SF	"
Recreational Workshop	3,065 SF	"
Theater	5,540 SF	"

3. Facilities Authorized but Deferred for FY-1958 Funding:

<u>ITEM</u>	<u>SCOPE</u>	<u>BOD</u>
Club, Service	12,700 SF	Jan 59
Club, NCO	6,500 SF	"
Exchange Sales	13,650 SF	"
Rctn Pac Multi-Purpose	11,049 SF	"
Clothing Sales	3,558 SF	"

4. Family Housing. a. The Title VIII housing project has been authorized and is presently under final review. Project is scheduled for advertising about 1 May 1957, with contract award 1 August 1957. Estimated completion is 1 September 1958, with first units becoming available during the summer of 1958.

b. Rental housing available in the surrounding area is as follows:

1. None within 3 miles or 5 minutes driving time of base.
2. Gwinn, Michigan - 8 miles distant, 20 units.

(U) Summary of Status of E. I. Survey ACS

c/s

AMCS

Mr. [Redacted] / [Redacted]

(10000)

- 1. [Redacted], Michigan - 50 acres status, 25 units.
- 2. [Redacted], Michigan - 50 acres status, 25 units.

3. We have no information on the status of the 50 acres units listed above. The listing merely shows those units which have been found and ranked by ground team personnel. The figures shown represent complete information of available units.

MERRILL E DE LONGE
Colonel, USAF
Director of Real Property
ACS/Installations

MATT T. MAXWELL
Colonel, USAF
Assistant Chief of Staff
Installations

1. Attachment
[Redacted]

FILE NUMBER 302.5

SECRET

MESSAGE TRANSMITTED
WITH FOLLOWING DATE TIME GROUP
B-59-04 04/00Z

REFUSED
DEFERRED X AF
COMM. ADC

AFOP-OC 7/1
06117, 19 Apr 59

COMM. RAINY STEWART AFB NY
COMM. GARY GRANDVIEW MO
COMM. WANG HAMILTON AFB CALIF
44th FTR CG GERRARD AFB CALIF

FROM ADCP 01254 This message is
pert. RANT L. Following message received from Memphis
HEAD. Comm. Reference ADC Fighter Inventory Program and
specifically with new program for Glasgow, Klamath Falls, K.
I. Sawyer and Concord. Current estimated completion dates for
fleet heading are: (a) Glasgow, 340 units-ful Qtr/FY 59; (b)
Klamath Falls, 280 units-ful Qtr/FY 59; (c) K. L. Sawyer, 340 units-
ful Qtr/FY 59; (d) Concord, 300 units-ful Qtr/FY 59. Units are
presently anticipated to equip as follows: (a) Glasgow, F-105-40
Qtr/FY 59; (b) Klamath Falls, F-105-40 Qtr/FY 59; (c) K. L.
Sawyer, F-105-40 Qtr/FY 59; (d) Concord, F-105-40 Qtr/FY 59.
Current information indicates completion of address needed
operational facilities prior to completion of fleet heading. It is

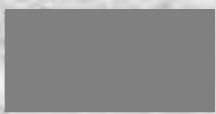
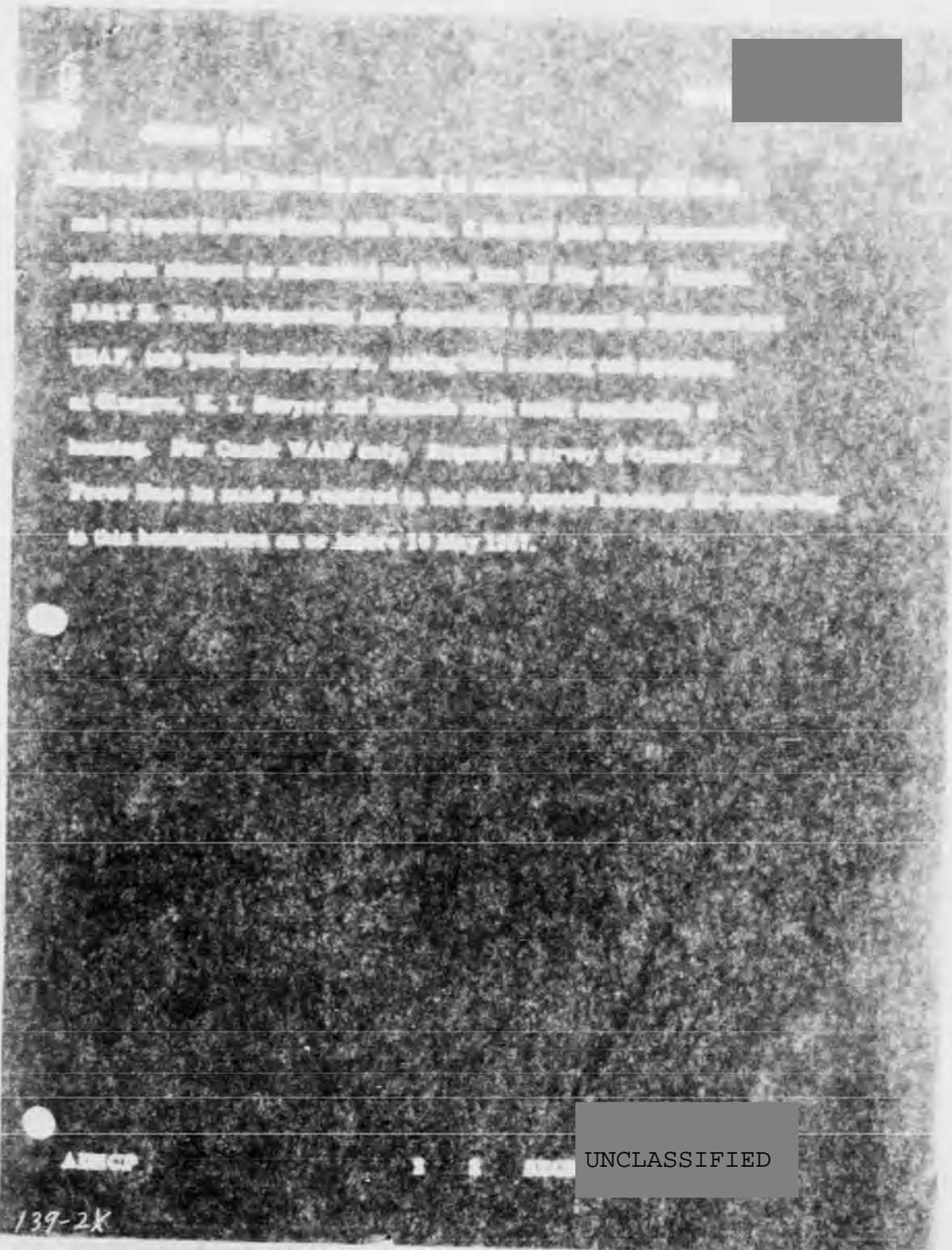
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ADMX	

DISPATCHED
3 MAY 1959
A.D.C.

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PART II. This headquarters is hereby notified that the
 USAF, and your headquarters, among the members of the
 of Charles E. J. Sawyer and Harold S. Brown, Secretary of
 Security. For Credit WAFB only, request a copy of General Air
 Force Base to be made as outlined in the above quoted paragraph or otherwise
 in this headquarters on or before 10 May 1957.

ALMCP



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AG 29
A031
RR RJEDEN
DE RJEPHQ 134
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FM HEDUSAF WASH DC
TO COMIRDEFCOM ENT AFB COLO
BT

DOC 213 ADCHR 57A

Action OOP
Info IG DO HCP
Comp 1E
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Swap 27 May 57

OM AF00P-OP-U 56377
MESSAGE ADOOP-C 21343. THIS HEADQUARTERS REVIEWED
APPROXIMATELY \$63 MILLION OF PRIOR AUTHORIZED AND NEW AUTHORIZATION
REQUESTS AT R.I. BONG FOR THE FY 58 FINANCIAL PLAN. OF THIS,
APPROXIMATELY \$27 MILLION WAS CONSIDERED TO BE THE MAXIMUM AMOUNT
OF FY 58 MCP FUNDS WHICH COULD BE APPLIED AGAINST CONSTRUCTION
BASED ON THE CONSTRUCTION CAPABILITY OF THE AREA. ACCORDINGLY,
ONLY LONG LEAD TIME ITEMS WERE RETAINED FOR FY 53 FUNDING AND
SHORTER LEAD TIME ITEMS DEFERRED FOR SUBSEQUENT MILITARY CONSTRUCTION
PROGRAM FUNDING. THIS ACTION DESIGNED TO PROVIDE BOD OF ALL

PAGE TWO RJEPHQ 134
REQUIRED FACILITIES IN THE SAME TIME PERIOD. EXCEPTION TO THIS IS
ONE OF TWO MAINTENANCE HANGARS WHICH IS LONG LEAD TIME ITEM IN-
CLUDED IN DEFERRED LIST. DEFERRAL OF THIS ITEM TO SUBSEQUENT
PROTAM IS NOT CONSIDERED CRITICAL. WITH RESPECT TO ALERT HANGARS,
PRESENT POLICY PROVIDES ALERT FACILITY FOR ONLY ONE SQUADRON ON TWO
SQUADRON INSTALLATIONS. THEREFORE, PROGRAMMED FACILITY WAS REDUCED
IN SCOPE ACCORDINGLY.
BT
22/1922Z MAY RJEPHQ

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TO DECLASSIFICATION--

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DOC 214 ADCHR 594

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COPY OF INCOMING CLASSIFIED MESSAGE

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29 May 57

PAGE TWO RJEKMT
SCHOOL SITES WERE FORMERLY PROPOSED APPLICATION. THREE SITES UNDER
CONSIDERATION WERE: (1) EAST AND WEST SCHOOL BOARD. (2) ALL OTHER
PERSONNEL FACILITIES AND CASERS WITH MEET MINIMUM STANDARDS SPECIFIED
IN ATTACHMENT 1. (3) NEW YORK STATE DEPARTMENT OF EDUCATION (DCE) SITES ABOVE
ARE FAMILY HOUSING, COMMISSARY STORES AND DETACHMENT SCHOOLS.
SINCE LOCAL SUPPORT IS MINIMAL AND BASE IS LOCATED IN ISOLATED AREA,
WAIVER OF 20-3 IS REQUESTED IN ORDER THAT BASE, 100th FIGHTER SQUADRON,
MAY BE FULLY MANNED BY JULY 1958. MANNING OF PROPOSED FIGHTER SQUADRON
SHOULD BE PHASED TO COINCIDE WITH AVAILABILITY OF HOUSING AND
SCHOOLS, AT A DATE THAT CANNOT BE DETERMINED.
BT
29/1745Z MAY RJEKMT

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ADC Hq-O-AG-Form 23
9 April 53

[Redacted]

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DOC 215 ADCHR 59A

302

FM CINCSAC OFFUTT AFB NEBR
TO COFS USAF WASH D C

49440 1 Jun 1957

UNCLASSIFIED FROM D/ENG-PR 46432.

Subject: Air Force General Order, Richard I. Bong Air Force Base, Kansasville, Wisc. Since your headquarters has assigned master planning programming and family housing responsibilities at Richard I. Bong AFB to this command, it is requested that an Air Force General Order be published assigning this installation to strategic Air Command in an inactive status effective immediately. It is also requested that your headquarters authorize this command to accept accountability of all real estate that has been acquired and that is to be acquired by the Corps of Engineers for this installation.

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DOC 216 ADCHR 57A

FILE NUMBER 302413

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COMDR ADC

COMAEDF STEWART AFB NEWBURGH NY

COMCADP GRANDVIEW AFB MO

COMWADF HAMILTON AFB CALIF

21 Feb 57

[REDACTED] / FROM ADOBT-B 00515.

Due to slippage in the construction of storage facilities, some units will be equipped with F-89J type aircraft prior to availability of the MB-1 rocket. Aircraft will be delivered with 300 gallon tanks, carrying 2.75 rockets. 600 gallon tanks may also be available. Pending availability of MB-1 rockets, F-89J aircraft will be employed using 2.75 rockets/300 gallon tank configuration. Practice intercepts will be conducted using the missile feature and rocket feature of the fire control system.

A PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION - PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION.

DISPATCHED
21 FEB 1957
A.D.C.
20 2300Z
Feb 57

ADOBT-B

Maj J. H. Pedigo
2727

11 1

C. F. HUMPHREYS
Major, USAF
Asst Command Adj

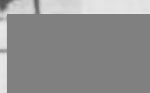
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DOC 217 ADCHR 574



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605 11 1957

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SECRET FROM AIR FORCE... SUBJECT...
DATA FOR... SUBJECT...
ON 11 to be... in... to... status of...
... however, change in...
affecting status of... in the near future is as follows:

18th Fighter Interceptor Squadron, Dover Air Force Base from
June 1957 to July 1957

31st Fighter Interceptor Squadron, Fair Air Force Base from
July 1957 to September 1957

46th Fighter Interceptor Squadron, Griffiss Air Force Base from
July 1957 to November 1957

58th Fighter Interceptor Squadron, Otis Air Force Base from

1 4000
205 1957

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PARFOLD NO 1

San W. BUFFALO, Co. 6

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July 97 to January 1958

319th Fighter Interceptor Squadron, Ramoth Hill Air Force Base
from July 1957 to June 1957

484th Fighter Interceptor Squadron, El Reno Air Force Base,
from June 1957 to December 1957. This storage facility is
completed, but is not usable due to lack of other base
facilities.

54th Fighter Interceptor Squadron, Elmendorf Air Force Base,
from October 1958 to April 1958

477th Fighter Interceptor Squadron, Gooding Air Force Base, from
July 1957 to April 1958. Due to uncertain beneficial
occupancy date, this date could vary from January to April
1958.

FANFOLD NO. 10000000

ALMAC-GB

M-675-2

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DATE: [REDACTED]

10/1/58

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1821 20 Feb 57

FM COMAMC WPAFB OHIO
TO C. MADG ENT AFB COLO

FROM MCW4-15199. FOR: DSN, SAATA. Reference ADHLO-AO 2299,

26 Oct 56. Subj: MB-1/W-25 Capability. AMC has a support responsibility for the MB-1/W-25 capability at your bases. In order to accomplish this responsibility, it is necessary to verify the information contained in OPU II 57-3, dtd Feb 57. OPU II 57-3 indicates that certain ADC bases are scheduled to accept the MB-1/W-25 capability on certain dates. Please advise if these dates are firm and that the capability can be accepted as scheduled, taking into consideration all phases of the program, i.e., facilities, ~~take/into~~ etc. This information is required as soon as possible in order that AMC may plan for the support of these organizational capabilities.

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FILE NUMBER 30213

RECEIVED
WITH FOLLOWING DATE TIME GROUP
B-302-21 212030Z

ADDC
21 MAY 1957
A.D.C.

COMEBACK COPY

C. F. HUMPHREYS
Major, USAF
Asst Commandant ADC

ADDC-M
1A Col
2398

DATE: 14 May 57

TEL NO: 2398

OFFICE CODE: ADCC-M

FANFOLD NUMBER AND SUSPENSE DA

MEMO FOR RECORD: NONE SEE REVERSE

FORM 18 MAR 57 (4250) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

2867

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COVER AND

A SUBSTANTIAL PROJECT AND IN ITSELF MUST NOT PREVENT US FROM SIGNIFICANTLY
INCREASING THE AIR SUPPORT CAPABILITY WHERE AVAILABILITY OF AIRCRAFT
AND WEAPONS WILL OTHERWISE PERMIT. IT IS THEREFORE REQUESTED THAT
YOUR HEADQUARTERS ACKNOWLEDGE THIS SITUATION TO THE EXTENT THAT
REQUEST AND SUBSEQUENT APPROVAL OF WAIVERS WILL IN MANY INSTANCES BE
AN AFTER-THU-FACT SITUATION.

A PARADISE E
TO DIRECTOR B E
END OF ALL INST

ADOCO-W

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DOC 219 ADCHR 57A

102.13

MEMO-44, WAFB, 29 Mar 57, Subj: (U) Falcon Missile Storage

AIRAC-04 2nd Incl

4 APR 57

HQ AIR DEFENSE COMMAND, 2nd Air Force Base, Colorado Springs, Colo.

TO: Commander, Western Air Defense Force, Attn: MEMO-44, Hamilton Air Force Base, California

- 1. Authority is granted for storage of missiles in any structure which meets explosive safety criteria.
- 2. Requirements for air conditioned storage of Falcon has been deleted. The use and supply of dehumidant is presently under study by USAF and continued pressure is being applied to AEC to publish criteria and procedures peculiar to GAF.

BY ORDER OF THE COMMANDER:

1 Incl
1 of w/d



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FILE: [REDACTED]

DATE	26 March 1957	REPORT TO PARFOLD NO.	H-26970
CLASSIFICATION	SECRET	NO. OF PAGES	306

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HEADQUARTERS
WESTERN AIR DEFENSE FORCE
UNITED STATES AIR FORCE
HAMILTON AIR FORCE BASE, CALIFORNIA

WDPAF-AA

SUBJECT: (U) Falcon Missile Storage

TO: Commander
Air Defense Command
Hnt Air Force Base
Colorado Springs, Colorado

1. Reference is made to the following documents:
 - a. AFR 190-16, USAF Construction Program (1957 and prior).
 - b. Facilities planning documents for USAF bases.
 - c. AF-004-1-50-018 (Project Nitalife), attachment 3 to AFR 67-44, 23 August 1955 (D-5).
 - d. AFAC Report AFR/4 A.36-14, Subject: Final report on employment and suitability test of MB-1 (Falcon) missile, 14 January 1957.
 - e. Aircraft program, 19 February 1957, as amended.
 - f. AOC message AOC1-4 00566, 27 February 1957.
2. The attached chart breaks down by USAF units and bases, the aircraft program, Falcon missile operational requirement, and missile storage facilities.
3. Falcon missile storage facilities at McCord and Travis Air Force Bases, Meier Field, Portland International Airport, and Clatsop Falls Municipal Airport are inadequate under existing requirements of temperature and humidity control and/or quantity/distance criteria.
4. Air conditioned MB-1 storage buildings provide additional space for Falcon missiles at McCord and George Air Force Bases, making sufficient total storage facilities at those bases. McCord is inadequate even with one air conditioned MB-1 building.
5. Ground ambient temperatures in the USAF geographical area are no threat to Falcon missiles in dead storage. AFAC's report recommends deleting the requirement for humidity control in missile storage. Mass detonation of Falcon missiles is considered highly improbable.

FANFOLD NO. 5242

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6. In order to ease the Falcon missile storage problem at WAFB's fighter interceptor squadrons, recommend authority be granted for storage of the missiles in any structure which meets safety and quantity-distance criteria. This will permit use of "extra" space in 2.75" FPAR buildings, MB-1 storage buildings, and may include some ammunition igloos. If your headquarters approves, further recommend the following:

- a. Coordinate all changes with San Bernardino Air Materiel Area so that directives and T.O.'s may be changed.
- b. Delete requirement for, and stop work on, air conditioning MB-1 storage buildings for storage of Falcon missiles.
- c. Issue directives on checking desiccant in shipping containers whether or not they are equipped with external indicators.
- d. Authorize suitable desiccant baking ovens for Falcon missile squadrons.
- e. Notify other major air commands of new criteria and procedures to insure support by host bases of AXC tenant fighter interceptor squadrons.

FOR THE COMMANDER:

1 Incl
Falcon Prgm Chart (copy)

165-3X

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DOC. 240 ADGHR 57A

Re: SAIF, SACPH, 10 Dec 56, subj: (U) Status of response facilities at Presque Isle AFB

ADGCP 1st Ind

22 JAN 1957

Re: AIR DEFENSE GUARD, 8th Air Force Base, Colorado Springs, Colo

ADGCP

TO: Commander, Eastern Air Defense Force, Stewart Air Force Base, Westburg, N. Y.

1. The incompatibility of the response handling facilities with the Fighter Interceptor Squadron conversion program at Presque Isle AFB is recognized. This Headquarters has not been able to secure release of construction funds for Presque Isle due to the uncertainty of the future program at that base.

2. Approval from Headquarters USAF is now being sought to move the 7th Fighter Interceptor Squadron from Presque Isle to location in possession of adequate facilities at that base. Also accordingly has been requested from USAF to survey Elmendorf AFB as a possible site for relocation of the 7th Fighter Interceptor Squadron under their command (see AAFS O OOD). To alleviate the immediate problem, funds programmed for Presque Isle are being diverted to another unit.

3. The solution to this problem is being handled as a matter of urgent priority at this Headquarters.

g...
...

BY ORDER OF THE COMMANDER:

...
...



1957 JAN 22



10 Dec 56

Subject: (Unclassified) Status of Weapons Facilities at Crosson
 AFB, Texas Base

To: Commander
 1st Air Force
 1000 1st St
 Randolph Air Force Base, Texas

1. On 22 October 1956, 21 October 1956, Captain
 William H. ... in the 1st Air Force ...
 ... to the ...

2. The ... of the ...
 ... of the ...
 ... of the ...

3. The effect of our air defense ...
 ... of the ...
 ... of the ...

4. In view of the lack of adequate facilities at Crosson AFB
 to support the F-84 weapons system, the conversion to that type
 aircraft appears to be undesirable. It is recommended that no con-
 version to different type aircraft be made until the future of the
 master plan is established and adequate facilities can be provided
 for weapons storage, check-out and assembly.



44-1121-4

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This document is classified secret by accident only.
Paragraph 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

See also [Redacted]

C

[Redacted]

FORM NO. 7-12125

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DOC 221 ADCHR 51A

202.13

ROUTINE

X AF RANAC-5 OZLL SECRET

COMER ADC ENT AFB COLO

COMER EAWF STEWART AFB MI

4 Mar 57

00609



MAC-CA _____ Reference your message

RANAC-5 OZLL. The program incompatibility at Presque Isle was recognized prior to program approval. Desire you investigate the feasibility of using the Unit A at Presque Isle for Falcon missile support. If sufficient power, heat and space exists in the assembly room, one OAR-1 console could probably be operated there. The rocket storage bays may be suitable for limited temporary Falcon storage or, if base munition storage is near the Unit A, missiles could be transported to and from the Unit A checkout area. Desire you analyze the Presque Isle base arrangement and facilities and inform this office whether or not operation is possible, and if so, how many Falcon missiles can be supported for the interim period. Desire this information be forwarded to this office by 22 March 1957.

1 2305E
MARCH 1957

AIRMAC-CA



CAPT E.M. SMITH

2500

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CONFIDENTIAL

MAR 25 1957

22 3

DOC. 222 ADCHR 57A

ROUTINE

I AF HMMO-3 0945 CONFID

COMM AND INT AFB OLS

COMM BAW SERANT AFB NY

25 Mar 57



HMMO-CA 00823, Reference your message HMMO-3

0945, 09H aircraft are scheduled in to Fresno IAB 4/57. These aircraft will come from this AFB as they convert to 69-J models. Expect date Fresno IAB receives first aircraft is April 57. As was pointed out in previous message P-09H aircraft will be assigned to Fresno IAB. Missiles will be shipped to Fresno IAB. No missile building will be constructed at Fresno IAB. Request you take immediate action to provide facilities to support the missiles without further delay.

22 1602
MARCH 1957

HMMO-CA

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CAPT H.S. STEW
2500

1 1

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DOC 123 ADCHR 574

2300

AIRMAIL

SUBJECT: (Encl) Falcon Squadron Activations

TO: Commander
 San Bernardino Air Materiel Area
 ATTN: SMO
 Norton Air Force Base
 California

The following schedule, derived from the latest OAF approved Air Defense Fighter-Interceptor Program, is forwarded for your planning purposes:

IS OF	TY	SQUADRON	LOCATION	TYPE	SR* DUTY		NO OF
					MO	DATE	
1/57		432nd FIS	Alameda	F-7H		Wing Completed	5
		411st FIS	Palmd	F-105/8	*	*	5
		412th FIS	Hamilton	F-105/8	*	*	5
		413th FIS	Corona	F-105/8	*	*	5
		404th FIS	Orange	F-105/8		Get ST	5
		405th FIS	Orffline	F-105/8		Wing Completed	5
		501st FIS	Otis	F-105	*	*	5
		445th FIS	Wartland	F-105/8	*	*	5
		323rd FIS	Texas	F-102A	*	*	5
		114th FIS	Duluth	F-102A	*	*	5
		325th FIS	Truck	F-102A	*	*	5
		317th FIS	McChord	F-102A	*	*	5
		318th FIS	McChord	F-102A	*	*	5
		409th FIS	Sec		*	*	5
		327th FIS	Sec		*	*	5



REFOLD NO

[REDACTED]

AIRCO-CA, Hq AIG, Subj: (U) Falcon Squadron Activations

AS OF EX. YR	REGIMENT	LOCATION	TYPE AIRCRAFT	ACQ DATE	NO OF SALES
1/57	2nd FIS	Suffolk	F-102A	Slg Completed	h
	# 31st FIS	Wurtsmith	F-102A	" "	3
1/57	29th FIS	Wabstrom	F-69A	" "	h
	* 84th FIS	Hamilton	F-69A		
	* 137th FIS	Onward	F-69A		
	* 96th FIS	Dover	F-69A		
	* 58th FIS	Otis	F-69A		
	75th FIS	Presque Isle	F-69A	Not funded	
	* 115th FIS	Wurtsmith	F-69A		
	110th FIS	Finross	F-102A	Slg Completed	h
	112nd FIS	Dayton-Johnson	F-102A	" "	h
	116th FIS	Grandview	F-102A	tentative Sep 57	
	10th FIS	Langley	F-102A	Slg Completed	h
	5th FIS	Suffolk	F-102	" "	h
1/58	119th FIS	Bomber Hill	F-69A	Nov 57	3
	112nd FIS	McGuire	F-102A	Nov 57	3
	# 27th FIS	Griffiss	F-102A	Slg Completed	h
2/58	104th FIS	L.I. Sawyer	F-69A	" "	h
	76th FIS	Pinecastle	F-69A	Not funded	
	54th FIS	Killebrew	F-69A	" "	
	* 111st FIS	Paine	F-69A		
	* 165th FIS	Griffiss	F-69A		

[REDACTED]

FANFOLD NO.

ADMAG-CG, HQ ADC, Subj: (U) Falcon Squadron Activations

<u>AS OF</u> <u>FY QTR</u>	<u>SQUADRON</u>	<u>LOCATION</u>	<u>TYPE</u> <u>AIRCRAFT</u>	<u>BOC</u> <u>DATE</u>	<u>NR OF</u> <u>BAYS</u>
	86th FIS	Yonkers	F-102A	Not funded	
	82nd FIS	Travis	F-102A	Bldg Completed	4
	# 539th FIS	McGuire	F-102A	Nov 57	3
	37th FIS	Burlington	F-102A	Dec 57	3
1/58	518th FIS	Klamath	F-89H	July 57	4
	* 437th FIS	Osmond	F-89J		
	42nd FIS	Glasgow	F-102A	June 57	4
	# 329th FIS	George	F-102A	Bldg Completed	4
	# 66th FIS	Osmond	F-102A	" "	4
4/58	60th FIS	Otis	F-101B	" "	4
1/59	14th FIS	Sioux City	F-89J	Not funded	
	15th FIS	Davis-Houston	F-89J	" "	
	93rd FIS	Kirtland	F-89J	" "	
	47th FIS	Wapara	F-102A	" "	
	* 84th FIS	Hamilton	F-101B		
	* 96th FIS	Dover	F-101B		
	* 445th FIS	Wurtsmith	F-101B		
	* 498th FIS	Geiger	F-106A		
2/59	197th FIS	Walker	F-89J	Not Funded	
	330th FIS	Stewart	F-102A	Not Funded	
	96th FIS	Minot	F-101B	July 58	3
	97th FIS	Grand Forks	F-101B	Dec 57	4

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AFMAG-CA, Hq ADC, Subj: (U) Falcun Squadron Activations

<u>AS OF</u>	<u>SQUADRON</u>	<u>LOCATION</u>	<u>TYPE</u>	<u>DOC</u>	<u>NR OF</u>
<u>FX QTR</u>			<u>AIRCRAFT</u>	<u>DATE</u>	<u>DAYS</u>
	* 437th FIS	Omard	F-101B		
	* 332nd FIS	McGuire	F-106A		
1/59	* 432nd FIS	Kinn-OK Paul	F-89J		
	75th FIS	Lowing	F-101B	Not funded	
	* 29th FIS	Malstrom	F-101B		
	* 406th FIS	Griffiss	F-101B		
	* 438th FIS	Kinross	F-106A		
	* 327th FIS	George	F-106A		
	* 2nd FIS	Suffolk	F-106A		
4/59	13th FIS	Wobb	F-89J	Not funded	
	460th FIS	Portland	F-102A	" "	
	* 404th FIS	K.I. Sawyer	F-101B		
	* 317th FIS	McChord	F-101B		
	* 518th FIS	Klamath	F-101B		
	* 11th FIS	Duluth	F-106A		
	* 37th FIS	Burlington	F-106A		
	71st FIS	Selfridge	F-106A	Not funded	
1/60	58th FIS	Schilling	F-89J	" "	
	87th FIS	Lockbourne	F-102A	" "	
	318th FIS	Amarillo	F-102A	" "	
	44th FIS	Charleston	F-101B	" "	
	* 76th FIS	Pinecastle	F-101B		

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AMAC-CA, Hq ANG, Subj: (U) Falo

AS OF FY QTR	SQUADRON	LOCATION	TYPE AIRCRAFT	BOD DATE	NR OF BAYS
	* 325th FIS	Trux	F-106A		
	7 FIS	Randolph	F-106A	Not funded	
	* 327th FIS	George	F-106A		
	* 95th FIS	Andrew	F-106A		
2/60	56th FIS	Wright- Patterson	F-102A	Not funded	
	89th FIS	Scott	F-102A	" "	
	* 143rd FIS	Dayneour- Johnson	F-106A		
	324th FIS	Dow	F-106A	Not funded	
	* 142nd FIS	Glasgow	F-106A		
	* 539th FIS	McQuire	F-106A		
	149th FIS	Hannock	F-106A	Not funded	
1/60	154th FIS	McLhee-Tyson	F-102A	" "	
	* 319th FIS	Bunker Hill	F-106A		
	* 82nd FIS	Travis	F-106A		
	* 130th FIS	Stewart	F-106A		
	* 31st FIS	Wurtsmith	F-106A		
1/60	* 66th FIS	Onard	F-106A		
	* 148th FIS	Langley	F-106A		
	62nd FIS	R.I. Bong	F-106A	Not funded	
	63rd FIS	R.I. Bong	F-106A	" "	
1/61	* 323rd FIS	Trux	F-106A		
	* 321st FIS	Paine	F-106A		

ADMAG-CA, Hq ADC, Subj: (U) Fal:

Falcon Activations

AS OF FY QTR	SQUADRON	LOCATION	AIRCRAFT	BOB DATE	NR OF BAYS
	• 327th FIS	George	F-106A		
	• 27th FIS	Griffies	F-106A		
2/61	• 54th FIS	Ellsworth	F-106A		
	• 14th FIS	Sioux City	F-106A		
	• 19th FIS	Davis-Monthan	F-106A		
	• 47th FIS	Niagara	F-106A		
3/61	• 326th FIS	Grandview	F-106A		
	• 93rd FIS	Kirtland	F-106A		
	• 13th FIS	Webb	F-106A		
	• 58th FIS	Schilling	F-106A		
4/61	• 432nd FIS	Minneapolis-St Paul	F-106A		
	• 497th FIS	Walker	F-106A		
	• 60th FIS	Otis	F-106A		
	• 445th FIS	Wurtsmith	F-106A		

• Indicates squadron previously equipped with other Falcon missile carrying aircraft.

† Two squadrons will utilize one "B" Unit.

FOR THE COMMANDER:

M-630-6X



102.7
DOC 224 ADGHR 57A

AIRSI-A

12 MAR 57

Major General Edward P. Nechling
Commander
Air Force Armament Center
Eglin Air Force Base
Florida

Dear Ed:

I received your letter of 28 February 1957 and am reassured that the testing of Air Defense Weapons Systems by your Command is receiving your careful attention. It is gratifying also, because we can no longer attempt to make the systems being delivered to us combat capable from within our own resources.

We have been greatly concerned with weapons systems we have introduced into our inventory during the past year. We can no longer afford to replace combat capable weapons systems, though obsolete, in inventory with new systems which are not functionally proven. These drastic decreases in air defense combat potential are too serious to be allowed to continue. The pressure of our conversion programs has been such that we have been forced to continue with our programs and to accept a calculated risk that eventually these systems will be operationally suitable.

For example, the F-102A has been in operational units for over one year; to date, the functional problems of the total weapons system have been overwhelming, to a degree that the increase in combat capability over the weapons systems they replaced is questionable. The F-89B, in addition, has been in our inventory for some time, with functional testing still incomplete. We have been forced to seek a rapid and effective fix to known deficiencies to maintain the required level of combat potential.

It is evident to us that the present development cycle does not allow sufficient testing time. You had noted in the latter part of your letter that by allowing the contractors access to data and by calling their attention to deficiencies as soon as they are discovered and

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AFR to Major General Edward P. Seebing (Cont'd)

verified, it is possible for them, with the concurrence of the developing agency, to take corrective action on most deficiencies long before the entire test is completed. It is our understanding that a solution to this particular aspect of the problem has been proposed jointly by Headquarters Air Materiel Command and Headquarters Air Research and Development Command for the F-102A program in the form of a Product Verification Program to be conducted by the Hughes Aircraft Company. We have maintained that such a program is within the prerogatives of the developing agencies; however, we have agreed to "ball" some of our production aircraft periodically for this program.

In the meantime, the Air Defense Command will, to the limit of available resources, assist you in the extensive testing program you have outlined for your Command. The staff of the Air Defense Command will be available to provide this assistance as required to insure timely and successful completion of air defense tests underway or in the planning stage.

Sincerely,

J. B. ATKINSON
Lieutenant General, USAF
Commander

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FILE NUMBER 3084

HEADQUARTERS
AIR DEFENSE COMMAND
UNITED STATES AIR FORCE
ENT AIR FORCE BASE, COLORADO

29 MAR 1957

DOC 228 ADCHR 571

TO: ALL STAFF SECTIONS

SUBJECT: (U) Development of Weapons Systems

1. I am greatly concerned with the combat potential of new weapons systems which have been introduced into the Air Defense Command inventory during the past year. We have expended critical ADC resources in an attempt to make the F-102A, F-89H and F-89J combat ready. We cannot allow these drastic decreases in combat potential to continue, nor can we afford to accept, in the future, any weapons system that has not been functionally proven by development agencies.

2. It is my desire that all staff sections within the areas of their functional responsibility take all necessary actions to insure that weapons systems will not be delivered to the Air Defense Command unless they are combat ready.

J. H. ATKINSON
Lieutenant General, USAF
Commander



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DOC 126 ADCHR 57A

(U) REPORT OF THE F-104

HEADQUARTERS AIR DEFENSE COMMAND

16 January 1957

1. Attendance at this meeting and distribution of the minutes are listed on the last pages of these minutes. Corrections should be submitted to Headquarters Air Defense Command, Attention: ADWAC-AB, immediately after an error is noted.
2. Colonel Heath expressed the great need for the maximum effort to be exerted by each individual working with the F-104 project.
3. Development Program.
 - a. The First Phase VI test aircraft was delivered at Edwards AFB on 4 January 1957. The aircraft did not have the auto-itch control, boundary layer control, nor T-171 gun installed. The second Phase VI aircraft will not be delivered until 25 March 1957. This creates a problem for TDY personnel already assigned at Edwards. (See Personnel).
 - b. Armament Tests on the gun will be started by Lockheed in the next two weeks.
 - c. Sidewinder launchers are canted downward to conform to the relative airflow in high altitude flight. This causes the missile to be aligned $2\frac{1}{2}$ degrees downward from the sight which is aligned with the fuselage reference line. Lockheed Aircraft Corporation (LAC) (informally) plans to increase the launcher angle one and a quarter degrees up to achieve proper harmonization with the sight and radar. The MCP 231 for the launchers has not been approved but LAC is continuing to produce them. Major Dunwire, ADWAC-1A, will inform WADP as soon as the final configuration is set. Storage criteria for Sidewinder will be determined by Ogden Air Materiel Area tests on 23 and 24 January 1957. Captain Smith, ADWAC-CA, will notify the Defense Forces and Vincent AFB when results are received.
 - d. Automatic Pitch Control (APC) evaluation is to be continued by the contractor. ARDC has directed LAC to establish a consistent pitch-up boundary and to develop a system which will permit operation closer to the boundary.
 - e. The Tail Flutter Fix has not been approved by ARDC yet. The present restriction is an indicated airspeed of 575K below 5,000 feet. ARDC wants ADC to accept this limitation.

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f. Afterburner Relight has been unreliable above 29,000 feet. The contractor reports that with the McEnney fix, two successful re-lights have been obtained at 38,400 feet. ADC will accept nothing less than 40,000 feet as a minimum altitude for consistent relights and would prefer no limit.

4. Aircraft Delivery.

a. The ARDC presentation to the Air Staff at Headquarters USAF has initiated a possible decision to limit peak production to 14 aircraft per month beginning in July 1957. This recommendation has not been approved by USAF yet. The decision is expected in late January 1957. Such limited production would delay delivery to the last squadrons.

b. The ADC Fighter Program is in a state of flux. The only firm delivery schedule is generally agreed to be thirty aircraft before the end of June. Probably ten will go to Tyndall and twenty to Hamilton. (A later briefing by the Headquarters ADC Assistant for Programs indicates that the F-104 program will not be changed.) Major Ramsey, ADMAC-AB, will forward the aircraft delivery scheduled to the Defense Forces and Vincent as soon as it is firm. Colonel Heath pointed out that aircraft distribution (Captain Collins, ADMAC-DD) must insure that current UE aircraft are not lost before adequate numbers of F-104's are available. (Unfortunately, with the re-shuffled fighter program, the Follow-On commitments may not permit this in every squadron.)

c. The First Aircraft Delivery to ADC will not begin before #1039 or #1040. The delay will provide a better gun, automatic pitch control and boundary layer control which is claimed to decrease approach speeds by 20 knots.


5. Configuration.

a. Supersonic Pylons are scheduled for initial delivery in January 1958 with operational quantities by June 1958. Informal efforts are being made to advance the respective dates to October 1957 and January 1958.

b. Liquid Oxygen has been proved as a Class V modification and will be incorporated on the 17th and subsequent aircraft. Aircraft prior to #77 will be retrofitted back to #36. The system will be connected for pressure suit operation with four hours duration. Straight breathing capacity would be near twelve hours. The increase is most significant when compared with the early capacities of 18 minutes with the suit and 75 minutes without the suit using high pressure oxygen.

c. Auxiliary Internal Fuel will now be available on the 77th and subsequent airplanes, and will be retrofitted back to #36.

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d. Data Link is an ADC requirement. We have requested an additional numerical window presentation for exact target altitude. Currently the following message structure is the ADC requirement:

Target Range
Target Bearing
target Altitude (relative differential)
Command Heading
Command Airspeed (Mach Number)
Attack Heading
Time-to-Go to Offset

e. BROFICON has been cancelled because of the excessive cost of the miniaturized version. ADC plans to obtain Broficon by retrofit for all aircraft in ADC.


f. ILS interim equipment will be in the first and subsequent aircraft delivered to ADC. The equipment will utilize the space left for Data Link until the ILS repackage (ECP 94) is available on #166 about October 1957.

g. A Self-Contained Starter has been demanded by ADC and TAC. Headquarters USAF and Headquarters ARDC have directed Wright Air Development Center to turn out a suitable starter proposal. Any starter developed from such a proposal will miss all ADC aircraft in production and retrofit will not be possible in less than 18 months.

h. The C-1 Seat with a .9 to .95 Mach limit will be in all ADC aircraft but will not have a chaff dispenser. The "D" seat (no limit) has not been completely tested or accepted. ADC is on record for a "D" seat retrofit.

i. TACAN will not be in any ADC aircraft because of the late affectivity. No date is available on possible retrofit action. This will be a major modification.

j. Engines will not have horizontally split-combustion cases until late in production of the Phase II engine. ADC will have none. Phase II utilization in the ADC F-104A's is doubtful pending concusive tests related to by-pass airflow with the larger cross-section engine.



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6. Other Equipment.

a. M-4 Pressure Suits will be fitted when Firwell seat kits are available to the physiological centers to permit suit inflation, etc. A problem is anticipated in scheduling personnel for the fittings. It is not known if two suits per pilot will be available at the initial fittings.

b. The Second Cockpit Procedure Trainer is ready for delivery. USAF has directed sole source procurement for the last four CPT's. If Erco gets the contract we will get the 5th and 6th CPT's prior to activation of the last two squadrons. Colonel Heath will have a currently qualified F-104 pilot evaluate the first CPT installed at Hamilton.

c. The First Mobile Training Detachment (MTD) was not able to work with an F-104 while it was at Edwards but the second team should have ample opportunities.

7. Installations.

a. Defense Force representatives expressed concern in the lack of firm guidance in the Installations Program. Requirements have been furnished by Headquarters ADC and deficiencies are noted in the ADC Program Directive 56-48 dated 5 November 1956. Headquarters ADC has failed to keep the Defense Forces informed on the status of programmed facilities. Certain operational requirements existing at base level have apparently been overlooked by installations groups at high levels.

b. The above problems have been discussed with Air Installations at this headquarters. Installations personnel in the Defense Forces have failed to recognize or mention any deficiencies beyond those listed in Program Directive 56-48. This headquarters recommends that bases review requirements and deficiencies and submit a complete list of facilities as follows:

- (1) Existing Facilities:
 - (a) Sub-standard usable.
 - (b) Sub-standard non-usable.
 - (c) Usable for the ADC F-104 Units.
- (2) Under construction.
- (3) Programmed and funded.
- (4) Programmed.
- (5) Additional Requirements.

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Each facility listed should show the manner in which the facility is planned to be used; i.e., field maintenance, engine build-up, etc. This information should be forwarded to AD/AF-AS as soon as possible but not later than 14 February 1957. Every effort should be made to use standard nomenclature to describe the facilities and avoid confusion.

8. Personnel.

a. IDY Personnel at Edwards Air Force Base will be interviewed by Colonel Beeth to retain one crew for the Phase VI aircraft and to return all excess people to their organizations. EADP and PCS personnel will remain at Edwards. WADP and Vincent AFB personnel (except those PCS) will return to their bases. (With the possible exception of compassionate cases)

b. Training spaces for five pilot checkouts at LAC will be funded by ATC. Major Garrett, ABOET, will attempt to have these spaces allocated to the key squadron personnel for maximum effectiveness and morale.

c. Fire Control Systems personnel are being trained in the F-104A at Hamilton Air Force Base. Airmen completing the AFD course will be qualified for AFS changes to the A-10 system. Lowry Air Force Base (ATC) courses will begin in March and will graduate people in June or July 1957. Two additional spaces per class have been obtained for factory training.

9. The Operational Services Test (OST) is tentatively planned to be conducted at Hamilton Air Force Base. Captain Carrington, ADOCU, will report the final plans at the next meeting.

10. The Systems Evaluation will not be made because of the short lead time to effect corrections in A-10 aircraft, the small number of aircraft involved and the duplication of effort made by Phase VI tests and the SARA Maintenance Prototyping Tests.

11. Support.

a. Contractor Technical Assistance.

(1) The following technical representatives are programmed for permanent support of Tyndall Air Force Base:

<u>Type</u>	<u>Number</u>	<u>Arrival Date</u>
F-104A Acft Techn Rep	1	D-30
J-77 Engine Techn Rep	1	D-30
Electronics Techn Rep	1	D-30
Electronic Technician	2	D-30

(2) The following technical representatives are programmed for permanent support of each Fighter Squadron:

Type	Number	Arrival Date
F-104A Acft Tech Rep	1	D-30
J-79 Eng Tech Rep	2 (1 for FIS & 1 for FW)	D-30
Electronics Instructors	2	D-60
Spare Parts Representative	1	D-60
Ground Power Equipment	1	D-30
Electronic Technician	3	D-60
Electronic Tech Rep	1	D-60
Gas Turbine Technician	1	D-30

(3) The following contractor technical support is programmed for each F-104A Fighter Squadron:

Type	Number	Arrival Date
J-79 Engine Technician	2	Concurrent w/acft
F-104 Acft Technician	1	" "
Ground Powered Equipment	2	" "
Hydraulic System Technician	1	" "
Electrical Repairman	1	" "
Fire Control Systems Tech	2	" "
Electronic Eqp Tech Rep	2	" "
Electronic Eqp Technician	2	" "
F-104 Acft Tech Rep	2	" "
J-79 Engine Tech Rep	1	" "

This service will be provided as a Conversion Team and will remain with each squadron for a period of six months.

(h) Captain Perfill will confer with maintenance personnel at Vincent and advise Headquarters ADC of concurrence or desired changes to the Tyndall Technical Representative program before 8 February 1957.

b. Ground Support Equipment and Spares will only permit 60% support of the aircraft according to ARDC's report to the Air Council on 17 December 1956. Headquarters ADC considers this estimate to be obsolete. Captain Scheuer will obtain the latest support estimates from the weapon Phasing Grouping Meeting and advise the Defense Forces and Vincent AFB.

12. Other Discussion Items.

a. Colonel Bruce, 337th FIS, presented several problems anticipated at Westover AFB.

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(1) Many pilots assigned to the 337th have early FSSD's and retention of trained crews is doubtful. Major Jackson, ADPMI, stated there will be no problem in retaining captains for seven years following an overseas tour.

(2) F-104 Aircraft delivery and phase-out of old US aircraft will be critical on pilot proficiency. The F-104 Conversion Plan was given to Colonel race to resolve many of the unknowns and much of the apprehension associated with the conversion.

(3) Ground Power Units will include MA-1A's, MC-1's, and MD-3's. The squadrons prefer a multi-purpose unit particularly for snow operation. Headquarters ADC has held to the established policy of individual units (i.e., tugs, power carts, gas turbine starters, etc.) rather than composite or multi-purpose units. Great effort has been exerted to obtain MA-1A GIC's from AM and ADMAC-AB cannot jeopardize support at this late date by trying to adjust to a multi-purpose unit such as an MA-2.

13. Next meeting.

a. The next F-104A meeting is planned at Headquarters ADC on 20 February 1957 and will be preceded by the F-102 and F-106 meetings on 19 February 1957. This will be firm unless changed by a message prior to 1 February 1957.

ATTENDANCE ROSTER



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DOC 227 ADCHR 57A

21 JAN 1957

ABSI-4

SUBJECT: (1) Status of F-104 Weapons System

TO: Commander in Chief
Continental Air Command
Ent Air Force Base, Colorado

1. The Air Defense Command has taken aggressive action to incorporate the F-104 into the inventory. We have informed and will continue to support the employment of the Clear Air Base interceptor in the air defense environment. An assessment of the program to date, has pointed up two major areas which will drastically limit the effectiveness of this weapons system as presently configured and within the present program structure. These are development areas which are not within the capability of the Air Defense Command to solve; and, secondly, due to the short lead time available, the training, warning, predictive facilities and funding problems must be resolved with our allied command.

2. On 21 January 1957, Lt Colonel Robert Anthony, from the F-104 Project Office, Det 21, 40 AFW, briefed the SAC Commander and staff on the current development status of the F-104. His report confirmed the data which was available to AF. Several other limiting deficiency areas, from a development viewpoint, were isolated and evaluated as having a major impact upon the present program. These deficiency areas are:

a. Aircraft Stability: The F-104 has an inherent pitch-up characteristic. An automatic pitch control system, to assist the pilot with a sequence of warnings when approaching pitchover boundaries, has not been developed to a point where the full performance envelope of the F-104 can be safely exploited. Further development in this area is necessary to provide a technically feasible and operationally suitable automatic pitch control system.

b. Static and Air Load Limits: During static test, at 17,900 pounds, the fuselage mid-section failed without qualifying at 7.33 "G". The AF aircraft, at 21,900 pounds, will be limited to a load factor of 4.5 "G" at take-off, and 5.6 "G" at combat weight. Further, a restriction, due to tail flutter, will limit the maximum speed to 575 knots indicated below 20,000 feet. Studies are continuing and it is expected that the ultimate limit will be lowered to 55,000 ft

Lt Col Austin/ls

2573

23 Jan 57

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Ltr to CINC COMAB, Subj: (U) Status of F-104 Weapons System
in the near future and eventually to sea level.

e. Armament/Fire Control Systems: The fire control system and Sidewinder armament combinations have produced basic problems. The Sidewinder mountings are presently aligned for the least amount of aerodynamic drag. In this position the missile infra-red seekers are not zero-sighted with the fire control system. Studies are in progress to determine the optimum harmonization point; however, only air tests can determine the most effective carriage of the fire control and missile combination. The F-17L-4-3 gun has not met the original specification requirements of a 6,000 round per minute rate of fire. The Vertical Air Command and Control have been requested to accept the 4,000 round per minute rate of fire. Air firing tests to date have not been completed to establish the functional reliability of this gun.

f. Engine Reliability: The J-79 Phase I engine, as presently installed in the F-104, has frequently blown out at altitude. Afterburner operation can only be made instantaneously below 30,000 ft. The Phase I engine has not met scheduled performance in that the thrust is 10% less with a 20% increased specific fuel consumption. To date, the F-104 is the only Air Force aircraft scheduled for the J-79, with the J-79-100 engine not yet scheduled for production. Therefore, retrofit to a Phase II engine would be desirable. For example, retrofitting qualification to the airframe has been estimated to cost 120,000 with a re-work of the engine from Phase I to Phase II configuration estimated at 410,000.

g. Weight: The aircraft range and endurance is critical without external fuel tanks. The 200-gallon supplementary piston tank will not be available before January 1958. The use of this tank will not provide a great gain in range except under actual combat condition where the tanks can be dropped after climb and before acceleration. In a training mission, 1,000 pounds of fuel is required to accelerate to Mach 1.9 with these piston tanks installed. Attachment #1 points out available radius of action with various fuel loads.

h. Engineering Change Proposals: The engineering change proposals to provide the aircraft with minimum required configuration, i.e., IIF, Data Link, IRMAN, High speed ejection seat, auxiliary fuel valve, fuel cell, external starter, etc., will delay certain production blocks; thus a major modification program is indicated.

i. Support: Overall supportability of the weapons system appears to be 50 to 70% for the first year of operation.

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10r to CINC COMAD, Subj: (U) Status of F-104A Weapons System

3. An evaluation of these deficiencies by ARDC prompted a recommendation to limit the production of F-104As to 14 per month until these deficiencies could be corrected. This action has been forwarded to Hq USAF for approval. This action will delay delivery of F-104As to ADC by three months and the stretch-out will delay conversion of the last ADC squadron by four months.

4. The overall F-104A weapons system deficiencies, given time to resolve, are not insurmountable; however, the Air Defense Command is apprehensive about receiving a large number of aircraft, specifically allocated to perform the high altitude, high speed air defense mission, which, in fact, they will not be able to perform for many months after they enter inventory.

5. In view of the above, this command will accept the ARDC proposal to stretch out the F-104A program. This course of action, with a combat capable weapons system, will more readily prove the concept of the F-104A in the air defense environment.

1 Incl:
Radii of Ac
Ref F-104A

ROY W. LYNN
Major General, USAF
Vice Commander

[REDACTED]

10-12142

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MEMORANDUM FOR THE COMMANDER:

SUBJECT: (U) Status of the F-104A Weapons System

1. In accordance with your instructions, the attached (Tab A) letter to the Commander in Chief, Continental Air Defense Command, is forwarded for your approval and signature.
2. This letter outlines the major deficiency areas of the F-104A weapons system from a development viewpoint and represents data made available to this command on 21 January 1957 by Lt Colonel Robert Soderberg from the F-104A Project Office, Det #1, Hq ARDC.

1 Incl:
Tab "A", Proposed
ltr to CMC DONAD
(SECRET)

LOREN G. MC CULLOW
Colonel USAF
DCS/Plans and Requirements
Ext 2616



2021-4 ONIC-32167

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1964 Budget of the
U.S. Government
Estimated

	1964	1963
Total available for operations	21.0	20.0
Less: Interest on public debt	1.0	1.0
Less: Interest on Government securities	1.0	1.0
Less: Interest on other securities	1.0	1.0
Less: Interest on other securities	1.0	1.0
Less: Interest on other securities	1.0	1.0

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1964 BUDGET

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FOR 318 ADMHR SPA

MINUTES OF THE F-104 MEETING
Headquarters Air Defense Command
18 March 1957

FILED

1. Attendance at the meeting and distribution of the minutes are listed on the last pages of the minutes. Corrections should be submitted to Headquarters Air Defense Command, Attention: ADMAC-AB, immediately after an error is noted.

2. Colonel Heath presented a general review of program events since 20 February 1957.

a. The flying activity since the last meeting has been very limited. Only one airplane has been flown in Phase VI tests, none in Phase VII tests and one was to begin firing at Holloman Air Force Base today.

b. The APC retrofit to the finally configured system has been the major activity. The contractor development is continuing to obtain the ultimate APC boundary. Currently the following performance will be available:

Altitude	Airspeed	Normal Acceleration
20-22000 feet	Subsonic	5g
15-16000 feet	Subsonic	Less than 2g's
All	Supersonically	Limited only by pilot

c. The test program is delayed 30 days because of the loss of the Flight Loads Test (FLT) staff. The new assignment date for Phase VI test personnel is 15 April 1957. Phase VII is anticipated to begin 1 May 1957. Aircraft will be available on 15 and 23 April 1957 for Phase VII test. Delivery of aircraft to Tyndall will not be affected by the test program slip. The F-104 aircraft are no longer grounded.

d. Armament tests are to be continued with a new gas purge system for the gun. The contractor looks good according to contractor personnel. Holloman Air Force Base test personnel will fire GAR-8 missiles at Holloman Test Station, Inyokern, California this week. Completed ground tests appeared favorable. Phase VI and VII and Holloman will begin GAR-8 testing in June.

e. IAS-100000 tests conducted by the Open Air Materiel Area indicate the only modification required for the test pipe modification will be satisfactory. The test pipe modification shop areas can be used for assembly of the test pipe. The installations criteria to the Defense Test Agency.

f. The test pipe modification is completely resolved by the contractor. The test pipe modification will be completed at least September 1957. The next F-104 test will be in the next F-104 test.

g. The test pipe modification will be completed in the next one year.

of the 7-104 Meeting, Headquarters Air Defense Command, continued

A self-contained cartridge starter proposal has been requested from the contractor as directed by Headquarters USAF. The starter will not be on F-104 aircraft for approximately 2 years.

7. MC-4, pressure suit fittings will begin about 1 April 1957 at Wright-Patterson Air Force Base at the rate of approximately 8 per month. As soon as arrangements are made, Headquarters ADC will distribute schedules to Air Defense Forces at least one week prior to the date of fitting. ADCR 55-20 now requires the suit to be worn on all F-104 flights, however, a revision will change the requirement. Technical Order covers maintenance of high altitude pressure suits. Informal notice from AMC approves procurement of automatic washers to maintain the pressure suits.

8. Ground cooling requirements are to be furnished by the contractor next month. A blower or an air conditioning unit is anticipated to be required.

9. ADMAC-BA has queried SPANA by message to determine action necessary to obtain additional equipment listed in the revised Tentative Table of Equipment (February 1957). Defense Forces and Tyndall will be advised by message from ADMAC-BA as soon as possible.

10. Colonel West, Commander, 3rd FTS, requested additional spaces in personal equipment maintenance section, functional code 67000, O/T 1135. ADCR has requested the comments of ADMAC and ADMSV-C on additional people for personal equipment and ground power equipment maintenance as recommended by the 7-104 Phase III final report. Both ADMAC-A and ADMSV-C agree that the allocations should be increased provided that the allocations in other functional codes (e.g., aircraft maintenance, 80110) are not reduced to support the increase in aircraft auxiliary equipment maintenance, 80710, or ground equipment services, 82000. Final recommendations to Manpower and Organization will be reported at the next meeting by ADMAC-AB.

11. The status of possible targets for the F-104 was unknown at the end of the meeting. The following information was obtained from Lt Colonel [redacted], AIRHQ:

1. The F-104 aircraft has demonstrated a capability to fly as high as 60,000 feet. Unfortunately, the cost of this target will only be about 1/100th of the cost of the F-104.

2. AFHQ has submitted a tentative Operational Requirement (QOR) to Headquarters USAF and ADCR for a drone of increased performance in 1957 and 1958. Current AFHQ QOR now meets the requirement except for cost. AFHQ is aware of the performance to be going that it cannot be used with the current AFHQ QOR. The cost of this target is 1 million dollars per copy.

3. AFHQ is aware of the AFHQ development available for a drone of increased performance in 1957 and 1958. The cost of this target is 1 million dollars per copy.



13. The operational training program as per ADCR 51-3 has not been finalized by ADMET. Representatives of the Defense Forces were to contact Major Barrett following the meeting.

14. Phase VII test personnel will be given three weeks notice of the reporting date. AFGC has announced the opening of 500 on-base housing units which will relieve the off-base housing situation. Airman are directed to take tool boxes to Eglin Air Force Base since none are available for issue at Eglin. Except for the rated maintenance officer, pilots participating in Phase VII will be scheduled by this headquarters.

15. The cockpit procedure trainer is fine, however, there are minor differences in the trainer and the aircraft to be delivered to ADC. ADMAC will try to obtain authority to modify the trainers to conform to the 36th and subsequent aircraft. The need for a standard training program was noted by Defense Force representatives.

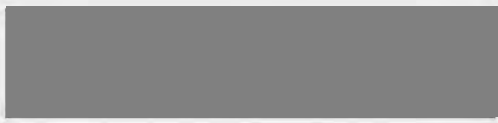
16. The fuel control system course has now been delayed until 22 May 1967 pending receipt of an engine for demonstration purposes. ADMAC will attempt to get an engine for the General Electric school as soon as possible. When the course date is firmly established, the ADP's and Vincent AFB will be advised. ADMAC-DR wants students for this course to be selected from JEFM personnel who have completed the J-79 engine F & O course if the airman are to be assigned to JEFM after graduation from the course. Commanders should therefore monitor selection of airman for this school to assure that qualifications pertinent to the airman's assignment are met. Airman to be assigned to operational maintenance may be selected for the course from JEFM personnel if the commander considers the man to be well qualified (experience, intelligence, ability to apply knowledge in trouble-shooting, etc.). Placement of a new ARSC to the level control systems analyst will depend on JAC and SAC comments and headquarters USAF approval.

17. Operational service test is being requested as well by ADACC. ADMAC will have the COE of decision next year. Captain Corrington is working on this at present.

18. Operational test of the new F-4 will be established by ADMAC-DR.

19. The new test program for the F-4 is being developed. Captain Gross is the project manager. Plans are being made for test work.

20. The new test program for the F-4 is being developed. Captain Gross is the project manager. Plans are being made for test work.



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ATTENDANCE ROSTER

<u>Name</u>	<u>Organization</u>	<u>Phone Number</u>
Col N K Heath	FIFAD	Ext 2033
Maj J W Ramsey	ADMAC-AB	Ext 2033
Maj M H Good	WADF	23186, Vestibule #32
Capt J C Scheuer	ADMAC-AB	2033
Capt T M McCormick	EADF, EAMAC	4900, Ext 740
Maj J Macfield	EATF, EACOT	4900, Ext 630
Maj T H Gerzel	337th FIS	Westover 36411, Ext 23115
Maj D H Bell	4721st Air Def Gp	Larson 7131, Shantung 78
Maj H L Johnson	83rd FIS	Tucker 37711, Ext 5105
Lt Col W E Evans	83rd FIS	Tucker 37711, Ext 5105
Lt Col J B Raebel	4721st Air Def Gp	
Capt C D Sloan	ADMAC-BA	Ext 2828
Maj R A Secor	ADMSV-C	Ext 2770
Civ, C Bales	ADATE-RR	Ext 2616
Maj F V Phillips	ADCOOP-C	Ext 2602
M/Sgt J M Appleby	DMAC-BA	Ext 2828
Capt A Newson	ADMAC-CB	Ext 2594
Maj C W Jackson	ADPRT-PA	Ext 2605
Capt J T McKinney	ADPRT-I	Ext 2897
Capt T E Perfill	4750th Test, Comd	
M/Sgt B E Hofsonner	4750th Test, WDM-M	
M/Sgt J E Loflin	ADMSV-J	Ext 2083
Capt L Carlton	ADMSV-J	Ext 2083
Capt F A Beebe	4756th Air Def Sq	
Maj C T Weaver, Jr	4756th Air Def Sq	
Civ, A D'Ambrosia	ADATE-CF	

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1 Cy ADPRT	1 Cys Comdr WADF
1 Cy ADRES-A	1 Cys Comdr EADF
1 Cys ADMAC	1 Cys Comdr 4750th ADW, WDM-M
1 Cys ADMAC	1 Cys Comdr 4750th Test Sq
1 Cys ADMAC	1 Cys Comdr 3243d Test Gp
1 Cys ADMAC	1 Cys Comdr, 4756th Air Def Sq
1 Cys ADMAC	1 Cys Comdr, 4756th Air Def Sq



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MAY 2 1957

FILE NUMBER 303.17

AIR DEFENSE COMMAND
FIGHTER INTERCEPTOR PROJECT OFFICE
Air Force Flight Test Center
Edwards Air Force Base, California

PTPAD

5 April 1957

SUBJECT: (U) Monthly Activities Report Phase VI F-104

TO: Commander
Air Defense Command
Ent Air Force Base
Colorado Springs, Colorado

1. The following is a summary of activities for the period 1 March 1957 to 1 April 1957, and is forwarded for your information and necessary action.

2. Operations:

a. During the month of March the Air Force Flight Test Center evaluation of the Automatic Pitch Control for the F-104A was completed. As previously stated, this evaluation was undertaken to determine maintenance reliability of the Automatic Pitch Control. The Evaluation was completed to the satisfaction of the Air Force Flight Test Center and subsequently the Air Defense Command pilots have been released to fly the aircraft.

b. Two Air Defense Command pilots were checked out during this period. The first was Captain James Low from the 83rd Fighter Interceptor Squadron, Hamilton Air Force Base, California who now has made four flights in the aircraft. On his first flight the long runway was closed because of an aircraft with a blown tire. Captain Low was instructed to use the runway at the old base for landing which is 8100 feet long. While Captain Low did use the drag chute for his landing, he stated that he could have stopped safely without it. It should be noted that this aircraft does not have boundary layer control and only the take-off flap setting is being used for landing at the present time. The installation of boundary layer control and the use of an optimum landing flap setting on Air Defense Command aircraft will decrease the landing roll considerably. Later aircraft delivered to this program will make use of both of these items. The second pilot to transition during this period was Colonel Royal N. Baker. He now has two flights in the aircraft.

c. While the F-104A will be integrated into the Air Defense Command system as a clear air mass fighter, we know that both ascending and descending cloud penetrations will be inevitable in our tactical squadron daily operations. In regard to this some concern has been expressed over the weather flight characteristics of the aircraft. Many queries have been advanced on whether or not it could be flown in weather at all and whether or not a GCA or IAS could be made.

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Because of this some early work has been done along this line. While not complete it does warrant mention in this report.

d. An afterburner climb produces a high angle of attack. Such a climb, even under VFR conditions, will seem extreme until the pilots gain experience in the aircraft. Add to this the problem of instrument conditions and the troubles are multiplied. It is felt, however, that after a few hooded practice climbs the average pilot will be able to accomplish this portion of an instrument mission with little difficulty.

e. Two types of let-downs have been tried to date. The power settings and configurations were as follows:

(1) 350 kts IAS, 84.5 percent power and a clean aircraft. Speed was reduced to 290 kts as low cone is approached. Take-off flaps are employed when 290 kts is reached. Speed is reduced to 240 kts over low cone.

(2) 290 kts IAS, 82.5 percent power, take-off flaps down. Speed is reduced to 240 kts low cone.

Each of the above seems to provide a satisfactory let-down and each has its merits. Both give the desired result of safely reaching a point where a low approach to an airfield can be initiated.

f. A number of hooded low approaches have been made using the GCA at George Air Force Base. The GCA ground unit reported that the pick-ups on the F-104 were satisfactory and compared to that on the T-33. Speeds and aircraft configurations on the GCA runs were as follows:

(1) Low cone - 240 kts IAS, take-off flaps down, speed brakes in, gear up.

(2) Down wind leg - 240 kts IAS, take-off flaps down, speed brakes in, gear up.

(3) Base leg - 180 kts IAS, take-off flaps down, speed brakes in, gear down.

(4) Final approach - 140 kts IAS, take-off flaps down, speed brakes in, gear down.

(5) After breaking out of clouds or coming from under the hood, speed brakes could be deployed if desired for landing. These speeds and configurations produce a comfortable pattern for the pilot, and the George GCA unit which is accustomed to working with the F-102's and F-100's had no trouble with the speeds.

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ADC FIELDGROUP FROM [REDACTED] (U) Monthly Activities Report Phase VI P-104

g. It is emphasized that all of the work done so far is the initial investigation into instrument flight. The use of Boundary Layer Control and optimum flap settings will certainly reduce some of the speeds, particularly in the GCA pattern. This preliminary work does indicate however, that instrument flight, to include GCA's, can be safely conducted in the aircraft.

h. Investigation is being continued on the flame out landing characteristics and techniques. This program will not be completed until the dry lake bed is reopened for landings. The lake bed has been closed since the latter part of December because of water coverage brought about by the local winter rains. Actual dead engine touchdowns will be conducted on a simulated 8000 foot runway. The airspeeds and aircraft configurations for simulated flameout patterns and landing stated in the February report still appear to be valid. The high key point has been lowered to 15,000 feet above the ground for local practice and this altitude seems adequate. Glide speed for the most efficient glide ratio is 290 kts using a clean configuration. Once the high key has been reached, take-off flaps should be lowered and speed reduced to 240 kts. An easy "rule of thumb" for determining the touchdown point has been noted, in either the clean or take-off flap configuration the point of touchdown appears to be the point on the ground where the nose is pointing. The flare for touchdown must be started at approximately 700 feet altitude in order to break the rate of sink. In an actual dead engine landing the gear should not be lowered until flare out is initiated. Since the gear has already been lowered in the practice pattern to simulate the dead engine, the speed brakes can be extended to simulate the lowering of the gear.

i. Work has started on extended range missions. It is known that the range of this aircraft will depend acutely on the mission to be accomplished. A sample of an extended range mission that has been conducted is as follows:

"A military take-off and straight away climb to 35,000 feet was made. Cruise outbound at 35,000 feet was held for 17 minutes. At the end of the 17 minutes the afterburner was lit and a subsonic climb to 45,000 feet made. At 45,000 feet the pilot leveled off and allowed the aircraft to accelerate to 1.4 Mach. Holding 1.4 Mach a climbing 180° turn to 50,000 was accomplished. In this turn the farthest point from the base, 260 nautical miles, was reached. At 50,000 feet the power was reduced to military and a descent begun back to 45,000 feet. Cruise back to the base was made at 45,000 feet holding 1.85 Mach

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ADC FITE/OTPF PIRW OIF, AFVTC, DAFB, Calif, PTFAD, Subj: (U) Monthly Activities Report Phase VI F-104

number. A standard instrument approach was made on the Edwards Air Force Base omni range. The aircraft made a low approach and go around, then executed a normal traffic pattern and landed with 300 lbs of fuel on board."

It should be noted that the maximum capabilities of the aircraft in speed, climb, and altitude were not employed during this mission. Again it is believed that the mission to be accomplished and the time available will be critical factors in the use of this aircraft.

j. Copies of an Appendix V to Air Defense Command Regulation 31-2 have been received for comment. The subject is "Standard F-104A Check-out and Transition." This office distributed the copies to personnel involved in the F-104 phase VI flying. Comments will be compiled into one letter and forwarded to ADC at an early date.

k. Considerable gear retraction difficulty has been encountered. Approximately 75% of the time the gear fails to retract on the initial try after take-off. Low speeds must be maintained and the gear re-cycled before an up-and-locked indication is obtained. The gear system is being reworked in an effort to alleviate the situation.

l. The items pointed out as pilot UR's in the February report continue to be the main sources of pilot complaints.

m. Total time flown in the F-104 to date by Air Defense Command pilots during the phase VI project is 10:30. Total time flown in the phase VI aircraft by all pilots to date is 39:35. Phase VI flights so far total 113.

n. Four engine flame-outs were experienced during this reporting period. Two on the phase VI aircraft and two at Lockheed (Palmdale). Both flame-outs on the phase VI aircraft were successfully relit. One of the two flame-outs at Lockheed was successfully relit and the other, the pilot ejected and the aircraft crashed. A modification to eliminate this condition has been proposed by General Electric and Lockheed results of the fix will be included in the next report.

3. Material:

a. Aircraft Maintenance:

(1) Aircraft status- based on 18 hour day

Flying Time	In Commission	Out of Commission		Percent In Commission
		Scheduled	Unscheduled	
42:05	67:40	38:25	210:30	18.5

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MAY 31 1957

JOINT MESSAGEFORM

SEC

SPACE REMOVED HEREFOR FOR CO

FILE NUMBER 303.14

ACTION	PRECEDENCE	TYPE MSG (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
		BOOK	MULTI	SINGLE			
INFO	AIR MAIL						
	AIR MAIL						

FROM: HQ AWC WPAFB OHIO

TO: COMDR ADC ENT AFB COLO

INFO: OOPS USAP WASH DC

COMDR AFFTC EDWARDS AFB CALIF

COMDR 3243RD TEST GROUP EGLIN AFB FLA

CONF FROM HCPAFF-5-32-11. FOR ADRESI (ADC); AFDRQ-AD & AFDO-AD (USAF); FTAFAD (AFFTC); LT COL JADARA (3243RD TG). SUBJECT IS F-104A COMPONENT DEVELOPMENTS. THE FOLLOWING IS SUBMITTED IN REPLY TO YOUR MESSAGE ADRESI-A01214, DATED 3 MAY 1957. PARTS 1 AND 2 REFER TO CORRESPONDING PARTS OF YOUR MESSAGE.

PART 1. THE F-104A MSGO WAS COMPLETED AND FORWARDED TO SHOW THE ENGINEERED FEASIBILITY STUDY FOR THIS CLASS V MODIFICATION IN ACCORDANCE WITH AFR 57-4. THE MODIFICATION IS FEASIBLE FOR THE F-104A IF A REPACKAGED A/APX-32 AND -33 ARE UTILIZED. INSTALLATION IN THE F-104A IS TECHNICALLY FEASIBLE ONLY WHEN USED AS A SINGLE-PLACE AIRCRAFT. PRESENT ESTIMATE FOR DEVELOPMENT AND REPACKAGING OF THE EQUIPMENT IS 20 MONTHS AFTER ESTABLISHMENT OF FINAL REQUIRE-

SPECIAL INSTRUCTIONS

31056

DATE MAY 10 1957

MONTH YEAR

SYMBOL HCPAFF/RESEPD/RAD 2-6/70

TYPED NAME AND TITLE (Signature, if required)
Ernest E. Gossett
 LT COL, USAF

PHONE 33179 PAGE NR. 1 NR. OF PAGES 2

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SIGNATURE
Ernest E. Gossett

TYPED (or stamped) NAME AND TITLE
 ERNEST E. GOSSETT
 Lt Colonel, USAF
 Chief, F-104/33 Weapon System Project Office
 Fighter Aircraft Branch
 Aircraft & Missiles Division
 Directorate of Procurement & Production

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MAY 21 1957

JOINT MESSAGEFORM - CONTINUATION SHEET

SECURITY CLASS

FROM

HQ AMC WPAFB OHIO

MENT BY USAF. PART II. THE F-104 WSPO HAS QUERIED THE CONTRACTOR ELECTRONIC PERSONNEL CONCERNING THE PROBABILITY OF INCREASING THE INFRA-RED SIGHT RANGE. IT APPEARS THAT IT WOULD BE POSSIBLE TO INCORPORATE SUCH ADVANTAGES IN PRODUCTION AIRCRAFT WITHIN TWO TO THREE YEARS. THE WEAPONS GUIDANCE LABORATORY OF WADC HAS UNDER DEVELOPMENT AN INFRA-RED SEARCH SET WHICH HAS ANGULAR COVERAGE COMPARABLE TO THE ASG-14 RADAR AND A MUCH GREATER RANGE CAPABILITY. HOWEVER, THERE IS NO ESTABLISHED REQUIREMENT FOR THIS EQUIPMENT IN THE F-104.

THIS MESSAGE HAS BEEN PREPARED WITH THE CONCURRENCE OF ARDC. FUTURE CORRESPONDENCE SHOULD BE TRANSMITTED TO HQ AMC, ATTN: MCPHFF.

TO: AG - AG-C

FILE: 644C

ACTION: NAR

REFANFOLD: 19-14825Z

SIGNATURE: S. O'Connell
Wing, USAF (OK)

SYMBOL

MCPHFF/RDCSFD

PAGE NR
2

NR OF PAGES
2

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10 1957

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1 MAY 55

U. S. GOVERNMENT PRINTING OFFICE: 1955-581254

37MCP-14625

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FILE NUMBER 314.7

MEMO, Lt SWAN, 23 Jan 57, Subject: (U) AFR 57-4 Study, Modification Prop 735 for Instal of Air-to-air IFF F-104 Series Aft

ADMIN-4 3rd Ind 4 JUN 1957

Hq, Air Defense Command, Ent Air Force Base, Colorado

TO: Commander, Sacramento Air Material Area, ATD: SWGLD, McChallan Air Force Base, California

Reference preceding indorsements and contents of basis letter. ADC reaffirms the requirement for air-to-air IFF in F-104A and B aircraft. The F-104B aircraft will be a two-place weapons system capable with a compatible combat capability to the F-104A. The air-to-air IFF will be the primary means of identification in combat mission employment; thus it is mandatory the F-104B be so equipped without removal of the rear seat. ADC has forwarded AFR 57-4 action to delete the IFF gun and install an additional fuel cell. Providing this proposed modification is approved by USAF, the space made available could perhaps accommodate the IFF requirement.

FOR THE COMMANDER:

COMEBACK COPY

Not requested, not furnished. H. J. TOSO
 Furnished 4 JUN 1957 Capt. USAF
 (Date) (Initials) (Av't Command Ad)

E16312
 110

COMDR	
VC	
COFS	
ADJ	
COOP/COSEC	Write Last Name and Show Date Coordinated
1	ADP21 J. Swan 27 May ADDET
2	ADDET J. Swan 3 June 57
3	ADSCO H. J. TOSO 10 June 57
4	ADMAC J. Swan 11 June 57
5	ADHAM TOSO 4 June

JUN 1957

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OFFICE ORIGIN	DATE	TEL NO	APPROVED
ADMIN-4	23 May 57	3665	3 Jun 57

UNCLASSIFIED

JUN 6 1957

SMO4D, HQ SMAMA, 23 Jan 57, Subject: (Unclassified) AFR 57-4 Study,
Modification Proposal Number 35 for Installation of Air to Air IPY
F-104 Series Aircraft

SMO4D

2d Ind

Hq Sacramento Air Materiel Area, McClellan AFB, California 17 MAY 1957

TO: Commander, Air Defense Command, ATTN: ADWAC, Fort Air Force Base,
Colorado Springs, Colorado
Commander, Tactical Air Command, ATTN: TACG-S, Langley Air
Force Base, Virginia

1. Your attention is invited to paragraph 1.2. of 1st Intercoment
relative to subject modification for the F-104B Aircraft. It is the
opinion of this Air Materiel Area that the modification as described
is not feasible inasmuch as the F-104B was designed as a two place
aircraft, and is being produced because of this capability. (S)

2. Your comments and/or recommendations are desired no later than
31 May 1957.

FOR THE COMMANDER:

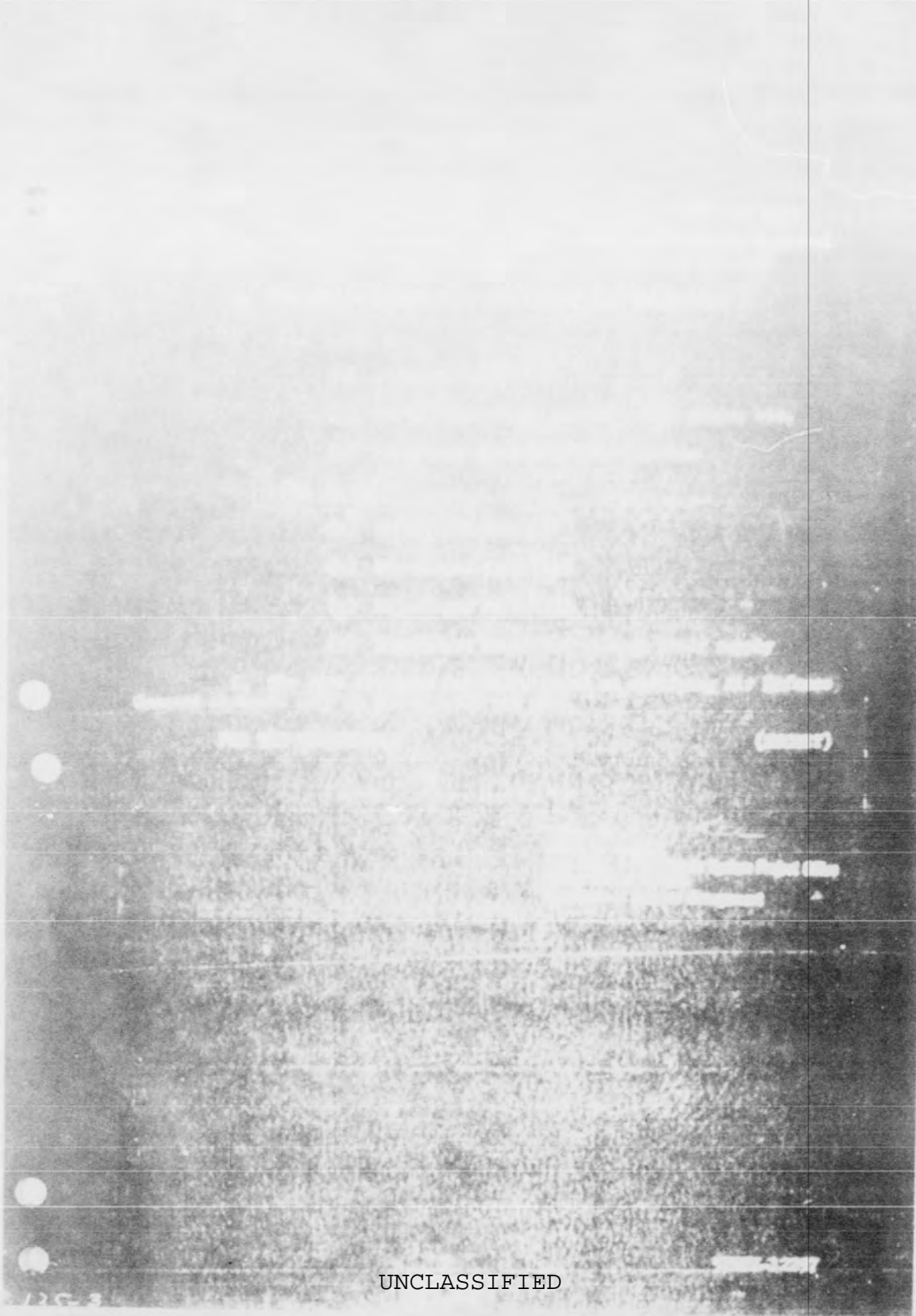
H. J. GRYN
Lt. Colonel, USAF
Chief, Lockheed Weapon System Division
Directorate of Maintenance Engineering

31911

UNCLASSIFIED

0816

UNCLASSIFIED



UNCLASSIFIED

MEMORANDUM FOR THE RECORD

DATE: 12/15/54

TO: SAC, [illegible]

FROM: [illegible]

SUBJECT: [illegible]

1. For several months a feasibility study has been conducted for the installation of the following equipment:

a. Installation of the [illegible] is technically feasible if the [illegible] is provided by the [illegible] for the F-104A aircraft.

b. At the present time, the available space for the installation of the [illegible] in the F-104A. However, if the F-104A is modified, an installation could be provided by [illegible] the [illegible] power supply on the [illegible].

c. The [illegible] of the modified [illegible] is not considered adequate for [illegible] consideration.

(1) The [illegible] system is not considered adequate for [illegible] from [illegible]. However, if the [illegible] of this system can be used [illegible] development by [illegible].

(2) The [illegible] will not materially to the range of the [illegible] although equipped with transponders. Actually the range of the [illegible] is increased from 10 to 20 miles.

(3) The [illegible] of the proposed installation is approximately [illegible].

d. The [illegible] for the prototype installation are \$25,000 and [illegible]. It is recommended that the aircraft contractor [illegible]. Further, it is expected that [illegible] to develop these equipments.

UNCLASSIFIED

JAN 6 1957

C O P Y

HEADQUARTERS
SACRAMENTO AIR MATERIEL AREA
MCLELLAN AIR FORCE BASE
CALIFORNIA

SMMLD

st/23 Jan 1957

SUBJECT: AFR 57-4 Study, Modification Proposal Number 35 for
Installation of Air to Air IFF F-104 Series Aircraft

TO: Commander
Wright Air Development Center
ATTN: WCOV
Wright Patterson Air Force Base, Ohio

1. During the F-104 Configuration Conference, 4 January 1957, which was directed by United States Air Force message AFDR0-TA 59422 dated 4 December 1956, a firm requirement for subject equipment in the F-104 Aircraft was established by representatives of ADC and TAC. It is to be noted that the referenced United States Air Force message indicated the actions and decisions during the conference would complete the basic AFR 57-4 responsibilities of the using commands and AMC. Therefore, it is necessary that this AMA complete the initial action by requesting the required engineering feasibility from your Headquarters.

2. The information required is as follows:

- a. Engineering lead time, availability, and cost.
- b. Group A and B breakdown and estimated cost.
- c. Support equipment required.

3. This information is required no later than 19 February 1957.

FOR THE COMMANDER:

Copy Furnished:
COMDR ADC
COMDR TAC

WILFRED B. CLARK
Technical Associate
Lockheed Weapons Systems Division
Directorate of Maintenance Engineering

UNCLASSIFIED

0819

314

MAY 20 1957

ADRSI-A 16 MAY 1957

SUBJECT: Re-evaluation of AFR 57-4 Class V Proposed Modifications

TO: Director of Requirements
Headquarters, United States Air Force
ATTN: AFPMQ-XS/M
Washington 25, D.C.

1. In accordance with request contained in your message AFPMQ 20066M, dated 18 April 1957, the proposed Class V Modifications listed have been reviewed. The following comments are forwarded for your information and consideration:

a. Modification No. 73 - TF-102A - ALE-2 Chaff Dispenser.

(1) This modification is to equip two T-3 and/or TF-102As per squadron with ALE-2 Chaff Dispensers. The dispensers afford the Fighter Interceptor Squadrons a capability to conduct a limited unit ECM training program.

(2) Our fighter units are notoriously deficient in ECM training, and this is a partial solution to their problem. The remarks concerning the need for ECM training outlined under Modification #378 are also applicable to this modification.

b. Modification No. 378 - RB-57 - Modify for ECM Equipment.

(1) This modification is to install a complete ECM capability in 32 RB-57As.

(2) One of the most serious problems facing air defense today is the ECM threat. We have taken action to improve our Fighter Interceptor and ground electronic equipment to decrease this threat from a technological aspect. This equipment is completely dependent upon the

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8- 31843/0187

WRITER (and typist's initials) *Maj Dunmire*
175-1 Maj Dunmire/lS

OFFICE CODE ADRSI-A

DATE 13 May 57

FILE NO: 2665

FANFOLD NUMBER AND SUSPENSE DATE H-27897 15 May 57

ADC HQ FORM 11 15 MAR 57 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE. MEMO FOR RECORD: NONE SEE REV

COMER	
VC	
COFS	
ADJ	
COORD PREC	With Last Name and Ship Date Coordinate
ADDOCC	Topok 14
ADDET	2 SH-Turn 14 May
ADMAC	3 Mc 14 May
ADRR	4 14 May
ADRSI	5 14 May
ADRP	6 14 May

REC: PERMANENT DESTROY AFTER: 30 DAYS 1 YR 2 YRS 3 YRS 4 YRS 5 YRS 6 YRS

UNCLASSIFIED AFR 205-1, or for reason(s) stated.

137 20 1957
[REDACTED]
ADC Ltr, ADRSI-A, to USAF, Subj: Re-eval of AFR 57-4 Class V Proposed Mods, Cont.

capability of our people to use it. The modified RB-57A is the only realistic target source we have to give our people the required training.

(3) Without an ECM-equipped aircraft capable of high speed and high altitude penetrations, there is no way of giving adequate training in an ECM environment, and this training is mandatory if we expect to achieve the highest degree of effectivity in combating the ECM threat.

(4) General Partridge and General Lynn have written personal letters to General Twining and General Putt expressing their concern over this problem and asking them to expedite the action on the procurement and modification of these aircraft. The procurement of this capability on an expedited basis is mandatory.

(5) In addition to their utilization as ECM trainers, it is planned to use the RB-57As for Radar Evaluation and Tactical Evaluation; however, the prime requirement will be as ECM trainers.

c. Modification No. 742 - F-104 - Liquid Oxygen.

(1) The liquid oxygen system is required required for early retrofit to all F-104 aircraft not so provided by production effectivity for the following reasons:

(a) The present one-and-a-half bottle high pressure system installed on aircraft numbers 1 to 15, and three bottle high pressure system on aircraft numbers 16 to 78, do not provide adequate oxygen supply commensurate to aircraft endurance when using auxiliary fuselage tank and pylon tanks. In addition, such oxygen supply is also inadequate for tie-in to normal or emergency Partial Pressure Suit operation. The five-liter system provides adequate supply for breathing and pressure suit operation, for four hours at 15,000', and for weapons system endurance capability at maximum altitude and performance values. Modification to ECP #98 results in a 3- to 5-pound weight decrease.

(b) The two-place F-104B will require the ten-liter system of ECP #127

MAY 1957

ADC Ltr, ADRESI-A, to USAF, Subj: Re-eval of AFR 87-4 Class V Proposed Mods, Cont.

(2) In consideration of the foregoing, it is mandatory the modification be accorded a high priority to insure early incorporation in all F-104 aircraft. Only with this modification can adequate oxygen supply be provided to insure optimum mission accomplishment.

d. Modification No. 849 - F-104 - Install ILS.

(1) The Instrument Landing System is definitely required for early retrofit modification to all F-104 aircraft not so provided by production effectivity for the following reasons:

(a) At the present time, the only method of instrument recovery of F-104 aircraft is standard VOR or UHF/GCA let-downs. These methods are adequate under certain situations and locations; however, they limit the extent of recovery minimums, and are time consuming. The F-104A low altitude endurance is much less than previous interceptors, and the GCA radar reflectivity for F-104 final approach is unknown, but expected to be of poor quality.

(b) Without ILS installation, the F-104A weapons system would be practically grounded during periods of low ceiling and visibility, thus negating any value to ADC clear air mass employment above weather level.

(2) In consideration of the foregoing, it is mandatory that Modification No. 849 be accorded a high priority to insure early incorporation in all F-104 aircraft. Only with this modification can minimum adequate recovery measures be assured for the F-104A.

e. Modification No. 50 - F-104 - Install ARR-39.

(1) Information indicates the UHF Data Link for the F-104A/B will be the Lockheed re-packaged AN/ARR-51 UHF Data Link Receiver. The first Data Link Receiver will be with frequency division, to be modified to time division at a later date.

(2) The Data Link Receiver is definitely required for early retrofit, to provide timely control compatibility with the GPA-37 and SAGE environment of the Air Defense mission.

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MAY 20 1957

ADC Ltr, ADRESI-A, to USAF, Subj: Re-eval of AFR 57-4 Class
Y Proposed Mods, Cont.

f. Modification No. 622 - F-104 - Install Angle of Attack Indicator. The requirement for an angle of attack indicator is not considered mandatory by ADC. The prime consideration for this instrument would be its relative importance and necessity to safety of flight. ARDC would have to make this determination. The Angle of Attack Indicator discussed here is not to be confused with the Pitch Rate/Angle of Attack Meter which is a component of the Automatic Pitch Control System.

g. Modification No. 446 - F-104 - Increase Fuel Capacity.

(1) The increased fuel capacity is definitely required for achieving mission endurance and range capability. ADC requires first aircraft delivered to possess pylons tanks and auxiliary fuselage tank to insure this capability.

(2) Tests accomplished and studies made reveal the F-104 without increased fuel capacity is very limited in both range and endurance capability when employed either in afterburner all the way, or normal cruise mission.

h. Modification No. 622 - F-101B - Install Angle of Attack Indicator. The requirement for an angle of attack indicator is not considered mandatory by ADC. The prime consideration for this instrument would be its relative importance and necessity to safety of flight. Such determination must be made by ARDC.

i. Modification No. 14 - F-89J - Install APX-25.

(1) The APX-25 consists of an APX-6A plus an encoder head and is to be used in conjunction with ground SIF equipment.

(2) Inasmuch as the Ground Environment will go over to SIF operation completely on 1 January 1959, and the F-89J is not scheduled to phase out of the ADC inventory until 30 June 1961, all F-89J aircraft must be equipped with the APX-25. If the modification is not made, GCI will only be able to control F-89Js when skin paints are possible. In addition, the personal identity mode of the SIF will not be usable with aircraft not possessing the APX-25.

FOR THE COMMANDER:

LOREN G. MC COLLOM
Colonel, USAF
DCS/Plans and Requirements

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JOINT MESSAGEFORM

SPACE BELOW RESERVED FOR TELETYPE-INITIATED SYSTEM

20 1957

PRECEDENCE	TYPE MSG (Check) BOOK MULTI SINGLE	ACCOUNTING SYMBOL AF	ORIG. OR REFERS TO X	CLASSIFICATION OF REFERENCE
FROM: HQ USAF				SPECIAL INSTRUCTIONS
TO: COMAIRDEFCOM ENT AFB COLO (AIR MAIL)				
FROM: [REDACTED] OM AFDRQ 20066M				
<p>Due to the nonavailability of Class V modification funds in the remainder of FY 57 and the projected shortage of funds in FY 58, only the highest operational priority items can be considered. Therefore, request your command modification review board established in accordance with paragraph 6a(4), AFR 57-4, re-evaluate the following tentative retrofit modifications and furnish this Headquarters, ATTN: AFDRQ, prior to 10 May 1957 the result of the board action:</p> <p>Mod No. 73 TF-102A ALE-2 Chaff Dispenser</p> <p>Mod No. 378 RB-57 Modify for ECM Equipment</p> <p>✓ Mod No. 742 F-104 Liquid Oxygen 27837</p> <p>✓ Mod No. 849 F-104 Install ILAS</p>				<p>TO: AG-C</p> <p>FILE: CMC-P</p> <p>ACTION: LR to USAF</p> <p>REFANFOLD: 192-ADRS</p> <p>SIGNATURE: [Signature] Lt Col, USAF</p> <p>DATE: 11 1957</p> <p>TIME:</p> <p>MONTH: 11</p> <p>YEAR: 1957</p>
SYMBOL AFDRQ-ES/M		SIGNATURE [Signature]		
TYPED NAME AND TITLE (Signature, if required) Lt Col James B. Newman		TYPED (or stamped) NAME AND TITLE ROBERT L. DELASHAW Colonel, USAF Deputy Director of Requirements Deputy Chief of Staff, Development		
PHONE 53884	PAGE NR. 1	NR. OF PAGES 2		

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DD FORM 173, 1 OCT 49, WHICH WILL BE USED UNTIL EXHAUSTED

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MESSAGEFORM - CONTINUATION SHEET

SEC

HQ USAF

MAY 20 1957

- ✓ Mod No. 50 F-104 Install ARR-39
- ✓ Mod No. 622 F-104 Install Angle of Attack Indicator
- ✓ Mod No. 446 F-104 Increase Fuel Capacity
- Mod No. 622 F-101B Install Angle of Attack Indicator
- Mod No. 14 F-89J Install APX-25

VEBKG

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SYMBOL	PAGE NR	NR OF PAGES	SEC	INITIALS
AFDRQ-ES/M	2	2		

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DD FORM 173-1 MAY 55

PRINTING OFFICE: 1955-0-28220

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DESTROY AFTER: <input type="checkbox"/> 30 DAYS <input type="checkbox"/> 1 YEAR <input type="checkbox"/> 3 YEARS <input type="checkbox"/> 5 YEARS <input type="checkbox"/> 6 YEARS <input type="checkbox"/> 4 YEARS PERMANENT <input checked="" type="checkbox"/>	1	COMER
	2	VC
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	7	ADRCG (Handwritten: ...)
	8	ADRPC (Handwritten: ...)
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	10	ADOCG (Handwritten: ...)
	11	ADODG (Handwritten: Hughes 20 May)
	ADMAC (Handwritten: ...)	
	ADMDB (Handwritten: ...)	
	ADNRA (Handwritten: ...)	
	23 MAY	

ADRSI-A **23 MAY 1957**

SUBJECT: AFR 57-4, Class V Modification: Proposal to Delete the T-171-E3 Gun, and Add Additional Fuel Cell in the F-104A Weapon System

TO: Commander
Air Materiel Command
Wright-Patterson Air Force Base, Ohio

1. In accordance with the provisions of AFR 57-4 dated 1 November 1957, the following Modification Proposal is made to delete the 30mm Gun Installation from the F-104A/B aircraft, and to install an additional internal Fuel Cell in the space provided.

a. Complete and specific identification of items involved:

(1) The F-104A/B aircraft, manufactured by Lockheed Aircraft Corporation.

(2) The T-171-E3 30mm Gun, and associated installed equipment, manufacturer unknown.

(3) A 125-gallon fuel cell, and associated installation hardware (to be developed, manufacturer unknown).

b. Justification: Not requested, not furnished. *PR* **23 MAY 1957**

(1) The present range/endurance (critical) F-104A/B aircraft is very limited, depending on the mission profile employed. Preliminary studies and tests reveal the increased combat radius resulting from replacement of the T-171-E3 Gun and associated equipment by an additional fuel cell as follows:

(a) For the ADC Long Range Intercept Mission, the radius increases from 174 to 389 nautical miles carrying internal fuel only, and from 366 to 486 nautical miles when pylon tanks are carried.

144-1
M. J. Dunmire

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WRITER (and typist's initials) Maj Dunmire/ls	OFFICE CODE: ADRSI-A	DATE: 16 May 57	TEL NO: 2665	FANFOLD NUMBER AND SUSPENSE DATE
ADC HQ FORM 18 MAR 57 11 (4750) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE		MEMO FOR RECORD: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SEE RE		

UNCLASSIFIED

ADC Ltr, ADR51-A, To AMC, Subj: AFR 57-4, Class V Mod,
Prop to Delete T-171-E3 Gun, Add Add Fuel Cell/T-104A

(b) For the ADC afterburner-all-the-way mission, the radius increases from 78 to 117 nautical miles carrying internal fuel only, and from 138 to 222 nautical miles with pylon tanks.

(2) Other aircraft performance increases are:

(a) Weight reduction - combat weight from 16,500# to 15,900#.

(b) Increase of Mach 1.7 combat ceiling from 55,400 to 55,900 feet.

(c) Increase of Mach 1.7 35,000-foot rate of climb from 16,750 to 17,350 feet per minute.

(d) The increase in structural load factor is .2G, raising the limit from 6.35G to 6.55G.

(e) The minimum turn radius for constant altitude and constant speed of Mach 1.7 decreases from 5.9 to 5.7 nautical miles at 35,000 feet, and from 10.9 to 10.5 nautical miles at 45,000 feet.

c. This proposal is generated by virtue of the following factors:

(1) The ADC employment of the aircraft will rely upon the Sidewinder IA missiles as the primary armament to exploit the weapon system's high altitude-high speed capability in clear air mass. To operate within the high-altitude area, the speeds of Mach 1.5 and above must be maintained. The effectivity of gunfire at such speed is predicated on use of the optical sight. The maximum gun-sight computing range is 6,750', with minimum target acquisition and track time of approximately 55 seconds at attack speed of 1.6 Mach. At this speed, or up to Mach 2.0, visual acuity cannot accommodate sufficient reaction time for a pilot to make possible final corrections in azimuth or elevation for successful completion of the mission. At any slower speed than the planned ADC attack speed at altitude above 45,000 feet, possible final corrections would be extremely difficult due to aircraft low turn capability.

UNCLASSIFIED

ADC Ltr, ADRSI-A, [REDACTED]-4, Class V Mod,
Prop to Delete T-171-E3 Gun, Add Add Fuel Cell/F-104A

(2) Removal of the Tpl71-E3 Gun and associated equipment, and installing an additional fuel cell, will increase combat range, which is now critical, and improve other operational parameters as listed in paragraph 1b.

(3) The developmental difficulties encountered such as not achieving the "D" rate of fire of 8,000 rounds per minute, the gun gas purge problem, gun barrel whip, the electrical power drain to the aircraft electrical system, and the shell ejection damage to aircraft external surface.

d. Primary materials required for all ADC aircraft:

(1) Fuel cell and accessories attendant for installation to provide tie-in to single point refueling. Source unknown

(2) Not in Air Force stock, thus would require development.

(3) Organization equipment required unknown.

e. This Command does not possess the capability to accomplish the proposed modification, and recommends priority action to insure early production effectivity. Modification will require AMC/ARDC determination of the degree of assistance required by ADC for aircraft retrofit.

f. Quantities of aircraft affected: All ADC F-104A and F-104B aircraft not so provided by production effectivity.

g. Effect of Modification on related equipment:

(1) Should have no effect on Cockpit Procedure Trainers.

(2) Would affect the range factor of the F-104A Mission Trainer.

(3) Cost estimates unknown.

(4) Requirement for new support equipment unknown.

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ADC Ltr, ADRESI-A, to AM, [REDACTED], Class V Mod,
Prop to Delete T-171-E3 Gun, Add Add Fuel Cell/F-104A

h. Additional training required due to new
components could be done by on-the-job training.

i. All major commands with a prime interest
have been forwarded a copy of this proposal.

ROY E. LYNN
Major General, USAF
Vice Commander

cc: Dir of Requirements
Hq USAF, ATTN: AFDBQ-AD
Washington 25, D.C.

Comdr, ARDC, ATTN: RDTPA
Baltimore, Maryland

Comdr, Sacramento AMA
ATTN: SMFU
McClellan AFB, California

Comdr, TAC, ATTN: TORQG
Langley AFB, Virginia

Comdr, Warner Robins AMA
Warner Robins AFB, Georgia

CINC USAFE
APO 633, New York

Comdr, FEAF
APO 925, San Francisco

Comdr PACAF
APO 953, San Francisco

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DOC 235 ADOR 57A



PRIC. JTY

NO ACTION CONSIDERED NECESSARY
UNTIL NEXT DUTY DAY
STAFF DUTY OFFICER.

REFR ✓
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MOM 13 Jun 57
HCP
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PP RJEPHQ RJEDEN
DE RJEDWP 29X
P R 132100Z
FM HQ AMC WPAFB OHIO
TO RJEPHQ/COFS USAF WASH DC
INFO RJEDEN/COMDR ADC ENT AFBASE COLO
BT

[REDACTED] FROM MCPHFF-6-1998.
FOR AFMPP, AFDRO, -15RD, AFOOP. THE F-104 AS CURRENTLY DESIGNED
CANNOT BE SAFELY OPERATED AT SPEEDS IN EXCESS OF 575 KNOTS AT ALTI-
TUDES BELOW 20,000 FEET DUE TO FLUTTER CHARACTERISTICS OF THE
EMPENNAGE. ADC HAS STATED THAT TO BE TACTICALLY USEFUL THIS PLACARD
MUST BE REMOVED ENTIRELY. TO ACHIEVE A LOW ALTITUDE HIGH SPEED
CAPABILITY AMC, ARDC, NACA AND THE CONTRACTOR HAVE ESTABLISHED A
TEST PROGRAM TO DETERMINE THE MODIFICATION REQUIRED. THE CONTRACTOR
HAS PROCEEDED ON THE FOURTH MODIFICATION PROGRAM IN ORDER TO INSURE
THE EARLIEST POSSIBLE PRODUCTION EFFECTIVITY. AMC/ARDC HAVE NEITHER

PAGE TWO RJEDWP 29X
APPROVED NOR DISAPPROVED THE CONTRACTOR ACTIVITY AND ARE AWAITING
DETAILED ANALYSES AND TEST DATA. ARDC ESTIMATES THAT EITHER THE
CURRENT 0.125 INCH STAINLESS STEEL SKIN OR A 0.250 INCH ALUMINUM SKIN
WILL REMOVE THE MAJOR PORTION AND POSSIBLE ALL OF THE PLACARD.
REQUEST THIS COMMAND BE ADVISED IF THERE EXISTS A REQUIREMENT FOR LOW
ALTITUDE PERFORMANCE.
BT
13/2100Z JUN RJEDWP
A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.



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DDP 236 ADGHR 57A

5 JUL 1957

ROUTINE
ROUTINE
COMDR, ADC

I

AF

MCPHFF-6-1998

CONFIDENTIAL

COPS USAF WASH D C

INFO: Comdr AMC WPAPB OHIO

CONFIDENTIAL FROM ADCRG-B 0037

For AFMPP, AFDEQ, AFOP, Hq USAF; for MCPHFF, AMC. Reference AMC message MCPHFF-6-1998. ADC reaffirms the requirement that the F-104 A/B in a normal interceptor mission profile be capable of low altitude high speed performance. The present speed placard of 575 knots below 20,000 due to tail flutter characteristics would be unsatisfactory when low altitude high performance is necessary.



A PARAGRAPH NOT ENCRYPTED MUST BE
TO CATEGORY B ENCRYPTION - PHYSICALLY
REMOVE ALL INTERNAL REFERENCES BY DATE
TIME GROUP PRIOR TO RECLASSIFICATION.

1 - 2200
JULY 1957

ADCRG-B

H7778

Maj F. T. Dunmire/js
2665

1 1

WILLIAM H. HUBBARD
1st Lieutenant, USAF
Administrative Officer

UNCLASSIFIED

UNCLASSIFIED

NUM

21 May 1957

(UNCLASSIFIED) Minutes of the F-104 Weapon Systems Phasing Group Meeting held on 15 May 1957 at Hq AMC, Wright-Patterson Air Force Base, Ohio.

SUMMARY

DOC 237 ADCHR 57A

1. The major problem areas affecting the timely and successful completion of the group's activities are as follows:

Item No. 4-55-1 - T-171E-3 Gun Development (CONFIDENTIAL)

Item No. 5-57-1 - Link and Case Ejection (UNCLASSIFIED)

Item No. 5-57-2 - Effects of Gun Operation on FCS (UNCLASSIFIED)

Item No. 5-57-3 - Link Evaluation (CONFIDENTIAL)

Progress continues slow in finalizing a gun installation compatible with operational requirements. Problems concerning loss of radar lock-on, debris ejection and suitable link selection contribute to this delinquency. See pages 2, 3, 12, 13 & 14 for details.

Item No. 1-56-1 - Availability of J-79 Engine Spares and Components (UNCLASSIFIED)

J-79 spare engines and component spares are extremely critical. Deliveries of component part kits for engine build-up will not begin until December 1957; also, the basis for spare engine provisioning (operational inventory) is not considered adequate. In the meanwhile, various approaches to the problem, with both interim and long range considerations, are being explored. See page 5 for details.

Item No. 2-57-1 - GAR-8 Phase-In (CONFIDENTIAL)

Excellent firing results have been achieved to date with F-104 use of GAR-8 missiles; however, fire control compatibility aspects must be investigated. See page 10 for details.

2. [REDACTED] GENERAL INFORMATION: The four recent F-104 accidents have severely disrupted the flight test program and threaten, further, the time phased delivery of the airplane to tactical users compatible with operational requirements. Considerable progress in resolving ground support equipment problems has been achieved of late, however, CFE support may be required to satisfy initial requirements for certain long lead time equipment.

Ernest E. Goebert

ERNEST E. GOEBERT
Lt Colonel, USAF
F-104 WSPG Chairman

57MCF-15009

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MINUTES

I. OPEN ACTION ITEMSItem No. 4-55-1 - T-171 E-3 Gun Development (CONFIDENTIAL)

- a. Problem Presented: T-171 E-3 Gun development problems must be resolved to attain compatibility with operational requirements.
- b. Progress to Date: The following data was given to the group regarding developments in this area. (Treatment of link and case ejection, links evaluation, and effects of gun operation on FCS will be given in new Action Item Nos. 5-57-1, 5-57-2 and 5-57-3):

Purge System. AFAC reports that in recent gun firing missions, gun gas concentrations exceeding 100% LEL were experienced. Two (2) of these flights were made with the gun housing hole covers and the vinyl gas bag covering the gun housing. The arrangement was successful in ground firing. LAC suspected that gun gas was leaking back into the gun bay from the purge system. A sealer was added prior to 9 May 1957 and the following results were obtained:

	Gun Gas Concentrations
100 rds fired 9 May 57	Aft of Blast Tube - 52% LEL
20,000 ft	Upper Recoil Adapter - 71%
400 knots	Lower aft Gun Comp - 57%
	Lower Recoil Adapter - 88%
120 rds fired 9 May 57	Aft of Blast Tube - 42%
20,000 ft	Upper Recoil Adapter - 71%
400 knots	Lower Aft Gun Comp - 57%
	Lower Recoil Adapter - 90%


As a result of these readings, LAC plans to begin aerial firing of full complements in 2 second bursts within the near future. In last four (4) flights by LAC, gun gas concentrations were considered satisfactory.

Blast Tube Adapter. A test of the stainless steel adapter has not been conducted as yet by AFAC. LAC has tested 15 types of adapters. 1/8 in. stainless steel withstood one (1) 750 rd burst and eighteen (18) 250 rd bursts. The Chairman advised that 1/8 in. steel adapters will have an effectivity on A/C #1060. No indication on availability of desired 1/8 in. Inconel is obtainable at present.

C vs D Rate Evaluation. AFAC reports the following data as result of its studies in this area:

- (1) When the time of availability of target is limited, the "D" rate gun is 50% more lethal. Only exception is when the weapons commence to accumulate high probabilities of kill.


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- (2) When the rate of closure of the fighter on the target is non-zero, the "D" rate is more lethal.
 - (3) When rate of closure is zero, both guns are equally lethal.
 - (4) As rate of closure increases, ratio of improvement in lethality of "D" rate over "C" rate increases.
 - (5) Any firing program which is possible to perform using "C" rate gun can also be performed using "D" rate gun by a clear-sighted firing program.

The above statements are predicated upon the assumption that all factors, other than firing rate, remain the same for both guns. As a result of current data accumulated, AFAC recommends that no deviation from original plan to pursue development of the "D" rate gun be made at this time.

- c. Action to be Taken: AFAC and LAC will report on further tests results concerning gun purging and blast tube adapter.
- d. Action Agency: AFAC (Major Holdsambeck) and LAC (Mr. Fish)
- e. Forecast of Completion: Status report at next Meeting.

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Item No. 4-55-2 - Engine Maintenance (UNCLASSIFIED)

- a. Problem Presented: ADC requires a split combustion case configuration in the J-79 GE-3 engine for purposes of burner can inspection and replacement.
- b. Progress to Date: Mr. Hill advised that on 29 April 1957, Mr. Fischer, MCPEP, at the request of Hq USAF again submitted cost data relative to the proposed modification of GE-3 engines to incorporate split combustion chambers and removable combustion liners. The cost estimates submitted were essentially the same as those contained in 13 February 1957 letter. Follow-up with AFMME on 13 May 1957 by Mr. Hill indicates this proposal will be disapproved due mainly to fund limitations. At the meeting, Captain Scheuer (ADC) expressed an objection to the lack of a split combustion case configuration in the -3 engine. (The -7 engine will contain the capability, however, earlier introduction of the -7 is doubtful.) The adverse effects of this decision in light of organizational maintenance concepts regarding the engine are clearly recognized by all concerned; however, in view of the Hq USAF position, further pursuit of this matter by the WSPO at this time, is considered pointless. ADC was advised that direct contact with Hq USAF citing repercussions on operational capabilities may provide a solution.
- c. Action to be Taken: ADC will apprise Hq USAF of their requirement for a split combustion case configuration in the -3 engine, pointing out the impact on operational capabilities if this repair capability is denied.
- d. Action Agency: ADC (Captain Scheuer)
- e. Forecast of Completions: Report of ADC action taken with Hq USAF at next meeting.

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Item No. 1-56-1 - Availability of J-79 Engine Spares and Components (UNCL)

- a. Problem Presented: Availability of J-79 engine spares and components is critical. Contributing factor in this deficiency is the decision to support both flight test and production programs with J engines.
- b. Progress to Date: In regard to production installation of the J-79 GE-3 engine, there will be 13 engines available this month, with sufficient deliveries forecasted to meet this aspect of the engine program.

The group was advised there will be deliveries starting in December 1957 of 20 kits (component parts for engine build-up) for spare engines for the program, also, 20 per month thereafter. In the meanwhile spare engine provisioning for tactical users is considered inadequate. It was revealed at the meeting that spare engines are being provided on a 33% basis (8 spares per squadron) whereas a 45% - 50% figure has been requested by ADC to compensate for pipeline factors, etc. Discussion also took place on other means of improving the spare engine and component spares availability. These included considerations for cannibalizing YJ removed engines for needed spare components; OCAMA actions planned:

- (1) Conversion of YJs to J engines
- (2) Modifications and improvements to engines as contained in General Mitchell's letter to GE
- (3) "C" kit procurement

An additional source of A/B nozzle components may be obtained by recall of these components by OCAMA from field activities (quantities of these items were distributed in the past to the field as a spare level for build-up purposes). If located by OCAMA, these parts could be returned to GE for complete A/B build-up. OCAMA advises there are 101 build-up kits on contract, no definite data on availability can be given - 5 months after receipt of contract by GE appears as a likely forecast. QEC kits are being procured on a basis to satisfy command requirements. ADC has requested a requirement of 1 for 3.

- c. Action to be Taken: WSFO will investigate with MCS relative to spare engine percentage increase to tactical units. OCAMA will follow-up with GE on improving deliveries of spare parts and components for spare engine build-up; also, check on recall of spare engine components from field activities for return to GE for complete A/B build-up.
- d. Action Agency: WSFO (Lt Col Gossett) and OCAMA (Mr. Sheldon)
- e. Forecast of Completion: Status report of progress at next meeting.

UNCLASSIFIED

Item No. 5-56-2 - Status of Pressurized Clothing (UNCLASSIFIED)

- a. Problem Presented: Using activities have requested the development and availability status of pressurized clothing.
- b. Progress to Date:

MC-4 Suit. Information has been available in the past that sufficient quantities of suits have been made available to the W-PAFB Physiological Branch as well as the other Physiological Centers in order to accomplish pilot fittings, checkout, etc. A quantity of 1,000 MC-4 suits comprising 12 suit sizes have been procured; however, complaints from using activities are still being received concerning deficiencies in the availability of popular sizes. This group is referring this problem to the Personal Equipment Management Group for additional consideration and support for resolution.

A-13A Mask Adapter. Current plans are to provide one adapter with each survival kit as CFE. In the future these items will be provided as GFAB for semi-permanent installation. A problem has arisen, however, in that the pressure reducer valve does not provide a positive lock on the adapter which becomes disconnected due to G force exertion.

Survival Kit. In accordance with CCN provisions, deliveries of the interim kit will be made starting this month. Results of the DEI held at LAC covering the Interim and the Production Kit indicate these as satisfactory items.

MC-1 Anti-Exposure Suit. TAC has confirmed a requirement for an anti-exposure suit. LAC advised there will be provisions for an electrically driven blower in the airplane. This problem is being deleted from the agenda.

- c. Action to be Taken: Secretariat will refer MC-4 Suit availability aspects to the Personal Equipment Management Group for action and report. WSPO will investigate problem with pressure reducer valve operation, also further data regarding survival kit.
- d. Action Agency: MCRW (Mr. Gimperling) and WSPO (Lt Col Gossett)
- e. Forecast of Completion: Report at next meeting.

Information Obtained Subsequent to Meeting.

On 20 May 1957 information obtained from WADC that on 1 March 1957 all physiological centers were furnished data relative to shipment and use of oxygen equipment, (hi-altitude) suits, Firewell Kits, etc. Equipment required by Shaw AFB shipped on 15 February 1957.

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Item No. 7-56-1 - Self Contained Starter (UNCLASSIFIED)

- a. Problem Presented: ADC and TAC request the status of studies covering self-contained starters for the F-104.
- b. Progress to Date: LAC is currently developing a cartridge starter installation for the airplane. An ECP was originally submitted covering this action but has been returned to LAC for refinement by WSFO following coordination and recommendations by WADC. GE is checking on engine changes that may be necessary to accept this type starter. Mr. Hill advised that fund estimates relative to retrofit installation of this cartridge type starter were submitted to Hq USAF on 25 April 1957. No reply has been received to date.
- c. Action to be Taken: WSFO will follow-up with LAC on ECP resubmittal covering the cartridge starter capability to the airplane. MCM will follow-up with Hq USAF regarding reply to retrofit costs and engineering data letter.
- d. Action Agency: WSFO and MCM (Mr. Hill)
- e. Forecast of Completion: Report at next meeting.

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Item No. 8-56-4 - Oil Servicing of the Airplane (UNCLASSIFIED)

- a. Problem Presented: The method of servicing the airplane with oil is not considered satisfactory. Present method requires a separate piece of ground servicing equipment for pressure-feeding.
- b. Progress to Date: LAC has proposed a hand-pump method for oil servicing with the pump mounting on the airframe; however, TAC desires the pump be mounted on the engine, if possible, also some type of gauging system. In this regard it appears that TAC will yield on previous requirement for a full scale reading sight gauge in favor of a 3 position reading gauge based on a series of lights and push buttons. Firm positions must be obtained concerning the following:
 - (1) Location on the engine for mounting of the hand-pump.
 - (2) Minimum requirements (levels) for oil.
 - (3) Oil level indications.
 - (4) Location of indication system (not desirable in cockpit).
- c. Action to be Taken: WSFO will insure that a unified position is reached on above desired actions by LAC, GE and WADC (Power Plant), with coordination of using command.
- d. Action Agency: WSFO
- e. Forecast of Completion: Report at next meeting.

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Item No. 1-57-1 - AFR 57-4 Funding Action for A/C Mods (CONFIDENTIAL)

- a. Problem Presented: Expedited funding action by Hq USAF is needed for required modifications to the airplane.
- b. Progress to Date: Feasibility studies have been forwarded to SMAMA for all Mods except for IFF.

IOX, Increased Combat Radii, Data Link and ILS - No change since last meeting. These mods have received approval from Hq USAF, however, funding will not occur until FY-58 and later years.

Ferry Range Extension - Mod #908 was initiated 15 February 1957.

Eroficon - Mod #487 has been initiated 5 February 1957.

Ejection Seat - Resolution in this area involves "C" versus "D" seat aspects, also upward versus downward ejection application.

Air to Air IFF - Mod #35 was initiated 21 January 1957.

Installation of Integrated Optical and IR - Mod #909 initiated on 31 January 1957.
- c. Action to be Taken: WSPO will insure that feasibility studies on the Air to Air IFF mod is forwarded to SMAMA by MCM.
- d. Action Agency: WSPO (Lt Col. Cossett) and MCM (Mr. Hill)
- e. Forecast of Completion: June 1957.

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Item No. 2-57-1 - GAR-8 Phase In (CONFIDENTIAL)

- a. Problem Presented: Action to provide for use of the GAR-8 on the F-104 must be closely monitored to insure compatibility with the FCS.
- b. Progress to Date: LAC reports the following achievements since last reporting period:
 - (1) 2 salvo firings by LAC.
 - (2) 3 AF firings at targets - all direct hits.
 - (3) 2 single firings by LAC.
 - (4) 3 LAC jettisons - all successful at different angles and speeds.
 - (5) 10 LAC stability and control flights - all satisfactory.
 - (6) 5 aborted firings for various reasons - no two stemming from same cause.

Information as cited above reflect excellent firing results by F-104 use of GAR-8 missile; however, further investigation into fire control compatibility aspects is needed.

- c. Action to be Taken: WSPO will advise the group of action being taken to insure compatibility of the FCS with the missile, coordinating action with AFAC.
- d. Action Agency: WSPO (Lt Col Soderberg) and AFAC (Maj. Holdsambeck)
- e. Forecast of Completion: Report at next meeting.

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Item No. 4-57-1 - Total Fuel Flow Indicator (UNCLASSIFIED)

- a. Problem Presented: Using commands request the status of action to provide a total fuel flow indicator in the airplane.
- b. Progress to Date: LAC prepared an ECP (#19) on this problem, originally, which was basically a study. Mr. Vance (WSPO) advised that in checking with WADC regarding the development status, first test articles are due in August (GFAE). Production delivery would be made approximately 1 year later. LAC representative advised that ECP 442 has been prepared covering this item (CFE), however, no production effectivity has been cited. In this regard, deviation from provisions of AFR 70-9 would be required. Another consideration that must be made is that 57-4 action will be necessary if ADC aircraft are to be equipped with these indicators.
- c. Action to be Taken: An evaluation of the new LAC ECP is needed, also a determination of most feasible method of providing this equipment for the program.
- d. Action Agency: WSPO (Lt Col Gossett)
- e. Forecast of Completion: Report at next meeting.

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II. ACTION ITEMS INTRODUCED

Item No. 5-57-1 - Link and Case Ejection (T-171E-3 Gun) (UNCLASSIFIED)

- a. **Problem Presented:** Action must be taken to prevent ejected links and cases from damaging the airframe or entering the airscopes. (This problem previously carried within Item No. 4-55-1 but has been made a separate agenda item for the purpose of improving identification and solution of individual problems).
- b. **Progress to Date:** LAC is planning to conduct tests to resolve this problem. Proposed methods include: hard steel leading edge for ventral fin, a retractable ejection chute and deflectors to shunt the debris in a different direction. AFAC recommends that a forced ejection system be developed to throw cases from the aircraft at higher velocity.
- c. **Action to be Taken:** LAC will advise this group of the status of fixes to resolve this problem. AFAC will coordinate with LAC on this problem.
- d. **Action Agency:** LAC (Mr. Fish) and AFAC (Maj. Holdsambeck)
- e. **Forecast of Completion:** Status report at next meeting.

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Item No. 5-57-2 - Effects of Gun Operation on FCS (UNCLASSIFIED)

- a. Problem Presented: It has been determined that initial firing of the gun produces a voltage drop, thereby, causing the low frequency cut-off relay to open; this results in loss of radar lock-on. (This problem was previously carried within Item No. 4-55-1, but has been made a separate agenda item for the purpose of improving identification and solution of individual problems.)
- b. Progress to Date: Tests will be made shortly in this area using the 20B9-1 voltage regulator. LAC advised that equipment has not been received to date.
- c. Action to be Taken: WSPO will follow-up on furnishing required voltage regulator to LAC. Status of tests will be made by LAC.
- d. Action Agency: WSPO (Lt Colonel Gossett) and LAC (Mr. Fish)
- e. Forecast of Completion: Report at next Meeting.

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Item No. 5-57-3 - Link Evaluation (CONFIDENTIAL)

- a. Problem Presented: A suitable link must be provided for reliable T-171 E-3 Gun operation. (This problem was previously carried within Item No. 4-55-1, but has been made a separate agenda item for the purpose of improving identification and solution of individual problems).

- b. Progress to Date: The following data was reported to the group:

14,000 rds of T-99 links have been ground fired at "D" rate at LAC with favorable results. T-76 link has been ground and air fired by LAC at "C" rate with favorable results. Five (5) separation did occur in the can. 8,000 additional rounds were fired with no separations. The links used were hand inspected T76-AVMI-2. LAC also reported 18 firing flights on A/C #1016 (full can firing at 3 G conditions). 130 rounds - longest burst by LAC in these tests.

AFAC reports there have been no failures with T-99 link tests at "D" rate; however, failures have occurred with the T-88 at this rate. Tests of the T-97 link have resulted in several rounds being thrown from the links (about 5 per ammo can). Springfield Armory is now modifying some of these links to increase stripping force. Hughes Tool Co. is attempting to increase the axial holding force of the T-99 link. AFAC still forecasts a link selection for production purposes by 15 June 1957.

- c. Action to be Taken: AFAC and LAC will report on further progress in link evaluation.
- d. Action Agency: AFAC (Major Holdsambeck) and LAC (Mr. Fish)
- e. Forecast of Completion: Report at next Meeting.

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Item No. 5-57-4 - Escape System (UNCLASSIFIED)

- a. Problem Presented: It has been determined that consideration should be made for incorporating an upward ejection capability to the airplane. Since canopy and structural changes to the airframe will be required, engineering, test and lead time data are needed from the contractor. As an associated problem, ADC requires retrofit to "D" seats for initial delivered aircraft.
- b. Action to be Taken: WSPO will report status of development action to provide an upward ejection capability to the airplane. SMAMA will advise of action taken to provide funds for retrofit to "D" seats for ADC requirements (Initial aircraft will employ the "C" seat).
- c. Action Agency: WSPO (Lt Colonel Soderberg) and SMAMA (Mr. Roberts)
- d. Forecast of Completion: Report at next Meeting.

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Item No. 5-57-5 - Incompatibility of FCS and Bench Test Units
(Test Program) (UNCLASSIFIED)

- a. Problem Presented: Bench test sets have been constructed to accommodate only the early model MA-10. Aircraft #36 and subsequent will contain the AN/ASG-14 unit. Bench test sets must incorporate a capability for testing both versions of the FCS.
- b. Action to be Taken: SMAMA and LAC will investigate this problem and insure that action is taken to provide bench test units incorporating this capability.
- c. Action Agency: SMAMA (Mr. Roberts and LAC (Mr. Hannan)
- d. Forecast of Completion: Report at next Meeting.

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III. INFORMATIONAL DATA

1. (UNCLASSIFIED) Training Devices

F-104-1 and -2 Mobile Training Units

A Contract is currently being negotiated for:

1. Supplement I to Lockheed Report No. SP/432514 covering the Engine Control Systems Trainer, Drag Chute Trainer and Instrument Trainer.
2. Supplement II to Lockheed Report No. SP/432514 covering the Command Radio System, Navigation Radio System, Fire Control System, I.F.F. Radar System, J-4 Compass System, and Missile System.

Contract placement is anticipated in June 1957. Anticipated delivery is April 1958.

F-104-3, -4 and -5 Mobile Training Units

Aircraft schedule changes have altered delivery requirements for these MTU's. Hq USAF has approved the following schedule:

1 ea - February 1958, 1 ea - March 1958, and 1 ea - April 1958.

F-104A Cockpit Procedure Trainers

Total on contracts: Two (2) type MF-12, Six (6) type MF-12A.

STATUS: Two (2) type MF-12 delivered to date. Scheduled delivery of six (6) type MF-12A as follows: 2 ea - May 1957, 1 ea - August 1957, 1 ea - September 1957, 2 ea - October 1957.

Programmed for Procurements: Three (3) type MF-12A in FY 57 and two (2) type MF-12A in FY 58. Forecast delivery is as follows: 1 ea - 3rd Quarter FY 58, 1 ea - 4th Quarter FY 58, 1 ea - 1st Quarter FY 59, 2 ea - 2nd Quarter FY 59.

NOTE: CPT's in 25th aircraft configuration are type MF-12.
CPT's in 36th aircraft configuration are type MF-12A.

2. (UNCLASSIFIED) Training

- a. Reference paragraph 2d, F-104 Weapons Phasing Group Minutes dated 10 April 1957. Four courses on the J-79 will be implemented at Chanute AFB. Course number, title, course length in academic weeks, and starting dates follows:

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- (1) SSL3250-39, J-79 Engine F&O Maintenance (F-104)
Four Weeks, Starts 7 August 1957.
- (2) SSL3270-1, J-79 Engine Organizational Maintenance (F-104)
Three Weeks, Starts 21 August 1957.
- (3) SSL3270-2, J-79 Engine F&O Maintenance and Control
System (F-104), Eight weeks, Starts 7 August 1957.
- (4) SSL3270-3, J-79 Engine Organizational Maintenance and
Control System (F-104), Six weeks, Starts 21 August 1957.
- b. A course SM43270-7, Title, J-79-GE-3 Engine Control, will
be conducted by General Electric at Evendale, Ohio. Two
classes, starting 22 May 1957 and 13 June 1957 each of
fifteen academic days duration will train a total of
sixteen personnel. Equivalent training will be available
in the latter portions of Chanute AFB courses SSL2270-2
and SSL2270-3.
- c. Lowry AFB will conduct training on the Fire Control System
in course AL32230M starting in August 1957. Plans for
implementation of Course SS32250-8 have been discontinued.

3. (UNCLASSIFIED) ECP STATUS

<u>ECP NO.</u>	<u>CLASS</u>	<u>TITLE</u>	<u>STATUS</u>	<u>REMARKS</u>
LH-F104A/B-138	IV	Ejection Seat-Install of Imp. Mod. C-1	Returned to LAC for add tech- nical info	34th & sub; 2nd B & subs plus cer- tain test acft
LH-F104A/B-284	IV	Aileron Control Friction Install of Prov to Reduce	In process	36th & subs; 2nd B & subs
LH-F-104A/B-289	IV	Seat Belt Tie-down Strap	Approved 4-15-57	18th & sub; 1st B & subs
LH-F104A/B-307	IV	Auto Pitch Actuator- Install of Increased Force Prov.	Approved 5-10-57	36th & subs; 2nd B & subs plus certain test acft
LH-F-104A-313	IV	Forebody Side Bending Capability Increase - Install of	Approved 5-7-57	18th & subs
LH-F104A/B-314	IV	Auto Eng By-Pass Flap Control Install of	Returned to LAC for add. tech info	36th & subs; 2nd B & subs; plus certain test acft
LH-F104A/B-344	IV	Radar Ind Filter Day & Night Oper - In- stall of	In process	36th & subs; 2nd B & Subs

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<u>REP NO.</u>	<u>CLASS</u>	<u>TITLE</u>	<u>STATUS</u>	<u>REMARKS</u>
LH-F100A/B-287	IV	Stability Aug & APC Syst. Rev. Incorp.	In process	36th & subs; 2nd B & subs plus Proj Chase
LH-F100A/B-300	IV	Stick Shaker-Pitch up Warning Install of	In process	36th & subs; 2nd B & subs; plus Proj Chase
LH-F100A/B-406	IV	Air Start Capability-Increase-Install of	In process Recd 5-7-57	Eff. all acft. Prod. eff. approx 21th & subs; 2nd B & subs
LH-F100A-45	V	Pylons, Underwing Ext Stores Sup of	Approved 4-26-57	77th & subs; 2nd B & subs
LH-F100A-125	V	Aux Fuel Tank - Install	Approved 5-8-57	35th & subs
LH-F100A/B-65	V	Data Link Receiver-Install of	In process Recd 5-7-57	291st & subs; 53rd B & subs
LH-F-100A/B-93	V	Navig. Set TACAN - Install of	In process Recd 5-6-57	319 & subs; 79th B & subs
LH-F100A/B-158	V	Data Link Read-out on Radar Scope - Install of	In process Recd 5-7-57	291st & subs; 26th B & subs

4. (CONFIDENTIAL) Flight Test Program

Four costly F-100A aircraft accidents marred the F-100 test program during this period. Article 19, a Phase VII aircraft was destroyed on 2 April 1957. Pilot ejected after being unable to get a successful air start. Article 1, an extensively instrumented aircraft, was destroyed in a hard landing on 25 April 1957. Pilot was uninjured. Article 8, another highly instrumented aircraft was destroyed on 1 May 1957. Pilot ejected when control was lost due to failure of the right tip tank. Article 13, the AFAC FCS aircraft, was damaged in a belly landing. The gear failed to extend. The pilot was uninjured. These accidents and the great emphasis placed on determining solutions to the problems plaguing the F-100 prior to its delivery to the Tactical inventory resulted in a complete realignment of the F-100 test program. The contractor will have 15 F-100's at his disposal. Three will be used briefly then return to their original intended use. These are Articles 12, the Phase IV stability & control aircraft; and Articles 39 & 40, the Class OZ aircraft for ATC. A new F-100A aircraft allocation chart has been prepared and will be distributed to the appropriate agencies. The Air Force test agencies have an aircraft inventory of four aircraft to date. Article 9 at WADC, which is being scheduled to go through the Project Chase modification, Article 14, the armament aircraft at AFAC; and Articles 11 and 17, the Phase IV and Phase VI aircraft at AFPTC. Six F-100's are scheduled for delivery during May 1957; eight during June 1957 and 10 during July 1957. (CONFIDENTIAL)

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Significant progress continues to be made in the testing of the P-104/missile combination. The contractor unguided firings during this period consisted of:

- One (1) missile fired from right side at 1.65 Mach and 54,000 feet.
- One (1) missile fired from right side at 1.8 Mach and 54,000 feet.
- Salvo launch of 2 missiles at 1.6 Mach and 44,000 feet.
- Salvo launch of 2 missiles at 1.6 Mach and 64,000 feet.

All launches were satisfactory. Three jettison flights were also made during this period, two at 24,000 feet and 0.57 Mach and 0.9 Mach and one at 44,000 ft at 1.4 Mach. All jettisons were clean and cleared the aircraft wing tip by 3 - 5 feet.

As anticipated in the last report, guided missile firings were performed in the 80-missile program at NOTS, China Lake, Calif. These firings consisted of:

1. Missile fired at target rocket. Launch altitude was 53,000 ft and launch speed 1.4 Mach. The missile missed the target rocket by approximately 10 feet.
2. Missile fired at target rocket. Launch altitude was 57,000 ft and launch speed 1.5 Mach. The missile missed the target rocket by approximately 40 feet.
3. Missile fired at an F6F Drone with wing tip flares. Target altitude was 18,000 feet. The P-104 was on a Tail Chase at 240 Knots and an estimated slant range of 10,000 feet. The missile intercepted the flares and the spotting charge actuated at Intercept. The missile test program has been expanded to include guided firings during the Phase VI testing at AFFTC and FCS testing at AFAC. The testing at AFAC suffers a delay in that Article 13, the FCS aircraft was damaged as mentioned above. (CONFIDENTIAL)

The start of the spin testing by the contractor continues to be delayed due to an unreliable spin chute system. A chute ejector device was ineffective when cold-soaked at 40,000 feet. The contractor intends to remedy this problem by using a catapult system to deploy the spin chute. (UNCLASSIFIED)

Aerial gun firing has not been too successful. Although the debris has been found to stay clear of the dust inlets, it scratches and nicks the underside of the fuselage. More seriously, the ventral fin is directly in the path of the debris and has suffered major damages during the air firing. To protect the ventral fin, the contractor intends to use a steel leading edge. Furthermore, a deflector plate is being tested to determine its effectiveness in deflecting debris away from the underside of the fuselage. Burst of 75 rounds are being fired now and the firing envelope has been extended from 15,000 feet to 40,000 feet. Supersonic firings were accomplished at 1.2 and 1.4 Mach numbers. In testing gas concentration the contractor has fired bursts of 100 rounds. Full complement firing at 3 G - 2 sec. bursts accomplished on 13 May 1957. (CONFIDENTIAL)

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In other tests, the contractor has made some progress. In the emergency dynamic testing the speed-altitude envelope has been extended to 1.03 Mach at 10,000 feet, 1.56 Mach (700K) at 24,000 feet, 1.45 Mach (700K) at 20,000 feet and 1.3 Mach at 15,000 feet. Inertial coupling testing of 60% aileron throw has been successfully completed. Rolls were performed at .7 to .8 "g" entry. Rolling performance was improved but fails to meet the requirement of 100° bank angle in 1 second and the roll rate of 150°/sec. The testing of the air conditioning package is in full swing now. The efficiency of the temperature selector, the effect of engine speed on cockpit pressure differential and the maximum cockpit cooling and heating in both manual and automatic temperature selector position are all being tested. The ram air turbine has been released 81 times to date. Most releases were during the landing phase and has resulted in only determining the minimum speed at which the ram air turbine will lock-out. The testing of an instrumented ram air turbine is underway and it is anticipated more realistic data will soon be available. Radar testing during this period has been more successful than the last period. Radar detections are being obtained at ranges as high as 15 miles. Most detections are in the 9 to 11 mile range. To check the loss of radar lock-on due to gun firing, the gun barrel was rotated in flight. The power reduction due to this rotation was sufficient to break radar lock-on. A fix for this deficiency, which reduces the amount of capacitance for adequate filtering of the regulated voltage transient, is being flight tested. (CONFIDENTIAL)

No flights were conducted on the Phase V aircraft. This aircraft, Article 9, is being shipped to the contractor for modification prior to the hot temperature testing at Edwards AFB, Calif., in July and August 1957. (UNCLASSIFIED)

Over 100 hours has been accumulated on Article 17, the Phase VI aircraft. In the last progress report the in-commission rate was 18.5%. Major emphasis on testing was put on establishing the feasibility of making a successful flame-out landing. Analysis of preliminary data indicates that dead engine landings are feasible; however, much more testing must be accomplished before a firm decision can be made to recommend dead engine landings in the F-104 aircraft. Some of the major problems encountered during Phase VI testing are (1) landing gear retraction. The landing gear has to be retracted on nearly all take-offs to completely retract the gear. Recent reviews of the gear system may result in eliminating this problem. (2) Intermittent operation of the yaw damper which caused shaking at high speed. This deficiency has been improved by replacing the 641 GPM yaw damper servo with a 1 GPM servo. (3) APC unreliability. Three failures have occurred thus far, an integrative rate gyro, failed amplifier and cracked rams. This may not be indicative of the reliability of the APC system in production aircraft since a bread board model is installed on Article 17. (UNCLASSIFIED)

Data presented in this report are obtained from the Lockheed Weekly Flight Test Reports and Progress Reports from WADC and AFFTC. (UNCLASSIFIED)

UNCLASSIFIED

5. (UNCLASSIFIED) Project 79

A project has been established at the first tactical base (Hamilton) receiving F-104 aircraft for the purpose of refining present horizontal repair procedures, developing new repair procedures and techniques, recommending and developing new tooling as required to advance the repair capabilities of the J-79 engine, and recommending engineering changes that will contribute to the maintainability of the engine. OCAMA has been assigned the monitorship of this project which has been assigned the short title "Project 79". Reports on developments in this project will be given to the group at each WSPG meeting.

6. (UNCLASSIFIED) GFAE Cartridge MK-1 Mod 2 (93-360) has been deleted as GFAE for all production F-104 aircraft due to the rigid requirement for receiving, storing and shipping as "loose equipment", all forms of pyrotechnics. In view of lack of approved pyrotechnic storage facilities at LAC (Burbank), it has been deemed advantageous to declare subject item as "base requisitioned" for those activities receiving F-104 aircraft. All other pyrotechnic items required are installed in the F-104 at time of delivery from contractors' Palmdale facility.

7. (UNCLASSIFIED) F-104A Aircraft AFSD Action as of 10 May 1957. SMAMA

<u>TEST LOCATION</u>	<u>AFSD NO.</u>	<u>DATE CANCELLED</u>	<u>ITEMS</u>	<u>D/L</u>	<u>PERCENT</u>	<u>DATE INITIATED</u>
<u>Hamilton AFB</u>						
A/cft Spares-FGP/GFAE	561118	Open	242	1 May 57	97	12 Sep 56
GSE	561117	Open	322	1 May 57	65	12 Sep 56
Engine Tools	561127	Open	103	1 May 57	92	12 Oct 56
Table XI	5611430	Open	962	1 May 57	26	17 Jan 57
Spares GFP/GFAE	5611450	Open	2318	1 May 57	8	18 Jan 57
Table III	GE Co Dir	Open	565	1 May 57	95	10 Sep 56
Table XVI	512042	Open	212	15 Dec 56	97	12 Nov 57
<u>Westover AFB</u>						
GSE	5611350	Open	347	1 Jun 57	25	7 Jan 57
Engine Tools	5611360	Open	105	1 Jun 57	35	7 Jan 57
Table II	5611370	Open	3058	1 Jun 57	18	7 Jan 57
Table XI	5611400	Open	962	1 Jun 57	19	7 Jan 57
Table XVI	5611440	Open	608	1 Jun 57	5	7 Jan 57
Table III	5611400	Open	565	1 Jun 57	84	16 Jan 57
<u>Convaair</u>						
GSE	5611380	Open	70	1 Mar 57	32	7 Jan 57
Table II	5611390	Open	3260	1 Mar 57	31	7 Jan 57
Table III	GE Co Dir	Open	565	1 Mar 57	87	16 Jan 57

UNCLASSIFIED

UNCLASSIFIED

<u>TEST LOCATION</u>	<u>AFSD NO.</u>	<u>DATE CANCELLED</u>	<u>ITEMS</u>	<u>D/L</u>	<u>PERCENT</u>	<u>DATE INITIATED</u>
<u>Larson AFB</u>						
Engine Tools	5611460	Open	105	1 Aug 57	25	12 Feb 57
Table XI	5611470	Open	575	1 Aug 57	53	12 Feb 57
Table XVI	5611480	Open	606	1 Aug 57	4	12 Feb 57
GSE	5611490	Open	473	1 Aug 57	13	12 Feb 57
Table II	561153	Open	3293	1 Aug 57	16	12 Feb 57
Table III	GE Co Dir	Open	565	1 Aug 57	0	12 Feb 57
<u>Tyndall AFB</u>						
Engine Tools	5611590	Open	105	1 Mar 57	55	12 Feb 57
Table XI	5611690	Open	566	1 May 57	15	19 Mar 57
Table II	5611700	Open	2820	1 May 57	15	19 Mar 57
Table XVI	5611720	Open	605	1 May 57	13	19 Mar 57
GSE	5611740	Open	360	1 May 57	14	19 Mar 57
Table III	GE Co Dir	Open	565	1 May 57	77	19 Mar 57
<u>Holloman AFB</u>						
Table II	561171	Open	2831	1 Jun 57	0	19 Mar 57
Table XVI	561173	Open	608	1 Jun 57	0	19 Mar 57
GSE	561175	Open	578	1 Jun 57	4	19 Mar 57
Table III	None	-----	-----	1 Jun 57	0	-----
Table XI	Reqn	-----	-----	1 Jun 57	0	-----
Engine Tools	None	-----	-----	1 Jun 57	0	-----

F-104A AIRCRAFT CONTRACT ACTION AS OF 10 MAY 57

<u>TEST LOCATION</u>	<u>CONTRACT NO.</u>	<u>ITEMS REQN</u>	<u>PERCENT COMPLETE</u>	<u>LAC REPORT</u>
				3 Apr 57
				28 Feb 57
<u>LAC-Palmdale</u>				
Spare Parts - CFE	AF 27378 A	1886	97.9	98.5
GSE	AF 27378 C	144	74.6	83.3
<u>NACA - Edwards AFB</u>				
Spare Parts - CFE	AF 27378 A	885	97.5	98.6
GSE - CFE	AF 27378 C	108	83.1	87.0
<u>Eglin AFB</u>				
Spare Parts - CFE	AF 27378 A	1813	96.0	97.2
GSE - CFE	AF 27378 C	240	81.4	73.4
<u>WADC - Wright-Patterson AFB</u>				
Spare Parts - CFE	AF 27378 A	1420	96.2	97.0
GSE - CFE	AF 27378 C	132	72.9	84.0

UNCLASSIFIED

<u>TEST LOCATION</u>	<u>CONTRACT NO.</u>	<u>ITEMS REQD</u>	<u>PERCENT COMPLETE</u>		<u>LAC REPORT</u>
			<u>LAC REPORT</u>	<u>LAC REPORT</u>	
				28 Feb 57	3 Apr 57
<u>AFFTC - Edwards AFB</u>					
Spare Parts - CFE	AF 27378 A	1931	96.7		97.6
GSE - CFE	AF 27378 C	133	80.0		81.2
<u>G. E. Edwards AFB</u>					
Spare Parts - CFE	AF 27378 A	847	98.0		98.2
GSE - CFE	AF 27378 C	107	81.8		85.0
<u>PROJECT NEEDLE POINT</u>					
Spare Parts - CFE	AF 27378 A	3788			87.0

F-101A AIRCRAFT AFSD ACTION AS OF 10 MAY 57

<u>TEST LOCATION</u>	<u>AFSD NO.</u>	<u>DATE</u>		<u>PERCENT</u>	<u>DATE INITIATED</u>
		<u>CANCELLED</u>	<u>ITEMS</u>		
<u>LAC-Palmdale*</u>					
Acft Spares-GEP/GFAE	5610500	1 Apr 56	407	3 Jan 56	95 7 Nov 56
GSE	5610490	1 Apr 56	215	3 Jan 56	90 28 Oct 55
Eng Spares	GE Dir	Open	967	3 Jan 56	96 25 Jul 56
Eng Tools	GE Dir	Open	66	3 Jan 56	98 25 Jul 56
<u>G.E. Edwards AFB*</u>					
Acft Spares-CFP/GFAE	5610760	1 Sep 56	155	1 Jun 56	92 30 Mar 56
GSE	5610750	1 Aug 56	42	1 May 56	90 30 Mar 56
Eng Spares	GE Dir	Open	879	1 May 56	96 25 Jul 56
Eng Tools	GE Dir	Open	155	1 May 56	95 25 Jul 56

*NOTE 1: Automatic supply action has been cancelled for LAC, Palmdale, and GE, Edwards through agreements between SMAMA and those agencies. The balance of the unsupplied items will be requisitioned if still required.

NACA - Edwards AFB**

Acft Spares-GFP/GFAE	5610780	1 Sep 56	805	1 Jun 56	80 30 Mar 56
GSE	5610770	1 Sep 56	48	1 Jun 56	91 30 Mar 56
Eng Spares	GE Dir	Open	647	1 Jun 56	93 7 Mar 57
Eng Tools	GE Dir	Open	18	1 Jun 56	100 7 Mar 57

WADC Wright-Patterson AFB**

Acft Spares-GFP/GFAE	5610830	1 Oct 56	1014	1 Jul 56	76 27 Apr 56
GSE	5610820	1 Oct 56	152	1 Jul 56	89 27 Apr 56
Eng Spares	GE Dir	Open	840	1 Jul 56	95 25 Jul 56
Eng Tools	GE Dir	Open	135	1 Jul 56	89 25 Jul 56

UNCLASSIFIED

<u>TEST LOCATION</u>	<u>AFSD NO.</u>	<u>DATE CANCELLED</u>	<u>ITEMS</u>	<u>D/L</u>	<u>PERCENT</u>	<u>DATE INITIATED</u>
<u>Eglin AFB**</u>						
Acft Spares-GFP/GFAE	5611070	1 Nov 56	1108	1 Sep 56	71	16 Jul 56
GSE	5611060	1 Nov 56	156	1 Sep 56	68	16 Jul 56
Eng Spares	GE Dir	Open	857	1 Sep 56	97	25 Jul 56
Eng Tools	GE Dir	Open	115	1 Sep 56	88	25 Jul 56
<u>AFFTC-Edwards AFB**</u>						
Acft Spares-GFP/GFAE	5611030	1 Nov 56	1327	1 Aug 56	82	23 Jun 56
GSE	5611020	1 Nov 56	69	1 Aug 56	76	23 Jun 56
Eng Spares	GE Dir	Open	1235	1 Aug 56	98	11 Dec 56
Eng Tools	GE Dir	Open	212	1 Aug 56	90	11 Dec 56

**NOTE 2: Automatic supply action has been cancelled for NACA, WADC, Eglin and AFFTC with all outstanding items placed on AF 2042 requisitions and/or ASI for direct shipment to respective consignees.

8. (UNCLASSIFIED) F-104 Engine Spares and Ground Support Equipment as of 30 April 1957. (GE)

	<u>TOTAL</u>	<u>SHIPPED</u>	<u>BALANCE</u>	<u>% SHPD</u>	<u>COMPLETION DATE</u>
LOCKHEED	66	65	1	98	1 June 57
EDWARDS, GE	155	148	7	95	1 June 57
EDWARDS, AF	212	191	21	89	30 Sep 57
WADC	135	122	13	90	30 Sep 57
EGLIN	135	120	15	88	31 Jul 57
<u>OPERATIONAL BASES</u>					
HAMILTON	99	87	12	88	1 Aug 57
TYNDALL	99	*63	36	63	6 Sep 57

NOTE 1: * Of the 63 shipped, 42 were sent to prime class prior to receipt of authority ship direct to Tyndall.

2: Other operational units should requisition from prime classes.

UNCLASSIFIED

V. AGENDA FOR NEXT MEETING (UNCLASSIFIED)

1. All items requiring continued action as listed in paragraphs I and II above.
2. Additional items may be submitted to the chairman for inclusion in the agenda; however, only in case such items require specific preparation and/or study will the chairman distribute a supplemental agenda. Items of such nature will be submitted sufficiently far in advance to allow preparation of reply or status reporting.
3. Each person assigned any action or making a report to the group will prepare his presentation in typewritten form and submit a copy of same to the chairman at the beginning of the meeting.
4. Next meeting will be held on 27 June 1957 in Conference Room C, Building 262, (Hq AMC), FLOCK, Area "A", Wright-Patterson AF Base, Ohio at 0900 Hours. This constitutes official notification of the meeting. If for any reason the meeting date or place is changed, notices will be issued.

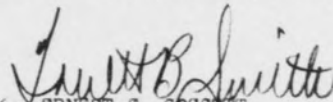
VI. ROSTER OF ATTENDANCE (UNCLASSIFIED)

<u>Name</u>	<u>Rank</u>	<u>Organization</u>	<u>Phone</u>
R. Weinstein	Civilian	Hq USAF, AFAMA-2	74830
E. A. McGough	Colonel	Hq TAC, TORQ-G	3217
P. E. Adams	Lt Colonel	TAC Rep - Sowards AFB	
J. W. Andrew	Major	Hq IAC, TMMT-F	22145
H. I. Diesel	Civilian	Topeka AFD, ODSMW	243
V. L. Smith	Civilian	Topeka AFD, CDMSA	483
R. T. Gimperling	Civilian	Hq AMC, MCPRW	33106
T. B. Smith	Captain	Hq AMC, MCPHFF	26148
E. E. Gossett	Lt Colonel	Hq AMC, MCPHFF	20119
E. Toops	Civilian	Hq AMC, MCSREF	59211
G. P. Hill	Civilian	Hq AMC, MCMAMF	72270
P. E. Jasper	2d Lieut	Hq AMC, MCPEP-C	31386
D. E. Lians	Civilian	Hq AMC, MCSEEF	63207
W. M. Fischer	Civilian	Hq AMC, MCPEP-C	20115
L. P. Knoles	Civilian	Hq AMC, MCPRW	33106
E. M. White	Civilian	Hq AMC, MCPHFF	26148
G. H. Weaver	Civilian	AFPR Lockheed, SMPRP	83942
H. Roberts	Civilian	SMAMA, SMFW	24111
C. H. Sheldon-	Civilian	OCAMA, OCSEB	8457
A. J. Sanderson	Civilian	OCAMA, OCMW	8867
M. Lerner	Captain	AFPR, GE, Evendale	10948
R. J. Gangwish	Civilian	AFPR, GE, Evendale	3574
L. H. Arnold	Civilian	Lockheed, Dayton Rep	AD 5135
W. M. Hannan	Civilian	Lockheed, Burbank	61312
W. A. Soetens	Civilian	Lockheed, Sacramento	77818
E. L. Fish	Civilian	Lockheed, Burbank	
J. L. Neill	Captain	Hq TTAF, TTORQ-A	348
S. F. Rullo	Civilian	TTAF, Chanute AFB, 20C	2707
J. C. Scheuer	Captain	Hq ADC, ADMAC-AB	2033

UNCLASSIFIED

ROSTER OF ATTENDANCE (CONT'D)

<u>Name</u>	<u>Rank</u>	<u>Organization</u>	<u>Phone</u>
N. K. Heath	Colonel	ADC, Edwards AFB, FTFAD	23071
L. K. Nesselbush	Lt Colonel	Hq ADC	
V. E. Chandler	Major	Hq ADC (Edwards AFB)	45321
W. A. Cobb	Major	Hq APGC, DCS/O-TR	27171
W. W. Metz	Civilian	Hq AFAC, ACYP	5209
R. J. Whitsitt	Civilian	GE, Dayton Rep	WA 3171
W. B. Jamison	Civilian	GE, Evendale	1619
P. V. Winter	Civilian	GE, Evendale	3378
E. Claxton	Civilian	GE, Evendale	
R. B. Smith	Civilian	GE, Los Angeles	
R. L. Grismer	Civilian	GE, Evendale	
H. E. Schumacher	Civilian	WADC, WCOPR-3	30271
E. W. Lindner	1st Lieut	WADC, WCLPR-3	30271
L. W. Vance	Civilian	ARDC, RDZSFD	33179
N. B. Robins	Lt Colonel	AFFTC, Edwards AFB, FTFP	37491
R. W. Soderberg	Lt Colonel	ARDC, Det #1, RDZSFD	39169
P. B. McKee	Civilian	ARDC, Det #1, RDZSFD	39169


 ERNEST E. GOSSETT
 Lt Colonel, USAF
 F-104 WSPG Chairman

UNCLASSIFIED

DISTRIBUTION LIST

18 Cys Hq USAF, AFMPP-WS (12Cys), AFDRD-TA (2 Cys), AFMSS-OP (2 Cys) and
AFCIS-B (1 Cy), AFAMA-2A (1 Cy)
5 Cys OTIG, AFCDI-B-2 (4 Cys) and AFCPI-D, Lt Col Lindberg (1 Cy)
25 Cys CINC USAFE, MFSSO-A (12 Cys) and MMTP (7 Cys) and EMMT-P (6 Cys)
5 Cys Comdr AMFEA, EFZ
4 Cys Comdr AAC
7 Cys Hq 12th AF (MMT)
23 Cys Comdr AMFPA APO 323 (PFM)
5 Cys Comdr TAC (1 Cy) and RQ (4 Cys)
5 Cys Comdr ADC (1 Cy) and RQ (4 Cys)
3 Cys Comdr APGC, DCS/O-TR (2 Cys) and DCS/M (1 Cy)
6 Cys Comdr ARDC (4 Cys), Log Plans Off (RDSML) (1 Cy) and RDZA (1 Cy)
2 Cys Comdr AFFTC
5 Cys Comdr AFAC (2 Cys), ACT (1 Cy), ACR (1 Cy) & ACRM (1 Cy)
2 Cys Comdr AFPTRC, Attn: PTDOR, Box 1557, Lackland AFB, Texas
3 Cys Comdr ATC (1 Cy) and ATOFT-C (2 Cys)
5 Cys Comdr TTAF
3 Cys Comdr CTAF
1 Cy Comdr Nellis AF Base, 3595th Combat Crew Tng Wg, Nevada
3 Cys Comdr OCAMA (1 Cy) and OCFW (2 Cys)
4 Cys Comdr SMAMA (1 Cy), SMFW (1 Cy), SMLLD (1 Cy) and SMSWL (1 Cy)
2 Cys AFPR Lockheed Acft Co. Burbank, California
6 Cys MCPHFF - Lockheed Acft Co., Dayton
1 Cy AFPR, General Electric, Evendale, Attn: Capt Lerner
10 Cys MCPHFF - For Chairman's Distribution
1 Cy M CPRMP
1 Cy Each in attendance
1 Cy M CPRP
1 Cy M CPRW, Mr. Kester
1 Cy M CPHD
1 Cy M CPEA
1 Cy M CPHF
2 Cys M CPHH
2 Cys M CPED, Col Larson
1 Cy M CPEP
1 Cy RDZSPO
1 Cy M CIMF
3 Cys Topeka AFD, Attn: CDF
2 Cys W CCE
1 Cy W CLO-7
1 Cy W CLPR-3
6 Cys W CLOO-4
1 Cy M CFP
1 Cy M CFO
1 Cy M CMTM
2 Cys M CMAM
8 Cys M CSRBF
1 Cy M CPHF, Col Downs
1 Cy M CPZRP, Mr. St. John
1 Cy M CQFA

UNCLASSIFIED

APPENDIX "A"

F-104 Phasing Group Ground Support Equipment (GSE) Minutes for Meeting on 14 May 1957

I. OPEN ACTION ITEMS

Item No. GSE 4-55-2A - Engine Maintenance Support Problems (UNCLASSIFIED)

- a. Problem Presented: Using organizations' field level maintenance require tools and support equipment not presently developed for the J-79 GE-3 engine.
- b. Progress to Date: Model 3110 Workstand was demonstrated at GE 15-19 April 1957. TAC indicates that the Model 3110 is not desired unless absolutely required, and if required will be used only for minor repair. The 3110 is over twice the weight of 3100 A Workstand and compromises TAC's mobility. The use of the 3110 stand will be accepted if it is proved that the 3100 A stand cannot satisfactorily do the job. (Use of the 3110 stand in lieu of the 3100 A stand with the J-79 engine is based upon USAF policy directing standardization of ground handling equipment between weapon systems.)

The redesigned 4500 Installation, Removal, and Rollover Adapter has been designated as the 4510 Adapter. LAC has been requested to demonstrate utilization of this Adapter in transfer of the engine to the 12000 A Run-Up Stand during the demonstration to be held at George AFB 4-5 June 1957.

- c. Action to be Taken: LAC will demonstrate the 4510 Adapter during the 12000 A demonstration. WSPO will continue to monitor this problem area, and will assist as necessary in the implementation of "Project 79". OCAMA is prime for establishing "Project 79" engine maintenance prototyping. SMAMA will establish with OCAMA the phase-in of the 3110 stand.
- d. Action Agency: MCM (Mr. Hill), SMAMA (Mr. Roberts), LAC and WSPO.
- e. Forecast of Completion: Report at next Meeting.

UNCLASSIFIED

Item No. GSE 7-56-2 - Cockpit and Electronic Cooling (UNCLASSIFIED)

- a. Problem Presented: Equipment necessary to provide adequate ventilation and cooling for the pilot and electronics equipment must be provided during ground maintenance and alert status of the aircraft.
- b. Progress to Date: ECP #130 to provide necessary plumbing and blower for utilization of the vent suit has effectivity for 1st ADC aircraft. WSPO has recommended the MA-1A Air Conditioner for cooling the electronics compartment when ambient temperature exceeds 95°-100°F and for cooling cockpit occupied by pilot clothed in vent suit on alert status when ambients exceed approximately 70°F. However, ADC representative states that simultaneous support of four (4) aircraft by the MA-1A is not compatible with present ADC operation; therefore, SMAMA has agreed to authorize procurement of MA-7 and MA-8 Air Conditioners. MC-1 and MD-1 Heaters will be procured for cooling support of the aircraft electronics compartment when ambients do not exceed those noted above.
- c. Action to be Taken: ADC will justify their disapproval of the MA-1A Air Conditioner and will establish their quantity requirements for the MA-7 and MA-8 Air Conditioners, and the MC-1 and MD-1 Heaters with SMAMA. Upon receipt of this information, SMAMA will take action to assure timely support of the ADC aircraft. TAC will establish their requirements for this type of equipment.
- d. Action Agency: SMAMA (Mr. Roberts), ADC, TAC, and WSPO.
- e. Forecast of Completions: 1 July 1957 - Report next Meeting.

UNCLASSIFIED

UNCLASSIFIED

Item No. GSE 8-56-3 - Engine Run-Up Stand (UNCLASSIFIED)

- a. Problem Presented: TAC does not consider the OCAMA engine run-up stand satisfactory from the standpoint of meeting mobility requirements.
- b. Progress to Date: Topeka has confirmed J-79 engine adaptation to the Air Log Model 12000 A Run-Up Stand; however, users have requested a demonstration. This action has not been accomplished, however, arrangements have been made by TAC for 4-5 June 1957.
- c. Action to be Taken: Major Evans will insure that a demonstration of the 12000 Run-Up Stand is accomplished at George AFB 4-5 June 1957. LAC has been issued shipping instructions for delivery of a J-79 engine to George AFB 22 May 1957 to allow time for Air Logistics to finalize J-79 adaptation prior to this demonstration.
- d. Action Agency: TAC (Major Evans)
- e. Forecast of Completion: Pending results of this demonstration. Report next meeting.

UNCLASSIFIED

Item No. GSE 11-56-1 - Critical Items of Equipment (UNCLASSIFIED)

- a. Problem Presented: Action is required to insure that certain critical items of tools and test equipment are made available to support the F-104 in the using organizations.
- b. Progress to Date: SMAMA is monitoring this problem to assure support of the aircraft for ADC. A presentation on the status of the support position of the F-104 for ADC was given by SMAMA to ADC at Colorado Springs on 30 April 1957. The Hamilton position was reported as good; however, due to the late ADC decision on the activation of Tyndall AFB, the support position of this base is questionable. Follow-on support for other ADC bases remains questionable. SMAMA is now making a bi-weekly report to ADC and the WSPO on this problem. Fourteen (14) additional suspect items have recently been added to this list. SMAMA was unable to forecast a get-well date on these items.

Certain CFE items have been reported in the doubtful support category; however, LAC indicated that every effort is being made to assure support of these items on a timely basis.

MCS (Mr. Toops) has agreed to work with LAC in an attempt to resolve the Federal Catalog problem. It was indicated that LAC will be given a deviation to ship certain CFE ground support items without Federal Catalog numbers, if it becomes necessary in order to assure timely support for ADC units.

- c. Action to be Taken: MCS (Mr. Toops) will continue to monitor this problem and will assist as necessary in resolving difficulties. SMAMA will follow-up on all items to assure their availability to ADC on a timely basis. SMAMA will make a presentation to AMC/ARDC on 28 May 1957 on this problem area.
- d. Action Agency: MCS (Mr. Toops), SMAMA (Mr. Roberts).
- e. Forecast of Completion: Report at next meeting.

UNCLASSIFIED

UNCLASSIFIED

Item No. GSE 4-57-2 - Outmoded or Inadequate Mechanics Hand Tools
(UNCLASSIFIED)

- a. Problem Presented: In previous Weapon System Field Maintenance Programs, many tools in the aircraft mechanics tool kit have been found to be dimensionally and design-wise unsuitable for proper maintenance. Poorly designed tools damage fittings, or cause difficulty in removal of items due to limited space.
- b. Progress to Date: Mr. Don Dickey, crew chief of the WADC Phase V F-104 in Alaska, briefed the group on deficiencies of ground support equipment and mechanics hand tools. The mechanics hand tools problem appears to be the result of surplus quantities of certain outmoded hand tools in the supply system, and the failure of base procurement to procure quality Class 17B hand tools.
- c. Action to be Taken: Mr. Toops (MCS) agreed to bring this problem to the attention of responsible parties. SMAMA will follow-up on their request for a revised listing of common hand tools for the F-104 from LAC. Upon receipt, this list will be checked against presently authorized hand tools to insure that this problem is resolved. SMAMA will check to see that adequate quantities of proper hand tools are authorized. WSPO will request information from WADC concerning deficiencies of ground support equipment.
- d. Action Agency: MCM - MCS (Mr. Toops), SMAMA (Mr. Roberts) and WSPO.
- e. Forecast of Completion: Report at next Meeting.

UNCLASSIFIED

Item No. GSE 4-57-3 - Hydraulic Test Stand (UNCLASSIFIED)

- a. Problem Presented: ADC requires that suitable hydraulic test stands be timely available for support of their aircraft.
- b. Progress to Date: The D-3 and D-4 test stands were originally provisioned for support of the F-104; however, these stands are not satisfactory without some modification. Topeka AFD advised that no D-3 and D-4 stands would be available. The MK-1 and MJ-1 stands have recently been selected for support of the F-104. Topeka AFD advised the availability date of these stands as December 1957. LAC has forwarded a listing of recommended interim support equipment, and SMMID is evaluating these recommendations.
- c. Action to be Taken: Based on the current date of delivery of F-104 aircraft to ADC, SMAMA will authorize the CFE procurement from LAC of a limited quantity of LAC recommended test stands to assure support of early ADC aircraft.
- d. Action Agency: SMAMA (Mr. Roberts), Topeka AFD, and WSPO (Captain Dillon)
- e. Forecast of Completion: 1 July 1957 based on LAC's recommendations, availability of CFE equipment, and SMAMA taking action as indicated on a timely basis. Report at next meeting.

UNCLASSIFIED

UNCLASSIFIED

II. ACTION ITEMS CLOSED

Item No. GSE 4-57-1 - Cross-Country Support Equipment For ADC
(UNCLASSIFIED)

Closing Action: SMAMA reported that the three (3) bases as listed by ADC had been instructed to requisition items of ground support equipment required for support of the F-104. SMAMA is in the process of filling these requisitions. No problem is seen in supplying this equipment.

III. INFORMATIONAL ITEMS

- A. (UNCLASSIFIED) The next F-104 GSE meeting will be held at Hq AMC on 26 June 1957 in Conference Room 103, Building 14, Area B at 0900 Hours.
- B. (UNCLASSIFIED) It is requested that each interested agency take the necessary action that assure that they are represented at these meetings. Non-attendance by ADC representatives hampered the progress in resolving certain problems affecting this command.
- C. (UNCLASSIFIED) Any new items for the agenda should be submitted before each meeting to Hq AMC, ATTN: MCPHFF. If this cannot be done, a typewritten report should be handed to the Chairmen during the regular meeting for inclusion in the minutes of the meeting.
- D. (UNCLASSIFIED) TAC requested a TTE Review. It was tentatively agreed that this would be held at LAC starting 8 July 1957.

UNCLASSIFIED

MAR 22 1957

DOC 134 ADCHR 57A

PRIORITY
PRIORITY
DATE 22

TO: SAC, [REDACTED]
FROM: SAC, [REDACTED]
SUBJECT: [REDACTED]

22 Mar 57

[REDACTED] - 20798

For SAC, [REDACTED]; for Det 21, [REDACTED]; for AFB C, Col Slocumb, AFB
Resident Rep. Subject is MB-1 Rocket configuration on F-101B air-
craft. On 18 Mar AFB C representatives conducted a briefing this [REDACTED]
on status of AFB C weapons systems. This briefing disclosed that an
MB-1 capability is not programmed until the 138 production aircraft.
This is not acceptable to this Command. The atomic weapon is the
primary armament for air defense. All AFB C F-101 aircraft must have
atomic configuration. In view of the extremely limited time available
for full integration of the MB-1 capability it is mandatory that the
proper emphasis and highest priority be accorded this problem. In
order to secure incorporation of the MB-1 into the first production
article this Command recommends that MB-1 efforts sup-
plant development

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of the secondary armament configuration. It is requested that this headquarters be advised of what action is being taken to obtain an MB-1 capability in all A/C F101 aircraft.

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303.10 *g/s*
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AG-24
A-830-19

DOC **239** ADCHR **37A**

Hurd
Act P+R 18 Jan 57
Info: IG, DG, DM
S-23 Jan 57
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Lush.

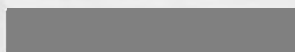
RR RJEDEN
DE RJEPHQ 223
FM HED USAF WASH DC
TO COMAIRDEF COM ENT AFB COLO

[REDACTED] FROM AFOOP OC F/2 51283
REFERENCE YOUR MESSAGE ADRSI A0017, DATED 14 JAN 57. 651
PROGRAM FOR DUAL ARMAMENT CONFIGURATION ON F-101B REMAINS FIRM.
DOOR DELIVERY IS PROGRAMMED TO BE CONCURRENT WITH AIRCRAFT DE-
LIVERY SCHEDULE. IT APPEARS THAT COMPLETE DUPLICATION OF DOORS
MAY BE UNNECESSARY AND THAT PROCUREMENT OF ALTERNATE ALL-GAR DOORS
SHOULD BE TAILORED TO ADC ANTICIPATED F-101B COMBAT READINESS.
THIS APPROACH WOULD ESTABLISH QUANTITATIVE REQUIREMENT FOR PERHAPS
60-75 PERCENT OF YOUR F-101B INVENTORY. REQUEST YOUR COMMENT ON ABOVE
PHILOSOPHY AND YOUR ANTICIPATED F-101B COMBAT READINESS RATE.
BT
132322Z JAN RJEPHQ

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TO DECLASSIFICATION.

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ADRSI-4, Hq ADC, 15 Apr 57, Subj: (U) Armament Configuration F-101B

RDEPD

1st Ind

APR 26 1957

Hq Air Research & Development Command, P. O. Box 1395, Baltimore 3, Md.

TO: Commander, Air Defense Command, ATTN: ADRSI-4, Ent Air Force
Base, Colorado

1. References:

a. Secret message, your Headquarters, ADRSI-4-00798, dated
22 March 1957, subject: < > MB-1 Rocket Configuration on F-101B.

b. Secret message, this Headquarters, RDESPF-4-30588-E,
dated 12 April 1957, same subject.

c. Secret message, Hqs USAF, AFIRD/ADJ7476, dated 22 July 1955,
subject: F-101B Armament Configuration Development. (Unclassified)

2. The primary problem of the delayed MB-1 capability for the
F-101B, as stated in your basic letter, is under consideration as in-
dicated by our teletype message (Reference 1b). We wish to emphasize
that priority of development of the secondary armament configuration
to obtain earliest operational capability was directed by Hqs USAF
(Reference 1a). In view of your desire that the priority of effort be
shifted to development of the primary armament configuration, we are
reviewing the F-101B and F-106 test programs and the allocation of
MB-1 test rounds to determine the best course of action. If concurrent
MB-1 development programs for both aircraft cannot be supported, their
relative priority must be established by your Command and Hqs USAF.
We will advise you approximately 1 May 1957 of the results of our re-
view of these programs. (Confidential)

3. With reference to your suggestion that parallel development
of the MB-1 ejection and rail launch systems for the F-101B be pursued,
the ARDC position is that ejection launch is feasible and we are taking
no more than the usual moderate risk in proceeding with that development
only. There are several reasons why ejection launch for the F-101B was
decided on early in the program. The F-101B is a modified version of
an earlier aircraft, the F-101A. As a result, the armament bay and its
subsequent utilization, while being what we consider the best solution
under the circumstances, leave much to be desired. In order to best
utilize the available space and to avoid the complexity, weight, and
space requirements of rail launch, while providing for the maximum
number of missiles and rockets, ejection launch from the rotating door
was decided upon. Testing to date has so far justified our decision.

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AMSL-4, In AMS, 15 Apr 57, Subj: (U) Arrestment Configuration F-101B

MAY 21 1957

The F-106A, on the other hand, has also been ear-marked for ejection launch. However, in this case, we have been conducting MB-1 rail/ejection launch tests for some 18 months on several modified F-106A aircraft, with direct application to the F-106A program. These F-102 tests have produced results to date which have greatly advanced the F-101B ejection launch program. In addition the results of the rail launch tests with the F-106A are directly applicable to the F-101B, should the ejection launch prove not feasible. Finally, dilution of engineering and test effort at this time to proceed with both systems on the F-101B would in all probability result in a later operational date for either system. (Confidential)

FOR THE COMMANDER:

Signed

MELVIN F. McNICKLE
Colonel, USAF
Assistant for Aircraft Systems
Deputy Commander/Weapon Systems

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NOV 14 1957 57A

FM COMARDC DET 1
TO COMADC


5549 6 Jun 57

SECRET FROM RDZSFF-30893-E. Personal from Gen. Estes to Gen. Lynn.
At Hq ARDC for Gen Boyd. At ADC to ADRSI-A and AIDMAC-CD. Subject: MB-1
Capability in F-101B Interceptor. Reference first indorsement of 26 Apr
57 by Hq ARDC to ADC letter ADRSI-A, Subj: "Armament Configuration F-101B.
Also msg this detachment RDZSFE-5-30774, 31 May 57. This message pro-
vides further interim information and consists of three parts. PART I.
In mid-April 1957 Douglas Aircraft Company was requested through Hq Air
Materiel Command to provide information on the availability of 487 addi-
tional MB-1 test rounds. This quantity was based on concurrent F-106/MB-1
and F-101B/MB-1 test programs and includes McDonnell requirements to ad-
vance the effectivity of MB-1 configuration to the first ADC F-101 air-
plane. Configuration of these R&D test rounds was that required to produce
an optimum amount of test data. On ARDC/AMC/Douglas conference 17 May 57
at WPAFB established that the availability of R&D test rounds was grossly
incompatible in that deliveries would be zero from Sept 1957 through Feb
1958. PART II. As a result a USAF/ADC/AMC/ARDC/Douglas conference was
held 22-23 May 57 at Douglas - Santa Monica to reconfigure some of the
487 test rounds. Every available source of MB-1 components was considered
including those intended for tactical use. Based on best estimates of
Douglas MB-1 production capability it was determined that the gap in R&D
test rockets could be filled providing the following diversions of MB-1
tactical items by Hq USAF could be made: (a) 176 tactical rockets less war-
heads from Douglas production in excess of estimated ADC requirements
and (b) 41 MA-1 tactical dummy warheads including demolition and spotting

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chargex intended for immediate use in your F-89J pilot proficiency program. Information copies of your concurrence in this approach (msg to Hq USAF 3 Jun 57) have been forwarded from Hq AMC. McDonnell concurrence in the suitability of the substituted rounds has been received by the F-101 WSPG. PART III. In view of the foregoing and assuming Hq USAF concurs in the diversions of Part II above, it appears that the effectivity of the F-101B/MB-1 capability can be advanced to the first ADC F-101 airplane without affecting F-106 testing. However final ARDC meetings in consideration of this matter will not be completed until 10 Jun 57. You will be advised 11 Jun 57 or as soon as possible.



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FM COM IET NR 1
TO COMADC

5915 17 Jun 57

FROM RDZSPP-30958-K.

Reference first indorsement of 26 Apr 57 by Hq ARDC to ADC letter AFDRSI-A subject: "Armament Configuration F-101B". Also Hq ARDC Det 1 msg General Estes to General Lynn 6 Jun 57. Subject is MB-1 Status Summary Including Effectivity of MB-1 in the F-101 Interceptor. This message in VI parts. PART I. It is important to recognize that the ARDC MB-1 rocket program consists of four sub-programs listed in descending order of current Hq USAF precedence. (a) completion of MB-1 rocket development, (b) completion of F-89J/MB-1 weapon system tests, (c) F-106/MB-1 weapon system tests and (d) F-101/MB-1 weapon system tests. Unattained MB-1 rocket development objectives include qualification of MB-1 rounds for ejection launches established characteristics of an improved propellant (thiokol) rocket motor extension of MB-1 launching speeds from present sub-sonic to mach 2 etc. Important requirements for test rounds funds and procurement actions are associated with this sub-program. The completion of the F-89J/MB-1 sub-program is expected during the third quarters of calendar year 1957. PART II. During fiscal 1958 progress of the ARDC MB-1 sub-programs will be dependent upon the following factors: (a) Hq USAF allocation of certain tactical MB-1 rocket components (which is now assured) plus the capability of Douglas Aircraft Company to meet estimated delivery schedules for both tactical and ARDC M-1 rocket configurations; (b) relative precedence of MB-1 sub-programs as it pertains to allocations of test rockets range time test facilities etc; and (c) capability of each sub-program to absorb problem areas without slipping present schedules.

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PART III. The F-101/MB-1 effort is the most vulnerable to development troubles because of: (a) necessity for using non-optimum test rockets exclusively for the critical early months of testing; (b) Douglas MB-1 production estimates may be optimistic for the remainder of calendar 1957, (c) low USAF precedence with respect to other ARDC MB-1 sub-programs and, (d) compressed development schedules for the purpose of advancing the F-101B/MB-1 configuration effectivity to the first ADC F-111 interceptor. All of the foregoing allow only a minimum margin of safety should a major development problem arise. PART IV. This command, Hq AMC, and the Douglas Company are taking every possible action to improve the availability of MB-1 test rockets. Contractual coverage was effected by Hq AMC during May 1957 in two major areas: (a) procurement of minor components to complete R&D test rounds now being delivered incomplete due to defective contractual instruments prepared six months ago, and (b) procurement of 426 test rockets for F-101 and F-106 tests during the period August 1957 through April 1959. Timely delivery of the above is expected but not yet assured pending final analysis of Douglas production readjustments. Concurrently F-101/F-106 requirements have been reduced from 487 to 426 rounds due to cancellation of F-101 rail launch tests and consolidations of AFSWC and AFPTC testing with other centers. It is now practical to consider testing of the Thiokol propellant motor during August-November 1957 and meet an early scheduled F-106 tests. Major procurements still underway include 25 additional test rounds (Thiokol) contract with Douglas to support F-101/F-106 test at Holloman AFB and MB-1 development

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during FY 58. PART V. ARDC is accomplishing within its jurisdiction the necessary emphasis to the F-101B/MB-1 program. This avion is considered necessary to provide maximum probability of success for the compressed AQPQ tests in matters which conflict with the less critical schedules of the other MB-1 sub-programs. PART VI. In view of the foregoing it is concluded that the effectivity of M-1 configuration can be advanced to the first F-101 interceptor without affecting other ARDC MB-1 testing.

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PRIORITY I AF ADRSI-A 0010 SECRET
 AFDRD-AD 47329 UNCL

COMDR ADC
 COPS USAF WASH DC
 COMDR DET 1 ARDC WPAFB OHIO
 COMDR HQ ARDC BALTIMORE MD
 COMDR AFSWC KIRTLAND AFB NMEX
 COMDR AFPTC EDWARDS AFB CALIF

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FROM ADORQ-R CC60. For Col Slocumb at AFSWC

This Office formerly ADRSI-A. For AFDRD-AD & AFDRD-AD at USAF; for
 RDZSPF, RDZSPF, RDZSPF at Det #1; for RDZPD at ARDC; for FIFAD at
 AFPTC. Subject is F-101/MB-1 configuration. Reference ADC msg
 ADRSI-A 0010 dated 24 Jun 57 and AFDRD-AD 47329 dated 5 Jul 57. Ref-
 erenced USAF message (UNCL) directed necessary priorities for MB-1
 rocket allocation and associated weapon systems development efforts
 be adjusted during the USAF/ADC/ARDC conferences at Hq ADC #-11 July.
 The following priorities are established:
 (1) The F-101/MB-1 present configuration to have top development
 priority over all other F-101/F-106 armament programs.

RECEIVED
 11 JUL 1957
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ADORQ-R


A 7753

Mr Sanderson/ls

WILLIAM H. BURNARD
 1st Lt, USAF
 Administrative Officer

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COMDR ADC

(2) Reallocation of MB-1 test rockets as required will be effected by
by Hq ARDC to support the F-101/MB-1 development effort.

(3) Hq ARDC will adjust the priorities of the F-101/MB-1 test sup-
port functions to expedite the F-101/MB-1 development.

It is emphasized that the action outlined above is confined to the
F-101 and F-106 programs and does not affect other ARDC MB-1 rocket
subprograms. This message received USAF and ARDC coordination
prior to transmittal.

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17 January 1957

[REDACTED]
(UNCLASSIFIED) Minutes of the F-106A/B WSPG Meeting held on 9 January 1957
at Hq AMC, W-P AFB, Ohio

DOC 245 ADCRR 57A

SUMMARY

1. Major problem area affecting the timely and successful completion of the group's activities is as follows:

Item No. 5-56-1 - JEFM of J-75 Engine (UNCLASSIFIED)

The limited field maintenance capability of the J75 engine may increase ADC's requirement for spare engines to support the F-106 program

2. [REDACTED] General Information: A possible slippage in delivery of initial F-106 production aircraft, and of the production build-up date, remains of major concern to the WSPG. This slip is foreseen unless the four-month slip in the J75-P-2 schedule (from March to June 1957) or a portion of the quantities involved, can be recovered. P&W is reluctant to make any change in the schedule from the current June 1957 date. Convair is to continue to the current aircraft delivery schedule pending determination of what recovery, if any, can be made in engine deliveries. Total impact on the F-106 program remains unknown. The first two (prototype) aircraft and the first production aircraft use YJ75-P-1 engines, and are unaffected by this slippage.

William A. Kruege
WILLIAM A. KRUGE
Lt Colonel, USAF
F-106A WSPG Chairman

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I. OPEN ACTION ITEMS

Item No. 1-56-4 - Status of Training (UNCLASSIFIED)

- a. Problem Presented: Assurance has been requested that planning and support of maintenance training for airframe, engine, FCS, etc., are being accomplished in timely manner.
- b. Action Agency: ATC (Mr. Welna), Lowry AFB (Mr. Bokovoy) and HAC (Mr. Whipple)
- c. Progress to Date: Mr. Welna reported that the Training Parts Provisioning Conference was held 30 October through 6 November 1956. A Training Parts Re-provisioning Conference is scheduled to convene 15 January 1957 to complete the selection of trainer parts, spares and bench items, to discuss factory trainer construction proposal, and to firm up personnel training requirements.

Hq TTAF was reported in the process of screening the Commands for maintenance training requirements. Replies are due in to TTAF by 11 January 1957.

Lowry AFB plans to contract seven (7) MA-1 courses with HAC with starting dates between July 1957 and October 1957.

Convair factory training in support of field and organizational maintenance courses will begin during the month of October 1957. Factory training is anticipated from October 1957 through July 1958 and will provide trained personnel to support both the USAF Test Program and for initial ADC units.

It is anticipated that J-75 jet engine factory training will be conducted at P&W. August 1958 is the established target date for implementation of Phase II training. Phase II quantitative training requirements will be determined at a later date.

Mr. Welna reported that while the trainer proposed in Convair Report ZM-8-231 evidenced many desirable characteristics, ATC was of the opinion that the high relative cost of the trainer and the limited number of students that could be trained at a given time offset any advantages. It was therefore determined to procure individual trainers to support the training program presently scheduled.

During a 23-25 October 1956 MA-1 AWCS Conference at Lowry AFB, TTAF recommended specific changes in the career field progression structure. These recommendations were taken under advisement by representatives from Hq USAF. No reply or additional information have been received to date.

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It was learned during this meeting that MA-1 training systems on order from HAC had been reduced from thirty-four (34) to a quantity of nineteen (19). Impact, if any, on MA-1 training is unknown.

In view of the comprehensive coverage of factory training reported at this meeting, it was requested that ATC consider extending this factory training to include Pilot Checkout in addition to the Pilot Ground School presently planned. (This training would be similar to that currently being provided for F-102A checkout).

- d. Action to be Taken: Lowry AFB and HAC will investigate the reduction in MA-1 training systems and report the impact, if any, on programmed training. Mr. Welna will report the current status of training planning including Pilot Checkout.
- e. Forecast of Completion: March 1957

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Item No. 1-56-6 - Test Support Table (UNCLASSIFIED)

- a. Problem Presented: The LAMA (SAAMA) requires a test support table in order to permit review of requirements by test agencies, supporting AMAs and AFDs prior to holding a test support table provisioning conference.
- b. Action Agency: SAAMA (Mr. High)
- c. Progress to Date: Parts I, II, III and IV of the F-106A TST were disseminated to all involved activities by 3 January 1957. Field and overhaul tools for engine maintenance were based on a J75-P-5 list, due to non-availability of a J75-P-9 list. Mr. Bradley, P&W, stated that the tools required for the P-5 and P-9 engines are basically the same and that SAAMA would be justified to order tools for support of the P-9 engine on the basis of the P-5 list. With regard to possible differences, the statement was made that based on current knowledge, the P-5 list is as valid for P-9 engine support as it is for P-5 engine support. A TST finalization conference is scheduled to convene 22 January 1957 at Convair, San Diego.
- d. Action to be Taken: SAAMA will report the status at the next meeting.
- e. Forecast of Completion: March 1957.

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Item No. 3-56-6 - Training Aids (CONFIDENTIAL)

(A)

- a. Problem Presented: Total requirements for, and firm availability of MTUs for the F-106 program are unknown.
- b. Action Agency: WSPO (Major Price, Captain Stabley)
- c. Progress to Date: Major Price reported that four (4) MTUs are now on contract, and are scheduled to be delivered as follows: One (1) in March 1958, two (2) in June 1958, and one (1) in December 1958. Complete revision of the MTU specification requirements by ATC letter, dated 18 September 1956, delayed submission of the F-106 MTU specification by Convair until 27 December 1956. An Engineering Approval Conference for the MTU specification is scheduled to be held at Convair on 22 January 1957. Convair is currently advertising for bids and plans to select a MTU subcontractor by 1 March 1957. This scheduling will provide the necessary 12 months production lead time for delivery of the first MTU in March of 1958. The required delivery schedule is extremely tight and can be met only if timely contractual action is made by Convair, timely delivery of GFAC to the MTU contractor is accomplished by the Air Force, and no significant production problems are encountered.
- d. Action to be Taken: The WSPO will report the current status at the next meeting.
- e. Forecast of Completion: Report at each meeting.

(B)

- a. Problem Presented: A periodic report of flight simulator procurement status is required by this group.
- b. Action Agency: WSPO (Major Price)
- c. Progress to Date: It was reported that contractual coverage for the initial F-106A flight simulator, including specification revision "C" which adds the MA-1 AWCS, has been accomplished. No delay in delivery is anticipated.

Seven (7) additional simulators (representative of the 14th airplane - S/N 56-164) are also on contract. Contractual coverage for revision "C", which adds the MA-1 AWCS, will be provided for these additional simulators by 15 January 1957. The simulator contractor has assured the buyer that contractual coverage by this date will insure the agreed upon delivery schedule. No delivery delay is indicated at this time. The current delivery schedule is as follows:

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J	F	M	A	M	J	J	A	S	O	N	D
1			1	1	0	1	0	1	1	1	1

- d. Action to be Taken: WSPO will continue to monitor and report on this problem.
- e. Forecast of Completion: Report at each meeting.

(C)

- a. Problem Presented: The requirement fo 01-A (CZ) aircraft is unknown.
- b. Action Agency: ATC (Mr. Welna)
- c. Progress to Date: TTAF has submitted (through channels) an initial requirement for two (2) CZ aircraft, one for Amarillo AFB and one for Lowry AFB. Additional requirements, if any, will be determined during the 15 January 1957 conference referenced under item 1-56-4. ATC review of Convair's proposal to use a production airframe with special cut-outs and access holes, etc., in lieu of CZ aircraft, indicated that individual trainers are preferable. This opinion was based both on the high cost of the proposed trainer and by the limitations imposed on the number of students who could be trained at one time.
- d. Action to be Taken: ATC will re-submit their requirements for CZ trainers should additional requirements be determined at the 15 January conference.
- e. Forecast of Completion: March 1957.

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Item No. 5-56-1 - JEFM of J-75 Engine (UNCLASSIFIED)

- a. Problem Presented: The feasibility of cold section JEFM of the J-75 engine as presently designed is doubtful.
- b. Action Agency: Engine Management Group and ADC (Major Dethman)
- c. Progress to Date: It was reported that P&W is contractually obligated to initiate the design of a split stator for the low pressure compressor of the J75 engine. Negotiations are currently in progress for P&W to conduct a 150-hour qualification test of a J75 engine with a low compressor having split stator assemblies. Despite these present and proposed contractual actions, the Power Plant Laboratory, WADC, was reported of the opinion that there is no definite assurance that the split stator design will be practical when all factors are taken into account, namely, performance, reliability, durability, maintainability and other considerations. A J75 field maintenance demonstration by P&W was reported in progress concurrently with this WSPG meeting.

In view of the present uncertainty as to the degree of JEFM capability, the question was raised as to the adequacy of programmed spare engines.

- d. Action to be Taken: The Engine Management Group will report the current status. Major Dethman will furnish ADC's specific requirements for spare engines at the next meeting.
- e. Forecast of Completion: May 1957.

Item No. 7-56-2 - Contract for MA-1 (AWCS) (CONFIDENTIAL)

- a. Problem Presented: Early definitization is required of the MA-1 Interceptor Systems (AWCS) contract to allow timely release of provisioned equipment to production.
- b. Action Agency: WSPO (Major Price - Captain Stabley)
- c. Progress to Date: Major Price reported the contractual status as follows: (1) The letter contract for (104) MA-1 production systems was executed on 14 November 1956. Provisioning documents MCP 71-649 and MCP-71-650 are cited in this contract. Definitization of the letter contract is scheduled in February 1957. (2) A letter contract for (44) ASQ-25 systems was executed on 2 January 1957. Provisioning documents MCP 71-644 and MCP-71-650 are also cited in this contract. The tentative ASQ-25 delivery schedule agreed upon by Hughes is as follows:

1957			1958								
O	N	D	J	F	M	A	M	J	J	A	S
0	0	1	3	4	4	5	5	5	5	6	3

This delivery schedule is not in complete agreement with the proposed F-106B flight test program. However, this schedule will be subject to further negotiation when the contract is definitized in April 1957.

- d. Action to be Taken: Captain Stabley will review the MA-1/ASQ delivery schedules for compatibility with aircraft requirements. Major Price will report any change in contractual status.
- e. Forecast of Completion: March 1957.

Item No. 7-56-3 - Qualification of CFE (UNCLASSIFIED)

- a. Problem Presented: Many CFE items being installed in the F-106 have not been qualified.
- b. Action Agency: Convair (Mr. Ferguson)
- c. Progress to Date: Status as of 3 January 1957 is as follows:

Total No. of Items in ZM-8-211.867

<u>Engineering Approval</u>	<u>No.</u>	<u>Percent</u>
Items requiring Engr. Approval.	867	100 %
Items submitted for Engr. Approval.	489	56.4%
(1) Items which have received Engr Approval.	158	18.2%
(2) Items submitted but no answer or approval.	331	38.2%
Items not submitted as yet.	378	43.6%

IDE Approval

Items requiring IDE Approval.	839	100 %
Total number of items tested.	40	4.8%
(1) Items which have received IDE Approval.	12	1.4%
(2) Items submitted but no answer or approval.	3	.4%
(3) Items tested but not yet submitted.	25	2.9%
Test Reports not received as yet.	799	95.2%

Installation Approval

Items requiring Instl. Approval.	867	100 %
Items submitted for Instl. Approval.	16	1.9%
(1) Items which have received Instl. Approval.	5	.6%
(2) Items submitted but no answer or approval.	11	1.3%
Items not submitted as yet.	851	98.1%

No information was provided regarding priority A item qualification.

- d. Action to be Taken: Mr. Ferguson will report the current status of CFE qualification including priority A items.
- e. Forecast of Completion: Report at each Meeting.

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Item No. 9-56-1 - ECP Status (UNCLASSIFIED)

- a. Problem Presented: All outstanding ECPs will be reviewed at each meeting.
- b. Action Agency: WSPO (Captain Causa - Captain Stabley)
- c. Progress to Date: ECP-1042, Case XXIX Wing Camber is the only outstanding ECP on the F-106 airframe. Captain Causa reported there was no change in the status of this ECP since the last meeting. Negotiations will be delayed until Case XXIX wind tunnel data is reduced and made available for evaluation. Data for subsonic and transonic speeds is being reduced at this time; data for supersonic speeds is currently being collected.
- d. Action to be Taken: Follow-up and report at each meeting.
- e. Forecast of Completion: Report at each meeting.

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Item No. 11-56-1 - [REDACTED]

- a. Problem Presented: OOAMA has not yet received the MB-1 Rocket requirements for the F-106 test program.
- b. Action Agency: WSPO (Captain Stabley - Major Price)
- c. Progress to Date: MB-1 rocket test program requirements were forwarded to OOAMA on 7 January 1957. OOAMA will initiate purchase requests for both rockets and necessary support provisioning. A configuration conference has been scheduled to convene at WADC on 16-17 January 1957.
- d. Action to be Taken: WSPO will report current status.
- e. Forecast of Completion: March 1957.

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II. ACTION ITEMS INTRODUCED

Item No. 1-57-1 - Engine Procurement (UNCLASSIFIED)

a. Problem Presented: A MIPR for 258 J75-P-9 engines is being delayed by the Navy pending funding action.

b. WSPO (Major Price)

Comment: The USAF order for follow-on J75 engines is needed at P&W this month in order to assure continuous production. The Navy was reported as withholding action on the MIPR for 258 engines pending funding by the AF. The AMC buyer wired the Navy a release of \$13M on 7 January 1957, however, no apparent action had been taken by the ASO. Production engines for support of the aircraft program through March 1958 were reported on order.

c. Action to be Taken: Major Price will follow-up with the engine buyer to assure continuous production at P&W in support of the F-106 program.

d. Forecast of Completion: March 1957.

UNCLASSIFIED

Item No. 1-57-2 - Engine Starters (UNCLASSIFIED)

a. Problem Presented: The MA-6 starter, programmed for the first 17 F-106 aircraft is not compatible with the J75 engine. Compatibility of the MA-11 starter, programmed for airplane #18 and subsequent is unknown.

b. Action Agency: WSPO (Captain Stabley)

Comments: It was determined subsequent to the F-106 WSPG meeting that type MB-3 Pneumatic Starters will be used in the first 17 aircraft. Requirements for the MA-6 starter have been cancelled. The MA-11 Air Combustion Starter will be installed on subsequent models providing it proves compatible with the J75 engine. Tests to establish compatibility are to be conducted at P&W on the test stand. These tests will simulate the accessory loads of the installed production engine. MA-1A gas turbine compressors will be required for starting the first 17 aircraft.

c. Action to be Taken: Captain Stabley will report the current status. Mr. High will initiate necessary action to support the first 17 aircraft with gas turbine starters.

d. Forecast of Completion: May 1957.

III. ACTION ITEMS CLOSED

Item No. 3-56-6 - Cockpit Procedure Trainers (UNCLASSIFIED)

Closing Action: Major Dethman reported that ADC has no requirements for cockpit procedure trainers.

Item No. 7-56-4 - Component Category MA-1 (UNCLASSIFIED)

Closing Action: Convair has categorized Group "A" and "B" components and has set up the production facilities in accordance with these lists. Copies of these lists have been furnished the WSPG.

Item No. 9-56-2 - Test Aircraft Instrumentation (UNCLASSIFIED)

Closing Action: The first prototype specification and the APGC specification have been approved. The AFAC specification is being re-written, however, it is anticipated that all instrument specifications will be approved before the next F-106 WSPG meeting.

IV. INFORMATIONAL DATA

1. (UNCLASSIFIED) Colonel Baker reported that ADC would like for the F-106 and MA-1 AWCS to be added to the T.O. 00-35D-54a and AMCL 66-5 "Failure-to-Fix" service test. Command correspondence will be initiated with appropriate recommendations.
2. (UNCLASSIFIED) A total of six (6) YJ75-P-1 engines will be available for initial F-106 support. Three (3) of these engines will be installed (one (1) in each prototype and one (1) in the first production airplane) and one (1) is on test stand, leaving two (2) spare engines. It is intended that a P-9 engine will be installed in airplane no. 3 (first production) at the first engine change. Further, the test stand engine can be converted to a flying engine, if necessary, making a potential of four (4) spare engines to support the two (2) prototype aircraft. Engine overhaul turn-around will be between 60 and 90 days.
3. (UNCLASSIFIED) The F-106B Mock-Up Board has programmed the "side stick" for all F-106B aircraft. Initial aircraft will have a ten (10) inch horizontal situation indicator (HSI) while subsequent aircraft will have an eight (8) inch HSI. Should any change from the side stick installation be approved, the lead time required for this change would be 18 months for the F-106A and 19½ months for the F-106B. The 34th and subsequent F-106A aircraft have been programmed for the side stick installation.
4. [REDACTED] SAAMA emphasized their requirement for a F-106B specification at this meeting. The first flight of the F-106B is scheduled for December 1957. The WSPO recognizes the problems that SAAMA will encounter in provisioning of F-106B support without a specification, and is making every effort to provide this specification by the earliest possible date.
5. [REDACTED] Preliminary flight testing of the prototype F-106 aircraft has commenced. The F-106 has successfully demonstrated flight speeds above mach 1.0.
6. (UNCLASSIFIED) The next F-106 GSE Sub-Committee meeting is scheduled to be held at Convair on 14 February 1957.

UNCLASSIFIED

V. AGENDA FOR NEXT MEETING (UNCLASSIFIED)

1. All items requiring continued action as listed in paragraphs I and II above.
2. Additional items may be submitted to the chairman for inclusion in the agenda; however, only in case such items require specific preparation and/or study will the chairman distribute a supplemental agenda. Items of such nature will be submitted sufficiently far in advance to allow preparation of reply or status reporting.
3. Each person assigned any action or making a report to the group, will prepare his presentation in typewritten form and submit a copy of same to the chairman at the beginning of the meeting.
4. Next meeting will be held at San Antonio Air Materiel Area (SAAMA) at 0900 hours on 6 March 1957. This constitutes official notification of the meeting. If for any reason the meeting date, or place, is changed, notices will be issued.

VI. ROSTER OF ATTENDANCE (UNCLASSIFIED)

<u>Name</u>	<u>Rank</u>	<u>Organization</u>	<u>Phone</u>
W. A. Kruge	Lt Colonel	Hq ARDC, Det #1, RDZSFG	34174
S. S. Stabley	Captain	Hq ARDC, Det #1, RDZSFG	34174
H. C. Witham	Civilian	Hq AMC, MCPRW	33106
R. N. Baker	Colonel	Hq ADC, Edwards AFB, FTFAD	23071
I. H. Dethman	Major	Hq ADC, Ent AFB, ADMAC	2023
C. H. McKinney	Major	Hq APGC, Eglin AFB, DCS/O-TR-AD	3172
R. A. Taylor	Major	Hq AFAC, Eglin AFB, ACYP	5209
R. E. Bokovoy	Civilian	Hq TTAF, Lowry AFB, OTP-T	683
E. N. Powell	Captain	CTAF, Tyndall AFB, HCMC	4239
W. T. Creech	Major	CTAF, Tyndall AFB, TIF	2236
G. A. Calvert	Civilian	Convair, San Diego	
R. P. White	Civilian	Convair, San Diego	
G. A. Welna	Civilian	Amarillo Wg Tng Plans, O	306
C. Konigsberg	Captain	OTIG, Norton AFB, ARCDI-B-2-B	4275
R. A. Jaynes	Lt Colonel	Hq USAF, AFMPP-WS	77078
D. M. Sharp	Major	Hq USAF, AFMME-AC	75158
N. F. Buck	Civilian	Hq AMC, MCMTAF	72138
M. R. Hawkins	Civilian	Link Aviation, Binghamton, N.Y.	
E. C. Greuling	Civilian	Link Aviation, Dayton Rep	MI 3371
C. J. McBride	Civilian	HAC, Culver City	
P. K. Horrigan	Civilian	HAC, Culver City	5637
R. C. Whipple	Civilian	HAC, Culver City	3163
R. C. Fildes	Civilian	Convair, San Diego	2273

UNCLASSIFIED

<u>Name</u>	<u>Rank</u>	<u>Organization</u>	<u>Phone</u>
G. R. Sibley	Civilian	Convair, San Diego	21351
B. F. Ferguson	Civilian	Convair, San Diego	1381
W. M. High	Civilian	Hq SAAMA, SAFW	5218
W. G. Price, III	Major	Hq AMC, MCPAFC	33204
H. G. Reed	Lt Colonel	Hq AMC, MCPHFC	33204
J. C. Schwab	Captain	Hq AMC, MCPHFC	33204
M. Danas	Civilian	P&W (Convair, San Diego)	
F. X. Bradley	Civilian	P&W, Hartford, Conn. MIL RQRS	

William A. Krue
WILLIAM A. KRUE
Lt Colonel, USAF
F-106A WSPG Chairman

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DISTRIBUTION LIST

17 Cys Hq USAF, AFMPP-WS-2 (14 Cys), AFMPP - Lt Col W. A. Young (1 cy)
 AFGIS-B (1 cy) AFAMA-2A (1 cy)
 4 Cys OTIG, Attn: AFDCI-B-2, Norton AFB
 2 Cys Comdr AAC, MM
 4 Cys Comdr NEAC, NEMMT-1
 3 Cys Comdr ATC - ATOWS (2 cys) and Capt Guill - ATMME-A (1 cy)
 6 Cys Comdr TTAF - TTOTT (5 cys) TTORQ (1 cy)
 7 Cys Comdr FTAF
 3 Cys Comdr CTAF
 1 Cy Comdr Amarillo AF Base, Mr. Welna
 2 Cys Comdr APGC-DCS/M-SS (1 cy) and DCS/O-TR (1 cy)
 1 Cy Comdr Tyndall AFB, Attn: Capt Powell
 23 Cys Comdr AMFPA APO 323 (PFM)
 5 Cys Comdr AMFEA
 2 Cys Comdr ARDC (1 cy) and Log Plans Off, RDSML (1 cy)
 1 Cy Comdr ARDC, Attn: RDZA
 1 Cy Comdr AFFTC, Attn: Col Baker, FTFAD
 1 Cy Comdr AFAC, Attn: ACOPP
 1 Cy Comdr AFAC, Attn: DCS/M (ACML)
 1 Cy Comdr AF Special Weapons Center, Attn: Capt A. Ross, SWVCF
 1 Cy Comdr ADC
 1 Cy Comdr ADC, ADMAC-2A2, Major Dethman
 12 Cys Comdr ADC - 10 cys for Dep Chief of Staff, 1 cy for Dep of Materiel
 and 1 cy for Dep of Plans and Requirements
 2 Cys Comdr OQAMA, Attn: OOF
 1 Cy Comdr SAAMA
 20 Cys Comdr SAAMA, Attn: Mr. High, SAFW
 1 Cy Comdr WRAMA, Attn: WRFW
 2 Cys Comdr AFPTRC, Attn: PTDOR, Box 1557, Lackland AFB, Texas
 2 Cys AFPR Convair, San Diego
 1 Cy HAC, Attn: Mr. Horrigan - Culver City
 3 Cys Convair, Attn: Mr. Ferguson
 1 Cy WCOL-7
 1 Cy WCCE
 1 Cy WCL
 6 Cys WCLOS
 3 Cys WCLEO
 4 Cys RDZSFG
 1 Cy RDZSF
 1 Cy RDZSPO
 1 Cy RDZSFJ
 1 Cy MCRP
 1 Cy MCRO
 1 Cy MOQFRA
 1 Cy MCMRM
 1 Cy MCMTM
 6 Cys MCSRBC
 1 Cy MCSE

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1 Cy MCPWE
1 Cy Comdr 3499th Mobile Training Group, Chanute AFB, Rantoul, Illinois
1 Cy MCPRMP
2 Cys MCPED, Col Larson
1 Cy MCPHD
1 Cy MCPRW, Mr. Kester
1 Cy MCPRP
3 Cys MCPHFC
1 Cy MCPHF
1 Cy MCPPEA
1 Cy MCPHH
1 Cy Each person in attendance

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Minutes of the F-106A WSPG Support Sub-Committee Meeting held on
5 December 1956 at Hughes Aircraft, Culver City, California

MINUTES

Item No. 10-56-1

- a. Problem Presented: Delivery and qualification of electrical support equipment for MA-1 system.
- b. Action Agency: Mr. Ferguson, Convair
- c. Progress to Date: 8-96025 Electric Driven Ground Power Unit, Purchase Order No. 450909 released prior to 1 November 1956, with 24 August 1957 delivery date valid.

8-96026 Gasoline Engine Driven Ground Power Unit, Purchase Order No. 450910 released, with 24 July 1957 delivery date valid.

8-96016 Load Bank, Purchase Order No. 450908 released, with 20 June 1957 delivery date valid.

- d. Action to be Taken: Convair will accomplish coordination on the specification for the ultimate equipment during the month of January.

Ultimate Equipment: Between 90% and 95% of the information required from HAC received to generate specification. Convair will have the specification the first week in January 1957.

Item No. 10-56-2

- a. Problem Presented: HAC recommendations for electrical equipment which is long lead time in support of Air Force MA-1 maintenance training.
- b. Action Agency: Hughes Aircraft and Captain Stabley
- c. Progress to Date: A letter was sent to TTAF recommending quantities and time-wise requirements for equipment. No reply has been received as yet. A representative from Hughes is presently in Gulfport, Mississippi, on follow-up. TTAF is to establish requirement to AMC for procurement along with normal support of the aircraft.

The Sub-Committee feels that if equipment is to be furnished, immediate steps must be taken to extend procurement through Convair for the required number of equipment.

- d. Action to be Taken: Captain Stabley will coordinate with Hq. AMC and TTAF to determine need and method of procurement of equipment.

Item No. 10-56-3

- a. Problem Presented: Compatibility and provisioning TST of ground support of MB-1.
- b. Action Agency: Captain Stabley

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- c. Progress to Date: MB-1 stand is provisioned. It is compatible with the F-106 and no trouble is expected. Ogden was furnished a copy of the test program for the F-106 and WSPO is coordinating MB-1 configuration.
- d. Action to be Taken: Item is closed.

Item No. 10-56-5

- a. Problem Presented: The J-75 engine tools list has not been provided.
- b. Action Agency: SAAMA
- c. Progress to Date: Verbal information received that tools list is in the mail. If true, the list will be incorporated into the initial publication of the test table now in production. Thirteen (13) sets of organizational tools for the J-75; eleven (11) test agencies, leaving two (2) reserve sets. Four (4) sets of field maintenance tools.
- d. Action to be Taken: Item is closed.

Item No. 10-56-6

- a. Problem Presented: Review of F-106 support.
- b. Action Agency: Convair and SAAMA
- c. Progress to Date: Total of 139 GSE items on the F-106 airplane. Of this total, 60 of them have been pre-released from the Engineering Design Section and 80 are final released from Engineering Design Section. Purchase Orders issued on 80 items. Forty-three (43) first articles have been received of the 139 items. First article acceptance has been received on 31 of the 43 items from vendors.

The following is a list of changes on the F-106 support progress of items of equipment considered to be in a marginal support position at the present time:

- 8-96007 - Cover Assembly, Canopy and Radome - Marginal for Prototypes only.
- 8-96039 - Sling Assembly, Aircraft Hoisting - Marginal for Prototypes only. (Jury Rig will be provided, if needed).
- 8-96046 - Adapter Assembly, Engine Shroud Handling - Marginal for Prototypes only - Experimental is furnishing interim.
- 8-96068 - Adapter Assembly, Engine Hoisting - Marginal for Prototypes only.
- 8-96069 - Pin Set, Rudder Control System Rigging - Marginal for Prototypes only.
- 8-96076 - Pin Set, Elevon Control System Rigging - Marginal for Prototypes only. Engineering rigging prototypes.

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- 8-96094 - Cover, Drogue Chute - Marginal for Prototype only. Experimental Dent. to furnish interim.
- 8-96098 - Guard, Transducer Vane - Not available for Prototypes.
- 8-96099 - Fixture, Rudder and Elevon Friction Check - Not available for Prototypes.
- 8-96100 - Gage, Aileron Friction Check - Not available for Prototypes.
- 8-96101 - Gage Set, Elevon Angle Rigging - Not available for Prototypes.
- 8-96103 - Eye Bolt, Wing Mooring - Not available for Prototypes.
- 8-96104 - Bracket Set, J75 Engine Transfer - Not available for Prototypes.
- 8-96105 - Roller Bracket Set, J75 Engine Transfer - Not available for Prototypes.
- 8-96108 - Gage, Drag Chute Over-Center Mechanism - Not available for Prototypes.
- 8-96109 - Pin Set, External Fuel Tank Safety - Not available for Prototypes.
- 8-96111 - Adapter Set, Engine Bleed Air Check - Not available for Prototypes.
- 8-96112 - Adapter, Elevon Bolts Attaching - Not available for Prototypes.
- 8-96113 - Wrench, Torque Wing Attach - Not available for Prototypes.
- 8-96114 - Wrench, Torque Elevon Horn Attach - Not available for Prototypes.
- SE0985 - "Q" Pot Loader - Not available for Prototypes.
- SE1074 - Adapter, External Fuel Tank Handling - Not available for Prototypes.
- SE1078 - Adapter Set, Engine Transfer Stand - Not available for Prototypes.
- SE1085 - Coupling, Hi-Pressure Air Quick Disconnect - Marginal for Prototypes.
- 8-96054 - Tester, Cabin Temperature Control - Marginal on Airplanes #3 and #4.
- SE0997 - Tester, Fire Detector - Marginal on Airplanes #3 and #4.
- 8-96059 - Adapter, Constant Speed Drive - Need GFP/CFE decision.
- 8-96072 - Tester, Armament System - Marginal for Airplanes #4 and #4.
- 8-96050 - Test Unit, Air Data Computer - Marginal for Airplanes #1-#3, #5, #6, #8-#12.
- 8-96089 - Tester, Calibration Stability Augmentation - Not available for Prototypes. Interim equipment available.
- 8-96102 - MA-3 Air Conditioner - Need GFP/CFE Decision. (This equipment will be furnished GFP approved.)

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- d. Action to be Taken: SAAMA to furnish roll over rings in addition to 4000A engine stand for Convair use in designing adapters.

Mr. Ferguson will continue to report any changes in the listing at each meeting.

Information: Convair has formal notification that an Air Log installation and removal stand is on the way to San Diego to design adapters for F-106. SAAMA has taken follow-up action.

Item No. 10-56-8

- a. Problem Presented: Hughes Aircraft presentation on tools and test equipment support for the MA-1 system.
- b. Action Agency: Hughes Aircraft
- c. Progress to Date: The following is a listing of test equipment, showing the start and completion dates of verification tests on special field maintenance test equipment:

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>START DATE</u>	<u>REPORT SUBMITTAL DATE</u>
486100-120	Stand, Test, W.C.S. - QN&L	September 1957	March 1958
486101-120	Stand, Test, W.C.S. - Digital Computer	September 1957	March 1958
486102-120	Stand, Test, W.C.S. - Flight Sensing	September 1957	March 1958
486104-120	Stand, Test, W.C.S. - Radar	September 1957	March 1958
486111-120	Stand, Test, W.C.S. - Power Supply	September 1957	March 1958
486300-120	Stand, Test, W.C.S. - F.I.S.	September 1957	March 1958
486107-110	Trailer, Maintenance	(not available)	
486106-100	Test Set, Radio - Beacon Simulator	September 1957	May 1958
486109-110	Test Set, Computer - Air Data	September 1957	May 1958
486112-100	Test Set, Converter - Signal Data	September 1957	May 1958
486113-120	Control Computer - Aux., Manual Oper.	September 1957	March 1958
486114-120	Test Set, Computer - Input-Output Conv.	October 1957	March 1958

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486115-110	Test Set, Armament Auxiliaries	October 1957	April 1958
486116-110	Test Set, Armament Auxiliaries	September 1957	March 1958
486117-110	Test Set, Arm. Aux. - Attach.	October 1957	June 1958
486118-110	Test Set, Generator, Stab. Data	August 1957	March 1958
486119-120	Test Set. Computer Subassemblies	August 1957	February 1958
486120-120	Adapter Set, Test Digital Computer Subassembly	June 1957	November 1958
486121-110	Reproducer, Digital Data, Computer Memory Loading	September 1957	May 1958
486122-100	Electrical Equipment - Maint.	September 1957	April 1958
486124-110	Keyer, Data Link - Signal Gen.	September 1957	March 1958
486125-120	Control, Computer - Manual Oper., Mobile	October 1957	March 1958
486129-110	Control, Remote Switching - Test Sig. Fac.	October 1957	March 1958
486130-120	Meter, Ratio	September 1957	March 1958
486131-110	Coder, Audio Frequency	September 1957	March 1958
486134-110	Generator, Signal - Glide Slope and Loc.	August 1957	March 1958
486139-100	Intercom. Set - Maintenance	October 1957	May 1958
486140-110	Adapter, Waveguide	November 1957	March 1958
486141-110	Dummy Load, Electrical	August 1957	January 1958
486142-100	Interrogator Set	October 1957	May 1958
486143-100	Carrying Case Set. Elec. Equip.	September 1957	February 1958
486144-110	Test Set, Radar - Antenna	August 1957	January 1958

d. Action to be Taken: Review list for any changes on a meeting basis.

Item No. 10-56-9

- a. Problem Presented: Air Conditioning Equipment for F-106A.
- b. Action Agency: Convair, SAAMA, ARDC WSPC

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- c. Progress to Date: 1. SAAMA advised that the MA-3 Air Conditioner procurement can be made GFP and that they are taking action to arrange for necessary funding in the amount of \$320,000.
2. Convair advised that they will handcarry the specification for the electrical driven MA-3 to WADC about 10 January 1957.
3. Convair submitted a specification for higher capacity heaters to WADC. Informal approval was received late November 1956. The specification is being retyped at present to incorporate changes agreed to during a meeting at WADC. The revised specification will be submitted 6 December 1956.
- d. Action to be Taken: 1. SAAMA will follow-up action and report. 2. Convair will follow up action and report. 3. Convair will follow-up and report procurement action.

Item No. 10-56-10

- a. Problem Presented: Funding for Support Equipment.
- b. Action Agency: Hughes Aircraft
- c. Progress to Date: P. K. Horrigan, Hughes Field Service and Support, at the WSPG Meeting indicated that approval was required to deliver unqualified items. Hughes must arrange to demonstrate equipment to show it performs adequately if delivered unqualified.
- The Provisioning Conference held at HAC 4 through 14 December 1956 will determine answer to the problem of funding in excess of 2.5% and delivery of unqualified test equipment.
- d. Action to be Taken: The Committee will review results of 4 through 14 December Provisioning Conference at next meeting.

Item No. 10-56-11

- a. Problem Presented: Support of MA-1 Production Systems.
- b. Action Agency: Hughes Aircraft and AMC
- c. Progress to Date: Item is adequately covered in Items 10-56-8 and 10-56-10.
- d. Action to be Taken: Item is closed.

Item No. 12-56-1

- a. Problem Presented: Availability of adapters for CSD Test Stand to be used in the F-106 program.
- b. Action Agency: Mr. Ferguson, Convair and Mr. Rodgers, SAAMA

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- c. Progress to Date: Adapter required to connect testing unit with the gear box. SAAMA buying CFE adapter for F-106 from Sunstrand.
- d. Action to be Taken: Determine availability of adapters for F-106 constant speed drive for use with the CSD test stand.

Item No. 12-56-2

- a. Problem Presented: F-106 Air Conditioning Requirement: To determine ground air conditioning requirement for F-106 aircraft.
- b. Action Agency: HAC, Convair and WSPO
- c. Progress to Date: 1. No missile bay pre-conditioning for F-106 aircraft for upper temperature limits of the armament is required.
2. When the MA-1 system is in the WARM or ON position, cooling is needed to maintain a maximum temperature of no more than 90° F.
- d. Action to be Taken: a. By HAC: 1. Investigate the lower temperature limits of missiles to determine the need for missile bay ground air conditioning and coordinate the findings with Convair.
2. Determine what the temperature and flow requirements are as a function of inlet air temperature for the WARM position of the MA-1 system.
- b. By Convair: 1. Determine the maximum extent possible that the heater can be used as a blower of ambient air for maintenance and alert (WARM) to maintain the MA-1-required temperature.
2. Determine if missile bay conditioning will be required to support the lower temperature limits of F-106 armament.
3. Submit a report to the WSPO for review indicating the air conditioning required to support temperature requirements of the armament and fire control system of the F-106 aircraft.
- c. By WSPO: Review the Convair report to determine the extent of the support programming required.

S. S. Stabley
S. S. STABLEY, Capt. USAF
Chairman, F-106A Ground
Support Sub-Committee

SSS:mcm

Attachment: List of Attendees

26

APPENDIX I

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57MCP-5119

UNCLASSIFIED

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UNCLASSIFIED
LIST OF ATTENDEES

One copy to each of the following:

<u>Name</u>	<u>Rank</u>	<u>Representing</u>	<u>Symbol</u>	<u>Clearance</u>	<u>Extension</u>
H. Siegel	Civ.	HAC	08-30	C	5661 Sta. 46
R. Fahrenthold	Civ.	SAAMA	SAMTAS	T/S	5945 - 63133
G. L. Rodgers	Civ.	SAAMA	SASY	T/S	5619
A. C. Frey	Capt.	ADC	ADMAC-DC	T/S	2055
C. C. Canfield	Capt.	ADC	ADMSV-J	T/S	2125
L. V. Larson	Civ.	WADC	WCLEM	S	39226
R. C. Whipple	Civ.	HAC	08-50	S	3163
B. F. Ferguson	Civ.	CVAC	Model 8 P/O	S	1381
S. S. Stabley	Capt.	Hq. ARDC - Det. 1	RDZSFG	S	34252

2 copies to Mr. H. L. Jones
3 copies to Mr. G. L. Rodgers
2 copies to Warner-Robins AMA, Attn: Mr. Jack Davis
5 copies to CVAC (total)
6 copies to ADC (total)
4 copies to HAC (total)

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DOC 246 ADCHR 574

7 Feb 57

PRIORITY

I AF

COMM: SAC

COMM: SAC WASHINGTON DC

INFO: COMM: SAC SAN DIEGO MISSOURI

COMM: SAC LOS ANGELES APR CALIF

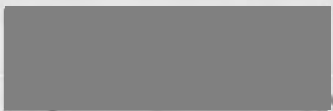


00377

For USA, AFHQ-40 Maj Howard; for AFHQ, FFPAD. This message in 3 parts. Part One. AFHQ reaffirms strong desire for the center-stick cockpit in the F-106 aircraft. This command is aware of the possible schedule slippage and increased costs, but is in agreement that control stick location is rapidly becoming a minor issue in view of J-75 engine stretch-out, MA-1 progress delays, and the critically short time left to complete the aircraft. Part Two. Present exact cost figures and time slippage are unknown in this MA, but according to telecon between Maj Howard and Col Baker on 4 Feb your office is in process of procuring this information from AMDC and ANC. Part Three. To date the minutes of the San Diego/Ft Worth Generals'

AFHQ-4

Maj Butler/ls
2666



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COVER AGE

[REDACTED]

F-106 Conference have not been received by either General Gault or
ADG. The only information available is Col R. H. Baker's trip
report and limited teletype information, this creating an extremely
difficult problem in understanding the entire situation.

PARAPHRASE NOT REQUIRED EXCEPT FOR
TO CATEGORY B ENCRYPTION - PHYSICALLY
E ALL INTERNAL REFERENCES

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ABR-1-A

[REDACTED]

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FANFOLD NOTES

0909

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C O P Y

FM USAF WASH D C

TO COMADC ENT AFB COLO

1 Feb 1957

CONFIDENTIAL/FROM AFDRD-AD 51771

1096

As a result of the investigation by the board of general officers on the F-106A/B Cockpit, 22-23 Jan 57, this headquarters requests additional information before reaching a decision. A change from side stick to center stick may very likely cause F-106 Program Slippage and incur additional costs. Request ADC comment on impact of these or other factors as may effect the ADC F-106 Program. Request reply not later than 6 Feb 57.

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308.4
DOC 247 ADCHR 57A

Telephone conversation with L/G Irvine, Hq USAF, 14 Feb 57:

Gen Irvine: I have been looking into the 106 program and talking to Convair and other people - AMC and ARDC. It appears in the light of our 102 experience that in our original plan, we don't have time enough for Phase 1 and particularly Phase 2 testing because of deficiencies that always show up. So, we may wind up having even more trouble than on the 102 by having an airplane in the system and in production before we finish Phase 6. This seems to be serious and I am worried. I started talking about this 8 months ago when I first talked to Convair. At that time, they assured me they would meet the completion date on the hardware and component testing but they have slipped. I am worried about having compatible and complete testing on the airplane system and on fire control and missiles. It came up last month and AMC, ARDC, and ourselves are all agreed that they are behind out there and slipping a little more so that we have a minimum of 3 month's slippage in the program we started out with. It had 3 months too little time in it. It appears to me that they should continue to build airplanes at a low rate for test purposes - 3 airplanes a month - for about a year. So this, in effect, sets back the activation or conversion date about 6 months. This would take out of the program - FY-57 and 58 - about 140 to 150 airplanes and set back your first conversion by about 6 months. Cost-wise, this is horrible. The 106 is not the 102 with a bigger engine; it is a new airplane.

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Completely different fire control system; changes in the engine - good changes. Better wind platform;; better airplane. We want to get these improvements and get them tested before they go to you. Now, about the stick. To do that alone would have taken about 20 million dollars. However, when you make these other changes, and do those things we want to do anyway, the change to the center stick costs only about 4 1/2 million. Doesn't affect delivery at all; that can be done at the same time. These other things are slipping the program 6 months. All are pretty essential to the program. It has come to me for a decision. I am making the decision but I would like to have from the ADC people a paper signed by the Commander which says that you agree in effect, that you want an aircraft to meet your requirements and that you understand D/M is proposing this slippage in activation date of the first wing practically six months and to continue production at low rate of 3 airplanes a month and about 6 months longer than we plan to do now. We are going to put in improvements recommended by the Board, including the center stick.

Gen Lynn: Do these changes improve safety of flight?

Gen Irvine: We do that automatically. These things will all improve the pilot's chance of survival and improve the airplane as a weapon. Before this is nailed down in a contract with Convair, you people should get in at the project office level and take a look at it. We won't spend money on something you don't want and if you want something, we want to know about it. We are a long way from having worked out in detail with contractors.

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We will work out precisely what the schedules are and after they get that worked up, you should keep in touch with that office. With Convair, too. If you don't like what they are doing, call me up. About the 102C-- they want to work on long term basis if we buy 102C's instead of 106's. I think that you ought to have you and your Ops people talk to Callahan about this. This is an area where I don't have any authority. I can only offer a proposal. We do the best we can and buy about the same number of 102C's as we lose in 106's. By the time we pay increased costs on the 106, we might have a little money left.

Gen Lynn: We could follow that up later after we know more about 106's.

Gen Irvine: Our feeling is that we should get together and if we put in wrong kind of apple, we should put in something else. The Air Force will take our money we save if we don't buy aircraft and finance other shortages. Send the letter to the Chief, not me.

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DOC 248 ADDITION 57A

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PRIORITY
COMM ABC

X AF X

COMM USAF WASH D C
INFO: COMM ABC BELL MD

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FROM ADRHQ-3.

01657

FOR AFHQ. PERSONAL FROM ATKINSON TO PWT. THIS MESSAGE IN FOUR
PARTS. PART I. RECENT CONTACTS WITH AIR RESEARCH AND DEVELOPMENT
BOARD AND YOUR HEADQUARTERS INDICATE CONSIDERABLE INSTABILITY
OF PLANNING IN FURTHERANCE OF AIR DEFENSE COMMANDS NAMED
INTERCEPTOR PROGRAM. ABC VIEWS THE CURRENT PROGRAM AS BASICALLY
SOUND AND THE MOST LOGICAL OF VARIOUS PROPOSALS WHICH HAVE
MATERIALIZED RECENTLY. HERE, IT IS RECOGNIZED THAT BUDGETARY
CONSIDERATIONS MIGHT DICTATE A FORCE REDUCTION. IT IS OUR
CONVICTION THAT ANY NECESSARY REDUCTIONS MUST APPLY ACROSS THE
BOARD WITH EQUAL SEVERITY TO THE F-106 AND F-101. BOTH THE F-101
AND F-106 AFFORD ABC GREATLY INCREASED CAPABILITY. THE TWO AIRCRAFT
ARE COMPLEMENTARY, PROVIDING FLEXIBILITY AND OPERATIONAL AND

DISPATCHED
11 JUN 1957
A.D.C.

3 1630E

JUN 57

ADRHQ-3

K. W. BAKER, Major, USAF
2519

PLEASE PRINT FULL NAME AND GRADE
TO C. T. G. B. EN. PHYSICALLY
CHECKED BY DATE

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H. J. TOSO
Capt USAF
Asst Command Ad

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ADMHQ-3

ENVIRONMENTAL BACK UP FOR EACH OTHER. WE LOOK WITH RESERVATION ON ANY ATTEMPT TO DELAY THE PRESENTLY PROGRESSING F-106 AIRCRAFT ENTIRELY OR IN FAVOR OF GREATLY MODIFIED VERSIONS. PART II. THIS COMMAND RECOGNIZES THE POSSIBLE MERIT OF A GROWTH F-106 AT A LATER DATE. IT IS ESSENTIAL THAT SUCH A GROWTH VERSION MUST FIRST, NOT DELAY OR AFFECT THE PRESENT CONFIGURATION, SECOND, BE MADE IN ONE MAJOR STEP TO INCORPORATE THE MOST ADVANCED AVAILABLE ENGINE AND RADAR AND THIRD, BE CHOSEN IN COMPLETE CONFLICT WITH A FOLLOW ON INTERCEPTOR SO AS TO PREVENT AN ADVERSE EFFECT ON THAT PROGRAM. ANY DELAY IN THE PRESENT F-106 PROCUREMENT PLACES THE ENTIRE PROGRAM IN JEOPARDY. PART III. THE SOUNDNESS OF THE F-106 PROGRAM IS EVIDENCED BY THE CONFIDENCE AND UNIVERSAL SUPPORT WITHIN THIS HEADQUARTERS AND AHEAD WHICH HAS BEEN ACCORDED IT SINCE ITS CONCEPTION. RECOGNIZING TECHNOLOGICAL PROGRESS IN AUTOMATIC AND IMPROVED EQUIPMENT REPRESENTED BY THE NA-1 AIRCRAFT AND WEAPON CONTROL SYSTEM, IT IS FELT THAT ONE VERSUS TWO PLACE ARGUMENTS ARE NOT JUSTIFIABLE REASONS FOR DISRUPTING THIS LONG STANDING PROGRAM JUST AS IT BEARS FRUITFUL. PART IV. THERE IS NO NEW INFORMATION AVAILABLE WHICH INDICATES THAT A DRASTIC REVISION IN CONCEPT AND EQUIPMENT IS WARRANTED. IT IS FELT THAT THERE CAN BE NO JUSTIFICATION FOR CHANGING THIS PROGRAM SHORT OF CLEAR RECOGNITION THAT THE F-106/NA-1 (PROJECT MX 1554/1179) HAS FAILED.

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[REDACTED]

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[REDACTED]

DCS/PLANS & REQUIREMENTS
29 May 1957

DGC 249 ADCHR 57A

1. DCS/P&R Staff Meeting was held at 1500, 29 May 1957 in Colonel McCollom's office. The following were present.

Colonel Lackey, Ass't DCS/P&R
Colonel Johnson, Dir, Sys Integration
Colonel Bruce, Ch, Off of Atomic Energy
Lt Colonel Butcher, Requirements
Lt Colonel Sheehan, M&O
Lt Colonel Porter, Executive
Major Wilson, Plans

2. Colonel Johnson (Sys Integration) mentioned that Boeing will present three briefings on 5 June 1957 on the operation of a BOMARC Squadron. P&R attendance has been determined.

3. Colonel McCollom and Colonel Johnson will accompany General Atkinson to McDonnell Aircraft Corporation on 4 Jun 57 to discuss F-101B matters.

4. Lt Colonel Butcher (Requirements) gave a resume of what is known to date on the current USAF study of the F-106 and F-101B. USAF will face an over-commitment in aircraft procurement because of an expected drastic reduction of future military budgets. For this reason the procurement of all types of aircraft is being re-examined. On the fighter-interceptors, it is understood that General Berquist favors the "2-2-2" concept - two engines, two pilots, two MB-1's. For this reason, also, there is a trend of thinking that the F-106B should be a two-place model. Thought is being given also to the question of whether either of these two (F-101B - F-106) should be eliminated. Consensus of ADC thinking is that one more delay in the F-106 Program (such as converting to 2-place model) may well spell the end of the program. In any event, a staff position on this subject is being developed by Directorate of Requirements. This position will give ADC's ideas on priority of procurement and will favor reduced procurement of both the F-101B and the F-106 rather than the elimination of either.

5. On 31 May 57, Lt Colonel Butcher will attend the ARDC presentation to USAF of a development plan for the follow-on interceptor (LRI-X). While there, Lt Col Butcher will brief some of the Operations people on our concept of the IM-X.

[REDACTED]

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DCS/P&R Staff Meeting, 29 May 57, (Cont'd)

6. On 5 June 1957, ARDC will give its presentation on the IM-X to USAF. P&R representative will attend.

7. Lt Colonel Sheehan (M&O) reported that the study on a 12% reduction of Hq ADC is now in the office of the Chief of Staff.

8. Colonel Bruce (Atomic Energy) stated that the staff comments on the IG survey of the MB-1 Program were unacceptable to the Command Section and would have to be redone. D/F to this effect was received from the Chief of Staff on 29 May 57.

9. Colonel Slocumb, the ADC Resident Representative at AFSWC (Kirtland) will be in this Hq on Friday, 31 May 57 to brief staff personnel on the recent ADC participation in the first (Boltzman) shot of the Plumbob series.

10. Lt Colonel Porter advised that the administrative changes resulting from the elimination of certain AG functions would all be covered in a paper from the AG and would be discussed by operating people prior to implementation. Pending such clarification, our people were asked not to take any premature action.


11. Colonel Lackey outlined the general concepts on which the pending reorganization of Hq ADC is based.

12. Colonel Lackey stated that the matter of expeditious handling of correspondence was receiving the attention of the V/C and C/S. A DCS/P&R letter on this subject to each officer in P&R is being distributed today (29 May 57).

13. The subject of increased use of the ADC Diary was discussed. Directors were asked to screen material for the Diary so that it would be more representative of major headquarters activities. Executive was asked to report at next meeting on exact distribution of the Diary as a key to whether controversial items should be included.

Paul V. Porter
PAUL V. PORTER
Lt Colonel, USAF
Executive

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DCS/P&R Staff Meeting, 29 May 57 (Cont'd)

DISTRIBUTION:

1 cy - DCS/O
5 cys- Dir, Sys Integration
5 cys- Dir, M&O
2 cys- Dir, Requirements
1 cy - Dir, Plans
1 cy - Off of Atomic Energy
1 cy - Ftr-Intcp Proj Off
1 cy - ADC Rep, AFSWC
1 cy - DCS/P&R Files


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DOC 250 ADCHR 574

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12 March 1957

(UNCLASSIFIED) Minutes of the F-106A/B JWG Meeting held on 6 March 1957 at San Antonio Air Materiel Area, Texas.

SUMMARY

1. Major problem area affecting the timely and successful completion of the group's activities is as follows:

Item No. 11-5/-1 - MB-1 Rockets (CONFIDENTIAL)

A delay of approximately six (6) months is foreseen in F-106A/MB-1 Rocket testing due to late determination of rocket requirements. Expedited action is being taken by the JWG to minimize the delay. (See page 11 for details).

2. (SECRET) General Information: A total of twenty (20) flights have been completed on the first prototype F-106A and one (1) flight on the second prototype. Velocities in excess of 1.8M have been reported by the Contractor. Only two (2) flights, to date, have been by USAF personnel.

William A. King
WILLIAM A. KING
Lt Colonel, USAF
F-106A JWG Chairman

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FANFOLD NO. 10118

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Item No. 5-56-1 - JEFM of J-75 Engine (UNCLASSIFIED)

- a. Problem Presented: The feasibility of cold section JEFM of the J-75 engine as presently designed is doubtful.
- b. Action Agency: Engine Management Group and SAAMA (Mr. High)
- c. Progress to Date: Action by the Engine Management Group was reported as follows: "The Field Maintenance Tear-down Demonstration of a J-75 engine was held 9-10 January 1957. The hot section of the engine possesses excellent field maintenance capabilities. Field maintenance of the compressors, however, is limited to inspection and replacement of complete compressor assemblies. The cost of complete high and low compressors will be approximately \$10,000 and \$90,000 respectively. Cost will make the stocking of large quantities of compressor assemblies prohibitive. Consideration is being given to stocking a small quantity of assemblies at certain selected locations for exchange by field activities on an austerity basis. Letters are being sent to ADC and TAC to obtain information for use in evaluation of the problem of field replacement of compressor assemblies. Action to provide parts for support of the J-75 engine program has been based on only hot section maintenance by field activities. Based on current programming and target dates for delivery of spare parts and tools, sufficient material should be in the system to support tactical organizations commensurate with activations. Status of parts and tools is shown on the current Planned Support Provisioning Charts." Upon completion of the study regarding field replacement of compressors, further action will be taken as necessary. - - - Redesign of the low compressor could affect present parts in stock; however, the degree will not be known until engineering is completed. Since tools will be provisioned in the near future, the affect on tooling will be in the same category as spare parts."

Major Dethman reported ADC's requirement as thirteen (13) spare engines per squadron (the same as the F-102).

- d. Action to be Taken: The EMG will report on progress to improve JEFM of the J-75 engine.

SAAMA will obtain quantitative requirements of other potential using commands and determine the total quantitative requirement for spare engines to support the current F-106 program.

- e. Forecast of Completion: July 1957.

Item No. 7-56-2 - Contract for MA-1 (AMCS) (CONFIDENTIAL)

- a. Problem Presented: Early definitization is required of the MA-1 Interceptor Systems (AMCS) contract to allow timely release of provisioned equipment to production.
- b. Action Agency: WSO (Lt Colonel Reed) and HAC (Mr. Whipple)
- c. Progress to Date: Lt Colonel Reed reported the contractual status as follows:

MA-1 Systems - A letter contract for (104) MA-1 production systems was executed on 14 November 1956. Provisioning documentation MCP 71-649 and MCP 71-650 are cited in the contract. Target date for definitization of the letter contract is now 31 March 1957. The definitive contract will be for 110 systems and reflect the following negotiated schedule:

1957			1958								
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4	6	12	12	12	10	10	10	12	12	9

ASQ-25 Systems - A letter contract for (14) ASQ-25 systems was executed on 2 January 1957. Provisioning documents MCP 71-649 and MCP 71-650 are also cited in this contract. The tentative ASQ-25 delivery schedule agreed upon by Hughes is as follows:

1957			1958								
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
0	0	1	3	4	4	5	5	5	5	6	3

Hughes representatives indicated that HAC has received the definitive contract for signature, and that it should be signed and returned to AMC the week of 11 March 1957. HAC was reported approximately thirty (30) days behind schedule on the service test quantity of MA-1 systems. Of three (3) service test units scheduled for training, one (1) was due in February 1957. HAC representatives were unable to predict the affect on the production schedule.

- d. Action to be Taken: Lt Colonel Reed will report the current contractual status.

Mr. Whipple will report the status of service test quantities and the affect on production, of any delay in the service test program.

- e. Forecast of Completion: May 1957.

Item No. 11-56-1 - MB-1 Rockets (SECRET)

- a. Problem Presented: Late determination of MB-1 Rocket requirements may delay that portion of the F-106 test program.
- b. Action Agency: WSPO (Lt Colonel Reed, Captain Stabley)
- c. Progress to Date: An MB-1 rocket configuration conference was held at Wright-Patterson AFB on 16 January 1957. Representatives from the WSPO, AFSWC, AFAC, APOC, SAAMA, OQAMA, Convair, HAC and Douglas attended. The test rocket configurations and required quantities agreed upon at this conference were not in accordance with the requirements previously sent to OQAMA on 7 January 1957. OQAMA was, therefore, notified to take no procurement action on the 7 January 1957 requirements. Based upon MB-1 configuration information which OQAMA obtained at the 16 January 1957 configuration conference, OQAMA notified the WSPO that they could not provide funding for the required test rounds because the desired rockets represented non-standard rounds which were outside their funding jurisdiction. To expedite delivery of the required rockets, the WSPO initiated a Purchase Request for the 215 non-standard rounds requirement established at the 16 January 1957 conference. This Purchase Request is funded with P-112 funds and is presently being circulated for coordination with all necessary agencies. Although procurement action has been initiated, attention is invited to the fact that 18 months lead time (6 months administrative procurement and 8 months production) are normally required, and that only 3 months remain until required delivery of the first MB-1 rockets. Even with expedited procurement action, the MB-1 flight test program does not appear compatible with the availability of properly configured MB-1 non-standard rockets.

Effort is being made to reduce the administrative lead time to the minimum by hand carrying the PR for coordination and processing by the various agencies.
- d. Action to be Taken: WSPO will report current status.
- e. Forecast of Completion: September 1957.

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*Arde
Fisher*

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

1 February 1957

DOC 261 ABCHR 57A

MEMORANDUM FOR: Major General Albert Boyd, 484A - Chairman
Major General Hugh A. Parker, 506A,
Air Defense Command
Major General Kenneth P. Bergquist, 1117A,
Director of Operations, DCS/O
Major General James Ferguson, 1530A,
Director of Requirements, DCS/D
Dr. Courtland Perkins, Chief Scientist, USAF
Colonel Joseph F. Mooney, 4366A, Office of
Director of Development Planning, DCS/D,
Recorder

SUBJECT: Appointment of Board of General Officers

1. You are hereby designated a member of a Board of General Officers to consider the requirements for an advanced manned interceptor fighter within the guide lines set forth below and make recommendations to the Chief of Staff.
2. The Board will thoroughly review operational needs as posed by the threat and technical feasibility to establish realistic requirements for an advanced manned interceptor aircraft. The Board will avail itself of all sources of information to include, but not limited to, RAND, Air Defense Command, contractor studies, Operational Analysis Section of DCS/Operations, Directorate of Intelligence.
3. The Air Defense Command has stated a requirement for a high altitude (70,000 ft) Mach 3, 350 nautical mile supersonic radius aircraft to meet their needs. On the other hand, Air Staff agencies have concluded that an aircraft of longer range and lesser maximum speed would be better suited to fulfill future Air Defense requirements.
4. The Secretary of the Air Force and the Chief of Staff have made a decision that for the immediate future the efforts of the Air Force to obtain a Mach 3 interceptor will be confined to a continuation of the XF-103 as a means of determining the utility of a Mach 3 interceptor, provided the above appointed Board determines that the XF-103 is a desirable vehicle

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C Subj: Appointment of Board of General Officers

program for answering the questions regarding the utility of an interceptor with these speed and altitude capabilities and with fire control weapon and environmental system performance that can be provided in the same time period. In its deliberations concerning the possibilities of an interceptor with performance characteristics similar to the XF-103, the Board will be limited to providing a recommendation to continue or cancel the XF-103 development.

5. The Board will further examine the requirements for, and utility of, possible advanced manned interceptors having such maximum speed performance (approximately Mach 2.8) that a major change in basic structural materials other than aluminum is not required. A statement of the general operational parameters of the fire control system and associated armament will also be provided.


6. The Board is to concern itself only with requirements for advanced manned interceptors. Contractor selection and associated considerations are not a part of the deliberations of this Board.

7. The Board is authorized to contract for such additional studies as may be required to assist in their investigation through appropriate contracting agencies.

8. The Board will meet at the call of the Chairman and will submit its report to the Chief of Staff on 1 March 1957.

D. L. Putt

D. L. PUTT
Lieutenant General, USAF
Deputy Chief of Staff,
Development

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 HQA002
 PP JEDEN
 PP RJEYB RJDWP RJEDEH
 DE RJEPM 131
 P 112003Z
 FM HEDUSAF WASHDC
 TO RJEYB/COMARDC BALTO MD
 RJDWP/COMAMC WPAFB OHIO
 INFO RJDWP/COMDR DET MBR 1 ARDC WPAFB OHIO
 RJEDEH/COMAIRDEFCOM INT ATB COLG

FROM AFDRD-AD 5478E

1. IMMEDIATE INITIATION OF THE DEVELOPMENT OF A MANNED LONG RANGE INTERCEPTOR, WEAPON SYSTEM 202A, WITH PERFORMANCE AS INDICATED BELOW, IS DIRECTED.
2. BECAUSE OF PREVIOUS SOURCE SELECTION BOARD CONSIDERATIONS, NORTH AMERICAN IS RETAINED AS THE AIRFRAME CONTRACTOR, AND INFORMATION GAINED ON THE PREVIOUS LRIX, WHICH WAS TERMINATED IN MAY 1956, WILL BE UTILIZED TO THE MAXIMUM EXTENT POSSIBLE TO SATISFY PRESENT REQUIREMENTS. A LETTER CONTRACT TO THE EXTENT OF ONE MILLION DOLLARS FOR PRELIMINARY WEAPON SYSTEMS ANALYSIS AND DESIGN, TO

PAGE TWO RJEPM 131
 INCLUDE IDENTIFICATION OF POWER REQUIREMENTS, WILL BE NEGOTIATED IMMEDIATELY WITH NAA IN ORDER THAT WORK MAY PROCEED WITHOUT DELAY. RELEASE OF FUNDS IN EXCESS OF ONE MILLION DOLLARS TO NAA IS PROHIBITED AT THIS TIME PENDING HQ USAF APPROVAL OF THE DEVELOPMENT PLAN AND MORE DETAILED COST INFORMATION.

3. IN THE "REVISED FY 57 PROGRAM" DATED 21 DECEMBER 1956, THIS HQ HAS PROGRAMMED ELEVEN MILLION, TWO HUNDRED FORTY THOUSAND DOLLARS OF P-600 FUNDS FOR SYSTEM 202A. THESE FUNDS ARE TO COVER WORK NOW UNDERWAY BY HUGHES AIRCRAFT COMPANY AND RADIO CORPORATION OF AMERICA FOR PARALLEL AND COMPETITIVE DEVELOPMENT OF AN INTEGRATED AIRCRAFT AND WEAPON CONTROL SYSTEM FOR THE NEXT MANNED INTERCEPTOR, AND TO COVER WORK BY NAA FOR AIRFRAME DEVELOPMENT.
4. SYSTEM DEVELOPMENT WILL BE IN ACCORDANCE WITH THE "REPORT OF GENERAL OFFICERS BOARD ON ADVANCED MANNED INTERCEPTOR FIGHTER" DATED 26 FEBRUARY 1957, WHICH IS BEING TRANSMITTED TO YOU UNDER SEPARATE COVER. DESIRABLE PERFORMANCE CHARACTERISTICS ARE AS FOLLOWS: A. 350 NM SUPERSONIC (MACH 3.0) RANGE AND TEN MINUTES OF COMBAT AT 70,000 FEET; B. 1,000 NM SUBSONIC (MACH .9) RANGE AND FIVE MINUTES OF COMBAT AT MACH 3.0; C. AIRBORNE RADAR DETECTION RANGE OF 30-100 NM ON A B-47 TYPE TARGET; D. 100 15-20 NM AIR-TO-AIR

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PAGE THREE RJEPHC 121
MISSILES WITH NUCLEAR WARHEADS (NO. 1) WITH INITIAL ALTITUDE CAPABILITY OF 40,000 FEET AND A RANGE OF 100,000 FEET. ALTHOUGH NOT SPECIFICALLY INDICATED IN REPORT, THE REQUIRED MISSION PERFORMANCE IS TO BE ACCOMPLISHED WITH 15 PERCENT FUEL. THIS WILL BE REFLECTED IN A NEW COM. REPLACING COM NO. 118, WHICH WILL BE PUBLISHED IN THE NEAR FUTURE. SYSTEM OPERATIONAL DATE IS ESTABLISHED AS CY 1963.

5. ON EXECUTING THIS DIRECTIVE, PARTICULAR EMPHASIS WILL BE PLACED ON PRODUCING A FULLY COMPATIBLE AND INTEGRATED, REPEAT INTEGRATED, WEAPON SYSTEM. ARDC IS AUTHORIZED LATITUDE TO CONSIDER DESIGNS WITH LESSER INITIAL PERFORMANCE PROVIDED THERE IS GROWTH POTENTIAL TO THE DESIRED PERFORMANCE. IT IS IMPERATIVE THAT APPROPRIATE USAF AGENCIES MAINTAIN CLOSE SUPERVISORY CONTROL OVER THE CONTRACTORS TO INSURE DEVELOPMENT ACCORDING TO USAF REQUIREMENTS.

6. MAXIMUM USE WILL BE MADE OF THE ARDC DEVELOPMENT NOW UNDERWAY BY HUGHES AND RCA ON SYSTEM 228A.

7. CONCURRENT DEVELOPMENT OF CAR-X GUIDED ATOMIC WARHEAD ROCKET, WEAPON SYSTEM 228A, IS MANDATORY.

8. THE CONTINUATION OF THE DEVELOPMENT OF THE XF-103 AS A

PAGE FOUR RJEPHC 121
RESEARCH VEHICLE AND THE CONTINUANCE OF THE XF-103 AIRCRAFT IS REAFFIRMED. ADDITIONAL GUIDANCE OF THE PROGRAM WILL BE FURNISHED IN THE IMMEDIATE FUTURE. MEANWHILE, THE TIMING OF THE LRX DEVELOPMENT PROGRAM SHOULD TAKE INTO CONSIDERATION THE AVAILABILITY OF FLIGHT TEST RESULTS FROM THE XF-103 PROGRAM.

9. SUPPLEMENTARY INSTRUCTIONS WILL FOLLOW OUTLINING INFORMATION WHICH MUST BE GENERATED EARLY IN THE DESIGN EFFORT TO IDENTIFY POWER PLANT REQUIREMENTS.

10. A TENTATIVE DEVELOPMENT PLAN FOR THE LRX WEAPON SYSTEM WILL BE FURNISHED TO USAF AS SOON AS POSSIBLE, TOGETHER WITH JOINT ARDC/AMU FUND REQUIREMENTS. INITIAL COM. IN THIS MESSAGE, INCLUDING FUNDING INFORMATION, WILL BE MADE WITHIN 10 DAYS.

BT

11/2012Z APR RJEPHC

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PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION.

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SECRET 3084

DOC 253 ADCBR 57A

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REMARKS: SUMMARY OF 18 APR BY INTERCEPT BUREAU...
AND COLLECTIVE ANALYSIS INDICATES AND CONFIRMING INFORMATION
RECEIVED FOR BULLY ON ERIC INTERCEPT, INDICATES RATE OF
THE INTERCEPT, INDICATED APPROXIMATE TIME FROM 0.9, 35,000
FEET TO 3.0, 70,000 FEET IN 5 MINUTES, BUREAU ACCEPTABLE
APPROXIMATE WIND LINE CONDITIONS IN 8 MINUTES, THIS LATER TIME
INDICATES A CORRECTION IN PERFORMANCE INVOLVED IN OBSERVATION OF
SPEEDY SPEEDS OF WASH 2.0 AND WASH 3.0, INDICATED POINTS OF INTERCEPT
WITHIN THE WINDLINE AREA, SUMMARY DELAY TIMES, GROUPS BASED INTERCEPT
RADAR AND INTERCEPT TACTICS OVERWHELMED UNDER STUDY AT THIS HEADQUARTERS.

COMEBACK COPY

NO DAILY DIARY ITEM

Not requested, not furnished
25 APR 1957
Furnished (Date) (Initials)

DISPATCHED
25 APR 1957
A.D.C.

H. J. TOSO
Capt USAF
Asst Command Adj

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ADC HQ FORM 11 15 MAR 57 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE
MEMO FOR RECORD: NONE SEE REVERSE

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RECEIVED
HQ. ADC

APR 19 1957

MEMO FOR RECORD: On 18 April 1957 Colonel Lenfest, Headquarters ARDC, requested Colonel Gravette, Headquarters ADC, to provide acceleration limits for the following interceptor. This information would be used to guide ARDC in selection of an engine size for the interceptor. This question was studied by Mr. Freeh of the Operations Analysis staff. The answer to Colonel Lenfest represents the best solution which can be provided in terms of operational data. This is an unusual question for an operational command to answer, since acceleration usually is a function of the best airframe-engine combination available. In this case, it is possible to provide an engine with significantly more power than necessary to maintain Mach 3.0 and consequently the power needed for acceleration is a deciding factor.

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DOC 254 ADCHR 57A

10 JAN 1957

303.14

Hq AEDG, WEDPT, 26 Nov 56, Subj: (U) Advanced F-104 Study Proposal

ADREQ-3

Let End

Hq Air Defense Command, 9th Air Force Base, Colorado Springs, Colo.

W: Commander, Air Research and Development Command, Post
Office Box 1395, Baltimore 3, Maryland

1. Requirements for day fighters such as the F-104 are the responsibility of the Tactical Air Command (TAC). Primary weapons systems of TAC should have a high compatibility with the air defense environment as a secondary characteristic. To this end, the Air Defense Command will continue close liaison with TAC on its requirements for future fighters.

2. Future day fighter interceptors prepared for the Air Defense Command inventory will be of whatever type is available to TAC at the time of F-104 attrition.

FOR THE COMMANDER:

Copies furnished:
AFDRC
AFDDO

IGOR S. McCOLLIF
Colonel, USAF
ROR/Plans and Requirements

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MEMPT

SUBJECT: (U) Advanced F-104 Study Proposal

TO: Commander
Air Defense Command
Mt Air Force Base
Colorado Springs, Colorado

1. This Command has received a proposal for study of an advanced F-104 type aircraft, capable of speeds of Mach 3.0 or higher. (Secret)
2. Although this proposal constitutes no more than a year's study program, it is obvious that the Lockheed design, at this time is for a minimal configuration change with a stainless steel construction probable. Radial of action and weight increase would retain only its clear air mass operational capability. (Secret)
3. Your comments as to the possible tactical utilization of such a weapon system are respectfully solicited. For your information, the roughly estimated first flight date of 30 June 1959 is considered highly doubtful from the point of view of engine availability. There is no present contract for development of a Mach 3.0 turbojet engine. (Secret)
4. This proposal is contained in Lockheed Aircraft Corporation Study Proposal Model F-1041, Report No. 11775 (LAC 50662), dated 9 October 1956. It is our understanding that a copy of this report is available in your Command. (Unclass)

FOR THE COMMANDER:

UNCLASSIFIED



2510-1000

UNCLASSIFIED

DOC 255 ADCHR 57A

PRIORITY

COMM-FAC

INFO THAT IS X

00630

Smansy

For RCV and PWR. Refer to letter this HQ (ADCHR) Dmjr (S)

F-106A Program. Slippers, dated 21 Feb 57, signed by Gen Stinson. The proposal to replace F-106As with F-106Cs was the only firm alternative that could be considered by this Command at that time. Later information indicates that other possibilities exist; for example, the McDonnell F-101B-40 proposal with an improved fire control system. It is requested that all possibilities be investigated and that an early decision be rendered to insure that the funds accrued from the proposed F-106A slippers be applied directly to critically needed atomic capable Century Series manned interceptors.

5 1730

Mar 57

FORM 1-A

Lt Col Hnatic/ls

2573

RECEIVED
FEB 28 1957

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0931

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- Mr. Tolson
- Mr. Boardman
- Mr. Nichols
- Mr. Belmont
- Mr. Ladd
- Mr. Clegg
- Mr. Glavin
- Mr. Harbo
- Mr. Rosen
- Mr. Tracy
- Mr. Egan
- Mr. Gurnea
- Mr. Hendon
- Mr. Pennington
- Mr. Quinn
- Mr. Nease
- Mr. Gandy
- Mr. Mohr
- Mr. Winterrowd
- Mr. Holloman
- Mr. Casper
- Mr. Callahan
- Mr. Conrad
- Mr. DeLoach
- Mr. Evans
- Mr. Gale
- Mr. Rosen
- Mr. Sullivan
- Mr. Tavel
- Mr. Trotter
- Mr. Tele. Room
- Miss Holmes
- Miss Gandy



308.4
X 310.10
MAR 6 1957

6 March 1957

DOC 156 ADGHR 57A

Lieutenant General Frank F. Everest
Deputy Chief of Staff, Operations
Headquarters USAF
Washington 25, D. C.

Dear Hank,

I mentioned several items of concern to me yesterday in our talk, but I can't refrain from putting a few of these items down in writing for your ready reference.

As I told you, I am convinced that we have to go to the "big bang" concept insofar as weapons for air defense are concerned. We have to meet the nuclear threat with nuclear arms. Any weapon which requires a fixed site just simply isn't going to do the job and we are wasting our time and money. Some exceptions may be made in this overall statement, of course, as infrared does offer direct hit possibilities but its use, as you know, is greatly limited. Therefore, anything that you can do to get the MB-1 type rocket installed in modern century type fighters at an early date will enhance the air defense capability many-fold. As a matter of fact, until this objective is reached I see no substantial progress that we will be able to make. I was greatly disappointed that my idea of installing these rockets on the F-102 turned out to be impractical. I do think we could go ahead and get an early capability by buying some 102C's. Otherwise, we will not have a nuclear capability with modern interceptors until the F-106 comes in, and the Lord only knows when that will be.

Item Number 2. I discussed the desirability of pushing for two Weapons Deployment Centers at an early date. We have Tyndall as of July 1st, and if you can get a capability for four squadrons at MacDill within a year or so, we will be on the right road in this direction.

J H Atkinson, Lt Gen/ghr
6 Mar 57



UNCLASSIFIED

Handwritten initials and marks

308,4

MAR 11 1957

GROUP
DOG-257 ADCHR 57A

PRIORITY

I AF AHSI-A 00670

COMSEC ADD

DIN OF A-1023 TRAF WASH DC

11 Mar 57

FROM AHSI-A 00677

For AFHQ. Cite our TIKENT message AHSI-A 00670 dated 6 Mar 57. This message in two parts. Part One. On 6 Feb 57 McDonnell Aircraft Co. personnel briefed this Command on their development program. Summary analysis of limited data available favors the procurement of the F-101B-40 proposal over the F-102C. Factors considered were: Overall performance envelope of each weapons system; fire control system capability and armament load. It must be emphasized that this Command considers the MB-1 to be the primary armament load for air defense. It is essential that we achieve this capability in Century Series aircraft as soon as possible. Further, this must be a proven capability. The predicted performance envelope of the F-101B is superior in all respects over the F-102C with the exception of steady state ceilings. This point is significant only when comparing the MB-10 (F-102C) and the MB-13 (F-101B) fire control systems. Increased

AHSI-A

RMDC FOR RECORD: See Reverse Side.

Lt Col Whittle/ls

2573

1

TO: Lt Col Whittle/ls	2573
DATE: 11 Mar 57	308
This communication is for the recipient's use only.	

MEMO FOR RECORD

On 28 Feb 57 a letter was sent to Hq USAF agreeing in principle with the proposed F-106 change. Reports were made to substitute suitable Century Series aircraft, suggesting further the F-101. Since that time, Hq USAF has inferred that the only acceptable substitute to AIC was the F-105. The message cited above clarified this point, stating that the F-106 was the only viable alternative at that time. Since the other correspondence was sent, the F-106 and F-101 and F-102 intercepter proposals were then considered.

WALTER S. [unclear]
[unclear] USAF
[unclear]
[unclear]

COMB ADC

performance of the fire control system will provide a greater potential for differential altitude attacks; therefore, minimizing the state altitude deficiency. Two MB-1s are considered to be essential armament for Air Defense in the time period under discussion and is a superior armament to the proposed F-102C configuration. Part Two, sketchy information available to this Command indicates that North American Aviation Inc is to propose an F-107 Interceptor for Air Defense. Features of this aircraft must be considered for possible application in the Air Defense Environment. Interesting features of this aircraft are: Optimization of known state of the art in manned interceptor performance (Mach 2). (Early availability in numbers, 1958.) All weather attack capability; 360° attack possibilities; two MB-1; North American Flood Flow pilot environment system; negative need for altitude units; KADC advanced cockpit flight instrumentation system. It can be apparent that simplicity of the subsystem can achieve great reliability within the present skill levels available to ADC. Request a complete analysis of the F-107 Interceptor proposal by your S4 and S4 ARDC and that this Command be furnished a firm recommendation as to the applicability and operational capability of this system from a technical and requirements viewpoint.

ADBI-4

2 2

UNCLASSIFIED

FILE NO. 008.2

DOC 251 ADDHR 57A

27 March 1957

ADRSI-A

SUBJECT: (U) Atomic Air-to-Air Capability

TO: Commander
Western Air Defense Force
Hamilton AFB, California

1. On 1 January 1957, the atomic air-to-air rocket was introduced into inventory. This represents the most significant improvement in Air Defense Capability to date, and opens up a vast new area to exploit.

2. I consider the atomic weapon to be the primary armament for Air Defense. It is my desire that appropriate staff sections and echelons of command take necessary action to insure the most rapid and effective integration of this capability into our manned weapons systems. Further, I consider atomic warheads for interceptor Missiles to be of equal importance. This should not be construed to mean that priority of critical resources should be allocated to units equipped with weapons systems possessing an atomic air-to-air capability. Distribution of critical resources must be made to all units in accordance with established priorities. For the present, it is mandatory that all recognize the potential of atomic armament and direct all efforts to secure full integration of this capability.

3. In addition, we must continue to emphasize further development of the atomic capability from the Air Defense viewpoint of greater yield, increased range and improved accuracy.

J. H. ATKINSON
Lt. Gen. USAF
Commander

UNCLASSIFIED

0937



Deputy Chief

2065

ADRESI-d

MEMORANDUM FOR THE COMMANDER

SUBJECT: (U) Primary Argument for Air Defense

1. Attached for your signature is a memorandum for all ADC Staff Offices and Major Air Defense Commands stating the importance of integrating atomic armament into the air defense weapons inventory. The reasons for publication of such a document are:

a. Briefings to ADC during the past two years have given the impression that a salvo of six GAR missiles would result in essentially the same kill potential as one MB-1 Rocket. To date, facts do not support these claims nor does the future outlook appear optimistic.

b. Even though the predictions for the GAR missiles have not been realized the impressions originally obtained may still exist in the minds of many.

c. There is evidence that some staff agencies are not aware of the importance of nuclear armament.

d. There is some doubt on the ADC position because of the operational limitations of the MB-1, i.e., low altitude application, plutonium hazard.

2. The objectives of the staff effort must be clearly oriented toward integration of atomic armament into air defense. The proposed memorandum should give all a common understanding and point of departure.

LOREN G. MC COLLON
Colonel, USAF
SOS/Plans and Requirements
Rm 2246-F



FAHFOJ

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[REDACTED]

HEADQUARTERS
AIR DEFENSE COMMAND
UNITED STATES AIR FORCE
ENT AIR FORCE BASE, COLORADO

ADRSI-A

MEMO FOR ALL STAFF SECTIONS, ADC

SUBJECT: (U) Atomic Air-to-air Capability

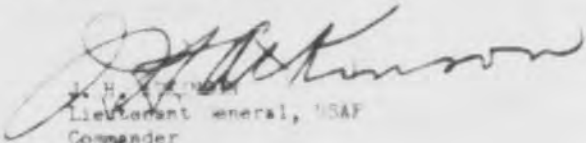
1. On 1 January 1957, the atomic air-to-air rocket was introduced into inventory. This represents the most significant improvement in Air Defense Capability to date, and opens up a vast new area to exploit.

2. I consider the MB-1 (Genie) to be the primary armament in the Air Defense inventory, and desire that all staff sections take necessary actions to insure the most rapid and effective integration of this capability into our manned weapons systems. Further, I consider atomic warheads for Interceptor Missiles to be of equal importance.

3. In addition, we must continue to emphasize further development of the atomic capability from the Air Defense viewpoint of greater yield, increased range and improved accuracy.

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DCS/P&R (7cys)


J. H. Johnson
Lieutenant General, USAF
Commander

UNCLASSIFIED

~~RESTRICTED DATA ATOMIC ENERGY ACT~~

1954

[REDACTED]

REFOLD NO. 2

██████████
 1957
 FILE NUMBER 30110
 DOC 259 ADNR 578
 FROM: USAF WASH D.C.
 TO: COMCOMINT AFB GOLF

SECRET/EX AFVVC 51979. REURAD ADMOR 02826, 21 Dec 56, and Interim replies from this hq dated 8 Jan 57 and 25 Jan 57, concerning incorporation of the NB-1 Air-to-Air Atomic Rocket in the F-102A. This message in 2 parts. PART 1.

While your requirement for the NB-1 in the F-102A is fully recognized, the proposed plan for stretch-out of F-102A production to accomplish this armament change cannot be accepted due to the adverse effect such program would have on world wide Air Defense capabilities. Areas considered in reaching this decision are:

(a) F-102A's programmed for AAC and NEAC must be delivered into ADC squadrons not later than 4th quarter FY 57 for deployment in the 1st and 2nd quarters FY 58. This 4/57 equipage date cannot be slipped further without unacceptable numerical depletion of the total AAC/NEAC Fighter Interceptor Inventory due to F-39D modification program requirements on these theaters. Proposed stretch-out would preclude AAC/NEAC deployment of F-102A aircraft in final configuration (NB-10, ARN-21 and ARN-31) thus requiring return of aircraft to the 21 for modernization at a later date with the resulting loss of operational capability. An attendant problem concerns the availability of navigational and recovery aids in AAC/NEAC. If stretch-out were approved, assignment of F-102A aircraft without AN/ARN-21 TACAN equipment would be required. Since neither AAC nor NEAC are programmed for a VOR network, these aircraft would therefore, in effect, be deployed without navigational and recovery equipment. (b) Proposed stretch-out of the F-102A production would require that F-36D/Ls be kept in the ADC active inventory through 2nd qtr FY 61 instead of phasing out in 3d quarter FY 60 as currently planned. Additional ADC F-36D/L squadrons would be maintained over present program by approximately 11 in 3/58, 6 in 3/59, and 6 in 3/60. ADC F-102A squadrons would be reduced by

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[REDACTED]

11 in 3/58, 3 in 3/59, 6 in 3/60 and 5 in 3/61. An evaluation was made, weighing the force structure which would result from F-102A stretch-out, against the increased capability of the 5 squadrons of WB-1 equipped F-102As which could be had with the stretch-out. The results of this evaluation favor retention of the present F-102A production program. (c) The addition of 5 squadrons of WB-1 equipped F-102s would generate a requirement for additional FY 58 MCP funds in excess of six million dollars. While this change to the 58 MCP could undoubtedly be accomplished, it would of necessity be at the expense of another high priority 58 MCP item. (d) It is probable that the \$25,000,000.00 cost of the proposed stretch-out of the F-102A program could only be paid for by a reduction in the total quantity of F-102As procured. This reduction, when considered with the force structure outlined in paragraph (b) above was considered undesirable from an over-all USAF air defense viewpoint. PART II. The possibility of procuring WB-1 equipped F-102Cs over and above the present F-102A procurement program is being investigated.

6 Feb 57

[REDACTED]

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COPY OF INCOMING CLASSIFIED MESSAGE

(is message in whole or in part is prohibited without approval of action office)

SEE CRYPTO SECTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

DOC 260 ADCHR 57A

ACC MDM 6 June 57
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HQS
39 June 57

AG102
HQA216
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DE RJEPHQ 82
R 031426Z

FM HEDUSAF WASHDC
TO RJEDEN/COM ADC ENT AFB COLO
INFO RJEDEN/CINCONAD ENT AFB COLO
RJEDWP/C OM AMC WPAFB OHIO
ZEN/COM FLD COMMAND AFSWP SANDIA BASE ALBUQUERQUE NM



FROM AFCAV 56728

THIS IS IN REPLY TO YOUR ADMLO-A 01133. DOD AND AEC
WILL NOT CONCUR IN TRANSPORTING MB-1 ROCKETS AS REQUESTED.
DOD POINTS UP THAT IT IS ONLY A MATTER OF MONTHS UNTIL WEAPONS
WILL BE PROVIDED TO NEW BASES AND THAT WE ARE JUSTIFIED IN
ACCEPTING THIS DELAY. AEC INSISTS UPON SURFACE DELIVERY.
CHIEF OF STAFF'S VIEW IS THAT IT IS NEITHER NECESSARY NOR TIMELY
TO APPEAL THESE DECISIONS TO THE PRESIDENT AND THAT WE CAN
LIVE WITH THEM.

BT
R 1429Z JUN RJEPHQ

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.

UNCLASSIFIED

MBER. 30/10

361

APR 23 1957

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17 April
ADMAA
T-50
19 April

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP B. 200-20 20000Z

01108

For your stream information and necessary action, please see my being classified to discuss four complete M-1 reports per hour during June 57 to each of the following bases: Taha, Tawa, Gattika, and Gato. Intent is to maintain capability of operational F-57 systems at earliest possible date. Each following date and method of delivery and get them. It is required that you plan to change into M-1s and Aviation from usual planning schedule with in necessary. Action has been initiated at this headquarters to expedite monthly payment, training of weapon personnel, Army major equipment ground support equipment, and a final delivery plan. Headquarters are being requested to coordinate with you this early action to substantiate by October, 1957.

COMEBACK COPY

all not requested, not classified
19 APR 1957
(Date) [Signature]

H. J. TOSO
Capt, USAF
Asst Command Ad
APR 205-1, or for instruction stated.

DISPATCHED
19 APR 1957
A.D.C.

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NO: [Redacted] PARFOLO NUMBER AND SUSPENSE DA

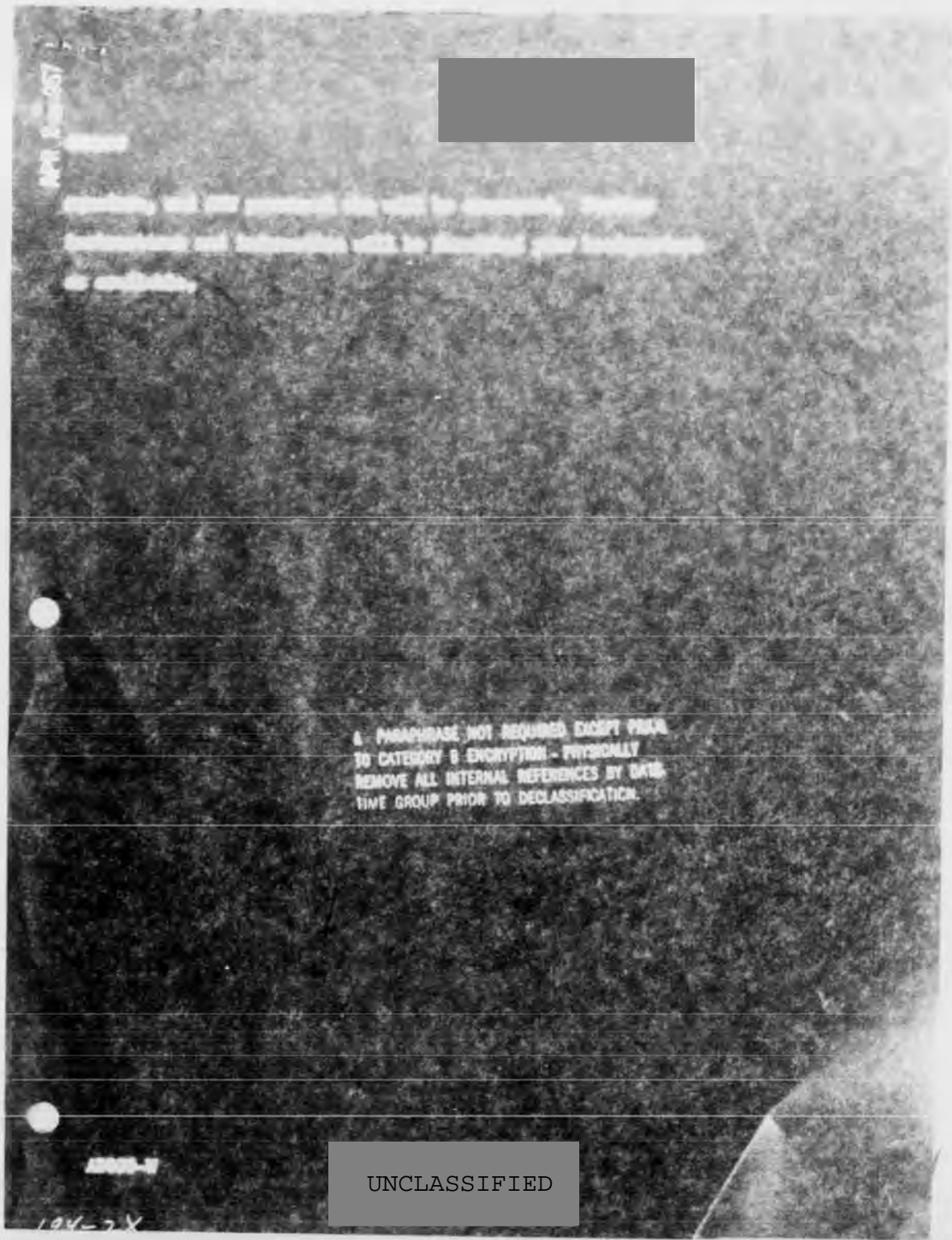
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COMBR ADC INT AFB C.10
COFS USAF WASH DC
INFO: COMBR ADC WPAFB OHIO
CINCOMAB INT AFB C.10 (COMBR)

01188

FROM AFHQ-3
USAF For AFOP and AFOP-2, AIC For USA, CINCOMAB For COMBR.
Reference letter CINCOMAB to COMR USAF dated 1 Apr 57, The Subject,
Subjects: COMAB Proposed Requirements for W-25 Mustang, Paragraph 4.
This message in two parts and is the proposed implementation of above
reference, PART I. By 1 July 1957, the ADC plans to increase the
numbers of W-25 by four (4) additional bases: Olathe AFB, Kans
Dover AFB, Del; Griffis AFB, NY and Palmer AFB, Wash. This will
be accomplished as follows: AFB's base (22) W-25 Mustangs
igniter by 7-0PM from Westfield AFB, Wash. Four (4) each to
Dover AFB and Griffis AFB. AFB's four (4) W-25 Mustangs
igniter by 7-0PM from Westfield AFB to Palmer AFB. The four (4)
at each new location will be hung on short aircraft in accordance

COMEBACK COPY

Not requested, not furnished
Furnished 29 APR 1957

W.P. Kennedy Jr.

cp 1st 24 Apr 57
H. I. TOSO
Capt USAF
AFC's Command

MESSAGE TRANSMITTED
WITH FOLLOWING DATE TIME GROUP
R-415-29 29 1707 Z



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COOPER	Write Last Name and Other Data Coordinates
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30	<i>Approved</i>

WRITER (and type of a initial)
Lt Col Wm P Kennedy Jr/sb

OFFICE CODE: ADPLD-A

DATE: 24 Apr 57

TEL NO: 2731-2676

FORM NO: 10 MAR 57

SECRET

AFR 255-1, or for manual

MEMO FOR RECORD

1001 1967

CONFIDENTIAL

with current restrictions. Tables in each issue are available to select periodic inspections as required by current Tech Orders.

NOTE II. Current Support Equipment, Technical and Security Personnel will be adequate. Present information at this Headquarters indicates classified data of MI-1 storage facilities are as follows: 000 - 000 000. Now - Oct 57; 00000 - Nov 57 and 000 - Oct 57.

Request General to display MI-1 storage facilities as indicated above.

A - PHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION - PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE TIME GROUP PRIOR TO DECLASSIFICATION.

116-2X

UNCLASSIFIED

DOC 263 ADCHR 518

HEADQUARTERS

AIR FORCE SPECIAL WEAPONS CENTER

AIR RESEARCH AND DEVELOPMENT COMMAND

KITLAND AIR FORCE BASE

NEW MEXICO

OFFICE OF THE AIR DEFENSE COMMAND RESIDENT REPRESENTATIVE

SAC

1 March 1957

SUBJECT: Transmittal of Special Weapons Weekly Summary

TO: Commander
Air Defense Command
Ext Air Force Base
Colorado Springs, Colorado

Forwarded for information, distribution and retention are eight copies of Special weapons Weekly Summary dated 25 February 1957.

1 Incl
Spec Wpn Wkly Summary
dtd 25 Feb 57
SACCS-60, 628-1/Cys 1 thru 8

Distribution at SAC

Cy #1 - DCS/Operations
Cy #2 - DCS/Operations, Attn: ADOOO-W
Cy #3 - DCS/Operations, Attn: ADOOP
Cy #4 - DCS/PRR, Attn: ADRAS
Cy #5 - DCS/PRR, Attn: AIRSI
Cy #6 - DCS/PRR, Attn: AIRRQ-B
Cy #7 - DCS/PRR, Attn: ADRPE
Cy #8 - DCS/Materiel, Attn: ADMLO
Cy #9 - CINC, CONAD, Attn: DCS/Intel, D/RAS
(Forwarded by separate letter)

UNCLASSIFIED

(Attached as Incl)

RECEIVED
MAR 1 1957

SM-70-40 2187

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ARMED WEAPONS SYSTEMS

25 February 1977

1. AIR-TO-AIR ROCKET, TYPE MB-1

a. Information from AFAC on 15 February indicated that 13 MB-1 Rocket fins on 4 different rockets were cracking at the rear weld on the second fin stage during MB-1/R-89J flyarounds at AFAC. This condition was immediately investigated by AFAC and found to be a production quality control problem rather than a rocket design problem. Fins with improved welds are now being shipped by premium transportation to AFAC. Action is also being taken to make certain that fins in the field which do not have the improved weld are replaced. (CONFIDENTIAL)

b. Complete Design Release (CDR) of the XM-25 Warhead was completed on 15 February with the CDR of the MC-790 Arm Safe Switch. (CONF)

c. Sandia Corporation sled tests which will test for the possibility of an MB-1 rocket fuse delivering a firing signal to XM-25 Warhead L-Unit will commence during the week of 4 March. These tests will simulate the condition of an MB-1 Rocket, which failed to detonate in the air, detonating upon ground impact. The probability of nuclear detonation upon ground impact has been calculated to be one in 200,000 of these weapons launched in an armed condition. (SECRET ED)

d. MB-1 Full Scale Delivery for Operation HARDTACK: at the request of HQ AFAC, a study was conducted to determine the feasibility of a full-scale MB-1 delivery against a modern bomber target during Operation HARDTACK. The study concluded that:

- (1) Such a test was feasible.
- (2) The F-102A is recommended as the delivery aircraft.
- (3) B-47 or B-45 employing a crew bail-out be recommended as the target.
- (4) The requirement for such a test cannot be supported by technical justification, but some technical data could be obtained as secondary results, if such a test were to be conducted.
- (5) The test requirement should be supported from an operational justification through ADC. (SECRET)

2. MX-40 Program: The Sandia Corporation has completed the modernization of the Bomarc Warhead Compartment. They have also completed their first external configuration of the MX-40 and have installed it in the warhead compartment. Although the warhead is not true weight (consisting of outer case only) and the Corporation does not have the casing designed

4.670-2

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SEC-75-62, 848-1/

UNCLASSIFIED

workshop handling equipment, it appears that the installation is quite satisfactory. Plans call for an "official" IIA check to be made at SAC in March 1997. (CONFIDENTIAL)

3. LOW LEVEL CONTAMINATION OF AIRCRAFT

Representatives from Conway, San Antonio Air Materiel Area, and Air Force Special Weapons Center, met at Kirtland Air Force Base to discuss permissible release levels of radioactively contaminated aircraft. AFMOC representatives presented their present experimental program designed to determine radiation hazards to personnel working on aircraft contaminated in routine flights throughout the world. After a prolonged discussion a table of inherent radioactive tolerance levels was agreed upon for the uncontrolled release of contaminated materials. These levels are higher than previously established levels, and it is hoped that those adopted nationally will be even higher. (UNCLD)

4. MISSILE VULNERABILITY CONFERENCE

This Center was represented at the Missile Vulnerability Conference conducted by Wright Air Development Center. This conference was concerned with the vulnerability of an ICBM to the effects of nuclear counter weapons at high altitudes. Allied Research Associates presented a theory for the ablation of material from an ICBM type weapon. Dayton University supplied experimental data from Operation NEWMINE upon which the AAA theory was based. The final result of this presentation was an estimate of the lethal volume of an ICBM. This lethal volume was dependent upon the establishment of a kill criterion of a certain thickness of material ablated. The data from this conference provided a comparison of lethal volumes for an ICBM from thermal effects and from neutron melting. (SECRET ED)

5. GUIDED AIRCRAFT ROCKET EVALUATION

Representatives of the AFMOC attended a meeting sponsored by Hq ANSG at WADC 11 through 15 February concerning the armament system for the Medium Range Interceptor, MRL-1. The purpose of the meeting was to evaluate proposals submitted by five contractors on a Guided Aircraft Rocket, GAR-1, as armament for the MRL-1 and to arrive at the most desirable characteristics for the GAR-1 on the basis of the information contained in the various proposals. As a result of the meeting Hq ANSG will write an abbreviated Development Plan which should be published shortly. (SECRET)

6. This document is classified SECRET RESTRICTED DATA in accordance with paragraphs 309 and 301 of AFR 205-1. (UNCLASSIFIED)

14-670-3X

UNCLASSIFIED

24-75-62, 248-1/

0949

UNCLASSIFIED

FILE NUMBER 301.10

MAY 3 1957

DESTROY AFTER: 30 DAYS 1 YR 3 YRS 4 YRS 5 YRS PERMANENT

ROUTINE
ROUTINE
COMM. ADR

X

AF

INSTR 4-87-2

INFO: COMM WRAP WASH DC
COMM ADRS BETHLEHEM MD
FIELD COMMAND AFHQ SANTA RAINA INDI
ON AFHQ WASH DC
COMM AFHQ KENTLAND AFB INDI

01226

For AFHQ, WRAP, for BETHLEHEM, INDI. Reference ADRS msg BETHLEHEM 4-87-2
CONFIDENTIAL, dtd 11 Apr 57. Due to the cost, loss of time and
distances involved, this Command does not foresee any additional
Operations and Training Projects for HAWTHORNE, other than the
previously submitted full scale H-1 test as delineated in Project
Proposal, entitled ADRS Evac Target and msg, ADRS 00043, BETHLEHEM,
dtd 25 Jan 57, which is unclassified in currently under consideration
by the Air Staff. This negative requirement does not, repeat not,
include the requirements of this Command for VIP and official ground
observer participation which will be submitted at the proper time.
Not requested, not furnished
Furnished 1 MAY 1957
(Date) (Initials)

COMEBACK COPY

Maj. N. B. Bodinger
2143

UNCLASSIFIED

C. F. HUMPHREYS
Major USAF
AFHQ

WRITER (and typist's initials) Maj. N. B. Bodinger/se OFFICE CODE: ADRAE DATE: 1 May 57 TEL NO: 2143 PARFOLD NUMBER AND SUSPENSE DATE: B-3691 29 Apr 57

ADC HQ FORM 18 MAR 57 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE MEMO FOR RECORD: HOME SEE REVERSE

COMM	
VC	
COPI	
3 ADRAE	
COORD PREC	Write Last Name and Show Date Coordinated
1 ADRAE	
	Bruce
2 DS/PCA	
	1957

MESSAGE TRANSMITTED WITH FOLLOWING DATE-TIME GROUP 3-14-01 01213Z

DISPATCHED 1 MAY 1957 A.D.C.

(filled in) COPY OF INCOMING CLASSIFIED MESSAGE
 YPTO SECTION BEFORE DECLASSIFYING. PARAPHRASE IS NOT REQUIRED

ACTION COPY

MAY 3 1957

AG 30
 A-430-12
 RR RJEDEN
 DE RJEPYB 53C
 R 112037Z
 FM HQ ARDC
 TO COMDR ADC

*Action DP
 info IC OET, P+R
 Supp 30 Apr 57 3691
 ARDC Supp 30 Apr*

FROM RDSTW 4-29-E, DIRTLAND FOR AFSWC
 FOR USAF, ATTN: AFDRD/CC, AND AFDRD/CC, SUBJECT IS: OPERATIONS AND
 TRAINING PROGRAMS FOR PARTICIPATION IN OPERATION HADRTACK (NUCLEAR
 TESTS PLANNED FOR ENIWETOK PROVING GROUNDS, PACIFIC DURING SPRING
 1958.) THIS MESSAGE IN 3 PARTS.

PART1. THIS HQS HAS BEEN REQUESTED TO ASSIST IN PREPARING AF
 OPERATIONS AND TRAINING PROGRAMS FOR OPERATION HARDTACK AND FORWARD
 SAME TO HQS USAF AND AFSWP FOR REVIEW AND APPROVAL. IT IS THEREFORE
 REQUESTED YOU REVIEW YOUR REQUIREMENTS TO DETERMINE IF PARTICIPATION
 BY YOUR COMMAND IN OPERATION HADRTACK IS DESIRED.

PART2. IF PARTICIPATION WITH AN OPERATIONS AND TRAINING PROGRAM
 IS DESIRED, YOUR PROPOSALS SHOULD BE SUBMITTED WITHOUT DELAY AND
 SHOULD INCLUDE THE FOLLOWING.

- A. TYPE OF TRAINING TO BE ACCOMPLISHED.
- B. NUMBER AND TYPE OF PERSONNEL INVOLVED.
- C. NUMBER AND TYPE OF AIRCRAFT PARTICIPATION.
- D. TYPE OF AIRCRAFT CONTROL OR NAVIGATIONAL FACILITIES REQUIRED.
- E. SUPPORT REQUIREMENTS FOR AIRCRAFT, IF ANY, AT THE ENIWETOK
 PROVING GROUNDS.
- F. AMOUNT OF SPACE (PROJECT REQUIRED).
- G. NUMBER OF BILLETTS BY TYPE, I. E., OFFICER, CIVILIAN, AIRMEN,
 AND APPROXIMATE DURATION.
- H. OTHER REQUIREMENTS.

PART3. PROPOSALS SHOULD BE SUBMITTED TO HQS, USAF, ATTN: AFDRX,
 NO LATER THAN 30 APRIL 56, WITH INFO COPIES TO: HQS, ARDC, ATTN:
 RDSTW; HQS, USAF, 7, WASH, D, C. HQS, FIELD COMMAND, AFSWP, SANDIA
 BASE, ALBUQUERQUE, NMEX; HQS, AFSWP, WASH, DC; AND HQS, AFSWC,
 KIRTLAND AFB, NMEX.

BT
 11/2045Z APR RJEPYB

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEOGRY B ENCRYPTION--
 PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
 TO DECLASSIFICATION.

ACTION COPY

UNCLASSIFIED

MAY 13 1957

AMSC, Subj: Short Flight Time of B-2 Rocket

of instrument signals delivered to the rocket by the fire control system.

4. This memorandum is not intended that the feasible equipment on the two short flight times in question has been really delineated to the extent that the solutions are clearly seen and corrective action has been taken. It is requested that your headquarters comment on the AF Form 8888 to the Resident Representative (reference 4), particularly with regard to paragraph 4 thereof. In the event that further information is available from your command on this subject, it is requested that it also be furnished.

FOR THE COMMANDER:

4 Bufile (not reqd for CA/C files)

- 1. SAC
- 2. SAC
- 3. SAC
- 4. SAC

ROY A. HARRIS
Lt Col, USAF
Asst Command Adj

Copy furnished:

AFMOC, ATTN: Col. Hensch

Det 1, AMSC, ATTN: F-59 & W-59 Ops
Freq 605

UNCLASSIFIED

157-2X

0953

UNCLASSIFIED

DOC 266 ADCHR 57A

ROUTINE
ROUTINE
COMDR ADC

I AP ORIG

COMDR ARDC BALTIMORE MD

INFO: COMPS USAF WASH DC

COMDR ANC WPafb OHIO

COMDR DET 1 ARDC WPafb OHIO

COMDR AFSWC KIRTLAND AFB NMEX

COMDR OGAMA HILL AFB UTAH

COMDR HOLLOWMAN AIR DEVELOPMENT CENTER HOLLOWMAN AFB NMEX

TO: [illegible]
REMOVE [illegible]
TIME [illegible]

FROM ADORQ-4

For INFO and AFOP, USAF. For Col. Slocumb, AFSWC. Subject:
Extension of F-89J/MB-1 Northrop Flight Test Program at Holloman
y 1 MB-1 rounds. To develop realistic tactics currently needed by
his Command for the F-89J/MB-1 weapon system, it is mandatory that
some means be provided whereby ADC tactics evaluation crews can
(immediately have a limited number of MB-1 rounds under conditions
where the weapon was disarmed and errors introduced at launch can
be accurately determined. To date no such capability exists and

H-7754

UNCLASSIFIED

ADORG-A

As indicated in ARDC Operational Requirement No. 253 dated 2 May 57,
Subj: Scoring and Recording System for the GENIE Rocket, such a
system will not be available prior to third quarter, 58. As an
immediate requirement to provide the bare minimum of information
needed for head on and beam attacks under snap-up and co-altitude
conditions, it is requested that permission be granted to have ADC
tactics evaluators fire 6 rounds at Holloman, utilizing Northrop
F-89J and B-57 target aircraft. These additional rounds should be
fired immediately following the current Northrop Flight Test Program
scheduled for completion around 15 July. Verbal concurrence has
been obtained from HADC that such an extension could be integrated
without jeopardizing any range programs or requiring further action
by the Program Review Board. Verbal concurrence has been obtained
from Northrop that such a proposal could be supported. Informal
information indicates that six practice rounds scheduled for ADC
units could be re-scheduled to go to Holloman for this purpose.
Further request direct liaison be authorized between Hq ADC and Hq
HADC for the scheduling of ADC crews to Holloman for this purpose.

ADORG-A

[REDACTED]

FILE NUMBER 201.10

E-17912
E-17913
E-17896
E-17892

COMDR
VC
COFS
ADJ

COORD
PREC
Write Last Name
Date
Show
Date
Minute

ADRRQ
ADRSI
ADRRP
ADDDO

14 JUN 1957

ADRRQ-3

SUBJECT: Improvement of the NB-1 Rocket

TO: Deputy Chief of Staff, Development
Headquarters USAF
Washington 25, D. C.

1. The Air Defense Command staff has recently reviewed the USAF program for development of air-to-air guided and unguided nuclear warhead rockets. It is apparent that the cancellation of the GAR-5/-6 development has left a void in an otherwise logical progression of atomic weapons for air defense. This command desires to proceed with the implementation of atomic weapons as our primary armament. Now, if we are to do this, the NB-1 rocket must be improved to have greater flexibility and effectiveness for its employment with the F-301/F-306 in the post-1960 time period.

2. The NB-1 rocket relies on the uninterrupted performance of the interceptor radar. Electronic countermeasures, therefore, present the greatest single limitation to the effectiveness of these systems, as they can force the radar into degraded operation. As a result, we have been forced to configure our interceptors with backup high explosive (HE) armament. Not only does this seriously complicate the armament and electronic systems, it also departs from our basic concept of making maximum use of atomic weapons.

3. It is believed that the NB-1 can and should be improved. It is necessary that it have a high kill probability not only with an automatic launching but also when launched during degraded modes of radar performance. The weapon should be designed to take advantage of the electronic counter-countermeasures firing modes available in the F-301/F-306 interceptors.

4. Air Defense Command does not intend that this improvement program should attempt to solve all of the problems considered in the GAR-5/-6 effort. Rather, it should achieve a balance between added capability and a reasonable operational date. It must be developed to assure minimum structural and fire control system modification and retention of the NB-1 support equipment.

COMEBACK COPY

169-1

Not requested, not furnished
Furnished 14 JUN 1957
(Date) (Initials)

AFR 205-1, or for reason(s) stated.

UNCLASSIFIED

30.b.

CODE: DATE: TEL NO: FANFOLD NUMBER AND SUSPENSE DATE
ADRRQ-B 5 June 57 2852

ADC HQ FORM 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE. MEMO FOR RECORD: NONE SEE REVERSE
(4780)

JUN 18 1957
 5 YRS
 4 YRS
 3 YRS
 2 YRS
 1 YR
 90 DAYS
 DESTROY AFTER:
 PERMANENT

UNCLASSIFIED

169-2

JUN 1957 13 14



2852

OFFICE OF THE DCS/PLANS AND REQUIREMENTS

5 June 1957

MEMORANDUM FOR THE CHIEF OF STAFF

SUBJECT: Correspondence for Signature of the Vice Commander

1. As was noted by your recent comment on the brief of JCS Document 2012/59, the cancellation of the GAB-5/-6 (GAB-X) development program has left USAF with no missile improvement program for the F-101/F-106 for the post-1960 time period. The cancellation of the GAB-5/-6 was agreed to by AFG representatives on the USAF GAB-X committee. We did not agree that only the long range missile development for the follow-on interceptor would suffice.

2. The GAB-5/-6 program was not considered favorably because it attempted to solve all the problems in too short a time. These problem areas were weapon kill, less reliance on performance of the AI radar which could be degraded by ECM, elimination or reduction of interceptor maneuver before and after launch, greater differential altitude capability and reduction of detection range requirements. As a result the development and modification costs were excessive, the 1959-60 time date was unrealistic and our total carrier kill potential was reduced.

3. Representatives of MAI have been working directly with staff officers from AFHQ, Headquarters AFGC and Headquarters USAF to determine the type of program which could now be supported for the 1960-65 time period for the F-101/F-106. It has been determined that the one problem which requires earliest solution is that of reducing the reliance on the perfect radar performance for launching the MB-1. If we can get a more flexible weapon in this respect, we will probably gain some in the other problem areas.

4. Though our letter ABHQ-2, 22 May 1957, subject: F-101/106 Nuclear Amendment Improvement, has previously stated our position, it is felt that the attached letter would add some needed impetus to get this program established.

LOWEN G. McCOLLION
Colonel, USAF
DCS/Plans and Requirements

169-2

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0957

JUN 14 1957

Headquarters ADC, ADRD-3, subj: Improvement of the PB-1 Rocket

5. This letter is considered a statement of requirements and action is requested in accordance with Air Force Regulation 57-3. This program should provide a needed improvement but should in no way infringe on the present development for the follow-on interceptor.

Copies furnished:
ADC Liaison Office,
AFSSC
ARDC, ATTN: RDTPA
DET 1, ARDC, ATTN: RWLSH

ROY E. JENK
Major General, USAF
Vice Commander

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COPY OF INCOMING CLASSIFIED MESSAGE

DOC. 268 ADCHR 57A

45
WPA047
PP RJEDEN
DE RJEDWP 4XA
P 182043Z
FM COMDR DET 1 ARDC WPAFB OHIO
TO CMDR ADC ENT AFB COLC

Has 6
Action: V/C

628-1 18 Jan 57

FROM MRDZSMA-1-33396-E PERSONAL FROM ESTES
TO LYNN. RECENT AIR FORCE TESTS OF GAR-1 AND -1D MISSILES INDICATED
PRODUCTION MISSILES WERE ACHIEVING ACCURACY BELOW THAT OBTAINED
DURING DEVELOPMENT PROGRAM. DETAIL ANALYSIS BY CONTRACTOR AND
ARDC INDICATED DIFFICULTIES WERE A NUMBER OF SMALL DEFICIENCIES
OF A QUALITY CONTROL AND ENGINEERING NATURE IN THE ELECTRONICS
PACKAGE PRIMARILY. CHANGES TO CORRECT DEFICIENCIES ARE BEING MADE
BY CONTRACTOR AND MISSILES ARE BEING MODIFIED FOR USAF TESTS TO
BEGIN APPROXIMATELY 4 FEB 57. ESTIMATE COMPLETION OF TESTS AND

PAGE TWO RJEDWP 4XA
MODIFIED ELECTRONIC COMPONENTS TO BECOME AVAILABLE BEGINNING
15 MAR 57. IT IS RECOMMENDED THAT EXCEPT FOR EMERGENCIES THE
EXPENDITURE OF GAR-1 OR -1D MISSILES BE HELD IN ABEYANCE UNTIL
REVISED COMPONENTS AND CHECKOUT CONSOLE CALIBRATION ARE AVAILABLE.
THE ABOVE DOES NOT REPEAT NOT PERTAIN TO GAR-2 OR GAR-3
OR GAR-4 MISSILES

BT
13/2121Z JAN RJEDWP

QA--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
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DECLASSIFIED

UNCLASSIFIED

ADC Hq-0-AG-8hrs
April 53

UNCLASSIFIED



DOC 269 ADCHR 57A

82 JAN 57

RE: [faded]
[faded]
[faded]
[faded]
[faded]
[faded]

00201

Will further advise from this headquarters, no report or
any type message will be filed except under emergency
conditions. Detailed information will follow.

[Handwritten signature]



20 2215 Z
Jan 57

UNCLASSIFIED



[Handwritten signature]

UNCLASSIFIED

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FILE 1 ³⁰⁶⁹
[Handwritten initials]

COPY OF INFORMATION CLASSIFIED MESSAGE

AG-88
A-1869-26
HQAB04
RR RJEDEN
DE RJEPHQ 203
R 252254Z
FM HED USAF WASH DC
TO COMAIRDEFCON INT AFB COLO

859-D *INFO-1G*
Suspense 30 Jan *DO* *u*
25 Jan 1957

DOC 270 ADCHR 57A

[REDACTED] FROM AFOOP OC F/2 51522
REFERENCE YOUR MESSAGE ADOCO-W 00158 DTD 18 JAN 57.
THE URGENCY OF YOUR REQUIREMENT FOR THE 4750TH AIR DEFENSE WING
(WEAPONS) TO FIRE THE GAR-1 TO DEVELOP TACTICS, TECHNIQUES AND
PROCEDURES FOR UNIT PRACTICE FIRING AND FOR THE MOST EFFECTIVE USE
OF THIS WEAPON IN AIR DEFENSE IS RECOGNIZED.
PRIORITY EFFORT IS BEING APPLIED TO THE DEVELOPMENT OF A SELF DESTRUCT
PACKAGE TO PERMIT GAR-1 FIRING ON THE VINCENT RANGE WITHOUT SUBJECT-
ING THE GAR-1 TO COMPROMISE.
DET 1, ARDC HAS BEEN INSTRUCTED TO SUBMIT A STATUS REPORT ON THE

PAGE TWO RJEPHQ 203
SELF DESTRUCT PACKAGE WITH AN INFORMATION COPY TO YOUR HQ AND TO
FURNISH AN ESTIMATE AS TO WHEN THE SELF DESTRUCT PACKAGE CAN BE
INSTALLED IN GAR-1'S AT VINCENT AFB. FURTHER, ACTION TO RESOLVE THIS
PROBLEM WILL BE DEFERRED UNTIL RECEIPT OF THE ABOVE INFORMATION.
YOU WILL BE ADVISED.
BT
25/2345Z JAN RJEPHQ

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR
TO DECLASSIFICATION.

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ADC Hq-0-AG-Form
9 April 53

This document consists of _____ pages.
This is copy No. _____ of _____ copies


 DOC 271 ADCHR 574 7

30 January 1957

(UNCLASSIFIED) Minutes of GAR-1 Weapon System Phasing Group Meeting held on 28 January 1957 at Hq AMC, Wright-Patterson Air Force Base, Ohio.

SUMMARY

1. The major problem areas affecting the timely and successful completion of the group's activities are as follows:

Item No. 10-56-2 - Missile Reliability (CONFIDENTIAL)

Design changes and retrofit modification of the GAR-1 and 1D is required to improve reliability and kill capability. (See page 2 for details.)

Item No. 12-56-1 - Materials Handling Equipment (UNCLASSIFIED)

Action is required to provide adequate handling equipment. Original equipment considered and handling procedures cannot be utilized in present storage and check out buildings. (See page 3 for details).

2. (CONFIDENTIAL) General Information. The reliability problem has been considered serious enough that WAC has stopped offering GAR-1Ds for acceptance pending satisfactory results from modifications being phased into production. This decision affects the production GAR-1D only, and does not in any way affect the GAR-2, 3 or 4 programs. In addition, the support of operational units will be continued as before in the GAR-1 and 1D program areas. Unless serious delays are encountered in the test and production recovery presently planned, there will be no serious affect on overall operational programs. The test program on the modified missiles is scheduled to start on 4 February with evaluation of the modifications by the end of February.

ALBERT D BORES, L/Col, USAF
Chairman GAR-1 & 2 WSPG

W E BJORNSON, L/Col, USAF
Chairman GAR-3 & 4 WSPG

41-1X


 57GCP-5156

c-218

UNCLASSIFIED



DOC 172 ADCHR 37A

FILE NUMBER 307.9

FM HQ AWC WPAFB OHIO
TO AFPR HUGHES ACFT CORP CULVER CITY CALIF

CONFIDENTIAL/MEPDR-3 789. Reference is made to MCPDR message 5338 dated 31 Dec 56, which advised your office to stop acceptance of GAR-1D missiles until fix was obtained. Reliability and firing tests now indicate acceptable performance. With this improvement, resumption of production acceptance of GAR-1D missiles is authorized effective immediately to the limit specified herein. Acceptance will be based on pending ECP HUG(GAR-1(-0042, covering changes and current contract specifications. Early ECP approval and contract specification revision are anticipated and you will be so advised. GAR-1D delivery schedule will be changed as dictated by a requirements slippages. Contract will be amended accordingly upon receipt of Hq USAF approval. Overtime or double shift operations are not authorized "to get-well", contractor will be notified that deliveries for the next two months will be as follows: March (40), April (50). Deliveries after April will be dependent upon satisfactory approval of ECP.



UNCLASSIFIED

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A966-29

AGOS
 HQA018
 RR RJEDEN RJEDUP
 DE RJEPHQ 106
 R 291724Z
 FM HEDUSAF WASH DC
 TO RJEDEN/COMARIDETCOM ENT AFB COLO
 INFO RJEDWP/COMDR DET 1 HQ ARDC WPAFB OHIO
 BT

DOC 273 ADCHR 57A

Action OCO
 Info IC No

4287

Aug 2 May 57

29 Apr 57

FROM AFOOP OC F/2 55435
 YOUR MESSAGE ADOCO-U 05158, 18 JAN 57; MY MESSAGE AFOOP OC F/2, 51522
 25 JAN 57; YOUR MESSAGE ADOCO-W 37018, 13 FEB 57. YOU ARE AUTHORIZED
 TO CONDUCT GAR-1, GAR-II, GAR-III FIRING ON THE YUMA RANGE PROVIDED
 THE FOLLOWING PRECAUTIONS ARE TAKEN: (1) GAR-1 WILL CONTAIN WARHEAD
 WITH CONTACT AND TIME DELAY FUSE. (2) FIRING PATTERNS ARE ARRANGED TO
 INSURE THAT ALL MISSILES IMPACT WITHIN THE CONFINES OF THE RANGE.
 (3) PRUDENT MEASURES ARE TAKEN TO RECOVER MISSILES AND PROTECT THE
 CONFIDENTIAL INFORMATION THEREIN WHEN THE WARHEAD DOES NOT DETONATE
 OR THE MISSILE IS NOT DESTROYED ON IMPACT. IT IS NOT EXPECTED THAT

PAGE TWO RJEPHQ 106
 THESE MEASURES WILL BE EXTENSIVE ENOUGH TO REQUIRE ADDITIONAL MAN-
 POWER AUTHORIZATIONS. ONLY THE GAR-1, GAR-II AND GAR-III MISSILE WILL
 BE FIRED ON THE YUMA RANGE. THE GAR-1D WILL NOT REPEAT NOT BE FIRED
 ON THE YUMA RANGE. ADVISE THIS HEADQUARTERS, ATTN AFOOP-OC-F/2 WHEN
 GAR-1 FIRING WILL COMMENCE AND IF THE FIRST F-89II SQUADRON IS
 SCHEDULED JMR GAR-1 PRACTICE FIRING.
 BT
 29/1728Z APR RJEPHQ

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
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 TO DECLASSIFICATION.

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DOC 274 ADGHR 570

REVIEW

1 47

AFOP DC 7/2 95435
29 Apr 57

CONFIDENTIAL

ORLADG

2398 WAF WASH DC

██████████ ORLADG 01323

Your AFOP DC 7/2 95435, 29 Apr 57. Our firings in connection with your message will begin immediately on the Test range.

Initial firings will be conducted under the auspices of the 1790th Test Squadron, which will develop a tactical firing program for AIC units. The first F-86H squadron is scheduled for deployment to Flanet on 21 July 57.

33102

29 30150

48 57

10003-W

GAFF ELDER/ABB
2398

UNCLASSIFIED

1 1

SP18



0965

(when filled in)

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TO RUEKJWZ/COMNAVSTA WASH DC
FM RUEKJWZ/COMNAVSTA WASH DC
INFO RUEKJWZ/COMNAVSTA WASH DC
RUEKJWZ/COMNAVSTA WASH DC
RUEKJWZ/COMNAVSTA WASH DC
RUEKJWZ/COMNAVSTA WASH DC
BT

ACT - PER 123084
1735 - EF WA-16-06
Singapore 21 Feb
18 Feb 1957 DO LM

DOC 215 ADCHR 57A

THIS MSG IS FIVE PARTS. PART I - AWC IS AUTHORIZED TO CONDUCT, IN COORDINATION WITH AFAC, A MISSILE FIRING TEST OF THE P-102A. THE TEST WILL BE CONDUCTED AT HOLLAMAN AND MAY BE INTERFERED BY AWC AS POSSIBLE AFTER CURRENT MISSILE FIRING BY AFAC HAVE DEMONSTRATED THE EFFECTIVENESS OF FIXES AND IMPROVEMENTS. THE PURPOSE OF THE TEST WILL BE TO DETERMINE AWC'S CAPABILITY TO LOCATE IDENTIFY, TRACK AND REPORT HOST HOSTEN SYSTEM. AWC WILL PROVIDE PERSONNEL SUFFICIENT TO OPERATE ALL GROUND HANDLING, GROUND TESTS, GROUND-AIR TESTS, AND WILL PROVIDE HOUSEKEEPING FACILITIES, GROUND SUPPORT EQUIPMENT AND THE BEST SUIT-

PAGE TWO RUEKJWZ 133
ABLE TARGETS AVAILABLE. PART II - AWC HAS INDICATED THAT IF 1000 IMPROVED GAR-108 CAN BE MADE AVAILABLE FOR THE MISSILE TEST EVERY 1000 DAYS SUBSEQUENT TO RELEASE OF PRODUCTION, PRODUCTION RELEASE IS DEPENDENT UPON RESULTS OF CURRENT AFAC TESTS. THIS HQ WILL TAKE NECESSARY ACTION TO ALLOCATE MISSILES. PART III - AFAC AND AWC WILL FORMULATE A JOINT PLAN FOR THE TEST AT AN EARLY DATE. AFAC AND BRCC WILL PARTICIPATE IN PREPARATION OF THIS PLAN TO INSURE ADEQUATE SUPPORT FOR THE TEST WITHOUT INTERFERENCE WITH CURRENT AFAC AND AFAC TESTS BEING CONDUCTED AT HOLLAMAN. AWC WILL ADVISE THIS HQ AS SOON AS POSSIBLE OF AIRCRAFT SERIAL NUMBERS SELECTED FOR THIS PROJECT. BRCC SHOULD ADVISE THIS HQ IF ASSISTANCE ON OBTAINING TARGETS IS REQUIRED. PART IV - UPON COMPLETION OF THE GAR TEST, AWC IS AUTHORIZED TO CONDUCT AN EVALUATION OF THE EFFECTIVENESS OF THE 2.75" FEAR ARMAMENT LOAD USING FIRE CONTROL SYSTEMS INCORPORATING THE IMPROVED AIR DATA COMPUTER. THIS TEST WILL BE CONDUCTED AT VICENT AFB. PART V - THESE TESTS WILL NOT TAKE PRIORITY OVER CURRENT AFAC AND AFAC TESTS BEING CONDUCTED AT HOLLAMAN TO PROVE OUT VARIOUS FIXES IN THE P-102A RESPONSE SYSTEM. IN ADDITION, THEY WILL IN NO WAY BE INTERPRETED AS REPLACING OR DIMINISHING THE IMPORTANCE OF AWC FOLLOW-ON TEST OF THE P-102A, PROJECT NO AWC/ADA/42211.
BT
170215Z FEB 57 RUEKJWZ

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DOC 276 ADCHR 57A

1217
c/s

AG 343
A-353-23
PP RJEDEN
DE RJEDWP SYA
P 231617Z
FM COMDR DET 1 ARDC WPAFB OHIO
TO COMDR ADC ENT AFB COLO SPRINGS COLO

Action P+R
Info IG
25 Apr 57
4171-c W
Group 30 Apr 57

FROM RDZSMA-30664-E. ARDC TESTS OF F-102A /FALCON SYSTEM AGAINST A MATADOR TARGET HAVE BEEN COMPLETED. TESTS OF 2.75 INCH SPAR S AGAINST MATADOR REMAIN OUTSTANDING. FIRST MISSION WAS A DAYLIGHT TEST IN WHICH ONE GAR-2 WAS LAUNCHED. SECOND MISSION WAS A SALVO OF THREE GAR-2 S AT NIGHT. THIRD MISSION CONSISTED OF A SIX-MISSILE SALVO OF GAR-1D S AT NIGHT. TARGET WAS HIT AND DESTROYED ON EACH MISSION. SUCCESSFUL COMPLETION OF THIS TEST COUPLED WITH EARLIER TEST RESULTS AGAINST QB-17 S AND PARACHUTES GIVE ADDED ASSURANCE THAT FIXES PROPOSED FOR THE SYSTEM SOLVES THE F-102A/MG-10/GAR-1 DEFICIENCY PROBLEM

PAGE TWO RJEDWP SYA
EXPERIENCED IN THE PHASE VI AND VII TESTS. THIS COMMAND IS PREPARED TO ASSIST THE AIR DEFENSE COMMAND WHEREVER POSSIBLE IN CONDUCT OF FORTHCOMING CONFIDENCE TESTS /ARDC PROJECT NUMBER ADC/-VAFB/M-F-102/ OF F-102A/MG-10/GAR-1D SYSTEM. REQUEST STARTING DATE OF TEST IF DIFFERENT FROM THAT STATED IN APCC PLAN.
BT
25/1842Z APR RJEDWP
A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION.

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UNCLASSIFIED

FILE NUMBER 303.11

**MESSAGE TRANSMITTED
WITH FOLLOWING DATE TIME GROUP**
B 35-19 12 1730Z

PRIORITY ROUTINE X N **AFHQ-AD 57011**

COMER AFG
COFS USAF WASH DC

INFO: COMER AFGC NGLIN #78 FLA

FROM ADOCO-W 01888

NOT REQUESTED, NOT FURNISHED
Not requested, not furnished
12 JUN 1957
oio **FURNISHED** (Date) **BE** (Initials)

YOUR AFHQ-AD 57011, 10 JUN 57, NOTAL. THIS HEADQUARTERS DOES NOT CONSIDER THE RESULTS OF PROJECT FAST IRAN CONCLUSIVE AND IMPLIES THAT THE PROGRAM BE CONTINUED. DUE TO THE F-102A ENGINE REFLECTOR MODIFICATION WE WILL NOT HAVE SUFFICIENT AIRCRAFT AVAILABLE TO INITIATE A CONTINUATION OF THE PROGRAM UNTIL AFTER 1 JULY 57. THIS HEADQUARTERS FINDS IT NECESSARY THAT THE CONTINUANCE OF PROJECT FAST IRAN BE DELAYED UNTIL 15 JULY 57, AT WHICH TIME WE WILL HAVE THE AIRCRAFT WHICH INCORPORATE ALL G-16 FIRE CONTROL SYSTEM ENGINEERING CHANGE PROPOSALS WITH THE POSSIBILITY OF AVAILABILITY OF TWO ADDITIONAL AIRCRAFT WITH MODIFIED FIRE CONTROL SYSTEMS. AFGC HAS RECOMMENDED THAT THE CONTINUED FAST IRAN PROGRAM BE EXPANDED TO TWENTY ADDITIONAL IRON FLIGHTS INCLUDING D.C. 6 G-17 KILLS AND 5 G-50 KILLS. THIS HEADQUARTERS AGREES WITH THE AFGC RECOMMENDED PROGRAM AND REQUESTS YOUR CONCURRENCE AS OUTLINED.

ADCOO-W
Capt. D. A. BROOKSHER

ROR
 D/D ITEM
 DO Policy
 INTERNAL REFERENCE BY DATE
 PHYSICALLY
 H. I. TOSO
Capt. USAF
Asst Command Adj

DISPATCHED
12 JUN 1957

AFR 205-1, or for reason(s) stated.

WRITER (and typist's initials)
Capt. D. A. BROOKSHER/cs

DATE: 10 Jun 57

TEL NO: 2398

FAHFOLD NUMBER AND SUSPENSE DATE: B-5632

ADC HQ FORM 11 18 MAR 57 147201

MEMO FOR RECORD: NONE SEE REVERSE

DESTROY AFTER: 1 YR 30 DAYS 3 YRS 4 YRS 5 YRS

RECORDS DISPOSITION: PERMANENT

COORD. PANEL: Write Last Name and Show Date Coordinate

ADCOO
ADDOA
ADDOFT
ADODO
ADM DM
ADPDP
ADHAA
ADMAC

14 JUN 57

UNCLASSIFIED

0968

COMER AFB

165-2
ABOVE AND AUTHORIZATION FOR DRONE AND MISSILE EXPENDITURE DURING 1ST
QTR FY 1958. WHILE THIS HEADQUARTERS DOES NOT WISH TO JEOPARDIZE THE
EXISTING Q8-17 KILL AUTHORIZATION, IT IS BELIEVED THAT THE TEST
RESULTS CAN ONLY BE MADE CONCLUSIVE BY THE ADDITION OF THE PROPOSED 5
Q8-80 KILLS. PERSONAL CONTACT WITH AFCC REPRESENTATIVE INDICATES
ADDITIONAL DRONES ARE AVAILABLE. AFCC FURTHER INDICATES FULL SUPPORT
WILL BE GIVEN THIS TEST AND RECOMMENDS 15 JULY AS STARTING DATE.

ABCCO-W

2 2

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165-2

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M
151

010
~~RRR~~ SU 13 Jun
1c NO 5632

PRIORITY

AG 002HQA017
PP RJEDEN
DE RJEPHQ 88
P 101406Z
FM HEDUSAF WASH DC
TO COMAIRDEFCOM ENT AFB COLO

FROM AFDRD -AD 57011
REFERENCE MESSAGE FROM COMDR APGC DCS/CTR-AD 0768C DATED 28 MAY 1957,
REPORTING THE RESULTS OF FAST DRAW TEST PROGRAM. THE RESULTS
REPORTED APPEAR TO BE INCONCLUSIVE. SIX OF THE EIGHT TARGET KILLS
ALLOCATED TO FAST DRAW REMAIN AVAILABLE TO ADC UNTIL 30 JUNE 1957,
THE END OF THE CURRENT QUARTER. STOCKPILE FALCON MISSILES ARE AVAILABLE
FOR CONTINUED FIRING IF THE QUANTITIES USED FROM THE STOCKPILE ARE
REPORTED TO HQ USAF FOR PROGRAM PLANNING ADJUSTMENT. PLEASE ADVISE
HQ USAF IF HQ ADC INTENDS TO CONTINUE THE FAST DRAW PROGRAM OR IF
THE RESULTS ARE CONSIDERED ADEQUATE BY ADC
BT

10/1430Z JUN RJEPHQ

CA--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION--
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TO DECLASSIFICATION.

TO: AG - AG-C

FILE:

ACTION:

USA to USAF

REFANFOLD:

SIGNATURE:

[Handwritten signature]

PRIORITY

ACTION COPY

30311



DGC 278 ADCHR 57A

PRIORITY I AF AMCO-W 0004 CONFIDENTIAL

COMER AEG

COMER 4750TH ADM VINCENT AFB ARIZ

COMER 4756TH ADM TYNDALL AFB FLA

COMER EAFB STEWART AFB NE

COMER CAIF RICHARDS GEBARR AFB MD

COMER WAFB HAMILTON AFB CALIF

INFO: COMAF AFCC FOLIN AFB FLA

A PARAGRAPH... TO CATEGORY B... REMOVE ALL... THE GROUP...

AFCC... JUN 1977

FROM AMCO-W 0009

THIS MSG IN 2 PARTS. PART I. HQ USAF HAS APPROVED CONTINUANCE OF PROJECT FACT II-A. DESIRE INSTRUCTIONS CONTAINED IN MY CLASSIFIED AMCO-W 0004, 19 JUN 77 BE IMPLEMENTED. PART II. 4750TH ADM(W) PASS TO COL ASHKINS. DESIRE AIC TEST PROJECT OFFICER BEGIN IMMEDIATE ACTION TO ORGANIZE TEST ACTIVITIES AT FOLIN AFB IN CONJUNCTION WITH AFCC. FURTHER DESIRE AIC TEST PROJECT OFFICER NEGOTIATE DIRECTLY WITH AFCC PROJECT PERSONNEL TO RESOLVE SUPPORT PROBLEMS. PRELIMINARY PLANS INDICATE THAT 54 GAR-1B MISSILES AND 12 GAR-2 MISSILES, ALL WITH LIVE WARHEADS, WILL BE EXPENDED. ALL GAR-1B MISSILES WILL BE

21 1832Z JUN 1977


AMCO-W CAPT D A BROOKSTER 2398

Copy # 1 H-10000

1 2

JOHN M. HENSKI... OPERATIONS

UNCLASSIFIED


COVER AND
YING IN FULL SALVO SIZES. THIS HEADQUARTERS IS HELPING AND
OPERATION PLAN 14-78, WHICH WILL BE DEPENDENT TO AND TASK ORGANIZATION
FOR PROVIDING TEST SUPPORT AND PARTICIPATION.

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ADCC-4

2 2

0972

301-8

DOC 279 ADCHR 57A

PRIORITY
PRIORITY

I AF I

COMDR ADC ENT AFB COLO

COMDR SHAWA WORTON AFB COLO
COMDR ODAMA HILL AFB UTAH

INFO: COMDR EADF STEWART AFB NY
CCPS USAF WASH DC
COMDR CADY RICHARDS GERBER AFB MO
COMDR WADY HAMILTON AFB CALIF
COMDR 4750TH AIN WPMB VINCENT AFB ARK
COMDR AMC WPAFB OHIO
COMDR DET 1 ARDC WPAFB OHIO
AFFR HUGHES ACFT CO TUCSON ARIZ

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RECEIVED
5 JUL 1957
A.D.C.

ADMN 008. FOR ODAMA, DET 1, ARDC. GAB-1

missiles are not tactically acceptable for use on F-102 aircraft.
Tactically acceptable combat ammunition will be GAB-1D and
GAB-2/2A missiles. Make no further shipment or redistribution
of GAB-1 missiles to F-102 squadrons. Ship 1400 GAB-1 missiles
to ODAMA for indefinite storage. The remainder of the ADC
inventory will be retained at present location for expenditure
in training. Specific shipping instructions with priority listing
will be forwarded by letter.

ADMN
LT COL LANE
2589 -2600

1 1

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JULY 1957

T. ALAN BERNETT H
BRIG. GEN., USAF

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301.9

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DE RPTSC1 143
P 141000Z
O AFGC
FM COFS USAF
INFO ADC
AMC
SUANA
OBT 1 ARDC WPAVO DMIO

Action
4831-E
MOM
INFO-115 OCO
RIR
Hest
14 May 57

DE RPTSC1 143
P 141000Z
O AFGC
FM COFS USAF
INFO ADC
AMC
SUANA
OBT 1 ARDC WPAVO DMIO
SUBJ: CAR-2 FAILURE RATES. THE MISSILE FAILURE RATES PRESENTED IN THIS
RPT ARE BASED ON LIMITED SAMPLE SIZES AND ARE THEREFORE TENTATIVE.
THE SHORTS WERE OBTAINED USING A CONSOLE WHICH CONTAINS THE REQ SIGNAL
INDICATOR PANEL MODIFICATION. 1. A PERIOD TEST PROCEDURES NUMBER OF
CAR-2 MISSILES WERE MAINTAINED IN THE PLANNED MAINTENANCE CONCEPT
OUTLINED IN THE FINAL REPORT OF THE CAR-2, THAT IS, MISSILES

DOC 280 ADCHR 57A

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C

PAGE TWO WJESGL 188

MAINTAINED IN DESICCANT CONTROLLED STORAGE FOR 13 DAYS, THEN LOADED ON ACFT FOR 17 DAYS, AND CHECKED ON THE CONSOLE UPON REMOVAL FROM ACFT. THE AVERAGE CAPTIVE FLIGHT TIME ON EACH MISSILE WAS 9 HOURS BETWEEN CHECKOUTS. A. TEST RESULTS: THE OVERALL MISSILE FAILURE RATE WAS 32 PERCENT, COMPRISING 34 PERCENT

METER DRIFT, 38 PERCENT COMPONENT FAILURE, AND 6 PERCENT OPERATIONAL FAILURE OF THE

METER DRIFT FAILURES, 1/3 WERE ATTRIBUTABLE TO PHASE ADJUSTMENT, 1/4 TO CROSS TALK, AND THE REMAINDER TO OTHER ADJUSTMENTS.

CONDITION 21 A. TEST PROCEDURES. GROUPS OF MISSILES WERE MAINTAINED IN DESICCANT CONTROLLED STORAGE FOR PERIODS OF FROM 7 TO 29 DAYS.

B. TEST RESULTS: THE OVERALL MISSILE FAILURE RATE WAS 48 PERCENT, COMPRISING 39 PERCENT

METER DRIFT, AND 9 PERCENT COMPONENT FAILURE. 2/3 OF THE METER DRIFT FAILURES WERE ATTRIBUTABLE TO PHASE

ADJUSTMENT AND 1/3 TO CROSS TALK DISCUSSION. A. FOR COMPARISON PURPOSES, THE MISSILE FAILURE RATES DUE TO

METER DRIFT OF THE GAN-1 AND GAN-2 UNDER PLANNED MAINTENANCE CONCEPT CONDITIONS WERE 14.5 PERCENT AND 23.1 PERCENT RESPECTIVELY, WITH OVERALL MISSILE FAILURE RATES OF 20 PERCENT AND 44.7 PERCENT.

PAGE THREE WJESGL 188

5. THE EFFECT OF OPERATION TECHNIQUES AND CONSOLE PERFORMANCE VARIABLES ON FAILURE RATE DATA IS DISCUSSED AT PAR 5.7. A LIST BY THE MANUFACTURER, IN CONJUNCTION WITH THIS COMMAND, IS NOW UNDERWAY TO INVESTIGATE THESE VARIABLES. RECOMMEND THE HIGH

METER DRIFT FAILURE RATE OBSERVED TO DATE, COMBINED WITH THE PRESENT COMPONENT FAILURE DATA WOULD MAKE THE GAN-2 UNACCEPTABLE

FOR OPERATIONAL USE. IT IS RECOMMENDED THAT DEVELOPMENT AGENCIES CONDUCT AN IMMEDIATE INVESTIGATION TO DETERMINE IF IT IS

POSSIBLE TO REDUCE THE GAN-2 FAILURE RATE TO AN ACCEPTABLE LIMIT. THIS MSG IS CLASSIFIED SECRET BY PARA 302, ACP 209-1.

BT

10/1852 AT 0000

A--PARAPHRASE NOT NEEDED SINCE THIS IS A MESSAGE OF DECRYPTION--
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FILE NUMBER 301.9

COMBR	
1 VG	
2 COFE	
ADJ	
COOP/PREC	Write Last Name and Ship Date Coordinate
ADOCO	
ADOOA	
ADODO	
ADMAC	
ADMMD	
ADHAM	

DESTROY AFTER: 30 DAYS 1 YR PERMANENT

RECORDS DISPOSITION: PERMANENT

EXPO: 5 YRS 4 YRS 3 YRS 2 YRS 1 YR

CLASSIFICATION: **SECRET**

GROUP: **ADOCO**

ADOCO

ADODO

ADMAC

ADMMD

ADHAM

MESSAGE TRANSMITTED WITH FOLLOWING DATE TIME GROUP B-31X-ZZ

A PARAPHRASE NOT APPLICABLE TO CATEGORY B ENCRYPTION REMOVE ALL INTERNAL REFERENCES TO THIS MESSAGE TO PROTECT TIME GROUP PRIOR TO DECLASSIFICATION

FROM ADOCO-W 01455

FOR INFO AT USAF, FOR INFO AT ANG, FOR SEMTEC-2 AT SBAMA, FOR KEMMA AT INT I AEG, FOR HEM/O-TB-AD AT AFOS. REFERENCE AFOS MESSAGE MESSAGE CITE HEM/O-TB-AD 0730G, 14 MAY 57. FAILURE RATE OF GAR-2 MISSILES IS OPERATIONALLY UNACCEPTABLE TO ANG. IT IS THEREFORE RECOMMENDED OPERATIVE THAT DELIVERY OF GAR-2 AND GAR-2A MISSILES TO ANG BE HASTED PENDING AVAILABILITY OF MISSILES WITH PROVEN HIGH RELIABILITY AND EFFECTIVENESS. FURTHER DEVELOPMENT, THROUGH TESTING, PRODUCTION OF OPERATIONALLY SUITABLE GAR-2'S AND GAR-2A'S REQUESTED TO PROVIDE THIS COMBAT WITH ARMAMENT WHICH WILL PERMIT ACHIEVEMENT OF DESIRED COMBAT POTENTIAL FOR INVENTORY WEAPONS SYSTEMS.

DISPATCHED 22 MAY 1957 QUALITY A.D.C.

COMEBACK COPY

Not requested, not furnished

ADOCO-W
Capt D.A. PROCESOR
2398

ADOCO-W
22 MAY 1957
H. J. TOSO
Capt, USAF
Asst Command Adj

WRITER (and typist's initials) *Handwritten initials*

DATE: 22 MAY 57

TEL NO: 398

FANFOLD NUMBER AND SUSPENSE DATE: H-1530

MEMO FOR RECORD: NONE SEE REVERSE

0976

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* 116-58
A-756-38
FM RJEDIN
FM RJEDWP
333300Z
FM COMDR DET 1 ARDC WPAFB
TO COFS USAF
INFO COMDR ADC
COMDR APGC EGLIN AFB FLA
COMDR ARDC BALTO
COMDR SBAMA NORTON AF

ACTION-OCO
INFO 116, 000

DOC 212 ADCHR 57A

30 May 57

5323-2

CITE: RDYSMA-30869-E, FOR AFDRQ-AD AT USAF FOR ADOCO
AT ADC FOR DCS/O-TR-AD AT APGC FOR RDXG AT ARDC FOR SBMTBM-2 AT SBAMA.
REFERENCE ADC SECRET MSG ADOCO-WO-1453 DATED 22 MAY AND APGC MSG
CITE DCS/O-TR-AD-2732C. INVESTIGATING TEAM REPRESENTING ARDC
WADC HADC APGC AND HAC WAS CONVENED AT APGC ON 24 MAY 57 TO STUDY
GAR-2 PROBLEM. COMPONENT RELIABILITY OF APGC MISSILES MANUFACTURED
IN LAST HALF OF 1956 WAS FOUND TO BE 70-80 PERCENT. THIS RELIABILITY
IS EXPECTED TO HAVE BEEN IMPROVED SUBSTANTIALLY SINCE THAT TIME BY
IMPROVEMENTS MADE IN GUIDANCE HEAD, BATTERY AND OTHER SPECIFIC
PROBLEM AREAS. AN OVERALL RELIABILITY OBJECTIVE OF 90 PERCENT

RE TWO OF A-756-38
APPEARS REASONABLE, EXCLUDING OPERATOR FAILURE ONLY. WITH REFERENCE
TO 54 PERCENT PARAMETER DRIFT FAILURE REPORTED BY APGC, THE
QUANTITY ATTRIBUTED TO CROSS TALK REPRESENTING 15 PERCENT OF THE
OVERALL PROBLEM WAS FOUND TO BE NON-CRITICAL TEST EQUIPMENT DEFICIENCY.
EVIDENCE AVAILABLE AND PRESENTED BY HAC SIMILARLY SHOWS THAT TIME
CONSTANT PARAMETER VARIATIONS REPRESENTING 27 PERCENT ARE NOT CRITICAL
AND THAT THEY DO NOT RESULT IN MISSILE FAILURE. CHANGES IN TECH ORDER
PROCEDURES AFFECTING THESE AND OTHER PARAMETER ADJUSTMENTS AND A MINOR
CONSOLE REVISION ARE EXPECTED TO RESULT FROM INVESTIGATION AND WILL
BE STATISTICALLY CONFIRMED BY AVAILABLE DATA AND/OR FLIGHT TESTING.
NO MISSILE DESIGN PROBLEM WAS FOUND AND WITH OVERALL MISSILE
RELIABILITY NOW EXPECTED TO BE OVER 80 PERCENT MISSILE HAS SUBSTANTIAL
COMBAT POTENTIAL. ACCORDINGLY WITH NO GAR-2 CHANGES PLANNED RECOMMEND
NO HALT TO GAR-2A MISSILE DELIVERIES. PROBLEM INVESTIGATIONS
ARE CONTINUING.

BT
30/0557Z MAY RJEDWP

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[REDACTED] 213 57A
PM COM AFGC
TO OOPS HQ USAF

523 5 Jun 57

[REDACTED] CITE DCS/O-TR 0792C.

Final report on Project AFG/ADC/914-A-2, Employment and Suitability Test of the GAR-2 (Ground phase). Testing was conducted during the period 19 Nov 56 through 20 May 57, in a ground environment identical to that in which the GAR-1 and GAR-1D were tested. The primary test consideration was the determination of MSL reliability. Test results and discussion: The final MST reliability results are substantially the same as those presented in AFGC msg Nr. 0732C, dated 14 May 57, which outlined the serious MSL reliability problem experienced with the GAR-2. As a result of this message, a meeting was held at this base with Det. #1 of ARDC, WADC, West, and Hughes Aircraft Company representatives in attendance. A detailed breakdown of MSL failures was presented to the action agencies at this meeting. The majority of GAR-2 MSL failures were "parameter drift failures" (missiles failing to check within specified console indicator limits which are adjustable at squadron level). At the meeting, the manufacturer stated that present console tolerances are a method of controlling the distribution of parameter values and are not go, no-go indications of GAR-2 MSL reliability; the manufacturer will submit justification to ARDC to support his position. If "parameter drifts" are not to be considered as failures, the current MSL failure rate, as indicated by console checkout, is approximately 30 percent under ADC alert conditions. The validity of the 30 percent figure must be verified by MSL firing tests

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under simulated ADC operational conditions. Additional checkout deficiencies have been encountered which make the validity of console check questionable. These include console calibration problems, console test errors, console operation instability, and operator interpretation of certain check functions. These deficiencies lessen the users confidence in the console check, and make it extremely difficult for the unit commander to estimate his MSL combat capability. The action agencies are cognizant of these deficiencies. m Other than the MSL reliability and checkout console deficiencies, no significant problem areas were discovered during the test. The minor deficiencies which were noted were reported to action agencies and have either been corrected or corrective action has been initiated. Because of the similarities between the GAR-2 and the GAR-1/GAR-1D, many of the findings in the interim and final reports on Project APG/ADA 38-A, employment and suitability test of the GAR-1 are applicable to the GAR-2. These include adequacy of the GAR building, base support and ground power requirements, storage, handling and loading of missiles, falcon supply plan, and manpower. Personnel trained in the radar version of the falcon can be cross-trained on the GAR-2 in a 30-day period of OJT. The checkout rate of GAR-2 is probably same as that of the GAR-1. Introduction of GAR-2 missiles into GAR-1/GAR-1D equipped squadrons will not have a great organizational impact. This report constitutes the final report on this phase of testing; however, as additional information becomes available, it will be reported in interim reports on Project APG/ADA/914-A-3, employment and suitability test of the GAR-2. Testing, including MSL firing results will be contained in

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the final report on that Project. Conclusions: 1. The actual MSL checkout reliability cannot be determined until the GAR-2 MSL failure criteria is defined and the checkout console is established as a suitable stand. 2. Other than reliability aspects, the addition of GAR-2 missiles to the squadron inventory will not impose any significant support problems different from those experienced during GAR-1/GAR-1D operations. Recommendations: 1. The GAR-2 MSL failure criteria should be defined as soon as possible. 2. Improvements in the checkout console to make it a reliable standard for MSL maintenance should be expedited. This message is classified CONFIDENTIAL in accordance with para 30 c, AFR 205-1.



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50111

AGDIA
8-859-20

RR RJEDEB RJEDEB [REDACTED] [REDACTED] [REDACTED] [REDACTED]
DE RJWPHL SH
R 191630Z
FM COMDR HQ OASMA HILL AFB
TO HQ USAF WASH DC
INFO TO COMDR AIG WPAFB
ARDC WPAFB
NAAMA OLMSTED AFB
ADC ENT AFB
TAC LANGLEY AFB
ARDC BALTO
APGC EGLIN AFB
AFAC EGLIN AFB
NAVAL ORDNANCE TEST STATION CHINA LAKE CALIF

Hist 1972057
Action - DM
1785 L INF-16
PFR

DOC 284 ADCHR 57A

[REDACTED] CITE CORSO-103. FOR ANUSAR FOR MOTSM FOR RDXSMG FOR
MASA FOR ADMAC-CA FOR TORR FOR RDSNER 1 FOR DES SLTBT W-A FOR ACTP FOR
USMC. REFERENCE CLASSIFIED MESSAGE CORSO-066 DATED 30 JAN CURR
SUBJECT: SIDEMINDER TEST. SECOND PHASE DETONATION TEST. REQUIRED BY
MESSAGES AFSS-AR 21778 AND MOTSM 2-571 DATED 1 FEB CURR CONDUCTED
14 FEB CURR. 2 TESTS OF MISSILES IN STEEL REINFORCED CONCRETE TUBING.
HORIZONTAL STACKED. 1 MISSILE IN EACH TUBE. UC PROPAGATION RESULTED.
HOWEVER ALL MISSILES WERE RENDERED UNSERVICEABLE AND FRAGMENTATION OF
CONCRETE TUBES SEVERELY INCREASED PROBABLE BUILDING DAMAGE. 1 TEST OF
MISSILES SUSPENDED VERTICAL IN CONCRETE TUBES PLACED IN THE EARTH ON

PAGE 2 RJWPHL SH
4 FOOT CENTERS. OTHER MISSILES WERE NOT DAMAGED BY DETONATION. METHODS
OF HANDLING AND SUSPENSIONS IN VERTICAL POSITION WILL REQUIRE INTENSIVE
STUDY IF THIS METHOD IS CONSIDERED. STORAGE OF THE ASSEMBLED MISSILE
IN HORIZONTAL CONCRETE TUBING IN THE 2.75 INCH ROCKET BUILDING IS
NOT RECOMMENDED. DETAILED REPORT WILL BE FORWARDED APPROXIMATELY 25
FEB CURR.
BT
19/2006Z FEB RJWPHL

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DOC 285 ADDR 59A

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DEFERRED

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AF I

COMR ADC ENT AFB COLO

COMR EADY STEWART AFB WESSBURGH NY
COMR WADF HAMILTON AFB CALIF

INFO: COMR CADP GRANDVIEW AFB MO
COMR 4750TH ADM WPHS VINCENT AFB YUMA ARIZ

25 Feb 57

ADMAC-CA 00544. Subject: GAR-8 (SIDEWINDER)

Storage Explosive characteristic test recently completed confirm that GAR-8 can be sympathetically detonated. Therefore, open storage on trailers is unsatisfactory. Tests also indicate the explosion can be contained (detonation is not propagated) if stored inside steel reinforced concrete culvert pipe. Standard culvert pipe with 2 1/2 inch wall thickness, 24 inch inside diameter in ten foot lengths was used for test. Present plans for GAR-8 storage are to use the Unit A (2.75 inch rocket storage building) or igloos. If the Unit A is used missiles are to be stored individually inside the pipe on small dollies. The pipe will be stacked cordwood style, four high, along one wall of the Unit A. This will require the removal of one or more interior walls in

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WITH FOLLOWING DATE TIME GROUP
260026Z



25- 1630Z
21- 2340Z
FEB 1957

ADMAC-CA

CAPT R.M. SMITH/STEEB
2500

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H. J. TOSH
Capt, USAF
Asst Command Adj

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COMER ADC ENT AFB CGLO

ADMAC-CA _____ (cont'd)

the Unit A. If igloos are used, the assembled missile will be stored on trailers inside the igloo. Desire you physically inspect the following squadron Unit A and igloo facilities and forward the following information to Hq ADC, Attn: ADMAC-CA, before 1 March 1957.

- (1) Composition of the center dividing wall in the Unit A (cement block, poured concrete or steel reinforced concrete).
- (2) Composition of the bay separator walls in the Unit A.
- (3) The number, size, type and location relative to the squadron operational parking area, of all igloos located on base. This information is desired for the following squadrons:

83rd FIS	Hamilton AFB
337th FIS	Westover AFB
538th FIS	Larson AFB
94th FIS	Selfridge AFB
331st FIS	Stewart AFB
46th FIS	Dover AFB
56th FIS	Wright-Patterson AFB

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ADMAC-CA

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MAY 21 1957

AGB07
A-365-17
RR RWDKA RJEDUP RJEDEN RJEPND RJRPSB RJEDKT
DE RJESGL 104
R 161500Z
FM COMDR APGC EGLIN AFB
TO COMDR DET 1 72 ARDC
COMDR ADC ENT AFB
COMDR CONAD ENT AFB
COMDR NOTS CHINA LAKE CALH
COMDR EADF STEWART AFB
COMDR WADF HAMILTON AFB
COMDR CADF GRANDVIEW AFB

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FILE NUMBER 30111

ACTION COPY

*Act MDM
Info IIB, OCO
3-21 May
4918*

CITE DCS/C-TR-AD 07380. FOR DET 1, ARDC
FOR ADC, ADCO-4 AND ADMAC-5. FOR NOTS ATTN CODE 143. SUBJ IS
RESULTS OF SIDEWINDER-1 FIRINGS ON 9 AND 10 APRIL 57. THIS MSG IN
4 PA

RPTING LAST CORRECT L
RPTING LAST LINE
RESULTS OF SIDEWINDER-1 FIRINGS ON 9 AND 10 APRIL 57. THIS MSG IN
4 PARTS. PART 1. GENERAL: ITEM A. SIDEWINDER-1 MISSILES WERE
ASSEMBLED WITH EXERCISE HEADS AND FUEL BOOSTERS IN THE FUSES.
4 NOTS TRACKING FLARES WERE ATTACHED TO EACH MISSILE. ITEM B.
1 MISSILE WAS LOADED ON F-36D SERIAL 487, LEFT OVBARRED PYLON.
2 MISSILES WERE LOADED ON F-36D SERIAL 487, LEFT AND RIGHT INBOARD
PYLONS. PART 2. FIRINGS ON 9 APRIL 57. ACFT WAS Q-2A DRONE, FIRING
ALTITUDE 25,000 FT, TARGET SPD 260 KNOTS INDICATED AIR SPD. ADMAC-4

ACTION COPY

PAGE TWO RJESGL 104
INTERCEPTOR 300 KNOTS INDICATED AIRGTD, 1000 FT CHASE ATTACK. ITEM A.
PASS NMBR 1 WAS MADE BY F-36D SERIAL 4889 AT A FIRING RANGE OF
7700 FT AT LESS THAN 15 DEGREES OFF THE TARGET TAIL. MISSILE PASSED
NEAR THE TARGET AND HAD FUEL ACTION. A RANGE OF CHASE ACFT TO TARGE AT
FT WAS MEASURED BASED ON STADIOMETRIC RANGE. MISSILE PASSED IN LINE BUT LOW. ITEM
TIME OF INFLUENCE FUEL DETONATION. MISSILE PASSED IN LINE BUT LOW. ITEM
B. PASS NMBR 2 WAS MADE BY F-36D SERIAL 4889 ABOUT 15 SECONDS AFTER PASS
NMBR 1 WAS LAUNCHED. THE MISSILE PREDETONATED AT APPROX 1,000 FT
IN FRONT OF THE FIRING ACFT. REPORTED FROM LAUNCH TO
DETONATION WAS ABOUT THAT REQUIRED FOR 15 SECONDS TO ARM, THEREFORE,
IT IS ASSUMED THAT 1 OF THE FUSES MIGHT HAVE ARMED AT THE TIME OF ARMING.
ITEM C. PASS NMBR 3 WAS AN UNINTENTIONAL LAUNCH WHEN THE PILOT TURNED
THE ARMAMENT MASTER SWITCH TO "MISSILES". AT THE TIME OF LAUNCH THE
FIRING ACFT WAS APPROX 5 MILES IN TRAIL OF THE Q-2A DRONE.
CAUSE OF THE ACFT FIRING SYSTEM MALFUNCTION WAS NOT BEEN DETERMINED.
CIRCUITRY CHECKED OUT ALL RIGHT IMMEDIATELY AFTER THE ACFT LANDED.
POSSIBILITY OF FIRING PULSE TO THE MISSILE CAUSED BY A MEMORY
CIRCUIT IS BEING INVESTIGATED. IT IS POSSIBLE THAT THE PILOT MOVED
THE CONTROL COUNTER CLOCKWISE TO THE "MISSILES" POSITION PASSING
THROUGH THE "EMERGENCY JETTISON" POSITION ON THE SWITCH, WHICH

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MAY 21 1957

PAGE THREE RJESGL 124
WOULD HAVE CAUSED AN UNINTENDED LAUNCH OF THE MISSILE. SELF
DESTRUCT ACTION OCCURRED. PART 3. FIRINGS ON 12 APRIL 57. TARGET
WAS Q-2A DRONE, FIRING ALTITUDE 31,000 FT, TARGET SPD 220 KNOTS
INDICATED AIRSPD, INTERCEPTOR SPD 250 AND
265 KNOTS INDICATED AIRSPD, TAIL CHASE ATTACK. ITEM A. PASS
NMBR 1 WAS MADE BY F-36D NMBR 4347 AT A FIRING RANGE OF
3,300 FEET AT LESS THAN 10 DEGREES OFF THE TARGET TAIL. MISSILE
PASSED NEAR THE TARGET AND WAS FUZE ACTION. A RADIAL MISS DISTANCE
OF 39 FT WAS MEASURED BASED ON STADIAMETRIC RANGE OF CHASE ACFT TO
TARGET AT TIME OF INFLUENCE FUZE DETONATION. MISS WAS LOW AND TO THE
LEFT OF THE TARGET. ITEM B. PASS NMBR 2 WAS MADE BY F-36D
NMBR 4033 AT A FIRING RANGE OF 3,000 FT AT LESS THAN 10 DEGR
FF THE ARGET TAIL. MISSILE PASSED BELOW TARGET AND APPEARED TO
GUIDE. THERE WAS NO FUZE ACTION. INSTRUMENTATION DAA WERE INSUFFICIENT
TO GIVE ANY ACCURAE MISS DISTANCE. THE MISSILE SELF DESTRUCTED
AFTER PASSING THE TARGET. SINCE THERE WAS NO INFLUENCE FUZE ACTION
AT THE TARGET, IT IS ASSUMED THAT THE MISS WAS LARGE. PASS NMBR 3
WAS MADE BY F-36D NMBR 4033 AT A RANGE OF APPROX 5,000 FT. MISSILE
WENT INTO A DIVE IMMEDIATELY AFTER LAUNCH AND DID NOT GUIDE TOWARDS THE
ARGET. SELF DESTRUCT ACTION OCCURRED. PART 4. THIS MSG CLASS
SECRET IN ACCORD WITH PARA 303 AFR 283-1.
BT

16/16202 MAY RJESGL

A--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY 2 ENCRYPTION--
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// ADVA

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AG0815
A-157-18
PP RJEDEN
DE RJESGL 73
P 181328Z
FM COMDR AFGC EGLIN AFB
TO COMDR DET 1 ARDC WPAFB
COMDR ADC ENT AFB COLO
COMDR NOTS CHINA LAKE CALIF
BT

PRIORITY

HIST

ACT 000
116
000
MOM
SUBJ 17 June
NR 5676-F
10 June 57

CITE DCS/O-TR 0800C. FOR DET 1 RDXSMG; ADC ADOCO-W
AND ADMAC-5 FOR NOTS CODE 143. SUBJ IS RESULTS OF SIDEWINDER-1
FIRINGS ON 3 JUN CURR. THIS MSG IN 4 PARTS.

PART 1. ITEM A. GENERAL: TARGET QB-17 DRONE. SPD 140 KNOTS
INDICATED FIR SPD, FTR SPD 250 SNOTS INDICATED AIR SPD. INTERCEPTOR
ALTITUDE OF ATTACK SECTOR 25000 FT, TARGET ALTITUDE 20000 FT. LATE
LEAD COLLISION CONVERTING TOPURSUIT TYPE DIVING ATTACK. SUN POSITION
AT ZENITH.

ITEM B. DIRST PASS. FIRING ALTITUDE 20000 FT, INTERCEPTOR SPD
AT 5.310 KNOTS INDICATED AIR SPD, ANGLE IFF AT FIRE PT 45 DEGREES.

DOC 287 ADCHR 57A

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PAGE TWO RJWESGL 73

RADAR CONTACT 16 MILES, LOCK ON 14 MILES, VISUAL CONTACT 5 MILES, FIRING RANGE 11000 FT. FIRM ACFT F-86D NR 4047, RIGHT OUTBOARD MISSILE OBSERVED MISSILE BEHAVIOUR: MISSILE ROLLED AND GUIDED SMOOTHLY WITH 1 SHARP CORRECTION. CLOSE MISS SLIGHTLY BELOW AND OUTBOARD FROM NR 4 ENG WITH FUZE ACTION. DRONE RECOVERED AND SUSTAINED MINOR SHRAPNEL DAMAGE TO NR 3 AND NR 4 ENG NACELLE, FUSELAGE, AND NOSE OF ACFT. BACKGROUND: BROKEN CUMULUS CLOUDS 5000 TO 6000 FT BELOW TARGET.

ITEM C. SECOND PASS. FIRING ALTITUDE 21500 FT, INTERCEPTOR SPD AT FIRE PT 305 KNOTS INDICATED AIR SPD, ANGLE OFF AT FIRE POINT 45 DEGREES. RADAR CONTACT 18 MILES, LOCK ON 14 MILES, VISUAL CONTACT 6 MILES, FIRING RANGE 12 THOUSAND FT. FIRING ACFT F-86D NR 4047, LEFT OUTBOARD MISSILE. OBSERVED MISSILE

BEHAVIOUR: MISSILE ROLLED NORMALLY FOR ABOUT 4000 FT AND THEN STARTED A VIOLENT SPIRAL GYRATION WITH FUZE ACTION ABOUT 6000 FT IN FRONT OF FIRING ACFT. 1 TRACKING FLARE CAME OFF MISSILE AT OR NEAR THE START OF THE VIOLENT GYRATIONS BACKGROUND: BROKEN CUMULUS CLOUDS 5000 TO 6000 FT BELOW TARGET.

PART 2. QB/17 DRONES WERE NOT AUGMENTED WITH FLARES ON FICHER FIRING. SIDEWINDER-1 MISSILES AUGMENTED WITH 4 TRACKING FLARES ON BOTH FIRINGS. BOTH MISSILES ASSEMBLED WITH EXERCISE HEAD AND FULL FUZE BOOSTERS. RESULTS ARE TENTATIVE AND BASED ON PILOT OBSERVATIONS.

PART 3. FOR FOTS DET 1. IN EACH OF THE 3 INSTANCES OF EARLY BURST OR RANDOM BURST, THE MISSILE FT HAS BEEN CHARACTERIZED

PAGE THREE RJWESGL 73

BY VIOLENT SPIRAL GYRATIONS IMMEDIATELY PRECEDING RANDOM BURST ACTION. THESE 3 FLTS WERE THE ONLY FLTS THAT EXPERIENCED VIOLENT GYRATIONS. OTHER FLTS EXPERIENCED MILD GYRATIONS IN SOME CASES BUT SOON SMOOTHED OUT IN FLT AND DID NOT SUSTAIN RANDOM BURST.

PART 4 THIS MSG IS CLASSIFIED SECRET IAW PARA 30B, AFR 205-1.

BT

18/1510Z JUN RDJESGL

AC--PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION-- PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION--NO UNCLASSIFIED REFERENCES IF DATE-TIME GROUP IS QUOTED.

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10113

DOC. 288 ADCHR 57A

4 JAN 1957

PRIORITY
PRIORITY

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AT

ORIG

COMR ADC

COMR USAF WASH DC

INFO: COMR ADC, BALTIMORE, MD

COMR DET 1 AND WASH DC



ADSI-4 ~~OCM 12~~

For COMR, Air Force Det 1, WASH DC. This msg in 5 parts. Part 1. Information available to this HQ indicates that ADC is making a study concerning the relative merits of the RCA improved MA-1 and the Hughes advanced MA-1 with the intention of selecting the more compatible system for inclusion in the F-101B. Part 2. Although the F-101B and the F-106 will be entering the ADC inventory almost simultaneously, the F-101B, as presently programmed, will be provided with a fire control system considerably inferior to that of the F-106. For example, while the MA-1 will have essentially the same performance capabilities as the B-6, with the exception of an improved receiver and the addition of a manual snap-up capability, the MA-1 will provide increased search and lock-on capabilities, non-coherent AWTI, jam angle track and

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Jan

ADSI-4

Maj A. F. Palmieri/ls
2665

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[REDACTED]

CONCLUSIONS

automatic snap up. The F-101B will not be able to compete on equal terms with its contemporary and the inherent advantages of a two-place interceptor will be negated. It is essential that the F-101B be equipped with an advanced fire control system which will enable it to more nearly realize its full potential. The system selected should be attuned to the two place concept which envisions the most efficacious division of duties between the pilot and radar observer since adherence to this philosophy should enable the contractor to decrease fire control system complexity, thus increasing reliability and alleviating to some extent the maintenance problem. This fire control system also must be the most advanced the state of the art will allow and at the same time must have an effectivity which will insure its incorporation into as many production aircraft as possible. Part 3. An advanced fire control system for the F-101B should provide:

1. Increased detection range.
2. Increased tracking range.
3. Increased azimuth coverage (180°).
4. Improved radar performance in weather.
5. Decreased vulnerability to ECM.
6. Improved low altitude capability.
7. Track while scan feature.

Part 4. In summation, ADC's position can be stated as follows:

1. The F-101B must have a vastly improved fire control system, as presently programmed, to obtain parity with the F-106A.
2. This improved fire control system must be introduced into early production aircraft to obviate an extensive modification program.
- 3.

Either the RCA improved MO-13 or the Hughes advanced MA-1, depending upon relative performance and compatibility with the F-101B

ADWSI-d

2 3

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CONDOR 410

and the Air Defense environment would be acceptable. b. The improved fire control system should be designed to allow maximum utilization of the Radar Observer since this will improve overall weapon system capability by decreasing complexity, improving reliability and alleviating the maintenance problem. Part 5. In view of the foregoing, ARDC has the following recommendations to make: 1. That the ARDC study concerning the relative merits of the two advanced fire control systems be accelerated by all possible means in order to insure a firm ARDC recommendation at the earliest possible date. 2. That the ARDC recommendation be supported by the necessary action which will insure installation of an advanced fire control system into the greatest number of production aircraft.



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30/12

DOC 289 ADCHR 674

ROUTINE
ROUTINE

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AF

DCS/O-TR 0512C

SECRET

COMDR ADC

COMDR ARDC BALTIMORE MD

COMDR ARDC DET WRIGHT PATTENSON OHIO

INFO: COMDR APOG BURLIN AFB FLA

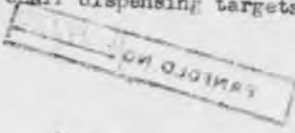
COFS USAF WASH DC

Host

18 MAR 57

FROM ADRSI-A 00749

For COFS, AFDRQ; for Det #1, F-89 WSPD; for APOG, DCS/O-TR. Ref
SECRET message DCS/O-TR 0512C dated 8 February 1957. This
command is gravely concerned at the ineffectiveness of the F-89H
when employed against targets dispensing chaff. Since the MG-12
has essentially the same components and circuitry as the E-9, it is
quite likely that the performance of the F-89J against chaff dispensing
targets will not be any better than that of the F-89H. Recommend
expeditious action be taken to improve the E-9 and MG-12 fire control
systems capability against chaff dispensing targets.



26 2330

Feb 57

ADRSI-A

Maj Palmieri/ls

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CLYDE E. MONNETT
Major USAF
Asst Command Adj

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301.5

DOC 290 ADCHR 57A

REF: [REDACTED]

ORDER AND

ORDER AND MESSAGE NO

ORDER INT 1 AND WPAFB GND

INFO: ORDER AFOS BDLIN AFB FLA

ORDER WCAF WASH DC

ADMIN-A COPY
DDO/0-01 TMS

6 Jun 57

A PARAPHRASE NOT REQUIRED EXCEPT PRIOR
TO CATEGORY B EN. DELETION - PHYSICALLY
REMOVE ALL INFORMATION BY DATE
TIME GROUP IS IN THE IDENTIFICATION

01595

FROM ADMIN-A [REDACTED]

For MEMPH and MEMPH, Det 1; for DDO/0-01, AFOS; for AFHQ, WCAF.
Reverts AFOS SECRET message DDOO/0-01 7010 and AOS SECRET message
ADMIN-A 00110. This Command wishes to reiterate its position that
the inability of the B-9 and B-50 to operate effectively against
chaff is operationally unacceptable and urges that every effort be ex-
pended to improve fire control systems capability against chaff dis-
persing targets.

mtw 22

DISPATCHED
6 JUN 1957
A.D.C.

ADMIN-A

Maj Palmieri/ls

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H. J. 1000
Capt, USA
Asst Commandant



3013

DOC 291 ADORQ 57A

ROUTINE

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COMDR ADC

COMDR ARDC DET 1 WPAFB OHIO

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FROM ADORQ-B 0250

F-89 WSFO. ADORQ-B formerly AINSEI-A. At the F-89H fire control system-armorment compatibility conference held at Wright-Patterson AFB last October, it was indicated that all modifications required to provide fire control system-armorment compatibility would be effected by July 1957. These fixes have been incorporated as scheduled, nevertheless APOC has informed this Hq that the F-89H does not have an effective radar missile capability and will not have one even when the missile itself has been improved. Request answers to the following questions: (1) Does the F-89H now have an effective rocket mode capability? How does it compare in this respect with the F-89D? (2) Will the F-89H have an effective radar missile capability when the scheduled improvements to the missile have been made? If not, what actions are necessary to rectify this situation? (3) At the present time, does the F-89H have a better target destruction capability with

ADORQ-B

7751

Wm. Palmieri/ls

WILLIAM H. HUBBARD
1st Lt, USAF
Admin Officer



WHER ADC

the 2.75" FFAR, than with the radar missile? (b) When the radar missile has been improved, will the F-69H have a better target destruction capability with the 2.75 FFAR or the radar missile?



OR-B

[REDACTED]

179

SPECIAL TEST REPORT FIRST ROMARE LAUNCHING FROM TACTICAL SHELTER

On February 13, 1957, the first fully automatic tactical launching of a ROMARE missile was made from a tactical prototype launcher shelter. Launch operations were initiated by a simulated tactical alert when the approaching target airplane was detected. At the appropriate time the fire up signal was given and within 30 seconds the XIM 99A Pivless Interceptor was operationally checked, launched, and on its way toward the target.

In detail the steps in this sequence were these:

DOC 292 ADCHR 57A

The XIM 99A Interceptor was in a ready storage condition—fueled and pressurized—when the first alert was given. Within 120 seconds the interceptor was warmed up and initial operational checks performed automatically by the Electrical Launch Equipment. A standard USAF/FPS-3 search radar was monitoring the target airplane course and feeding its track to the tactical prototype AN/GPA-35 Weapon Control Equipment to calculate intercept points and time for launch. At the prescribed time, the Senior Engagement Director pushed a fire up button which started a 30 second automatic sequence of events at the launcher shelter. In 5 seconds the shelter roof and doors opened. In 16 seconds the interceptor was erected. In the remaining 9 seconds the erecting mechanism retracted, the boost motor ignited, and the interceptor was launched.

Also, during this 30 second period, the integrity of the interceptor systems was being automatically monitored by the Electrical Launch Equipment, and the weapon control system computing equipment was transmitting initial steering commands to the interceptor via radio link.

During this launching operation, United States Air Force and Boeing Airplane Company engineers were required only to observe equipment behavior and operate the R & D data recording systems.

This test flight demonstrated the rapid response time of which the XIM 99A Weapon System is capable through complete automation of prelaunch functions from warm up through launch, and thus achieved another important milestone in the proving out of this weapon system.

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FL 100 3041 *CB*

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A-755-16
HQAS07
RR RJEDWP RJEDEN
DE RJEPHQ 199
R 152149Z

DOC 293 ADCHR 57A

ACTION DM
INFO 16, PAR.

FM HQUSAF WASH DC
TO RJJEDWP/COMAIRC WPAFB OHIO
INFO RJJEDWP/COMAIRC DET 1 WPAFB OHIO
RJEDEN/COMAIRDETCON ENT AND COLO
BT

1679

FROM AEDRO-AD 32410
REURAD MCPMMI-416 DATED 6 FEBRUARY 1957. THIS OFFICE NOT IN RECEIPT
OF AMO MSG 56 MCP 32347 DATED 6 DECEMBER 1956. HOWEVER GUIDANCE
PROVIDED YOUR HEADQUARTERS IN LETTER DATED 14 DECEMBER 1956 FROM
HQ USAF, SUBJECT HOWARD WARHEADS, REMAINS FIRM AND IS REPEATED FOR
IMPLEMENTATION. PROVISIONING TO SUPPORT A ONE HUNDRED PERCENT
NUCLEAR CAPABILITY IN BOMARC WEAPON SYSTEM WITH THE NECESSARY SPARE
PARTS AND EQUIPMENT IS REQUIRED. PROVISIONING TO SUPPORT A HIGH
EXPLOSIVE WARHEAD FOR BOMARC WITH THE NECESSARY SPARE PARTS AND
EQUIPMENT IS ALSO REQUIRED. THE PROVISIONING FOR THE HE CAPABILITY

PAGE TWO RJEPHQ 199
SHOULD NOT EXCEED TWENTY PERCENT OF THE MISSILE STOCK. AT SUCH TIME
AS NUCLEAR WARHEAD SCHEDULES AND PRODUCTION RATES ARE AVAILABLE TO
THE AIR FORCE FOR THIS WEAPON SYSTEM ANY REQUIRED REFINEMENT OR
ADJUSTMENT OF THE ABOVE REQUIREMENT WILL BE ACCOMPLISHED BY THIS HQ.
BT
104218Z FEB RJEPHQ

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MAR 22 1957

DOC. 294 ADCHR 57A

ROUTINE
ROUTINE
CONR. AUC

X AF X

CONR. DET 1 AFHQ WAFB AFB

INFO TO: CONR HQ USAF WASHINGTON DC 20330

22 MAR 57

00807

FROM: [REDACTED] _____

For CONR Det 1 AFHQ WAFB. Info for AFHQ-30-4/2, AFHQ, AFHQ, AFHQ, AFHQ, AFHQ, AFHQ, AFHQ. This message in two parts. Part I. Informal information reaching this headquarters indicates that recent contract negotiations for the BOMARC system will not provide for either the planned initial implementation or a production build-up which will allow for the presently planned A-C BOMARC deployment. Request confirmation of the tactical BOMARC production as affected by the recent contractual negotiations. Additionally request a forecast of tactical production at a later date. Part II. In a recent briefing by AFHQ representatives at AUC it was stated that the IM-99B would be capable of 250 NM range and 68,000 feet cruise altitude. During recent siting activities the GATS for BOMARC were located assuming a missile capability of 250 NM range and 80,000 feet cruise altitude.

21 1800
March 1957

AIRSI-8

Lt/Cel J. E. Thornton/js
2633

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CCMR ADD

Since GAT transmissions are line of sight it appears that the maximum GAT control range of the IM-99B at 60,000 feet altitude will be degraded in many areas. This is primarily the case in certain west coast mountainous areas. The west coast bases are planned to be provided with IM-99B. Request official confirmation of the operational characteristics of the IM-99B. Further request that the design criteria of the IM-99B be investigated in an attempt to provide a performance capability more closely paralleling the GCR for the advanced BOMAC.

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FILE NUMBER 304.1

DESTROY AFTER: PERMANENT 1 YR 2 YRS 3 YRS 4 YRS 5 YRS 6 YRS 7 YRS 8 YRS 9 YRS 10 YRS

ADRAI-D

24 MAY 1957

SUBJECT: BHWAC Development

TO: Deputy Chief of Staff for Operations
Headquarters United States Air Force
Washington 25, D. C.

1. It is anticipated that BHWAC will do more to enhance the air defense capability of AEC than any other weapons system. Accordingly, it is believed that improved models of this missile should be phased into the inventory as soon as possible. Information available to this headquarters indicates that the D-99B missile with the following characteristics could become operational by 1 January 1961:

- a. Range, 250 nautical miles
- b. Speed, Mach 2.7
- c. Intercept altitude, 75,000 down to 7,000 feet (possibly as low as 1,000 feet)
- d. Fine division data link
- e. More efficient nuclear warhead, to conserve nuclear material.

2. It is recommended that 1 January 1961 be established as a target date for action by all agencies concerned to provide an operational advanced model BHWAC (D-99B) with minimum capabilities as indicated in paragraph 1 above.

Copy furnished:
Comdr, Det 1 ARDC

ROY H. LYNN
Major General, USAF
Vice Commander

COMEBACK COPY

Not requested, not furnished
Furnished 24 MAY 1957
(Date) (Initials)

UNCLASSIFIED

This correspondence is classified _____ per para 30 b, AFR 205-1, or for reason(s) stated.

WRITER: Lt/col Kermit A. Tyler/js
OFFICE CODE: ADRSI-D
DATE: 22 May 57
TEL NO: 2669
FANFOLD NUMBER AND SUSPENSE DAY

FORM 15 MAR 57 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE MEMO FOR RECORD: NONE SEE REVER

COMDR	
1st VC	ALB
5 CDF3	MAAA
ADJ	
COORD PREC	Write Last Name and Show Date Coordinate
ADRSI	1 [Signature] 22 May 57
ADRCJ	2 [Signature] 27 May 57
ADRF	3 [Signature] 28 May 57
ADHAA	[Signature]
ADDF	4 Hughes 23 May

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DOC 296 ADCHR 57A

4 Feb 57

AIRSI-D

SUBJECT: (U) BOMARC Deployment

TO: Deputy Chief of Staff, Operations
Headquarters USAF
Washington 25, D. C.

1. Early in December 1956, a telephone request was made from your Headquarters (AFHQ-XX-570) that the BOMARC Deployment Plan, 20 August 1956, be coordinated through Continental Air Defense Command. It should be noted that a separate COMAD Headquarters did not exist at the time the Deployment Plan was submitted to Headquarters USAF on 10 September 1956. Air Defense Command's letter to COMAD and COMAD First Indorsement is attached for your information.

2. Reference is made to paragraph 1 of COMAD First Indorsement, in which concern was expressed in BOMARC deployment locations. Since differences in the order of deployment and the Continental Air Defense Objectives Plan 1956-1961 (CAOOP 56-60), 15 December 1956 order of deployment are caused primarily by the need to locate new flight detachments in the new Air Defense Force (in the new Air Defense Division, where possible) with their parent squadron headquarters. (See Inclosure 1.) These changes will result in better personnel and logistic support. COMAD has been requested, in separate correspondence, to revise CAOOP 56-60 to conform with the ACD order of deployment.

3. Paragraph 2 of COMAD First Indorsement to the ACD letter Subject: (U) BOMARC Deployment - 1965, states that COMAD desires that 40 BOMARC squadrons be operational by end Fiscal Year 1961. CAOOP 56-66 states this as a requirement. The ACD BOMARC Deployment Plan was based upon the USAF Force Structure and Planning Objective (FSPO) 1956, and results in 40 operational BOMARC squadrons by December 1956.

4. In view of paragraph 3 above, reconfirmation of the expected operational dates for BOMARC deployment is requested.

FOR THE COMAD & D.R.:

2 Encl:

1. BOMARC Order of Deployment
2. COMAD 1st Encl & Sec ltr fr ACD, w/1 Encl

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DOC 297 ADCHR 57A

MAILING
CONF AND
COPY-AD-3-66-1

20 Mar 57

00779

AFMSI-4

Reference your message COPY-AD-3-66-1 (C). Following is an A/C
plan not approved by USAF or HQ USAF. No serious objections are
expected from USAF or HQ USAF. This message is two parts. Part I.
DC/AC/3-3 Program. OASD base with one detachment (two flights)
showing best available deployment dates and tie of each base to two
direction centers are as follows: McGuire AFB (Air Defense Missile
Base), Sept 1959 to New York DC (Direction Center), and Washington
DC; Suffolk Co AFB, Dec 1959 to New York DC and Boston DC; Otis
(Bellfleur) AFB, Feb 1960 to Boston DC and New York DC; Dow AFB,
June 1960 to Bangor DC and Boston DC; Niagara Falls AFB, Aug 1960
to Syracuse DC and Detroit DC; Plattsburg AFB, Sept 1960 to Bangor
DC and Syracuse DC; Kinross AFB, Nov 1960 to Sault Ste. Marie DC and
Detroit DC; K. I. Sawyer AFB, Dec 1960 to Sault Ste. Marie DC and
Duluth DC; Langley AFB, Dec 1960 to Washington DC and Raleigh DC;

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OTHER AFB

Truxx AFB, Feb 1961 to Chicago DC and Sault Ste. Marie DC; Faine
AFB, April 1961 to Seattle AFB and Spokane AFB, Portland (St.
Paul) AFB, May 1961 to Portland DC and Seattle DC; Hamilton AFB
May 1961 to San Francisco DC and Los Angeles DC; Onard AFB, July
1961 to Los Angeles DC and San Bernardino DC; (Following deployment
approved in principle with no deployment dates. For planning purposes
use one detachment per month.) San Diego AFB to San Bernardino DC
and Los Angeles DC; Fort Ord AFB to San Francisco DC and Los Angeles
DC; Hunter Hill AFB to Chicago DC and Detroit DC; Pittsburg AFB to
Detroit DC and Syracuse DC; Duluth AFB to Duluth DC and Sault Ste.
Marie DC; Sioux City AFB to Sioux City DC and Grand Forks DC; Grand
Forks AFB to Grand Forks DC and Duluth DC; Out Bank AFB to Great
Falls DC and Spokane DC; Ophir AFB to Great Falls DC and Minot DC;
Minot AFB to Minot DC and Grand Forks DC; Klamath AFB California to
Portland DC and San Francisco DC; Geiger AFB to Spokane DC and
Seattle DC; McConnell AFB, Kansas to Kansas City DC and Sioux City
DC; Ardmore AFB to Kansas City DC and Shreveport DC; Amarillo AFB
to San Angelo DC and Kansas City DC; Reese AFB to San Angelo DC and
Albuquerque DC; Biggs AFB to Albuquerque DC and Phoenix DC; Laughlin
AFB to San Angelo DC and San Antonio DC; Williams AFB to Phoenix
DC and San Bernardino DC; Ellington AFB to Shreveport DC and San
Antonio DC; New Orleans AFB to Montgomery DC and Shreveport DC;
Campbell AFB to Fort Knox DC and St. Louis DC; Pinecastle AFB to
Atlanta DC and Raleigh DC; ~~Lowell AFB~~ to Montgomery DC and Atlanta

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OTHER AOC

DC; Charleston AHB to Raleigh DC and Atlanta DC; Seymour-Johnson
 AHB to Raleigh DC and Washington DC. (This communication cross-tie
 plan is for frequency division data link use only. The communica-
 tions plan will require restudy when time division data link is intro-
 duced) Part II. AAGE/POG-1 Deployment and Control Anti-aircraft
 Operations Center (AOC) showing ties to appropriate Direction Center
 (DC). Ft. Heath, Mass (Boston) to Boston DC; San Pedro, Calif to
 Los Angeles DC; Ft. Lenton, Wash to Seattle DC; South Park Mil. Res.
 (Pittsburg) Pa to Syracuse DC; Philadelphia, Pa (PFA) to New York DC;
 Arlington Heights, Ill (Chicago) to Chicago DC; Ft. Meade, Md to
 Washington DC; Highlands, New Jersey (P-9) to New York DC; Selfridge
 AFB, Mich (P-20) to Detroit DC; Lackport, New York (P-21) to Syracuse
 DC.

[REDACTED]

LAWFORD MO 010747

[REDACTED]

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DOC 298 ADCHR 57A

ADRSI-D

11 January 1957

SUBJECT: (U) IM-99/SAGE Integration

TO: Deputy Chief of Staff, Development
Headquarters USAF
Washington 25, D. C.

1. Reference is made to your letter, same subject, dated 19 December 1956, which was received by this headquarters 31 December 1956. The Air Defense Command is in complete agreement that the BOMARC weapon will do more to provide an increased air defense capability than the integration of any other single air defense system, and that it is imperative that control capability be provided on the dates BOMARC units are scheduled to become operational.

2. This headquarters recognized the need to accomplish an "integration" function within Air Defense Command early in 1956. To implement this, a Directorate of Systems Integration under the DCS/Plans and Requirements, was formed. One of the primary functions of this directorate is to provide operational plans and employment plans from which detailed operational specifications can be prepared for the SAGE computer program. The 4620th Air Defense Wing (Experimental SAGE) located at Lincoln Laboratory, Lexington, Massachusetts, was activated early in 1955. Part of the mission of this Wing is to provide operational guidance to Air Research and Development Command in the operation of the Experimental SAGE Subsector and to carry out Air Defense Command's responsibility for SAGE computer programming.

3. One of the first Air Defense Command attempts to integrate weapons into the air defense system from the operational standpoint was accomplished in a conference at the Boeing Airplane Company, Seattle, Washington, 14-22 May 1956. ARDC, AMC, AFGC, ADC, Boeing Airplane Company, RAND Corporation, Lincoln Laboratory and International Business Machine Corporation were represented; ADC provided the chairman. The results of this conference were published in the form of an Air Defense Command Employment Document. This document serves two primary purposes in that it outlines, in detail, how the specific weapon system under consideration will be employed in the SAGE era, and it points out numerous problem areas requiring solution in order to provide an effectively integrated system. A second BOMARC employment conference, to be convened at Boeing, 18-22 February 1957, was announced on 18 December 1956 for the purpose of refining the original employment document. Since the original employment

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Hq ADC, ADRSI-^u, Subj: (U) IM-99/SAGE Integration

conference, similar meetings have been held resulting in publication and wide distribution of employment documents for each new system programmed for the Air Defense Command inventory.

4. The Air Defense Command will actively participate with other agencies to assure expeditious integration of the SAGE/BOMARC program. Within this headquarters the primary contact agency is the Directorate of Systems Integration.

FOR THE COMMANDER:

Copies furnished:
Cmdr ARDC
Cmdr AMC

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DOC 299 ADCHR 57A

14 JAN 57

ROUTINE
ROUTINE
COMDR ADC

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COMS USAF WASH DC

INFO: COMDR DET 1 ADC SPAFB OHIO

COMDR ADC BALTIMORE MD

COMDR AFSC KENTLAND AFB TEXAS

COMDR 4630TH AIR DEP WG (KLP 2-66) LINCOLN LAB
LEXINGTON MASS

00167

FROM ADRSI-D

For AFED, AFER, AFOP-OS, FOSR, AFOWD, AFCE, AFOWD
Hq USAF; For ADCSMB Det 1; For ADC Resident Representative
AFSC. This message in four parts, is a statement of
requirements which should be attained as soon as possible
but not later than 1963 when the BOMARC squadrons are
scheduled to be composed of four flights per base. This
provides ADC answers to questions asked at 20 Dec 56
and 8-9 Jan 57 BOMARC Facility Conferences at Hq USAF.
Part I. Maximum rate of BOMARC launch must be 30 per
minute or one each two seconds per squadron. All

16 2110P
Jan 57

ADRSI-D

LtCol J.R. Thornton
2633

1 2

L C J R Thornton ms 2633

14 Jan 57

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COMDR ADC

components of the air defense system must be designed and developed to attain this launching rate. Part 2. Maximum number of BOMARC on standby alert (capable of launch within 30 seconds) will be 45 per squadron, maximum of 45 per squadron will be in warm-up or launch status at any one time. Maximum standby alert time will be one hour for any one alert. Part 3. ADC has requirement for a second and third re-launching capability is up to a maximum of one half of the BOMARC

launcher shelters. The time lapse between re-launching

On absolute minimum, limited only by unresolvable technical restrictions

launcher shelters must be capable of providing long-time

storage within one week of last launching. This re-

launch capability is undergoing thorough study in ADC.

Details of the requirement for re-launch will be supplied

at an early date. Part 4. Request revision of oper-

ational plans, programs and directives.

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DOC 300 ADCHR 57A

ADESI-D

2 FEB 67

SUBJECT: (U) IM-99/SAGE Integration

TO: Deputy Chief of Staff, Development
Headquarters USAF
Washington 25, D. C.

1. References:

a. Department of the Air Force Memo to Commanders SAC, ADC, and ADC, Subject: (U) IM-99/SAGE Integration, dated 19 December 1966.

b. Headquarters Air Defense Command letter to DCS/Development, Subject: (U) IM-99/SAGE Integration, dated 11 January 1967.

c. Lt General Power's personal letter to Lt General Pull, subject same as a. and b. above, dated on about 20 January 1967.

2. The purpose of this letter is to establish the position of the Air Defense Command regarding the proposed solution to certain major problem areas presented in reference 1. c. above. While ADC participated with ARDC and ADC in preparing the proposed plan, this command is not in full agreement with some of the proposed solutions to the IM-99/SAGE integration development objectives.

3. There are three areas of development in the IM-99/SAGE integration problem which require further investigation before ADC can fully concur in the ARDC recommendation outlined in reference 1. c.

a. The elimination of BOWARC Ground to Air Transmitter (GAT) with separate frequency in favor of using the nearest existing SAGE UHF transmitter for the BOWARC environment imposes an excessive degradation of weapons commitment capability. The limitation inherent in the frequency division data link system, controlling both BOWARC and GAT interceptors on the same frequency, will reduce the weapons intercept capability by 25-30%.

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Eq ADC, ADESI-D, Subj: (U) IN-09/AMM Integration

Furthermore, the prelaunch data must be either rerouted from an existing SAGE UNF transmitter or the transmitter must be physically re-sited close to the BOMARC site and the data transmitted by radio. If rerouted, some degradation of control capability of 350 mile BOMARC may occur due to distance of transmitter from BOMARC base. If re-sited, all transmitters in the SAGE sector must be tactically evaluated to determine adequacy of coverage for the sector.

b. The use of separate consoles for BOMARC and manned interceptors imposes the requirement for specialized directors for BOMARC and for manned interceptors. A single console should have the capability to control either BOMARC or manned interceptors initially. Ultimately, it is desired that there should be a capability to control BOMARC and manned interceptors simultaneously from each console. This is required to provide flexibility in use of personnel, equipment, and in tactical operations.

c. BOMARC control from only one Direction Center eliminates an inherent flexibility of long range and high performance in the weapon system. It appears that the BOMARC site could be tied directly by half squadrons to an adjacent Direction Center in addition to the parent Direction Center. A relatively simple predetermined switching system could allow for shifting blocks of BOMARC to an adjacent sector in an event of over saturation or loss of the parent Direction Center.

4. This headquarters is aware that Headquarters ARDC (reference 1.c.) is considering a plan to meet the September 1959 tactical date. However, it is not believed that deviation from the ARDC recommendation, as discussed in paragraph 3 above, will necessarily delay the operational date of the first tactical squadron. These are important operational considerations affecting the whole air defense system. It is recommended, therefore, that every effort be made to include these changes in the initial BOMARC plan.

FOR THE COMMANDER:

LOREN G. McCOLLUM
Colonel, USAF
Plans & Requirements

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FANFOLD NO. 1009

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MEMORANDUM FOR RECORD

1 On 19 December 1956, Headquarters USAF sent similar letters to Commanders ADC, ARDC and AMC expressing concern as to the actions being taken to integrate BOMARC with SAGE. The letter sent to ADC asked, (1) ADC to assist ARDC in preparing a single complete program plan for integration of BOMARC with SAGE, and (2) that a specific group be made responsible to provide detailed operational specifications to the agency preparing the BOMARC operational computer program for SAGE.

2 In reply to (1) above, ADC advised Headquarters USAF in letter 11 January 1957 that Directorate of Systems Integration had been formed early in 1956 to provide required operational and employment plans. The 4620th Air Defense Wing (Experimental SAGE) had been activated early in 1955 to provide operational guidance to the Experimental SAGE Subsector. It also advised of the BOMARC Employment Conference in May 1956 and proposed conference on 18 February 1957.

3 Subsequent to the letters, reference paragraphs 1 and 2 above, two conferences on integration of SAGE with BOMARC were held at Hq ARDC. A proposed letter from Hq ARDC to Hq USAF was drafted which contained certain operational considerations with which ADC is in disagreement. The gist of this letter is that the plan would orient the effort and allocate resources in such a way as to achieve a BOMARC capability by September 1958. The principal features of the initial BOMARC/SAGE system would be

a. Each BOMARC squadron will be controlled from only one Direction Center (no cross-tell or handover capability).

b. The common data link transmitter subcarriers in each subsector will be divided in preselected numbers between manned interceptors and BOMARC.

c. All Mark X interrogator responses will supply a single pulse reply to the FST-2 and operational procedures will be established.

d. Separate SAGE consoles will be used for intercept direction of BOMARC and manned interceptors.

e. Rate of fire for BOMARC from a single site will be limited as required to permit BOMARC identification based on time separation.

1 JAN 1957

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4. This letter is to establish the position of ADC in respect to those areas in which there is lack of agreement with Hq ARDC.

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MAY 20 1957

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COMR ADC

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ADDRESS-D 00779

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OFFS USAF WASH DC
CWF HDQD 220 CONROE ST RT 13 NY

INFO: COMR ANO WPAFB OHIO
COMDR ANDC BALTIMORE 3 MD
COMDR DET 1 ANDC WPAFB OHIO

01388

FROM ADOCS-ER

USAF for AFOAC-R/A, HEDD for ADNS PROJ OFF, AND for HCFV, ANDC, and
NETDGC, DET 1 for REZENS. Part 1 for USAF. Reference AFOAC-R/A let-
ters 12 April 1957 to ANO, ANDC and ADC, Subject: Communications-
Electronics, Ground Environment for REZENS. Schedule established at
2 - 3 April meeting for equipment programming (AFR 100-44) for 40
ground-to-air transmitter sites only. Schedules not established at
2 - 3 April meeting for other three areas. Information pertinent to
these three areas follows. Action in connection with Ground point-
to-point communications system scheduled at meeting 27-28 March at
ADC. Reference paragraph 4 of minutes of 2-3 April meeting. IFF/SIF
requirements not firm at this time. Meeting scheduled at this head-
quarters week of 13 May to resolve this problem. Appropriate action



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ADOCS-ER

M. F. SANDERS
2168

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WRITER (and typist's initials)	OFFICE CODE:	DATE:	TEL NO:	FANFOLD NUMBER AND SUSPENSE DATE
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FILE NUMBER 3041

MAY 20 1957

COMDR ADC

in accordance with AFR 100-46 will follow. Programming of AN/FSQ-7 items such as output sections responsibility of ADES Project Office not ADC. Forwarding of list of requirements for ground-to-air transmitter sites was not ADC action item. Requirements list has been forwarded by WIC letter, Symbol WCFC dated 11 April 1957, subject: Ground-Communications-Electronics to support the BOMARC Missile. Request assurance that action indicated in paragraph 3 of referenced letter for ground C-E environment along with procurement, installation and testing lead time is adequate to meet the forty BOMARC site operational schedule. Part II for RNSD-ADES PROJ OFF. Request additional ground-to-air output sections for the AN/FSQ-7's be programmed to support ADC Employment Plan for BOMARC. Message ADESI-D 00779, 20 March 57 to ADES PROJ OFFICE listed all BOMARC bases with the two Direction Centers that will control each base. Information contained in referenced ADESI-D message has not received COMAD or HQ USAF approval.

COMEBACK COPY

Not requested, not furnished

Furnished (Date) 6 May 57 (Initials) KA

M/R: (U) USAF advised that 2-3 April meeting at AMC established schedule for programming for G/A transmitter items only and that other action will provide for ground communications system, IFF/SIF and FSQ-7 output sections. Assurance requested from USAF that R&D, procurement, installation and test lead time is adequate and will result in ground C&E environment to meet 40 BOMARC site operational schedule. ADES Proj office requested to program for AN/FS Q-7 Output sections to support Bomarc.

NO DDI. COMEBACK CY REQ.

H. J. TOSO
Capt USAF
Command Ad

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EXEMPT FROM AUTOMATIC
DECLASSIFICATION
COLONEL USAF
DIRECTOR, BOMARC

This correspondence is classified Secret per para 30b, AFR 200-4, in the reason(s) stated.

WRITER (and typist's initials) M. F. SANDERS/mj	OFFICE CODE: ADOCE-ER	DATE: 8 May 57	TEL NO: 2166	FANFOLD NUMBER AND SUSPENSE DATE: H-28423	NOTE
ADC HQ FORM 11 MAR 57 11 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE		MEMO RECORD: <input type="checkbox"/> HOUSE: <input type="checkbox"/>			

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M. F. Sanders

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

MAY 20 1957

AFOAC-2/A

18 APR 1957

SUBJECT: Communications-Electronics Ground Environment for BOMARC

TO: Commander
Air Defense Command
Ent Air Force Base
Colorado Springs, Colorado

1. Attached is a copy of the minutes of the Communications-Electronics Missile Program Conference held at Headquarters, AMC, on 2 and 3 April 1957. Actions required for timely phasing of C-E ground equipment are indicated in the minutes. Dates for completion of specified actions are those required to meet the BOMARC initial operational date of September 1957, at McGuire Air Force Base. This letter will serve to officially confirm and emphasize the need for prompt and adequate action to meet the deadline dates.

2. Equipment programming (AFR 100-16) is required for forty (40) ground-to-air transmitter sites, the ground point-to-point communications system, IF7/ELF equipment for the radar stations and additional ground-to-air output sections for the AN/FSQ-7's. The requirements listing that ADC has been directed to provide (Par 3c of the minutes) will not be complete until it includes all equipment and facilities required in these four (4) areas. Air Force Forms 1295 are required on all items. List of requirements is to be forwarded to this headquarters (with 1 copy to Headquarters, AMC, and one copy to Headquarters, ARDC, Detachment #1) by 1 May 1957. The 1295's are required on all items by 15 June 1957, as specified in paragraph 3c of the minutes.

3. A complete and acceptable set of specifications on all non-standard, commercial and development items for the ground C-E environment is required from ARDC by December 1957. This date is based on the procurement, installation and testing lead time required to meet the BOMARC operational schedule. Failure to provide specifications by this date will result in lack of control equipment for the initial BOMARC sites and failure to meet operational dates. ARDC effort must be concentrated on this problem to assure preparation of these specifications by December 1957.

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MAILED
R/Ltr fr APOAC-E/A to ADC , Subject: Communications-Electronics
Ground Environment for BOMARC, (Cont'd)

4. Information regarding action taken is required from ARDC
by 15 May 1957.

BY ORDER OF THE CHIEF OF STAFF:

1 Incl
as listed in
Par 1


Ira F. Stinson
Colonel, USAF
Chief, Electronic Systems Division
Directorate of Communications-Electronics

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MAY 30 1957

COMMUNICATIONS-ELECTRONICS GROUND ENVIRONMENT CONFERENCE
Headquarters USAF
2-3 April 1957

1. Personnel in Attendance

Organization		Name
Hq USAF	AFCAC	Major E. L. Kilcullen (Chairman)
	AFCAC	Major McManis
Hq AMC	MCPCA	E. L. Flinn
	MCPCA	R. L. Wells
	MCIFOC	E. A. Kieckhefer
	MCSPDP	R. O. Young
	MCNRDP	J. G. McGreevy
	MCPIBT	J. M. Moellenberg
	MCWTC	L. Vialak
	MCWTCG	J. S. Salmick
	MCWAMM	J. L. Graham
Force AFD	MSFM	M. A. Madaloni
	MSGS	J. V. Worthington, Jr.
	MHFB	Capt. E. D. Strickland
Force ADC	RCDC	Major Bernard
ARDC	RECSGS	Capt. H. Roth, Jr.
ADC	AIRCEL-P	Major D. B. Mear
	AIDCE-EN	M. F. Sanders
	ADAIB-R	H. A. Strong

2. Major Kilcullen chaired the meeting, and, in his opening remarks, covered the broad objectives of the communications-electronics ground environment required for the COMARC, and stressed the importance of meeting the operational date (September 1959) as laid on by Headquarters USAF to the Air Defense Command. Major McManis supplemented these comments, and stated:

a. The Air Force will provide all ground communications-electronics in accordance with AF Regulation 100-46.

b. That the action at this conference will be based on the ADC Deployment Plan - a brief of which is in USAF for approval, and

c. That this conference is to proceed on the basis that transmitter power and frequency authorizations will be forthcoming.

3. After considerable discussion, the following actions were directed:

a. Headquarters USAF directed ARDC to concentrate effort in providing an acceptable set of specifications for all items required for the

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communications-electronics environment for BOMARC, with emphasis placed on the 100W Amplifier to be completed on/or about December 1957, and that RAJD take action to submit AMC Form 44 on all items for FY58 procurement enacted (BOMARC).

b. It was agreed by all concerned the initial requirements provided by ARDC to ADC will be reviewed and approved in item detail and quantity citing the operational date by the Air Defense Command. (This action will be completed during the conference.)

c. After such review and approval, this data will be placed on a requirements listing, one copy provided Headquarters USAF, one copy to Headquarters AMC and one to Headquarters ARDC, Detachment 21.

d. The Directorate of Maintenance Engineering Headquarters RAJD, will provide necessary design data, as required, for the SVEL packages required for the BOMARC Ground/Air Data Link configurations. Once AFD personnel, upon return to their activity, will prepare the complete SVEL packages. These SVEL's will be prepared and distributed to each of the AM's by 1 May 1957. Headquarters USAF (AFDAG-R/A) stated they will initiate the normal review and approval procedures and authorize AMC (RAJD) upon completion of the SVEL's to publish and distribute these SVEL's, and other necessary data, to meet the 1 May 1957 deadline.

e. Upon return of the AFD personnel, AF Form 105 will be prepared and submitted on/or before 15 June 1957 (action copy to Headquarters USAF, AFDAG, and information copy to Headquarters AMC, RAJD).

f. Headquarters USAF will coordinate the item requirements listing with the Air Staff and assure procurement authorization was released at the earliest possible date for inclusion in the FY58 buying program and/or FY-59 budget estimate as required.

g. It was recognized by all concerned, in agreement at the earliest possible date and to meet the operational date list on AM will require the concerted effort of each responsible agency to perform their duties as required, and, that if one agency is delinquent, a health warning results, and all agencies are forced into delinquency in meeting the operational date directed by Headquarters USAF.

4. Next Step. A meeting was conducted at the Air Defense Command on 27-28 March 1957 at which time the basic data requirements were discussed. The meeting consisted of representatives from RAJD, AMC, USAF, WDCB and AFCE. Results of the meeting indicated that the AM's should evaluate RAJD's recommendations and finalize the basic data requirements. After such evaluation and finalization, the AM's will initiate appropriate action in accordance with AFM 100-45.

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2. The Directorate of Research and Development, Headquarters ADC, has agreed to advise the applicable R&D criteria for the proposed modification of the ADC-309 antenna system. The proposed modification will be in accordance with the provisions of T.O. 15-100 and T.O. 15-101.

3. Request of the IOWA Amplifier. A proposed modification exists for the IOWA Amplifier to complete the contract for the IOWA Amplifier (IOWA) for the BOMARC missile sites. This requirement for the IOWA Amplifier would be reflected on all form 1000 which are submitted to the IOWA Amplifier through normal channels, at which time Headquarters ADC would be advised of the required quantity to support the operational requirements. Headquarters ADC specifically stated the applicability of the IOWA Amplifier would not apply to this item or any other item for the IOWA Amplifier in the operational environment. It was recognized, however, that the IOWA Amplifier for the IOWA will require a IOWA Amplifier and associated equipment to provide that operational requirements under the provisions of the contract. This pointed out a quantity of four (4) units of the IOWA Amplifier for the IOWA for BOMARC. The Directorate of Research and Development, Headquarters ADC, has suggested that if the operational requirements for the IOWA Amplifier for the BOMARC 1959 date (with a standard delivery date for the IOWA Amplifier in advance of the operational date), it may require development of a IOWA Amplifier service items currently on contract. ADC agrees to the development of equipment that is in the status of service test to address the operational requirements, and their objection is based on the fact it will not be completed by the ADC after the initial installation. Headquarters ADC agrees to advise to insure that a SFEL will be published to cover the IOWA Amplifier. This possibility exists that the IOWA Amplifier SFEL would not meet the requirements for the BOMARC missile requirements. BOMARC will consider this matter.

7. IFF Amplification. Headquarters ADC agrees that immediate action be taken by ADC to institute programmatic action to ensure that IFF and AT-309 antennas to complement the ground based requirements. This recommendation is predicated on the information that ADC will consider recommending the use of these two items.

8. Construction. Guidance is required from ADC for finalization of design criteria for the GAT building. Guidance by ADC should be provided R&D and Headquarters ADC for staffing and programming for approval. It appears, through current knowledge, that the IOWA Amplifier program for FY-58 Military Construction Program (MCP) is authorized support will be required from ANSO, R&D and AFMIG to gain approval of the revised scope of the GAT building.

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Compatibility of Airborne Electronics as Associated with the
environment. Since the conference devoted all of its time to strictly the
environmental area, and based on the type of equipment required, which
is in three categories - standard equipment, commercial equipment and custom-
developed equipment, it could not be determined whether compatibility existed
at that time during this conference period.

10. Headquarters ARDC provided one copy of letter, 26 March 1957, subject,
'D4 99 Squadron Duplexed Frequency Division Data Link and Transmitter Installa-
tion (U)', to Headquarters AMC - MCPCA, MCGHDP, RADC - R000, RAFD - MRFM and
Headquarters USAF - AFCAC-E/A, and ADC - ADOCE-E/R. This letter indicates the
requirements at the present time for the Ground to Air Transmission equipment
that will be required for the BOMARC Missile System.

11. Headquarters USAF has stated a meeting will be conducted in the future
(tentative date not established) to check on all accomplishments of actions
assigned during this conference.

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