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**HISTORICAL REPORT  
of the  
32d AIR DIVISION (DEFENSE)**

RESEARCH  
HISTORICAL  
AIR DIVISION  
JULY - DEC 1954  
v. 1  
K-DIV - 32-H1



**THE AIR DEFENSE OF A SECTOR  
JULY through DECEMBER 1954**

SUPPORTING DOCUMENTS V1

**HISTORICAL OFFICE  
SYRACUSE AIR FORCE STATION, NEW YORK**

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HISTORICAL REPORT  
OF THE 32d AIR DIVISION (DEFENSE)  
Number Seventeen

THE AIR DEFENSE OF A SECTOR  
July through December 1954

RCS: 1-AF-D2

SUPPORTING DOCUMENTS  
VOLUME VI (Documents 265/2 thru 297/7)

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## 32d AIR DIVISION (DEF)

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SUMMARY OF AIR DEFENSE OPERATIONS FOR 1 SEP-30 SEP 54

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d /
1. PENETRATION TRACKS	81	966	889	N/A	116	12	1259	773	409
2. WORKLOAD TRACKS	1782	1239	268	N/A	218	1059	3965	2524	1105
3. GOC TRACKS									
a. TRACKS RECEIVED	656	730	549	472	118	522	3406	N/A	645
b. TRACKS CORRELATED	589	617	494	104	58	347	2970	N/A	517
4. NUMBER OF UNKNOWN TRKS	60	24	31	5	9	12	23	32	196
5. SCR ACTION INITIATED	39	21	25	4	9	10	18	18	144
6. NO SCR ACTION INITIATED	21	3	6	1	0	2	5	14	52
7. NUMBER OF INTERCEPT	28	9	10	1	4	6	10	7	75
8. NUMBER OF MISSED INTCP	3	0	6	1	3	1	4	0	18
9. IDENT PRIOR TO INTERCEPT	8	12	9	2	2	3	4	11	51
10. IDENT AFTER MISSED INTCP	0	0	0	0	0	0	0	0	0
11. IDENT W/O SCR INITIATED	21	3	6	1	0	1	4	12	48
12. REMAINED UNKNOWN	3	0	6	1	3	2	5	2	22
13. INTERCEPT EFFECT %	72	43	40	25	44	60	56	39	52
14. IDENT EFFECT %	95	100	81	80	67	83	78	94	89
15. *TRUE INTCP EFFECT %	90	100	63	50	57	67	71	100	81
16. FLIGHT PLANS RECEIVED	101	2353	1335	N/A	473	N/A	1761	783	680
17. FLT. PLANS CORR.	101	2131	1256	N/A	377	N/A	1715	768	634
18. CORRELATION %	100	91	94	0	80	0	97	98	93

## REMARKS:

\*Intercept Figure Preceded By Asterick Is Determined By Intercepts  
Divided By Total Of Scramble Less Identification Prior To Intercepts

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32d AIR DIVISION (DEF)  
SUMMARY OF AIR DEFENSE OPERATIONS FOR-1SEP-30SEP'54

18	REASON FOR NO SCRAMBLE ACTION	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32AD
	a. WEATHER (WX)	6	3	2	0	0	0	1	0	12
	b. OUT OF INTERCEPT RANGE (OR)	10	0	0	0	0	0	2	0	12
	c. NO AIEQPD FTR IN SUITABLE LOCATION (NAIF)	0	0	0	0	0	0	0	3	3
	d. CONSERVATION OF AIRCRAFT (CA)	5	0	4	1	0	2	2	11	25
	e. NO SCRAMBLE MULTIPLE CORR. IDENT. SYSTM	0	0	0	0	0	0	0	0	0
19.	REASON FOR MISSED INTERCEPTS	0	0	0	0	0	0	0	0	0
	a. WEATHER (WX)	0	0	0	0	0	0	0	0	0
	b. LATE SCRAMBLE (LS)	0	0	0	0	0	0	0	0	0
	c. AIRBORNE EQUIPMENT FAILURE (AEF)	0	0	0	0	0	0	0	0	0
	d. DARKNESS (DK)	0	0	0	0	0	0	0	0	0
	e. ELECTRONICS COUNTERMEASURES (ECM)	0	0	0	0	0	0	0	0	0
	f. ABORT (ABT)	0	0	0	0	0	0	0	0	0
	g. CONTROLLER ERROR (CE)	0	0	0	0	0	0	0	0	0
	h. GROUND EQUIPMENT FAILURE (GEF)	0	0	0	0	0	0	0	0	0
	i. AIRCRAFT PERFORMANCE (ACP)	0	0	0	0	0	0	0	0	0
	j. FADE PRIOR TO INTERCEPT (FPI)	0	0	0	0	0	0	0	0	0
	k. PASSED TO 26th. AD (DEF)	3	0	6	1	3	1	4	0	18

REMARKS:

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32d AIR DIVISION FLIGHT PLAN CORRELATION  
1 SEP-30 SEP '54

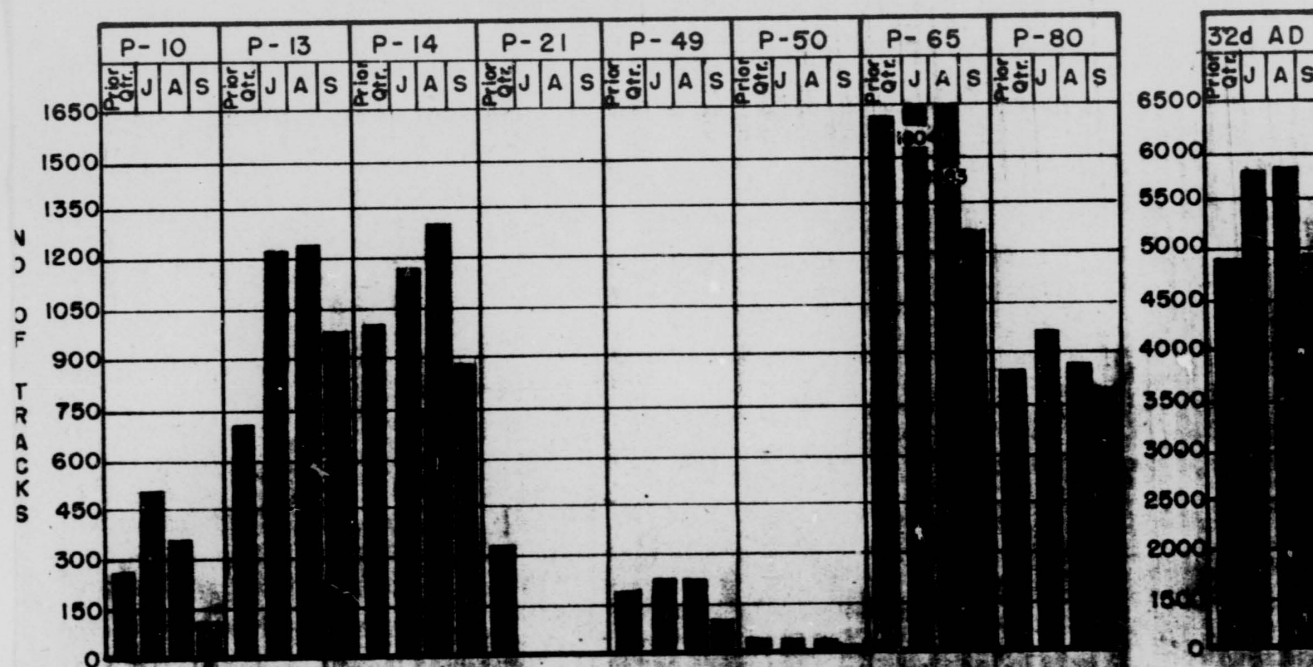
	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d AD
FLIGHT PLANS RECEIVED	101	2353	1335	N/A	473	N/A	1761	783	6806
FLIGHT PLANS CORRELATED	101	2131	1210	N/A	377	N/A	1715	768	6302
FLIGHT PLANS NOT CORR.	0	222	125	N/A	96	N/A	46	15	504
REASONS FOR NON CORRELATION (Mechanical Limitations)									
1. SCHEDULED MAINTENANCE	0	105	30	0	79	0	12	4	230
2. EMERGENCY MAINTENANCE	0	1	7	0	0	0	0	0	8
3. OUT OF CALIBRATION LIMITS	0	51	25	0	4	0	1	2	83
5. GROUND CLUTTER	0	16	0	0	4	0	14	0	34
9. OTHER *	0	5	39	0	3	0	15	7	69
TOTAL	0	178	101	0	90	0	42	13	424
(Other than Mechanical Limitations)									
4. WEATHER	0	41	13	0	4	0	0	1	59
6. LATE FLIGHT PLAN	0	1	6	0	0	0	0	0	7
7. DEVIATED FLIGHT PLAN	0	2	3	0	2	0	0	0	7
8. PERSONNEL ERROR	0	0	2	0	0	0	4	1	7
TOTAL	0	44	24	0	6	0	4	2	80
GRAND TOTAL	0	222	125	0	96	0	46	15	504

\* Most Common Reason For No. 9 Controller Could Not Locate

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32d AIR DIVISION (DEF)

TOTAL TRACKS REQUIRING IDENTIFICATION



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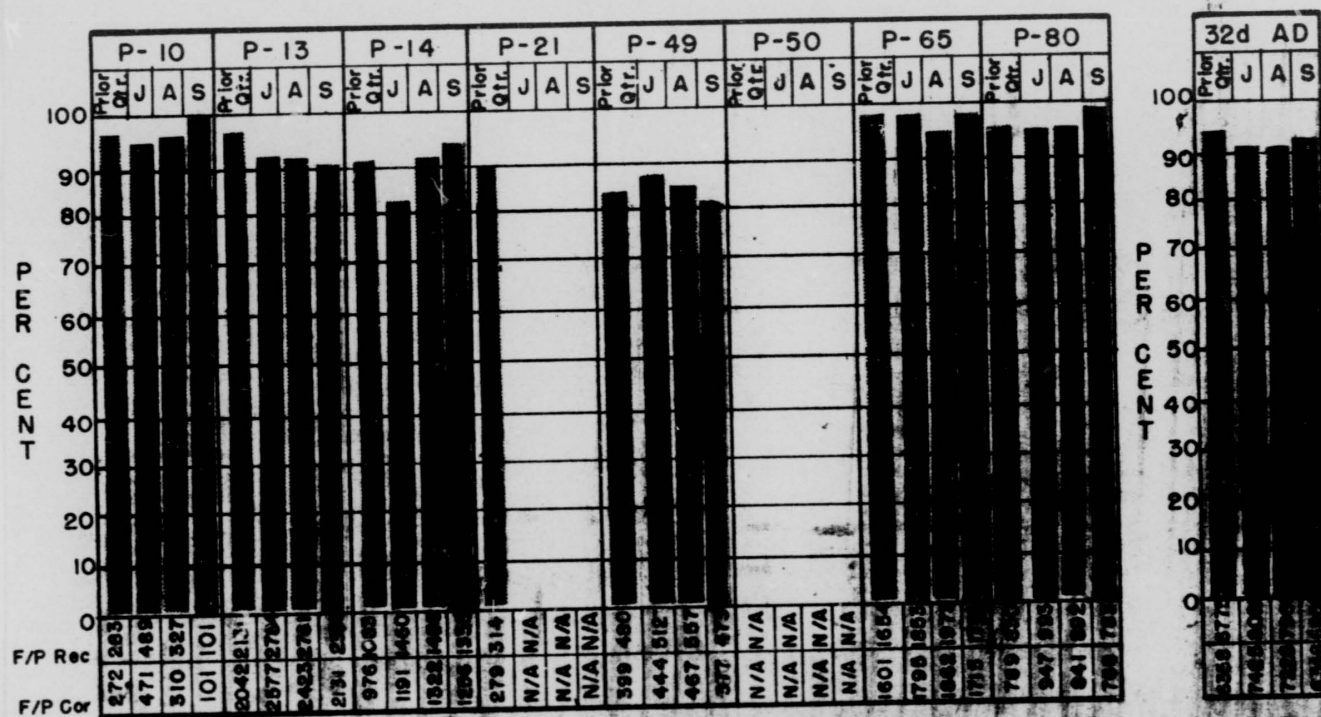
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32d AIR DIVISION (DEF)

FLIGHT PLAN CORRELATION



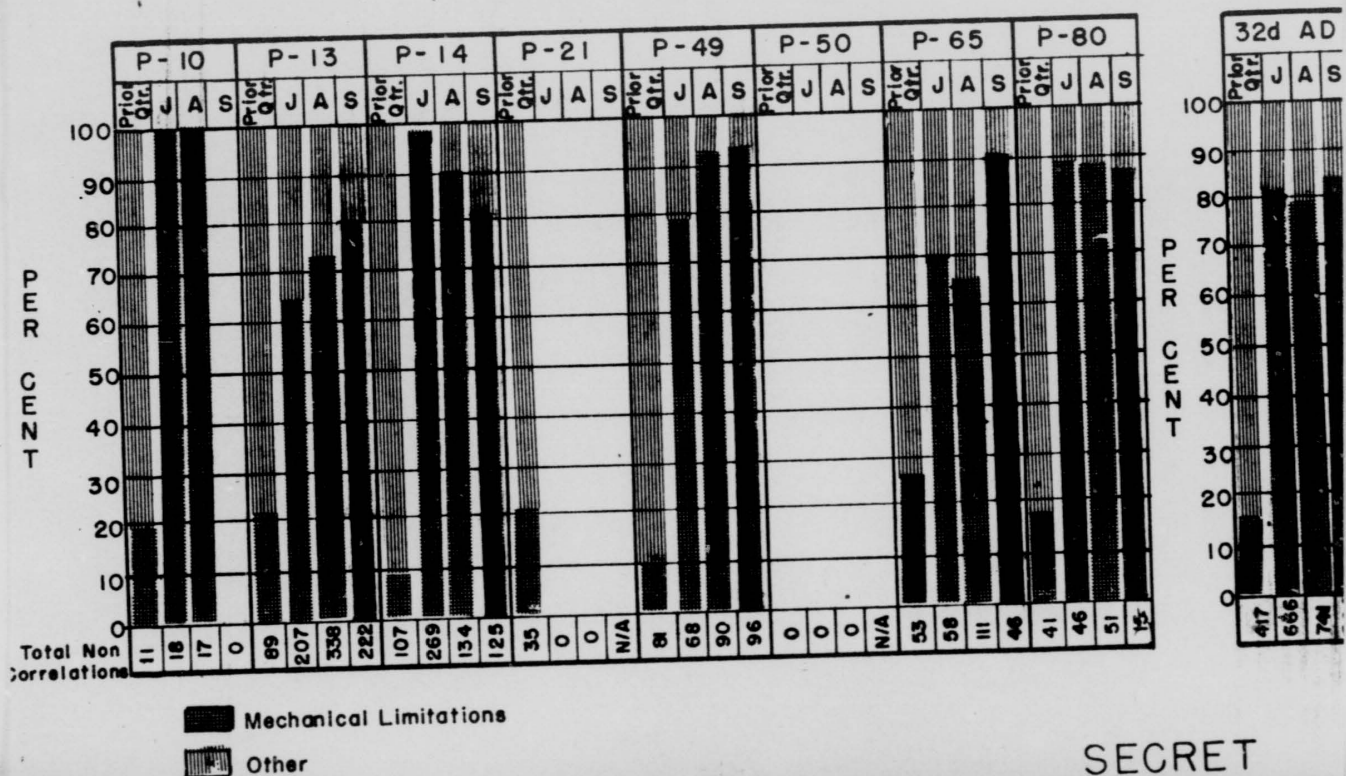
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32d AIR DIVISION (DEF)

NON-CORRELATIONS



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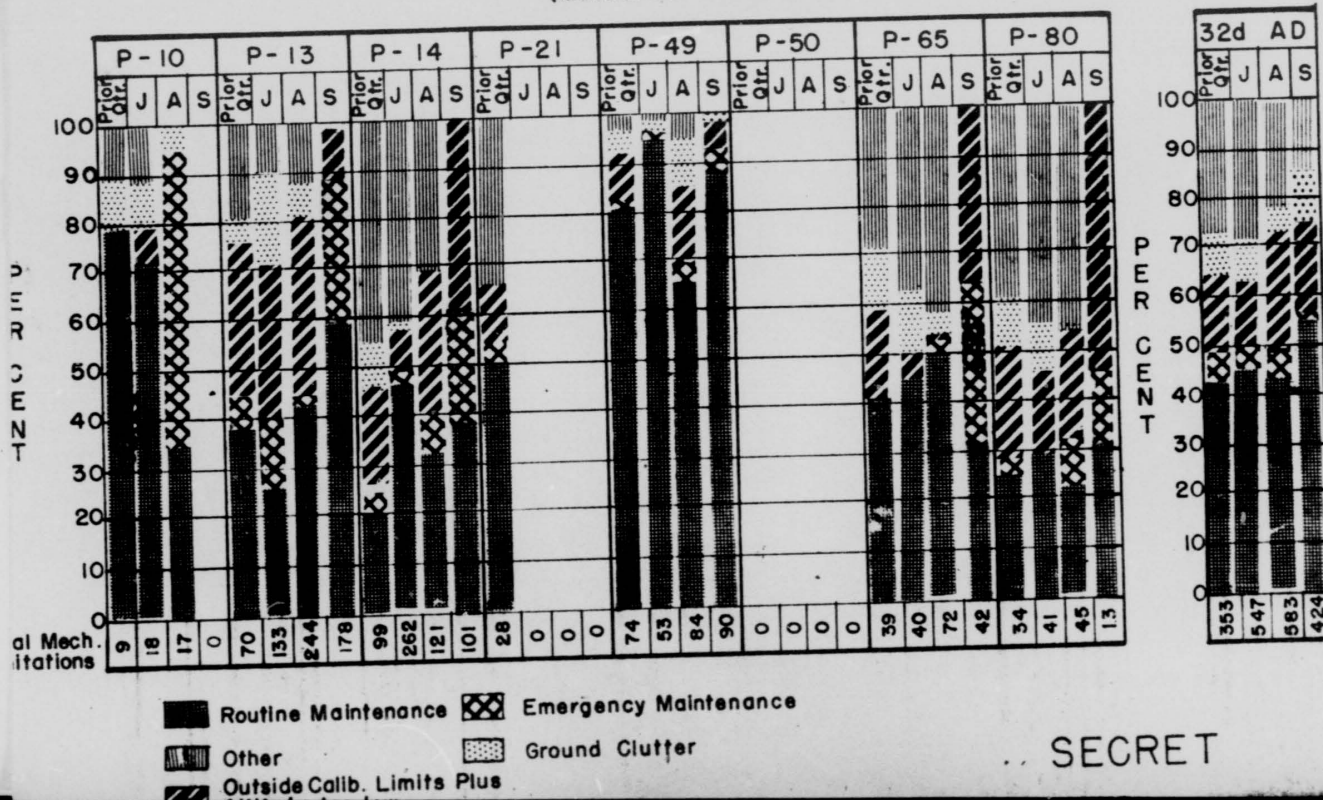
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32d AIR DIVISION (DEF)

**NON-CORRELATIONS**

(Mechanical Limitations)



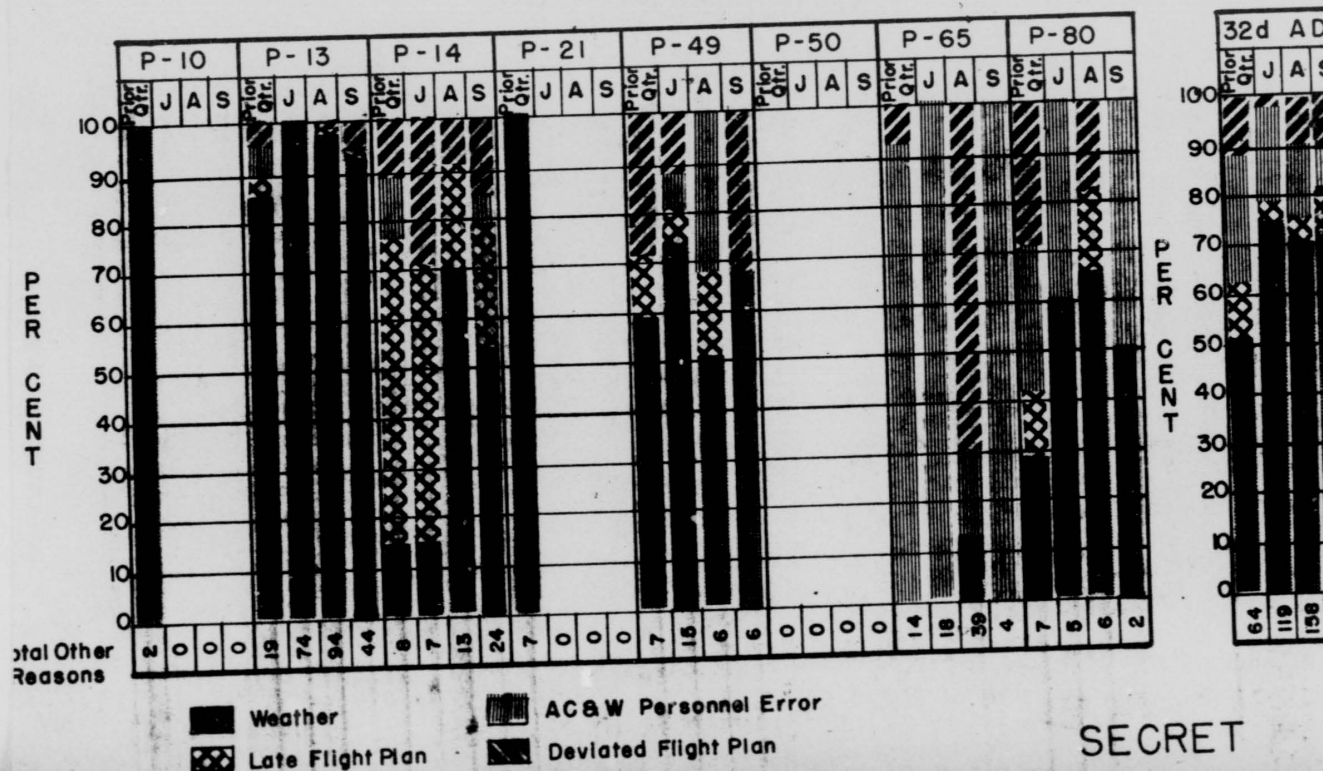
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**NON-CORRELATIONS**  
(Other Reasons)



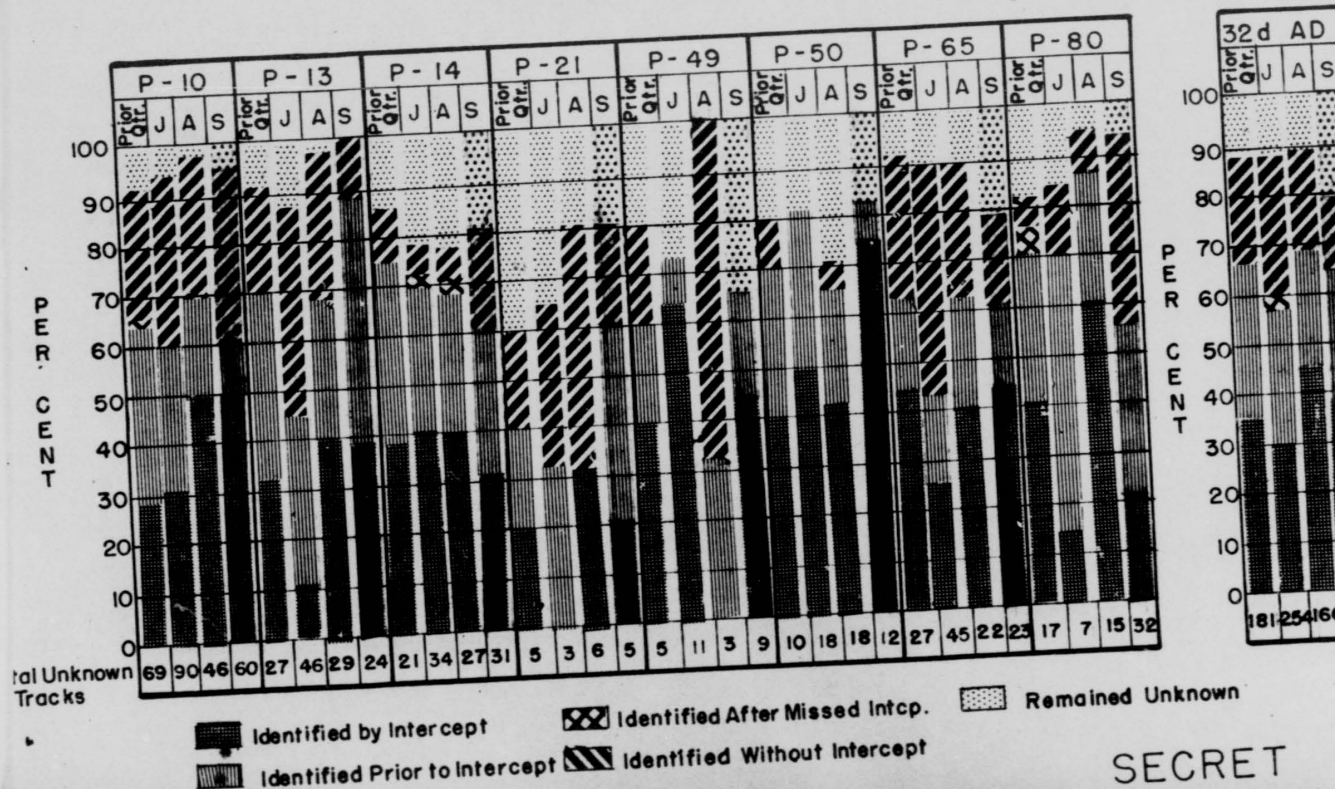
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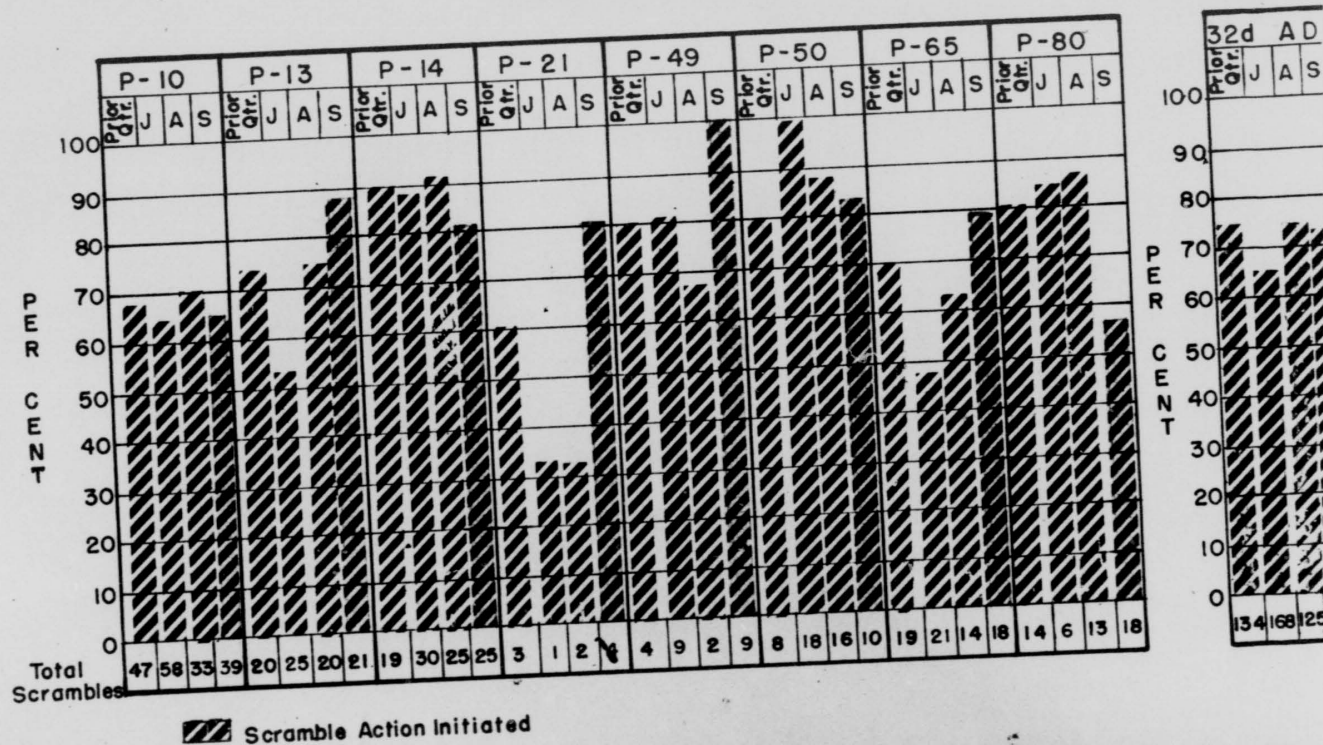
32d AIR DIVISION (DEF)  
IDENTIFICATION EFFECTIVENESS



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32d AIR DIVISION (DEF)  
SCRAMBLE ACTION



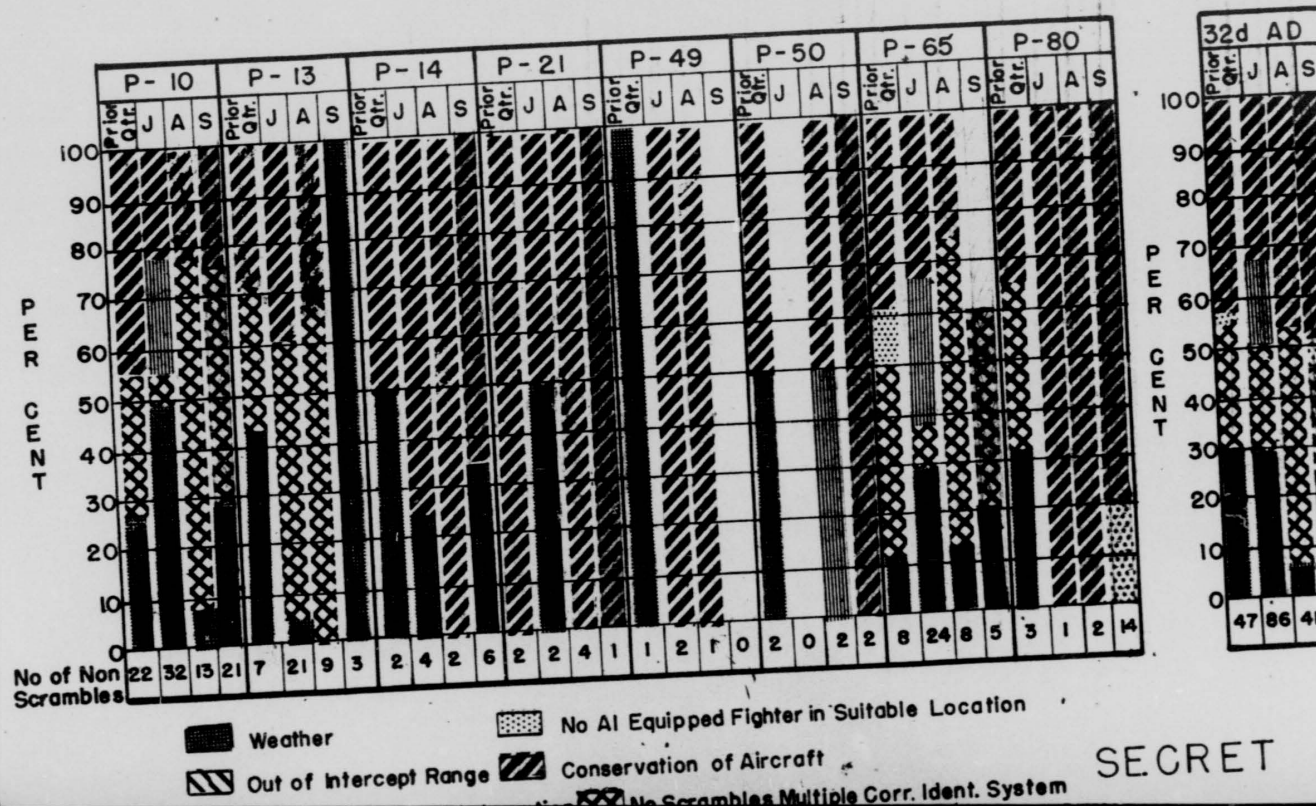
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REASONS FOR NO SCRAMBLE



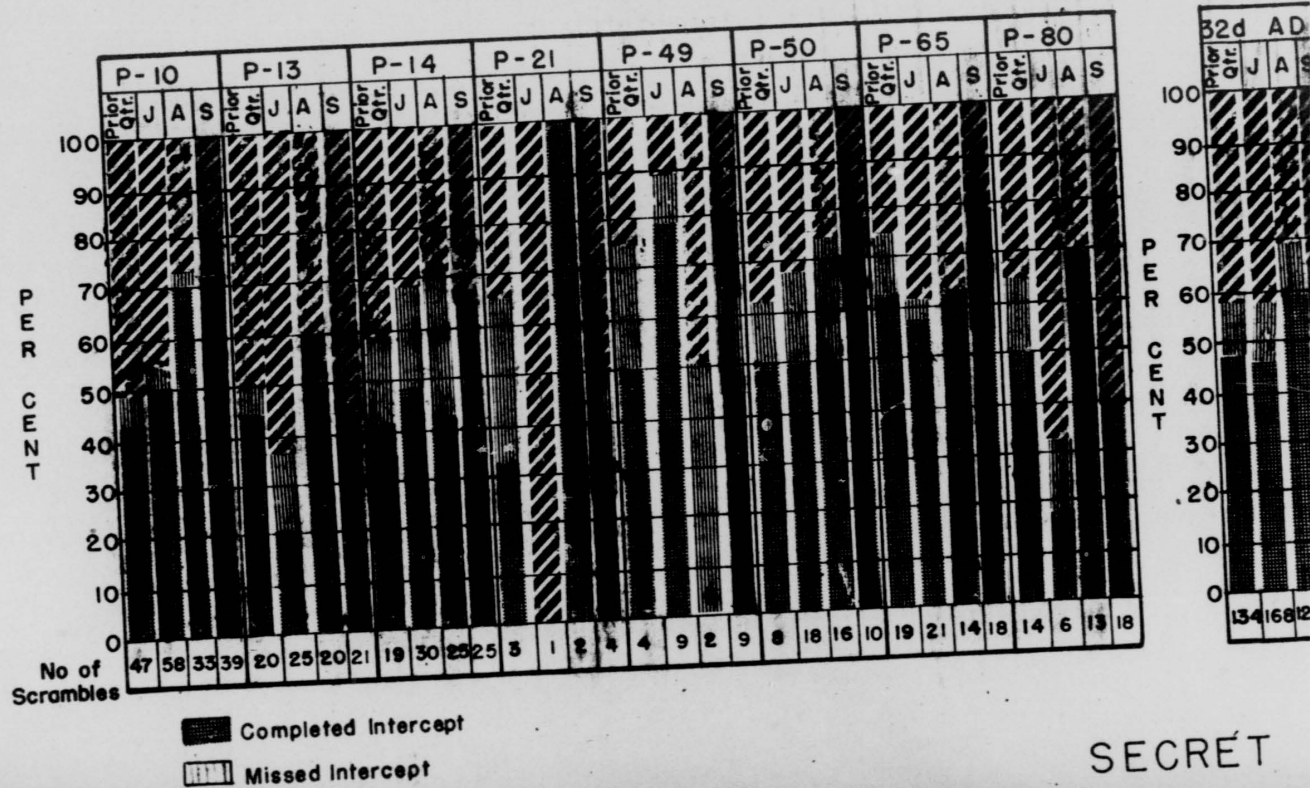
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32d AIR DIVISION (DEF)

INTERCEPT EFFICIENCY



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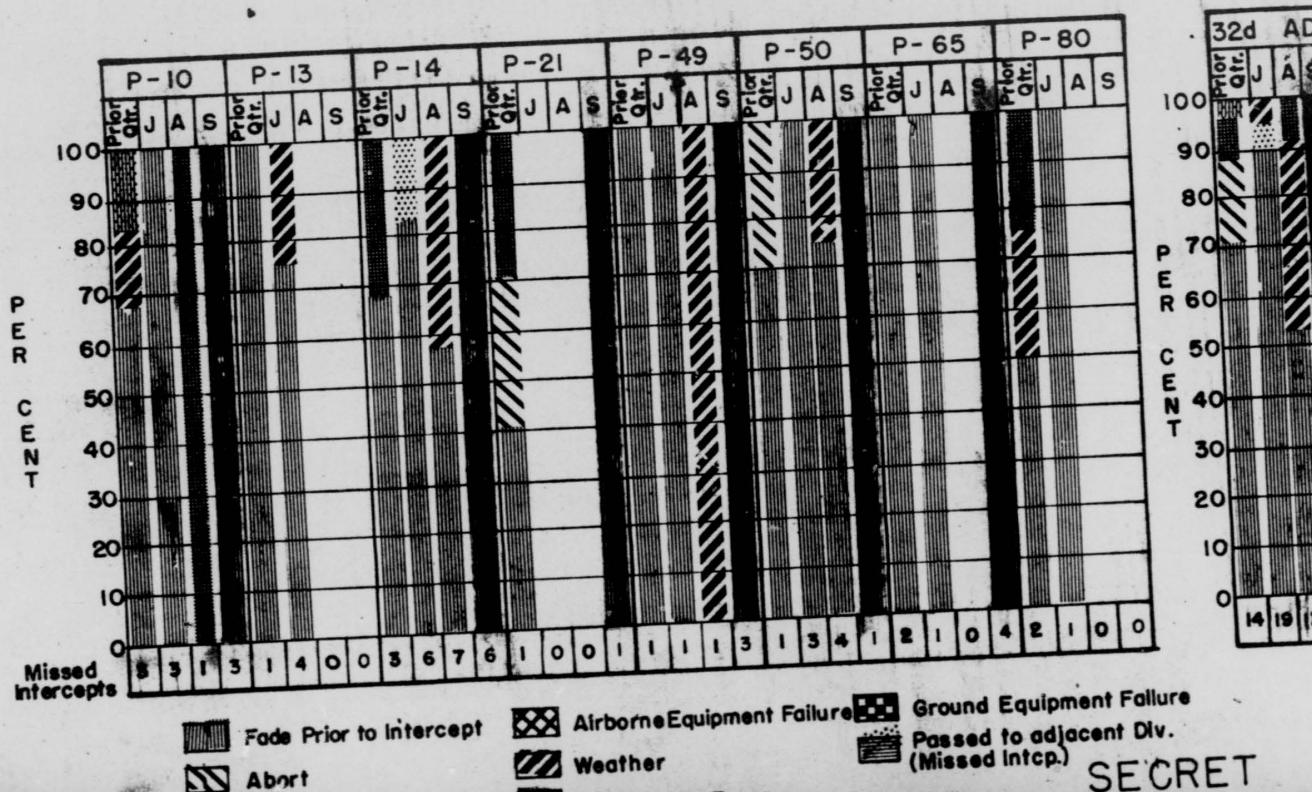
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32d AIR DIVISION (DEF)

REASONS FOR MISSED INTERCEPTS



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CO 518th Air Def Gp  
CO 528th Air Def Gp  
CO 564th Air Def Gp  
CO 654th AC&W Sq  
CO 655th AC&W Sq  
CO 656th AC&W Sq  
CO 762d AC&W Sq  
CO 763rd AC&W Sq  
CO 764th AC&W Sq  
CO 765th AC&W Sq  
CO 766th AC&W Sq  
CO 27th FIS  
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FOR DEPUTY OF OPERATIONS  
32D AIR DIVISION (DEFENSE)

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## 32d AIR DIVISION (DEF)

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SUMMARY OF AIR DEFENSE OPERATIONS FOR - 1 Oct - 31 Oct, '54

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d
1. PENETRATION TRACKS	158	611	1045	N/A	185	12	1722	813	454
2. WORKLOAD TRACKS	1603	1478	293	N/A	296	812	3484	2148	1011
3. GOC TRACKS									
a. TRACKS RECEIVED	1351	1224	565	607	298	549	3694	N/A	828
b. TRACKS CORRELATED	1304	917	512	177	85	335	2931	N/A	626
4. NUMBER OF UNKNOWN TRKS	59	22	14	4	6	12	14	20	151
5. SCR ACTION INITIATED	52	18	13	3	6	12	11	17	132
6. NO SCR ACTION INITIATED	7	4	1	1	0	0	3	3	19
7. NUMBER OF INTERCEPT	24	8	6	0	4	7	2	12	63
8. NUMBER OF MISSED INTCP	1	1	2	2	1	1	2	0	10
9. IDENT PRIOR TO INTERCEPT	27	9	5	1	1	4	7	5	59
10. IDENT AFTER MISSED INTCP	0	0	0	0	0	0	0	0	0
11. IDENT W/O SCR INITIATED	6	4	1	1	0	0	2	3	17
12. REMAINED UNKNOWN	2	1	2	2	1	1	3	0	12
13. INTERCEPT EFFECT %	46	44	46	0	67	58	18	71	48
14. IDENT EFFECT %	97	95	86	50	83	92	79	100	92
15. *TRUE INTCP EFFECT %	96	89	67	0	80	88	50	100	86
16. FLIGHT PLANS RECEIVED	157	2055	1203	N/A	526	N/A	1747	819	6587
17. FLT. PLANS CORR.	156	1927	1068	N/A	481	N/A	1710	804	6416
18. CORRELATION %	99	94	89	N/A	91	N/A	98	98	94

## REMARKS:

\*Intercept Figure Preceded By Asterick Is Determined By Intercepts  
Divided By Total Of Scramble Less Identification Prior To Intercepts

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## 32d AIR DIVISION (DEF)

## SUMMARY OF AIR DEFENSE OPERATIONS FOR-1 Oct-31 Oct, '54

18	REASON FOR NO SCRAMBLE ACTION	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32AD
	a. WEATHER (WX)	7	2	0	0	0	0	2	0	11
	b. OUT OF INTERCEPT RANGE (OR)	0	2	0	0	0	0	1	0	3
	c. NO AIEQPD FTR IN SUITABLE LOCATION (NAIF)	0	0	1	0	0	0	0	3	4
	d. CONSERVATION OF AIRCRAFT (CA)	0	0	0	1	0	0	0	0	1
	e. NO SCRAMBLE MULTIPLE CORR. IDENT. SYSTM	0	0	0	0	0	0	0	0	0
19.	REASON FOR MISSED INTERCEPTS									
	a. WEATHER (WX)	0	0	0	0	0	0	0	0	0
	b. LATE SCRAMBLE (LS)	0	0	0	0	0	0	0	0	0
	c. AIRBORNE EQUIPMENT FAILURE (AEF)	0	0	0	0	0	0	0	0	0
	d. DARKNESS (DK)	0	0	0	0	0	0	0	0	0
	e. ELECTRONICS COUNTERMEASURES (ECM)	0	0	0	0	0	0	0	0	0
	f. ABORT (ABT)	1	0	0	0	0	0	0	0	1
	g. CONTROLLER ERROR (CE)	0	0	0	0	0	0	0	0	0
	h. GROUND EQUIPMENT FAILURE (GEF)	0	0	0	0	1	0	0	0	1
	i. AIRCRAFT PERFORMANCE (ACP)	0	0	0	1	0	0	0	0	1
	j. FADE PRIOR TO INTERCEPT (FPI)	0	1	2	1	0	1	2	0	7
	k. PASSED TO 26th. AD (DEF)	0	0	0	0	0	0	0	0	0

REMARKS:

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32d AIR DIVISION FLIGHT PLAN CORRELATION  
1 Oct-31 Oct, '54

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d AD
FLIGHT PLANS RECEIVED	157	2055	1203	N/A	526	N/A	1747	819	6507
FLIGHT PLANS CORRELATED	156	1927	1068	N/A	481	N/A	1710	804	6146
FLIGHT PLANS NOT CORR.	1	128	135	0	45	0	37	15	361
REASONS FOR NON CORRELATION (Mechanical Limitations)									
1. SCHEDULED MAINTENANCE	1	61	65	0	34	0	7	8	176
2. EMERGENCY MAINTENANCE	0	0	1	0	3	0	1	0	5
3. OUT OF CALIBRATION LIMITS	0	17	34	0	0	0	3	1	55
5. GROUND CLUTTER	0	7	0	0	1	0	1	0	9
9. OTHER *	0	8	17	0	4	0	8	4	41
TOTAL	1	93	117	0	42	0	20	13	286
(Other than Mechanical Limitations)									
4. WEATHER	0	33	7	0	2	0	5	2	49
6. LATE FLIGHT PLAN	0	0	8	0	0	0	0	0	8
7. DEVIATED FLIGHT PLAN	0	2	0	0	1	0	0	0	3
8. PERSONNEL ERROR	0	0	3	0	0	0	12	0	15
TOTAL	0	35	18	0	3	0	17	2	75
GRAND TOTAL	1	128	135	0	45	0	37	15	361

\*Most Common Reason For No.9

Controller Could Not Locate

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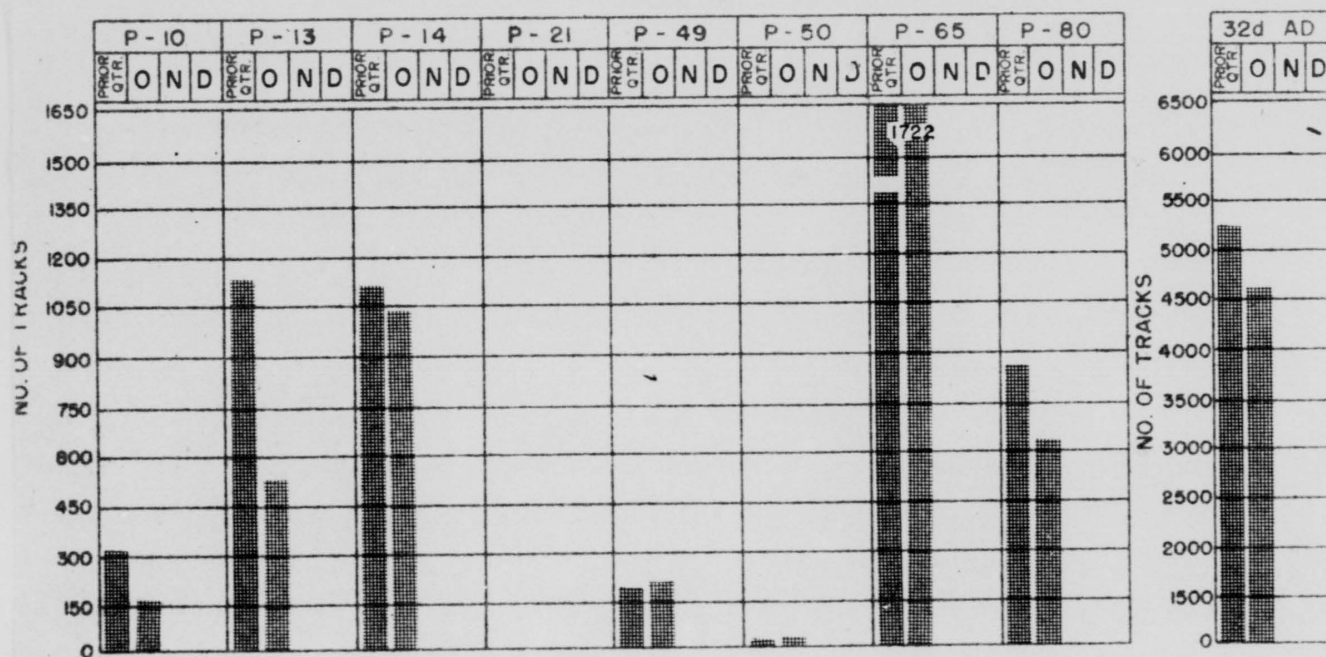
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32d AIR DIVISION (DEF)

TOTAL TRACKS REQUIRING IDENTIFICATION



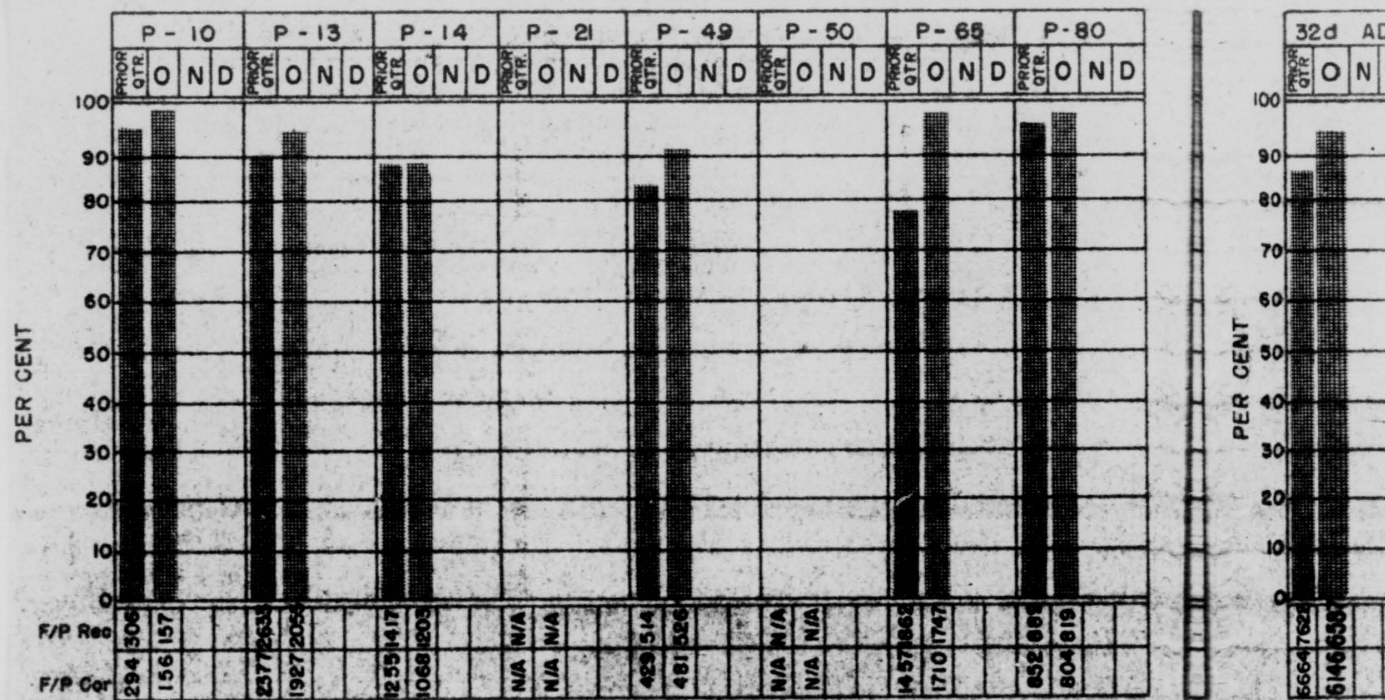
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32d AIR DIVISION (DEF)

FLIGHT PLAN CORRELATION



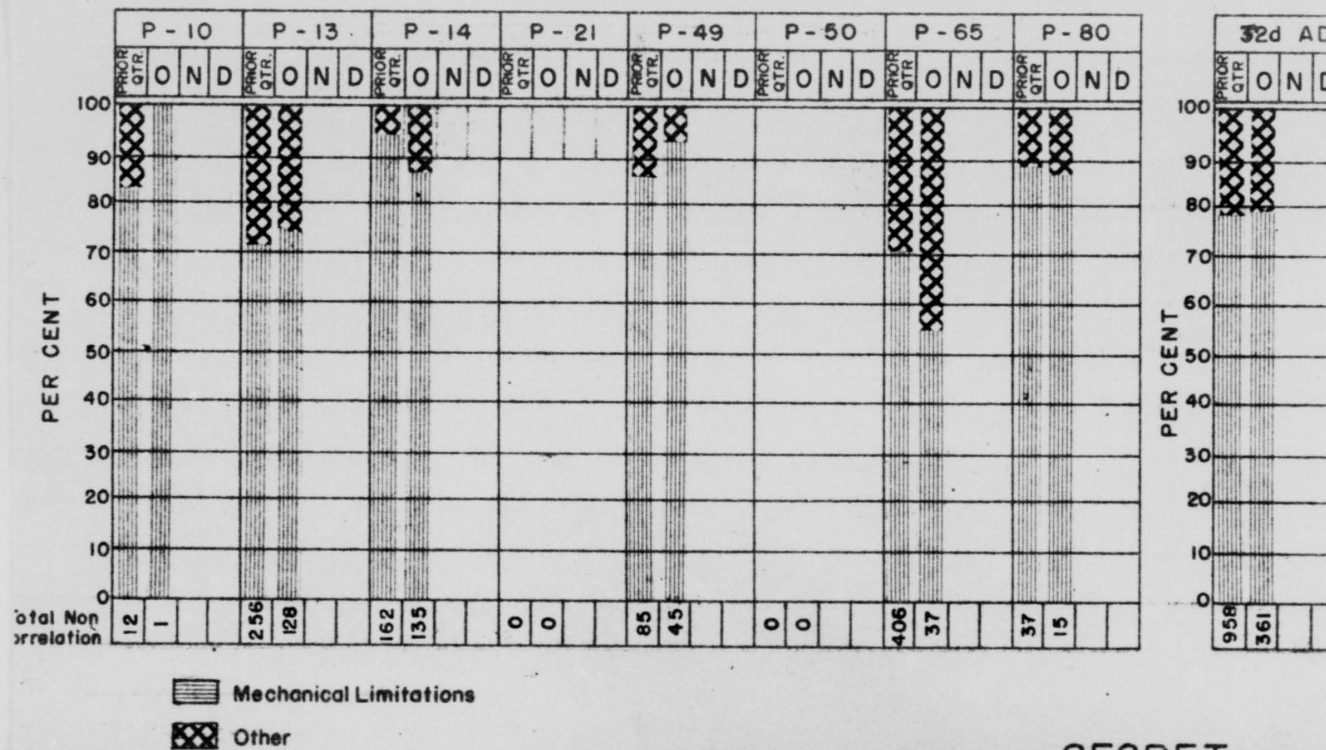
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32d AIR DIVISION (DEF)

NON-CORRELATIONS



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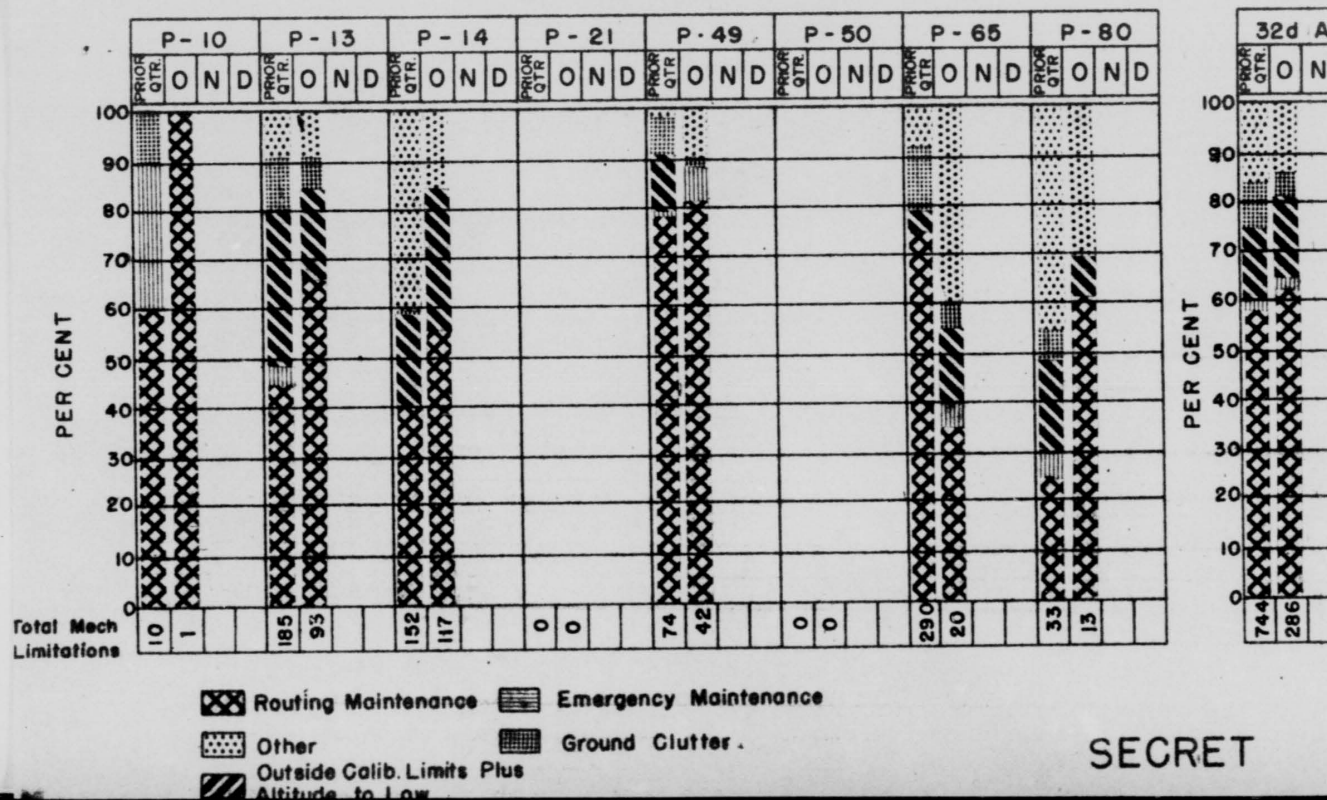
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32d AIR DIVISION (DEF)

**NON-CORRELATIONS**

(Mechanical Limitations)



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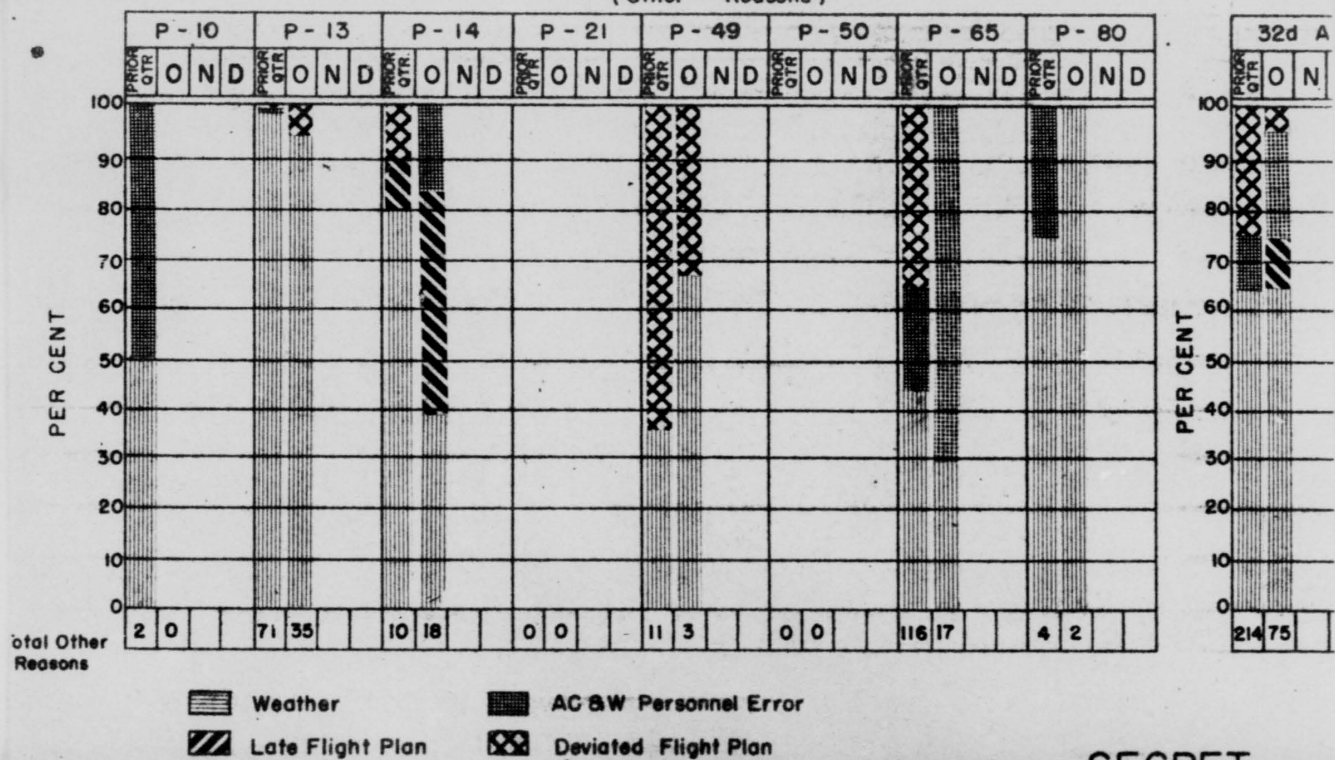


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32d AIR DIVISION (DEF)

NON-CORRELATIONS

( Other Reasons )



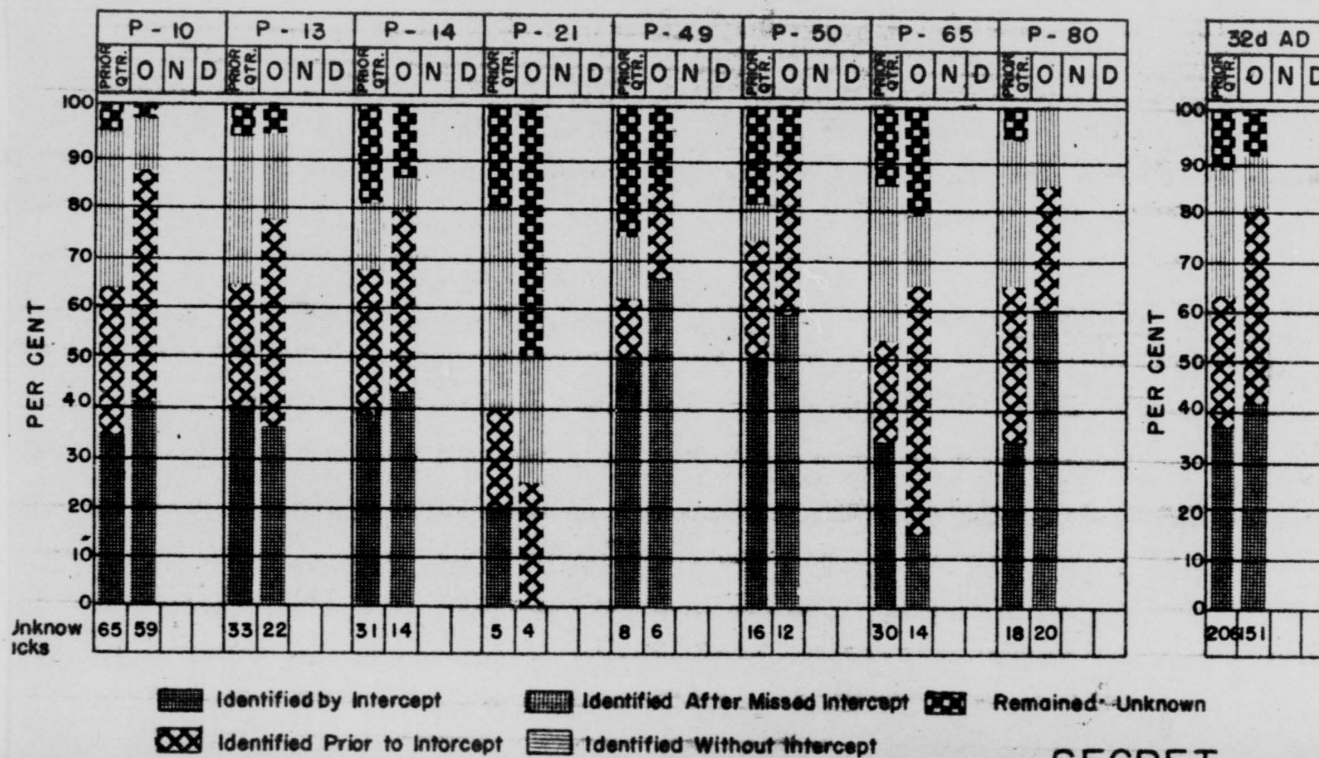
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32d AIR DIVISION (DEF)

IDENTIFICATION EFFECTIVENESS



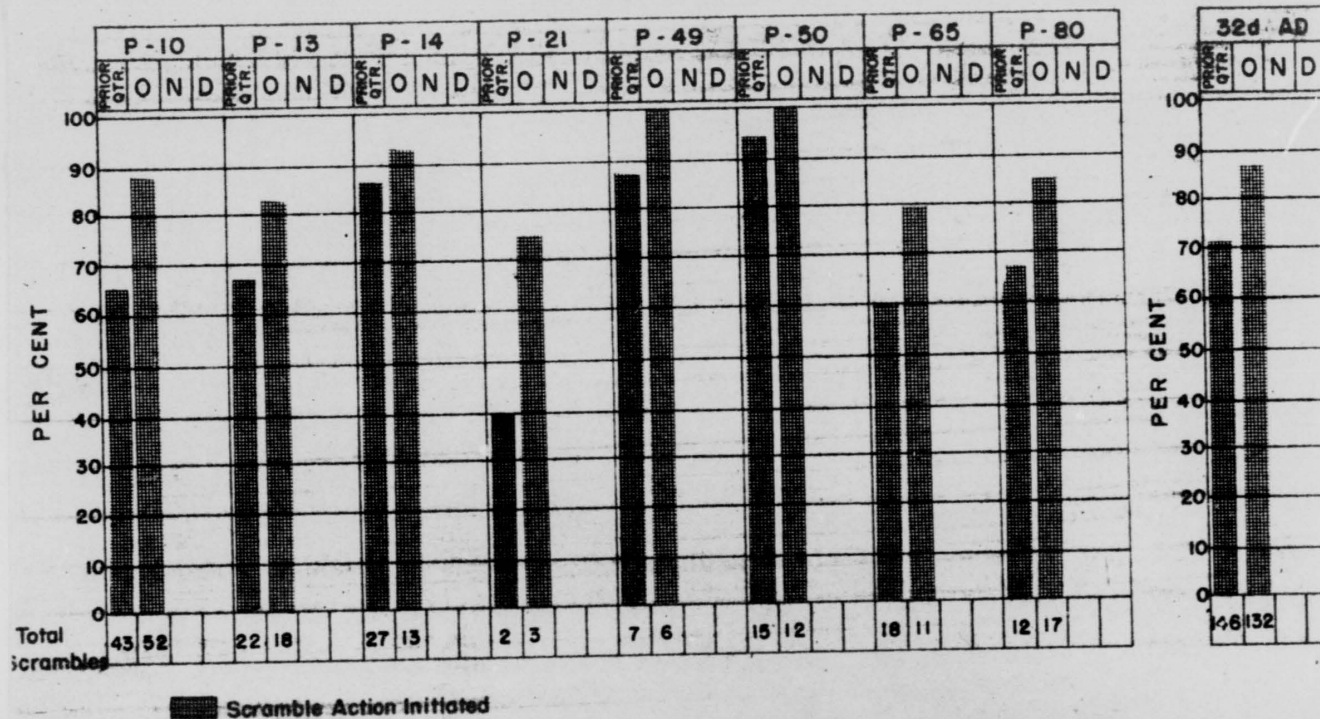
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32d AIR DIVISION (DEF)

SCRAMBLE ACTION



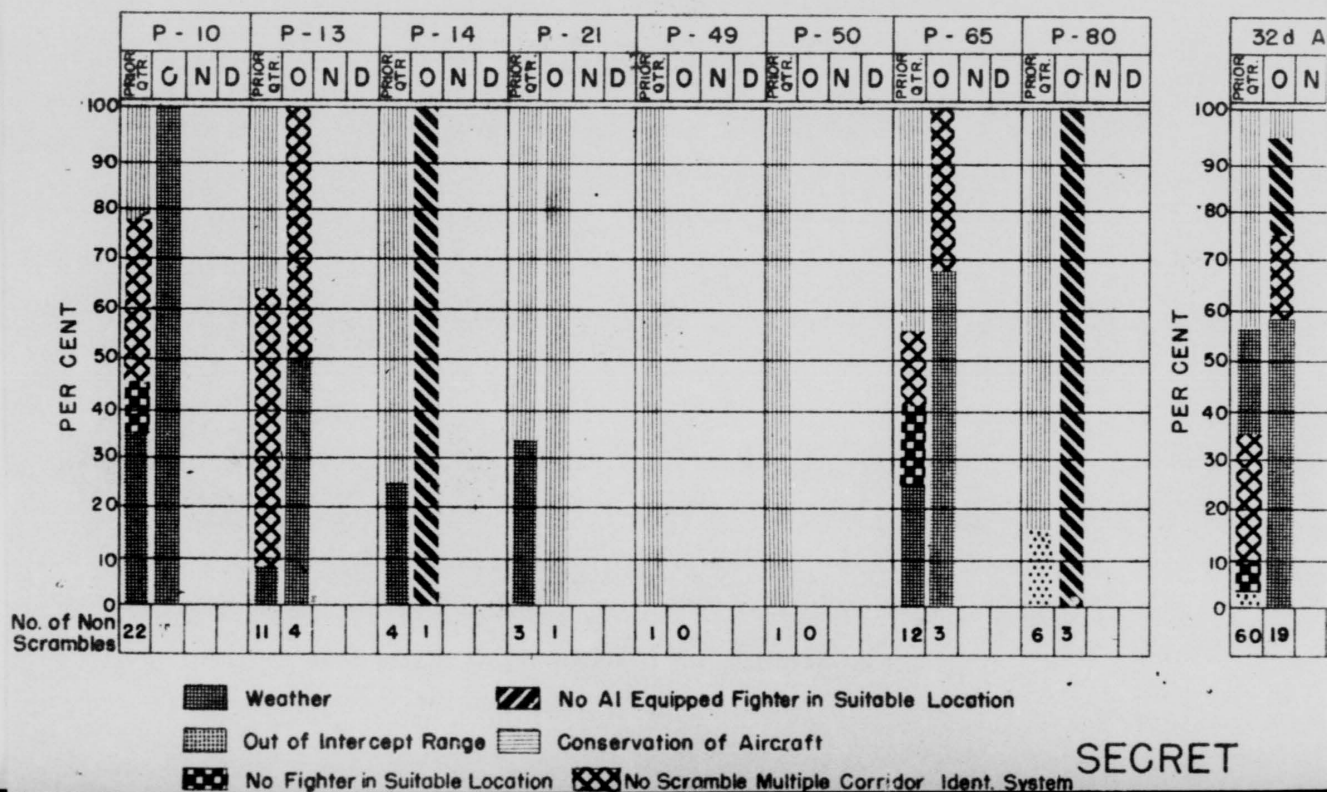
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32d AIR DIVISION (DEF)

REASONS FOR NO SCRAMBLE



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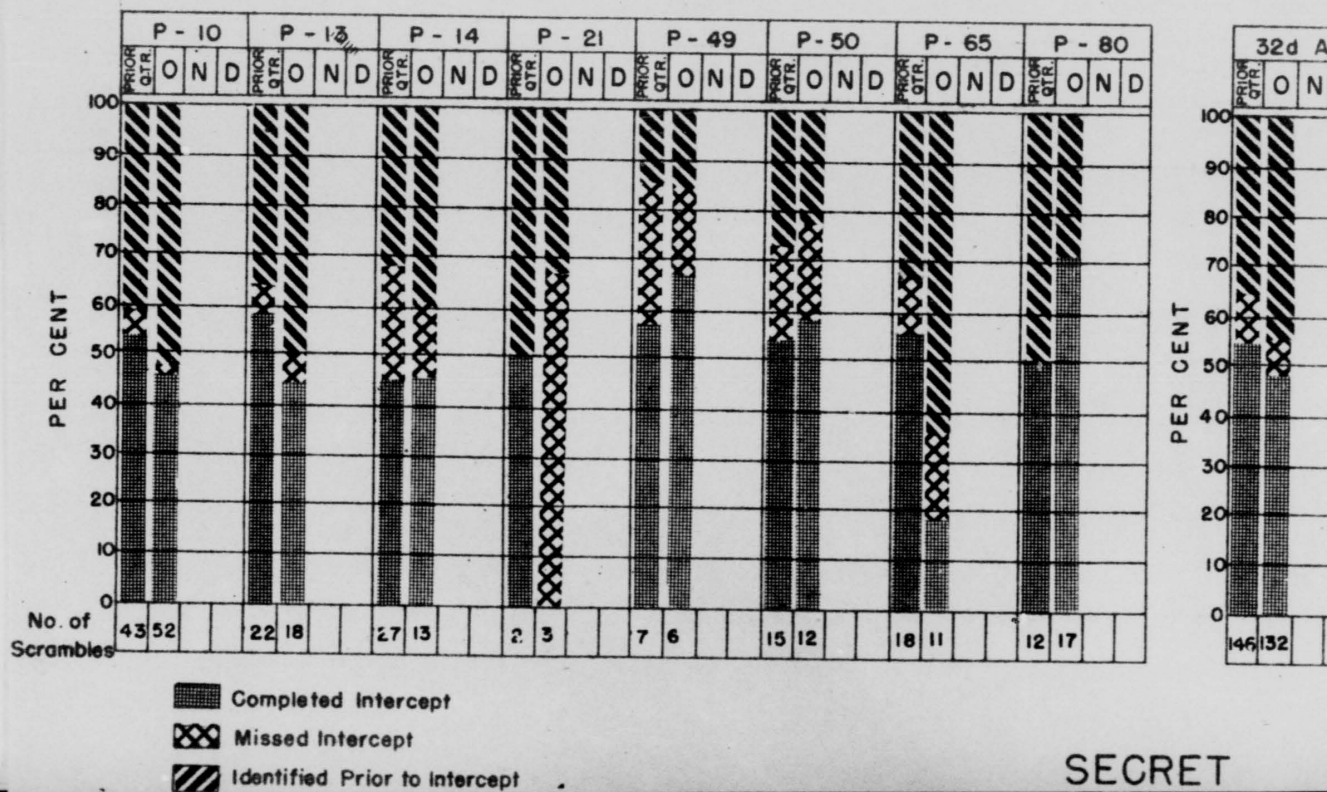
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32d AIR DIVISION (DEF)

INTERCEPT EFFICIENCY



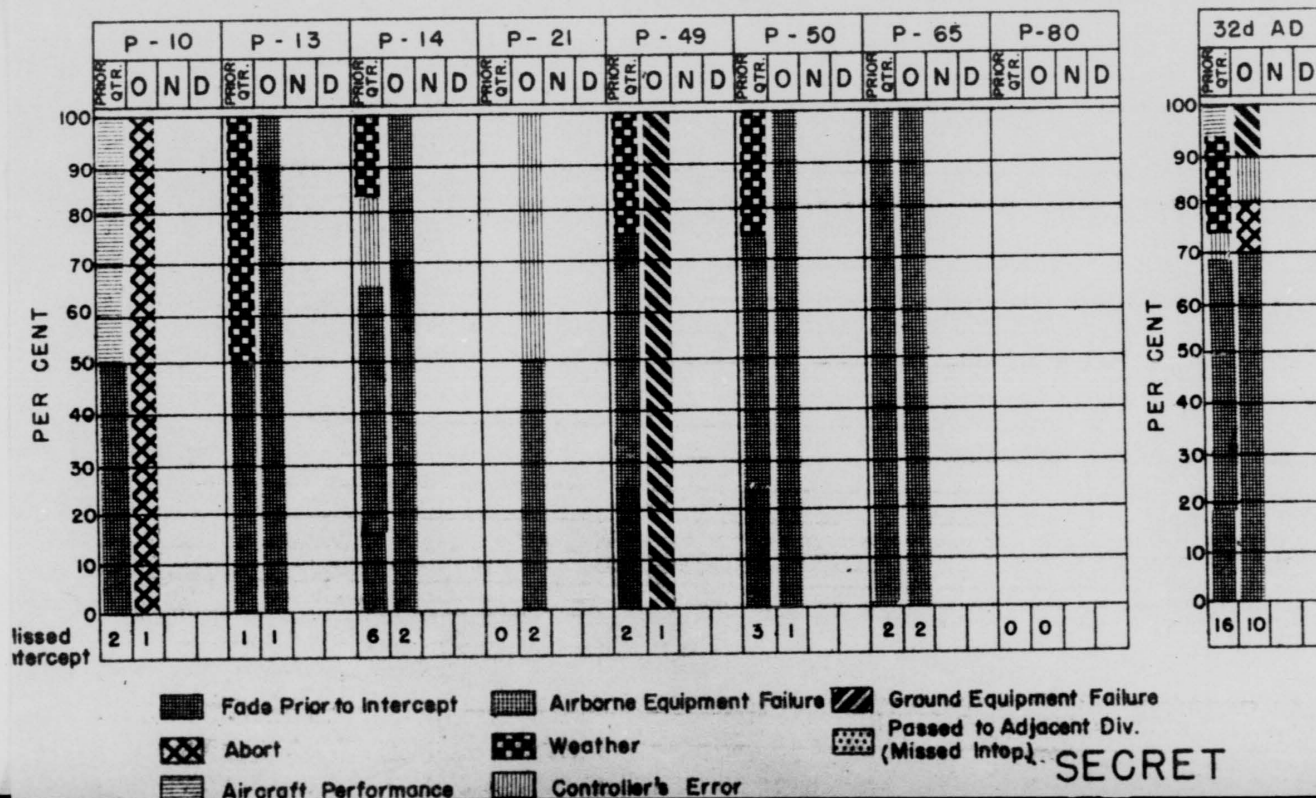
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32d AIR DIVISION (DEF)

REASONS FOR MISSED INTERCEPTS



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CO 517th Air Def Gp	1
CO 518th Air Def Gp	1
CO 528th Air Def Gp	1
CO 564th Air Def Gp	1
CO 654th AC&W Sq	1
CO 655th AC&W Sq	1
CO 656th AC&W Sq	1
CO 762d AC&W Sq	1
CO 763rd AC&W Sq	1
CO 764th AC&W Sq	1
CO 765th AC&W Sq	1
CO 766th AC&W Sq	1
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PREPARED BY  
OFFICE OF THE COMPTROLLER  
FOR DEPUTY OF OPERATIONS  
32D AIR DIVISION (DEFENSE)

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## 32d AIR DIVISION (DEF)

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SUMMARY OF AIR DEFENSE OPERATIONS FOR 1 NOV. 30 NOV '54

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d
1. PENETRATION TRACKS	134	573	926	N/A	162	6	1501	791	408
2. WORKLOAD TRACKS	1464	1128	301	N/A	295	769	3238	2061	925
3. GOC TRACKS									
a. TRACKS RECEIVED	955	922	527	488	128	441	3902		736
b. TRACKS CORRELATED	896	781	482	184	93	284	3181		590
4. NUMBER OF UNKNOWN TRKS	47	23	10	1	8	2	10	12	113
5. SCR ACTION INITIATED	40	22	8	1	6	2	10	12	101
6. NO SCR ACTION INITIATED	7	1	2		2				12
7. NUMBER OF INTERCEPT	25	9	4	1	1	2	2	5	49
8. NUMBER OF MISSED INTCP	1		3		4		4	1	13
9. IDENT PRIOR TO INTERCEPT	14	13	1		1		4	6	39
10. IDENT AFTER MISSED INTCP									
11. IDENT W/O SCR INITIATED	7	1	2		1				11
12. REMAINED UNKNOWN	1	1	3		5		4	1	14
13. INTERCEPT EFFECT %	66	53	50	25	83	25	55	49	51
14. IDENT EFFECT %	98	100	70	100	38	100	60	92	88
15. *TRUE INTCP EFFECT %	96	100	57	100	20	100	33	83	79
16. FLIGHT PLANS RECEIVED	125	1702	1052		486		1523	785	567
17. FLT. PLANS CORR.	122	1615	917		459		1482	778	537
18. CORRELATION %	98	95	87		94		97	99	95

## REMARKS:

\*Intercept Figure Preceded By Asterisk Is Determined By Intercepts  
Divided By Total Of Scramble Less Identification Prior To Intercepts



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32d AIR DIVISION (DEF)

SUMMARY OF AIR DEFENSE OPERATIONS FOR INOV.30 NOV.'54

18	REASON FOR NO SCRAMBLE ACTION	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32AD
a.	WEATHER (WX)	7	1							8
b.	OUT OF INTERCEPT RANGE (OR)									
c.	NO AIEQPD FTR IN SUITABLE LOCATION (NAIF)									
d.	CONSERVATION OF AIRCRAFT (CA)			2		2				4
e.	NO SCRAMBLE MULTIPLE CORR. IDENT. SYSTM									
19.	REASON FOR MISSED INTERCEPTS									
a.	WEATHER (WX)									
b.	LATE SCRAMBLE (LS)									
c.	AIRBORNE EQUIPMENT FAILURE (AEF)									
d.	DARKNESS (DK)									
e.	ELECTRONICS COUNTERMEASURES (ECM)									
f.	ABORT (ABT)									
g.	CONTROLLER ERROR (CE)					1				1
h.	GROUND EQUIPMENT FAILURE (GEF)*									
i.	AIRCRAFT PERFORMANCE (ACP)									
j.	FADE PRIOR TO INTERCEPT (FPI)									
k.	PASSED TO 26th. AD (DEF)	1		3		3		4	1	12

REMARKS:

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## 32d AIR DIVISION FLIGHT PLAN CORRELATION

1 NOV. 30 NOV. '54

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d AD
FLIGHT PLANS RECEIVED	125	1702	1052	0	486	0	1523	785	5673
FLIGHT PLANS CORRELATED	122	1615	917	0	459	0	1482	778	5373
FLIGHT PLANS NOT CORR.	3	87	135	0	27	0	41	7	300
REASONS FOR NON CORRELATION (Mechanical Limitations)									
1. SCHEDULED MAINTENANCE	3	19	76	0	20	0	14	3	135
2. EMERGENCY MAINTENANCE	0	2	0	0	1	0	1	0	4
3. OUT OF CALIBRATION LIMITS	0	14	22	0	3	0	7	1	47
5. GROUND CLUTTER	0	5	0	0	0	0	1	0	6
9. OTHER *	0	9	24	0	1	0	4	3	41
TOTAL	3	49	122	0	25	0	27	7	233
(Other than Mechanical Limitations)									
4. WEATHER	0	33	6	0	2	0	0	0	41
6. LATE FLIGHT PLAN	0	1	4	0	0	0	0	0	5
7. DEVIATED FLIGHT PLAN	0	4	1	0	0	0	0	0	5
8. PERSONNEL ERROR	0	0	2	0	0	0	14	0	16
TOTAL	0	38	13	0	2	0	14	0	67
GRAND TOTAL	3	87	135	0	27	0	41	0	300

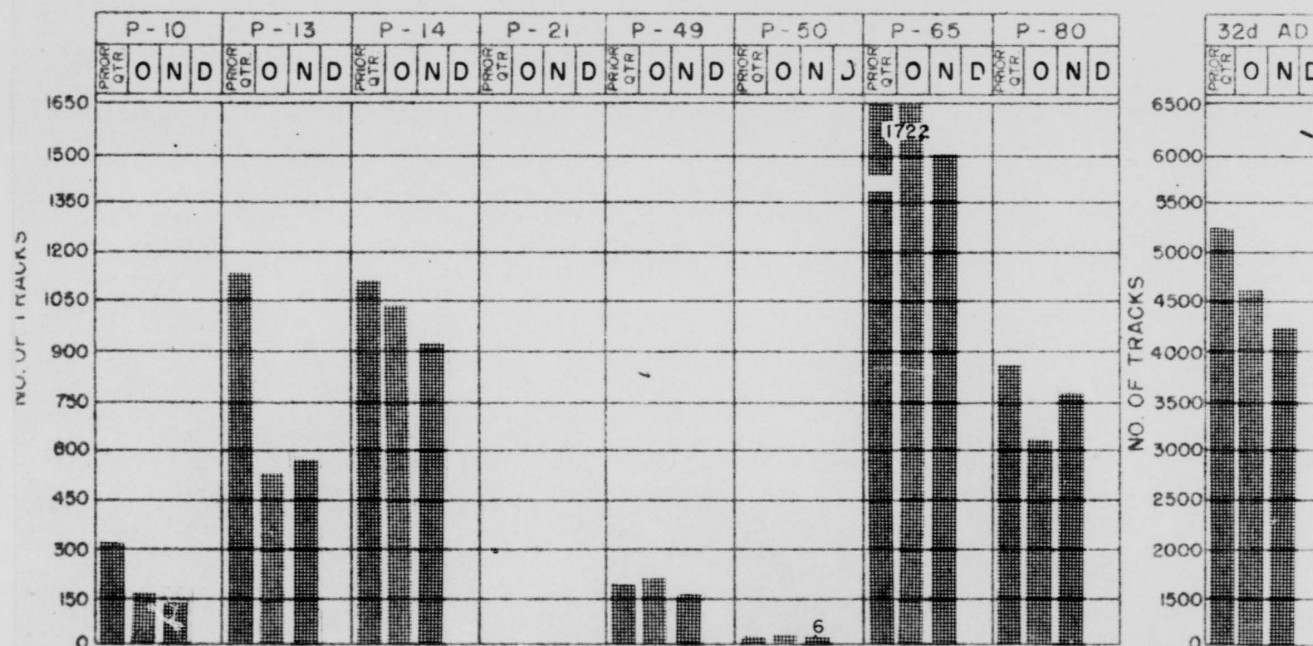
\*Most Common Reason For No. 9 Small Reflecting Surface

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32d AIR DIVISION (DEF)

TOTAL TRACKS REQUIRING IDENTIFICATION

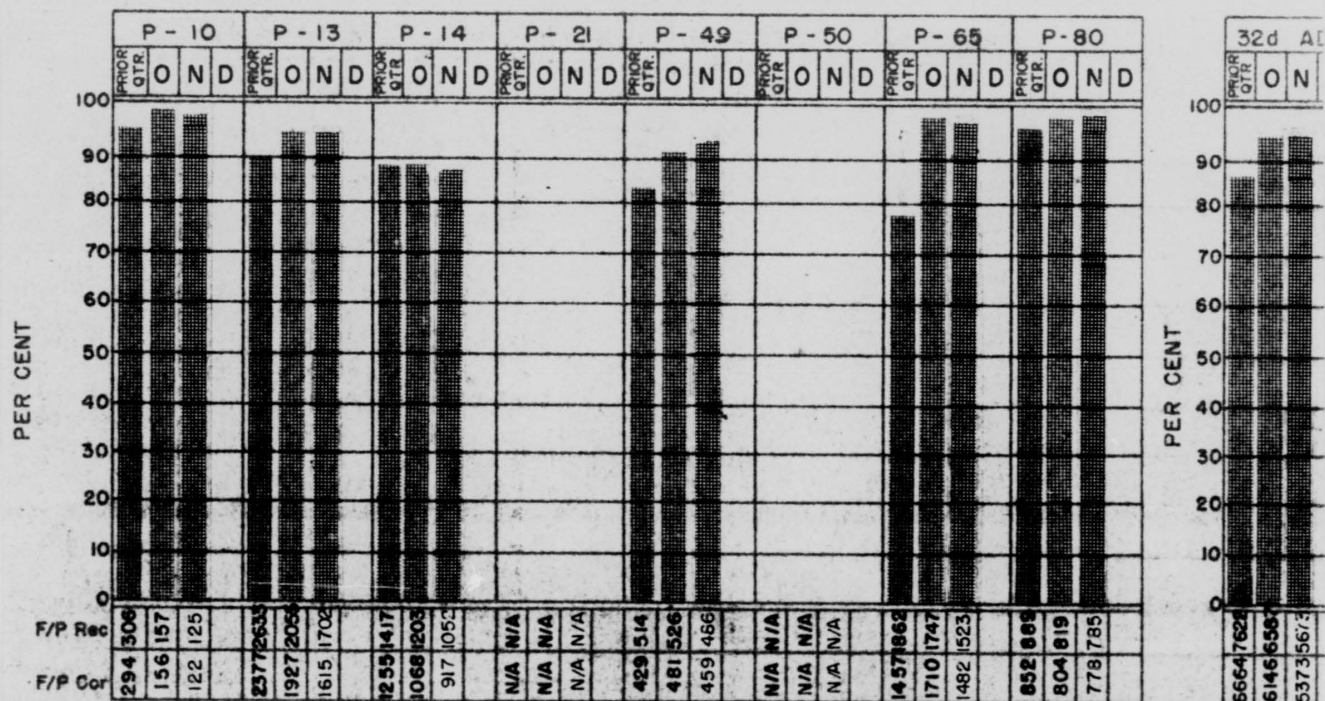


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32d AIR DIVISION (DEF)

FLIGHT PLAN CORRELATION



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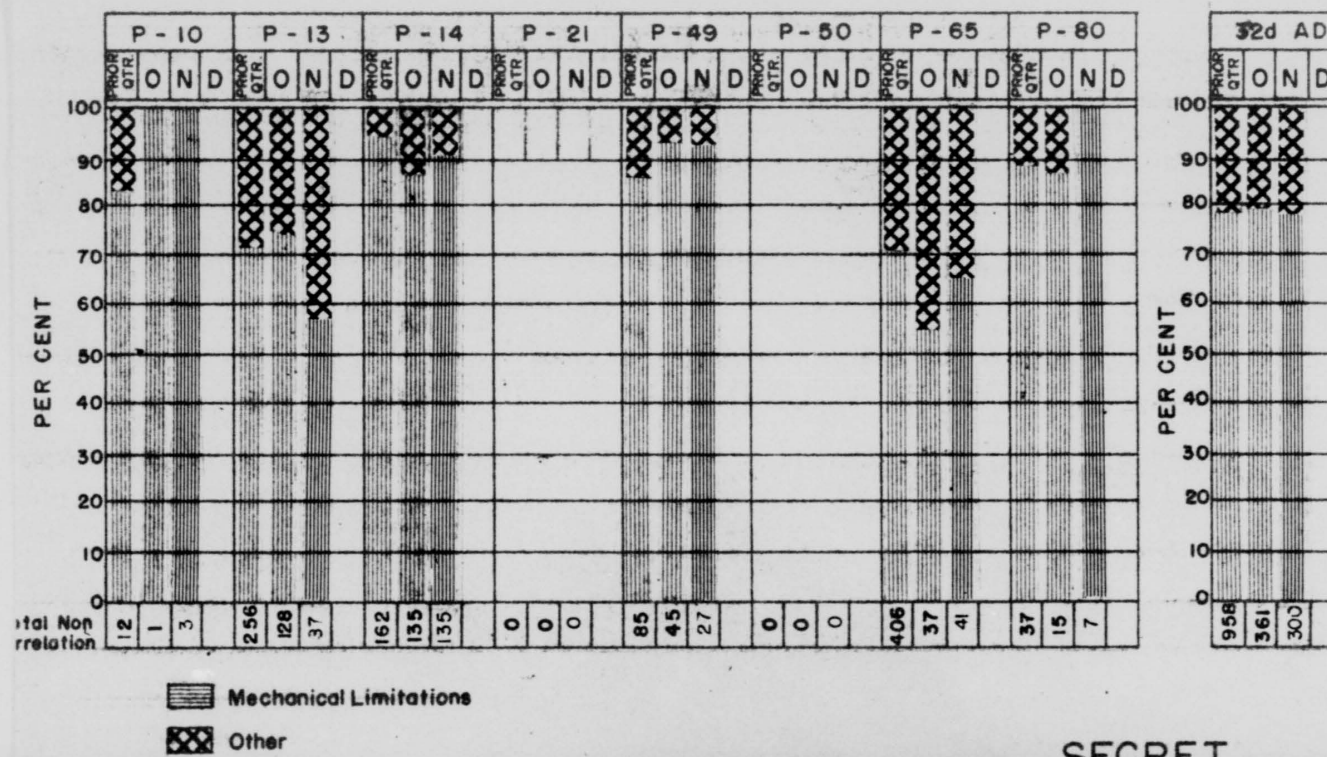
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32d AIR DIVISION (DEF)

NON - CORRELATIONS



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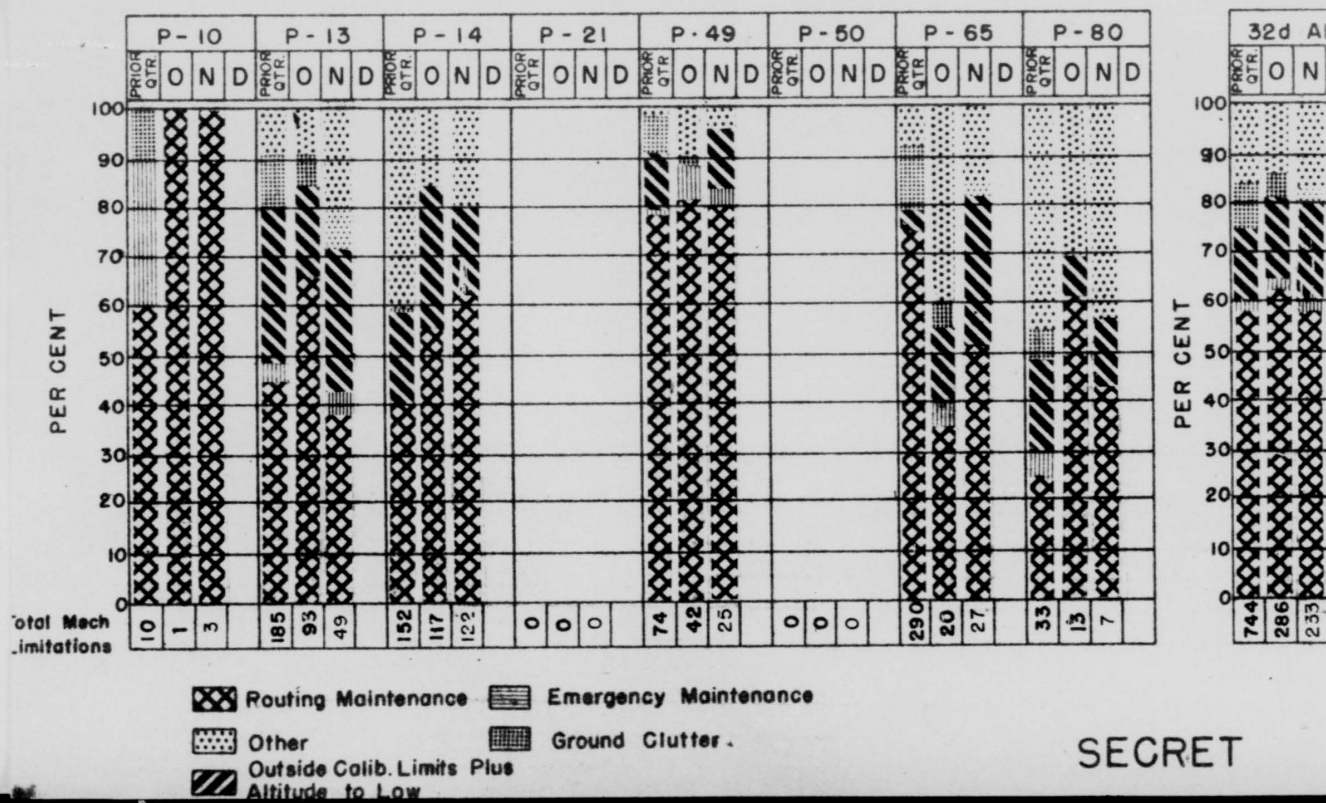
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32d AIR DIVISION (DEF)

NON-CORRELATIONS

(Mechanical Limitations)



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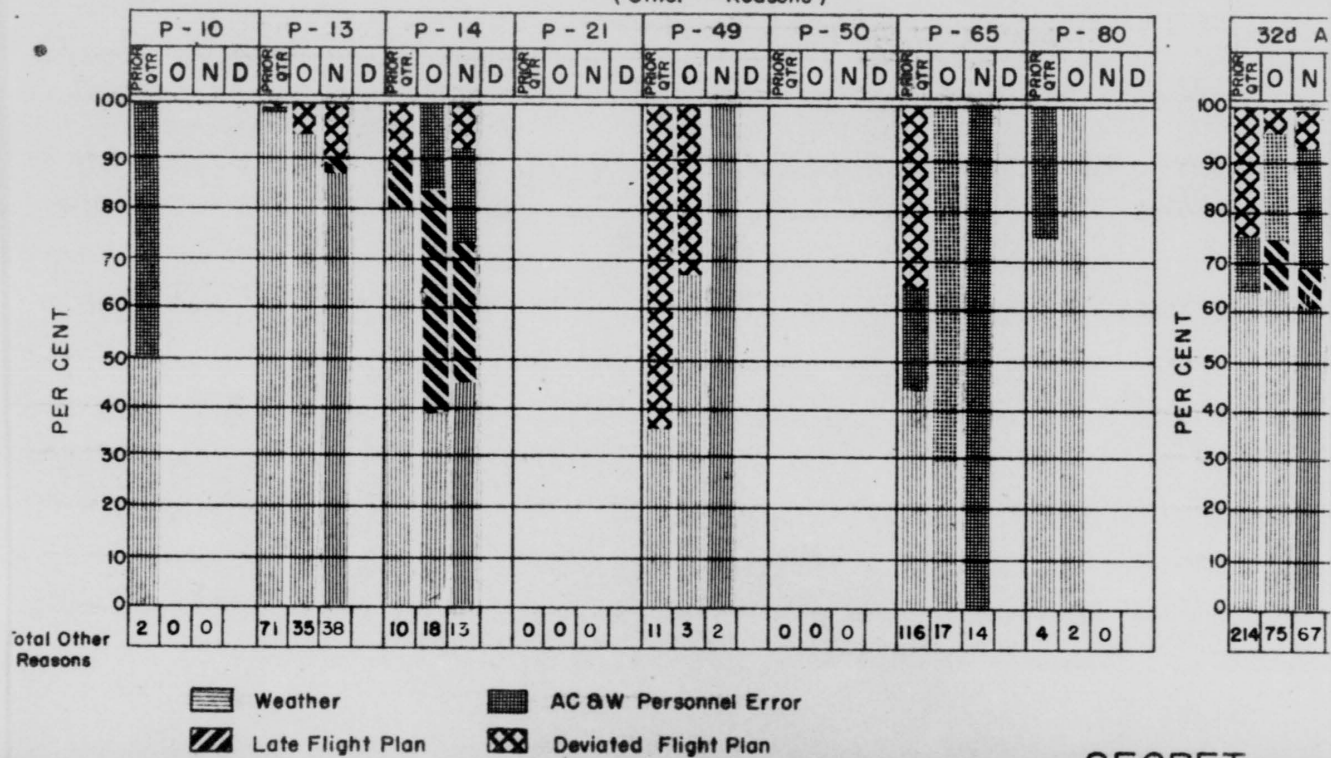
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32d AIR DIVISION (DEF)

NON-CORRELATIONS

(Other Reasons)



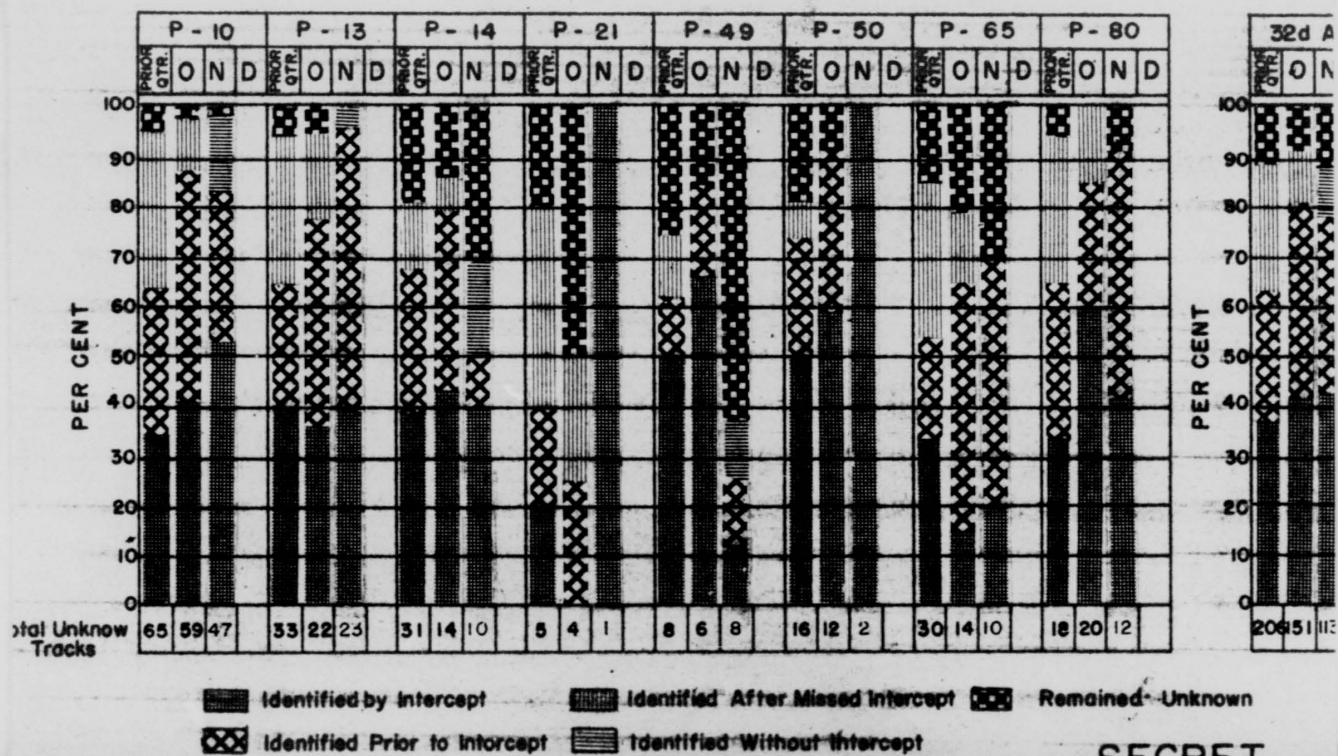
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32d AIR DIVISION (DEF)

IDENTIFICATION EFFECTIVENESS



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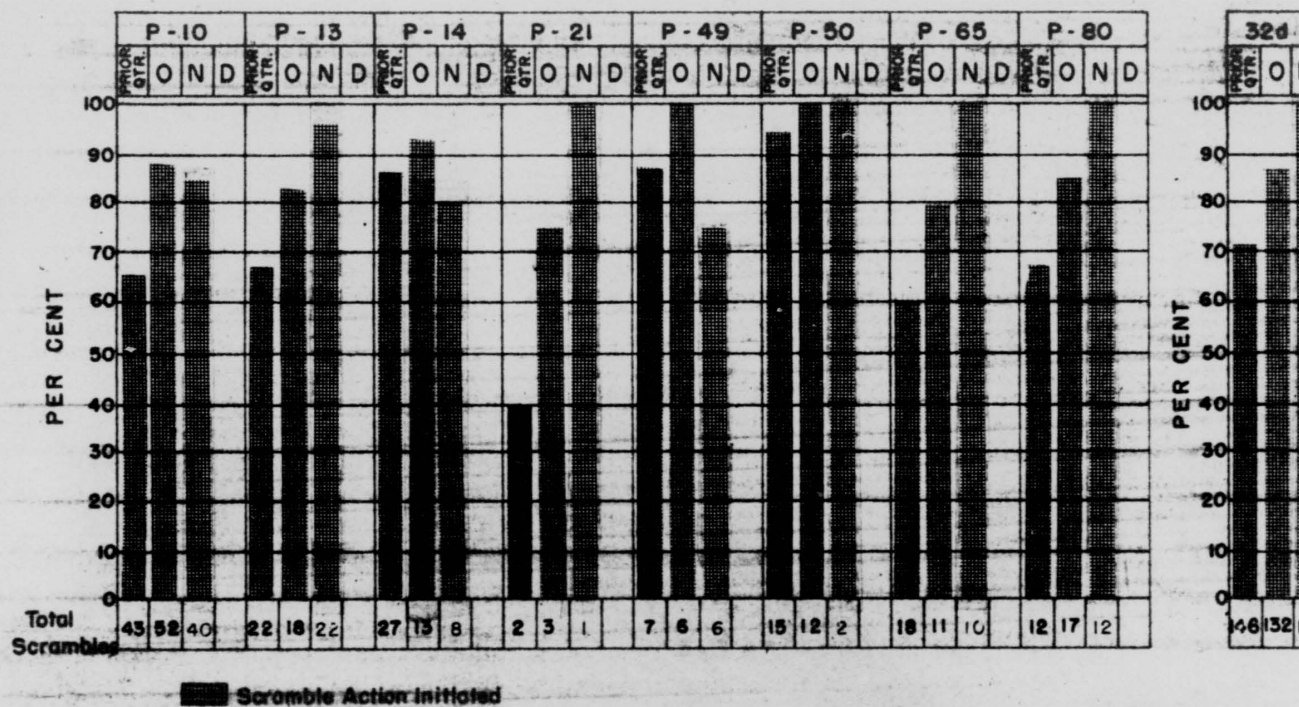
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32d AIR DIVISION (DEF)

SCRAMBLE ACTION



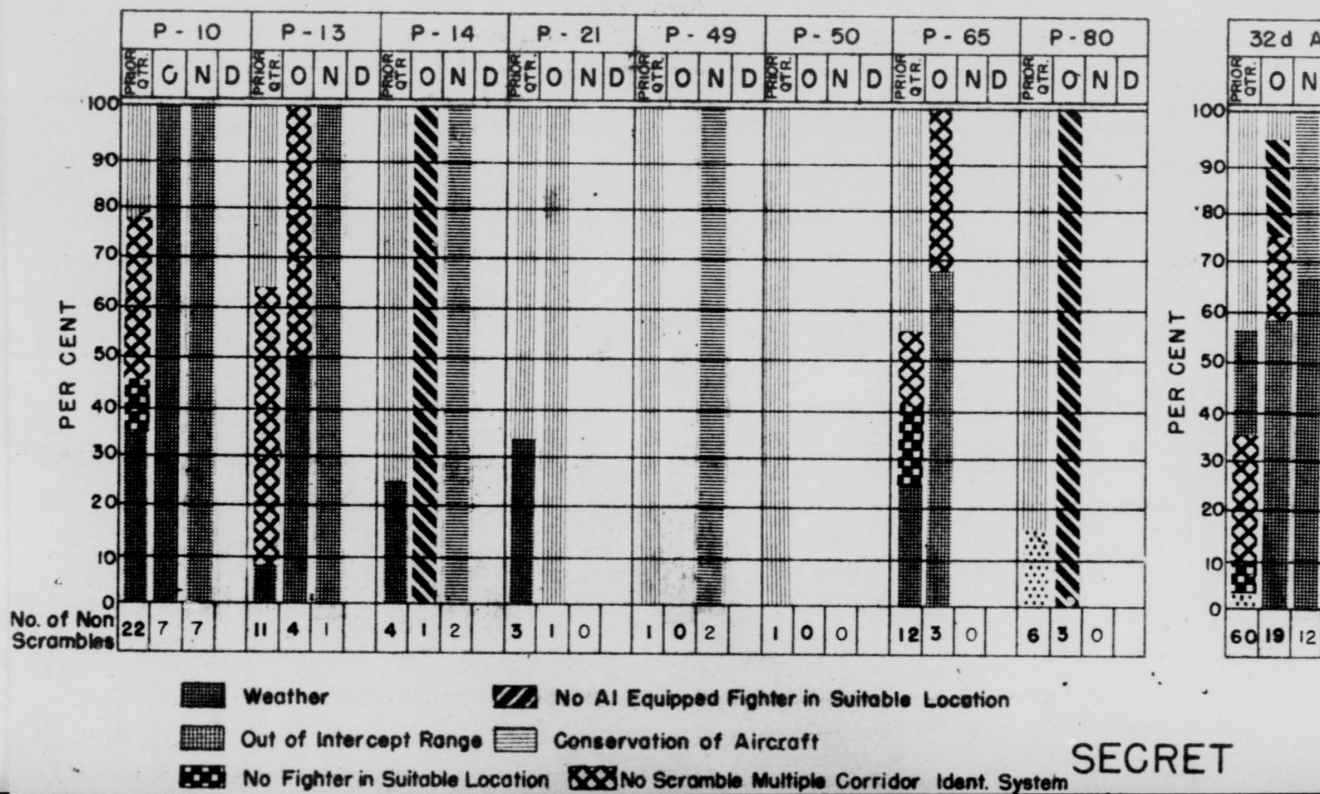
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32d AIR DIVISION (DEF)

REASONS FOR NO SCRAMBLE



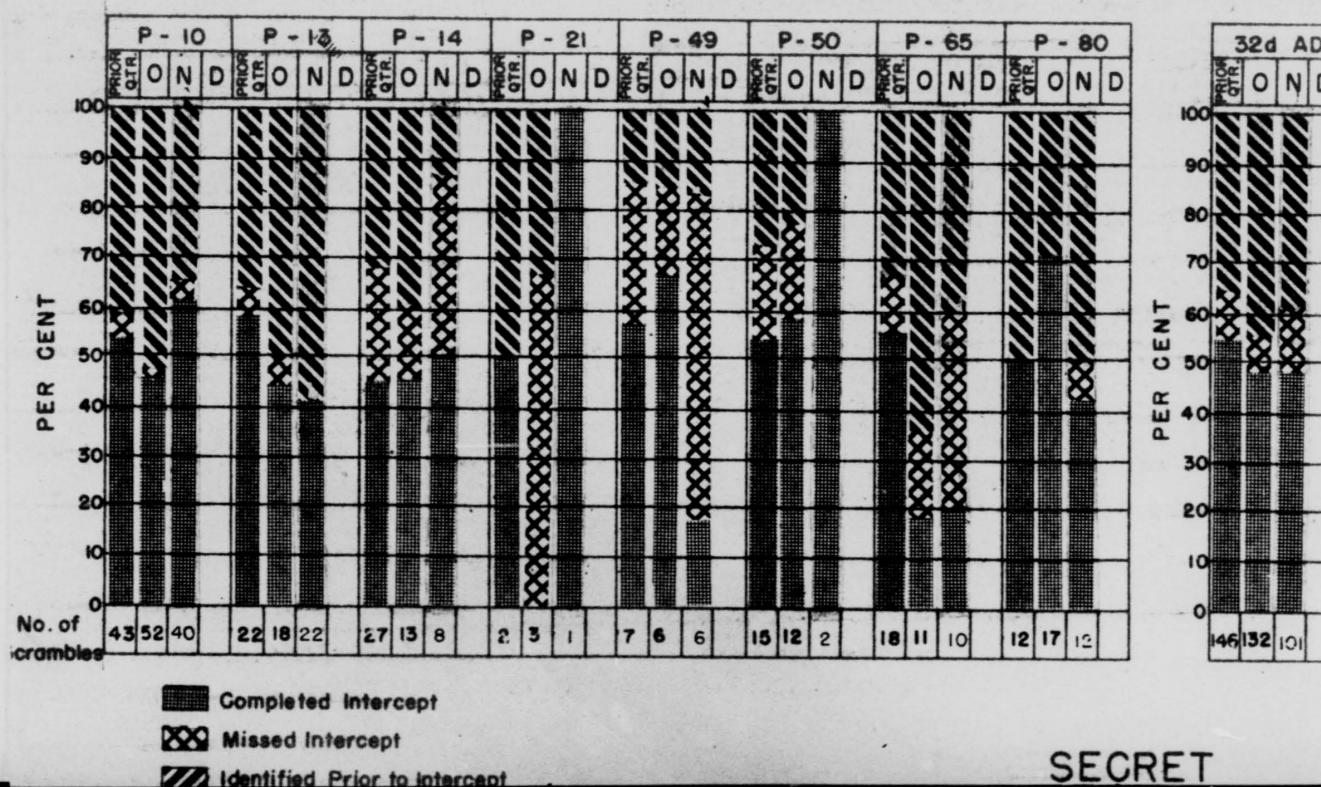
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32d AIR DIVISION (DEF)

INTERCEPT EFFICIENCY



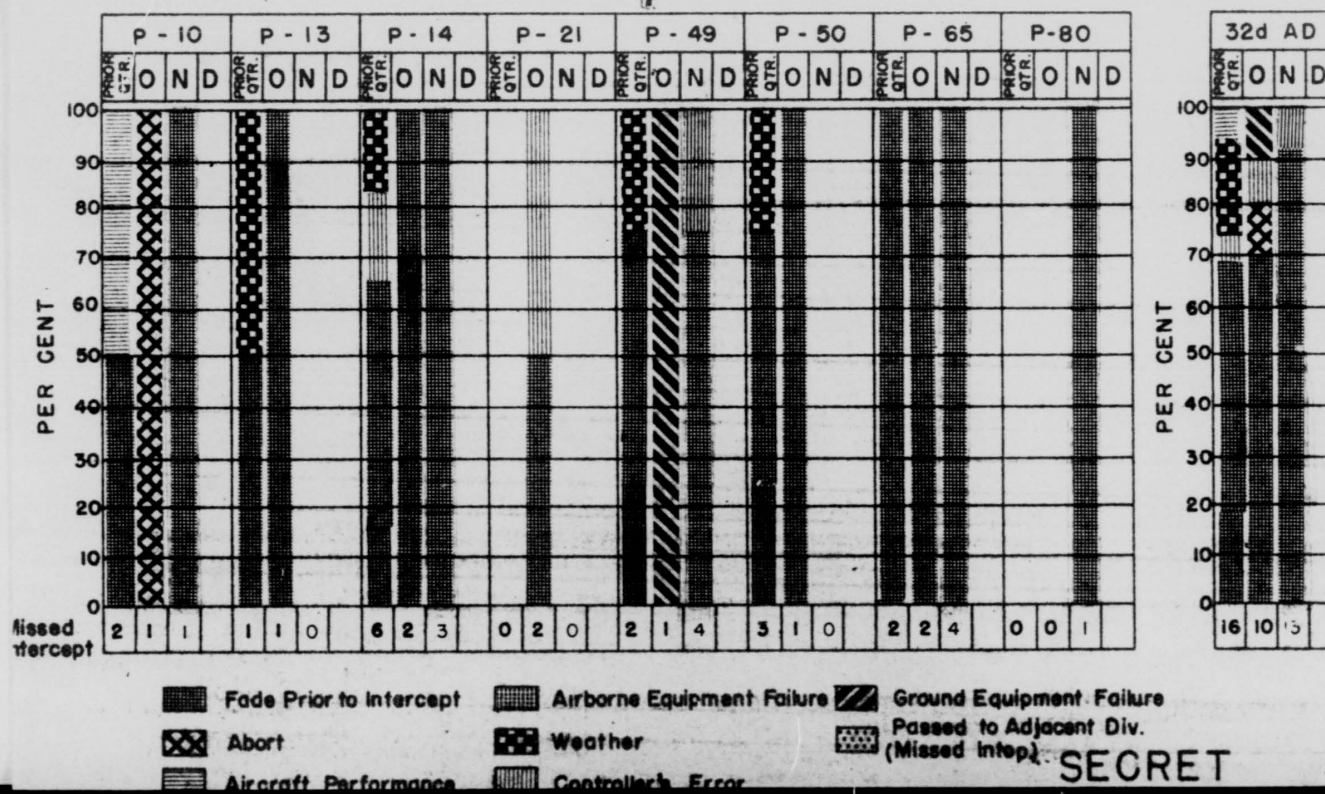
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32d AIR DIVISION (DEF)

REASONS FOR MISSED INTERCEPTS



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CO 564th Air Def Gp	
CO 654th AC&W Sq	
CO 655th AC&W Sq	
CO 656th AC&W Sq	
CO 762d AC&W Sq	
CO 763rd AC&W Sq	
CO 764th AC&W Sq	
CO 765th AC&W Sq	
CO 766th AC&W Sq	
CO 27th FIS	
CO 37th FIS	
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Intercept Efficiency	13
Reason For Missed Intercept	14
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32D AIR DIVISION (DEFENSE)

0060

## 32d AIR DIVISION (DEF)

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SUMMARY OF AIR DEFENSE OPERATIONS FOR 1-31 DEC 1954

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d AD
1. PENETRATION TRACKS	220	542	934	N/A	176	12	1454	688	4026
2. WORKLOAD TRACKS	1528	1099	265	N/A	252	870	2962	1810	8784
3. GOC TRACKS									
a. TRACKS RECEIVED	1031	915	488	337	42	335	3321	-	6499
b. TRACKS CORRELATED	997	768	426	143	58	272	2584	-	5248
4. NUMBER OF UNKNOWN TRKS	55	15	6	-	4	-	7	4	91
5. SCR ACTION INITIATED	43	15	6	-	4	-	7	4	79
6. NO SCR ACTION INITIATED	12	-	-	-	-	-	-	-	12
7. NUMBER OF INTERCEPT	26	6	4	-	3	-	2	1	42
8. NUMBER OF MISSED INTCP	1	1	1	-	-	-	1	-	4
9. IDENT PRIOR TO INTERCEPT	16	8	1	-	1	-	4	3	33
10. IDENT AFTER MISSED INTCP	-	-	-	-	-	-	1	-	1
11. IDENT W/O SCR INITIATED	12	-	-	-	-	-	-	-	12
12. REMAINED UNKNOWN	1	1	1	-	-	-	-	-	3
13. INTERCEPT EFFECT %	60	40	67	N/A	75	N/A	29	25	53
14. IDENT EFFECT %	98	93	83	N/A	100	N/A	100	100	98
15. *TRUE INTCP EFFECT %	93	86	80	N/A	100	N/A	67	100	89
16. FLIGHT PLANS RECEIVED	221	1589	971	N/A	475	N/A	1471	686	5413
17. FLT. PLANS CORR.	219	1561	916	N/A	433	N/A	1439	683	5251
18. CORRELATION %	99	98	94	N/A	91	N/A	98	99	99

## REMARKS:

\*Intercept Figure Preceded By Asterisk Is Determined By Intercepts  
Divided By Total Of Scramble Less Identification Prior To Intercepts

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32d AIR DIVISION (DEF)  
SUMMARY OF AIR DEFENSE OPERATIONS FOR 1-31 DEC 1954

18	REASON FOR NO SCRAMBLE ACTION	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32AD
a.	WEATHER (WX)	7								7
b.	OUT OF INTERCEPT RANGE (OR)									
c.	NO AIEQPD FTR IN SUITABLE LOCATION (NAIF)									
d.	CONSERVATION OF AIRCRAFT (CA)	1								1
e.	NO SCRAMBLE MULTIPLE CORR. IDENT. SYSTM	4								4
19.	REASON FOR MISSED INTERCEPTS									
a.	WEATHER (WX)									
b.	LATE SCRAMBLE (LS)									
c.	AIRBORNE EQUIPMENT FAILURE (AEF)									
d.	DARKNESS (DK)									
e.	ELECTRONICS COUNTERMEASURES (ECM)									
f.	ABORT (ABT)									
g.	CONTROLLER ERROR (CE)									
h.	GROUND EQUIPMENT FAILURE (GEF)									
i.	AIRCRAFT PERFORMANCE (ACP)									
j.	FADE PRIOR TO INTERCEPT (FPI)	1	1	1				1		4
k.	PASSED TO 26th. AD (DEF)									

REMARKS:

J 0 6 2



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## 32d AIR DIVISION FLIGHT PLAN CORRELATION

1 - 31 DEC 1954

	P-10	P-13	P-14	P-21	P-49	P-50	P-65	P-80	32d AD
FLIGHT PLANS RECEIVED	221	1589	971	-	475	-	1471	686	5413
FLIGHT PLANS CORRELATED	219	1561	916	-	433	-	1439	683	5251
FLIGHT PLANS NOT CORR.	2	28	55	-	42	-	32	3	162
REASONS FOR NON CORRELATION (Mechanical Limitations)									
1. SCHEDULED MAINTENANCE	2	13	13	-	37	-	7	2	74
2. EMERGENCY MAINTENANCE	-	2	2	-	-	-	-	-	4
3. OUT OF CALIBRATION LIMITS	-	3	17	-	-	-	-	-	20
5. GROUND CLUTTER	-	3	2	-	3	-	4	-	12
9. OTHER *	-	2	13	-	-	-	11	1	27
TOTAL	2	23	47	-	40	-	22	3	137
(Other than Mechanical Limitations)									
4. WEATHER	-	2	5	-	1	-	-	-	8
6. LATE FLIGHT PLAN	-	-	3	-	1	-	-	-	4
7. DEVIATED FLIGHT PLAN	-	3	-	-	-	-	-	-	3
8. PERSONNEL ERROR	-	-	-	-	-	-	10	-	10
TOTAL	-	5	8	-	2	-	10	-	25
GRAND TOTAL	2	28	55	-	42	-	32	3	162

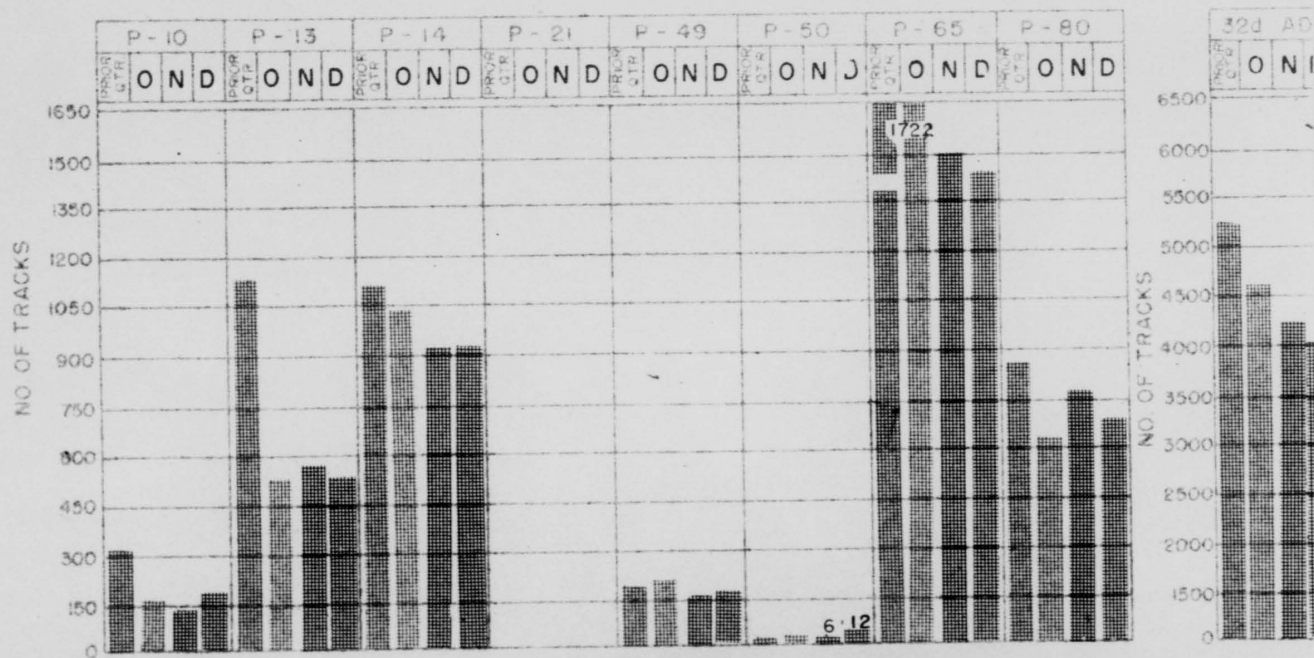
\*Most Common Reason For No 9. CONTROLLER COULD NOT LOCATE

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32d AIR DIVISION (DEF)

TOTAL TRACKS REQUIRING IDENTIFICATION

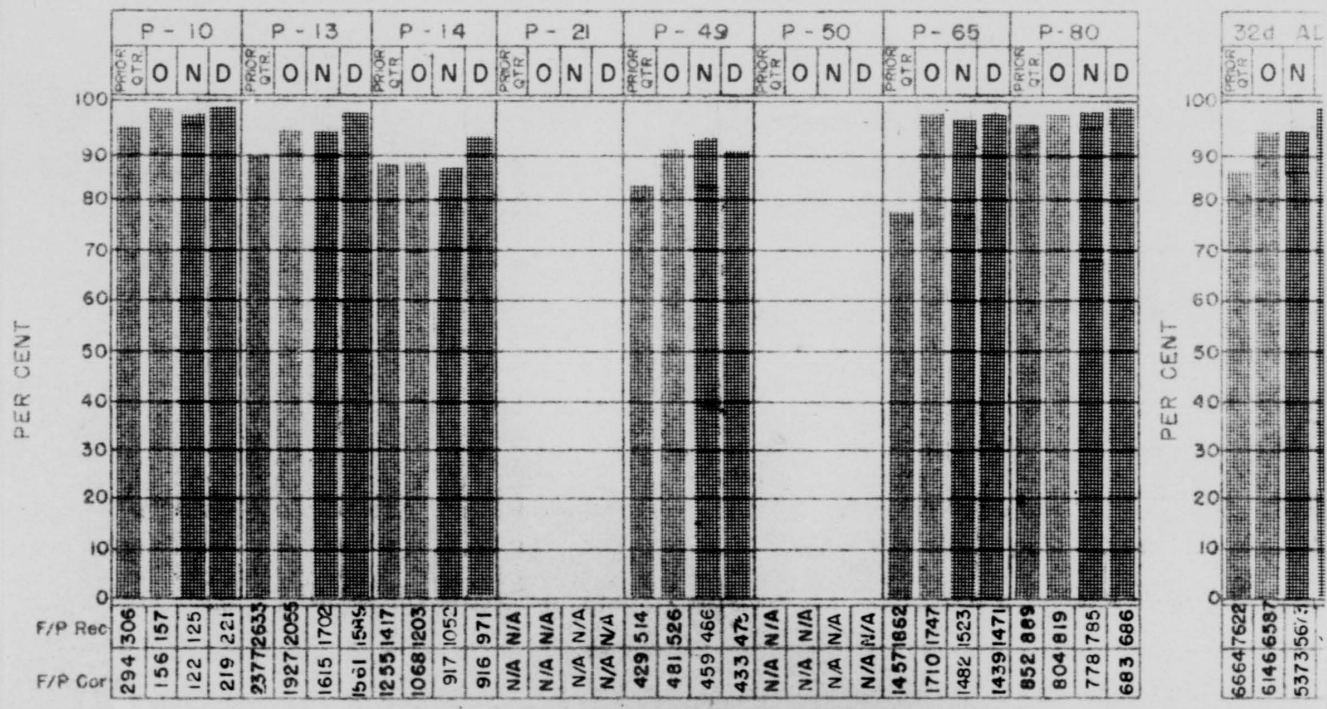


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32d AIR DIVISION (DEF)

FLIGHT PLAN CORRELATION



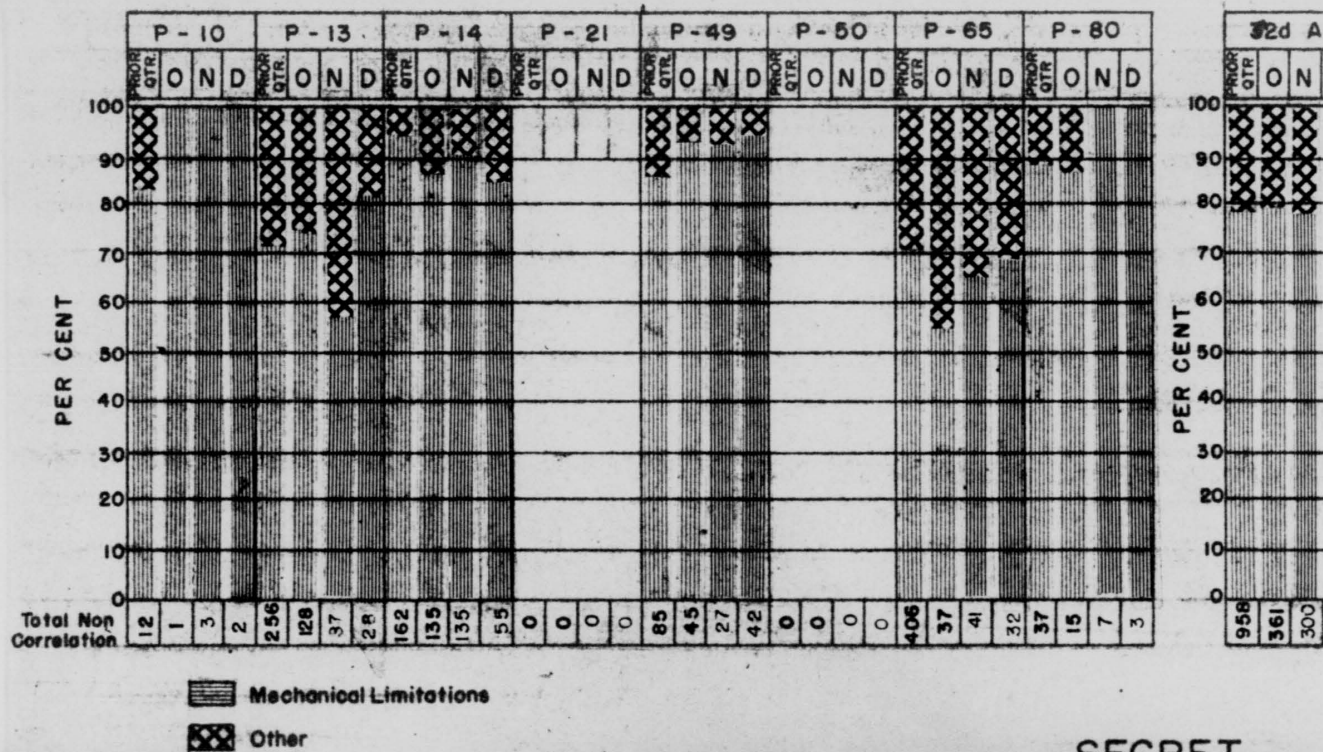
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32d AIR DIVISION (DEF)

NON-CORRELATIONS



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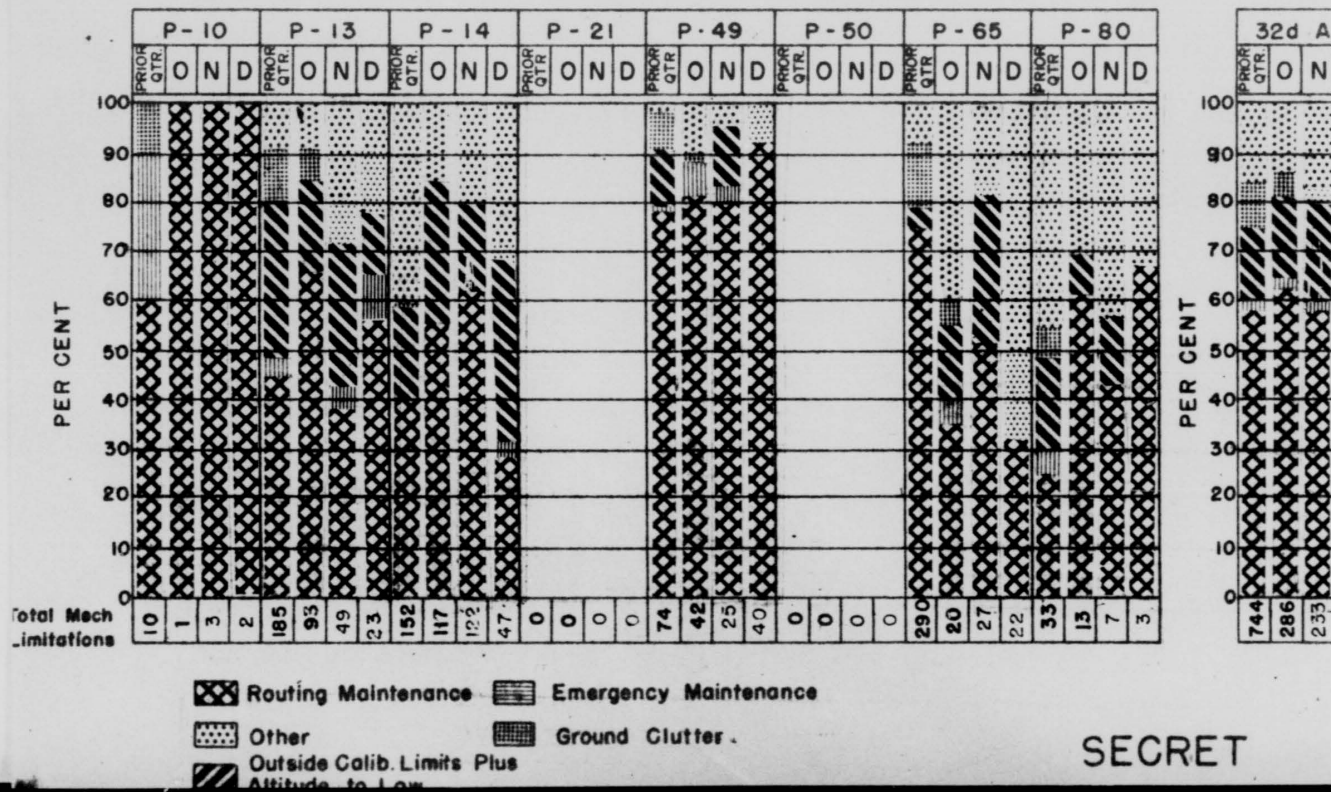


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32d AIR DIVISION (DEF)

NON-CORRELATIONS

(Mechanical Limitations)



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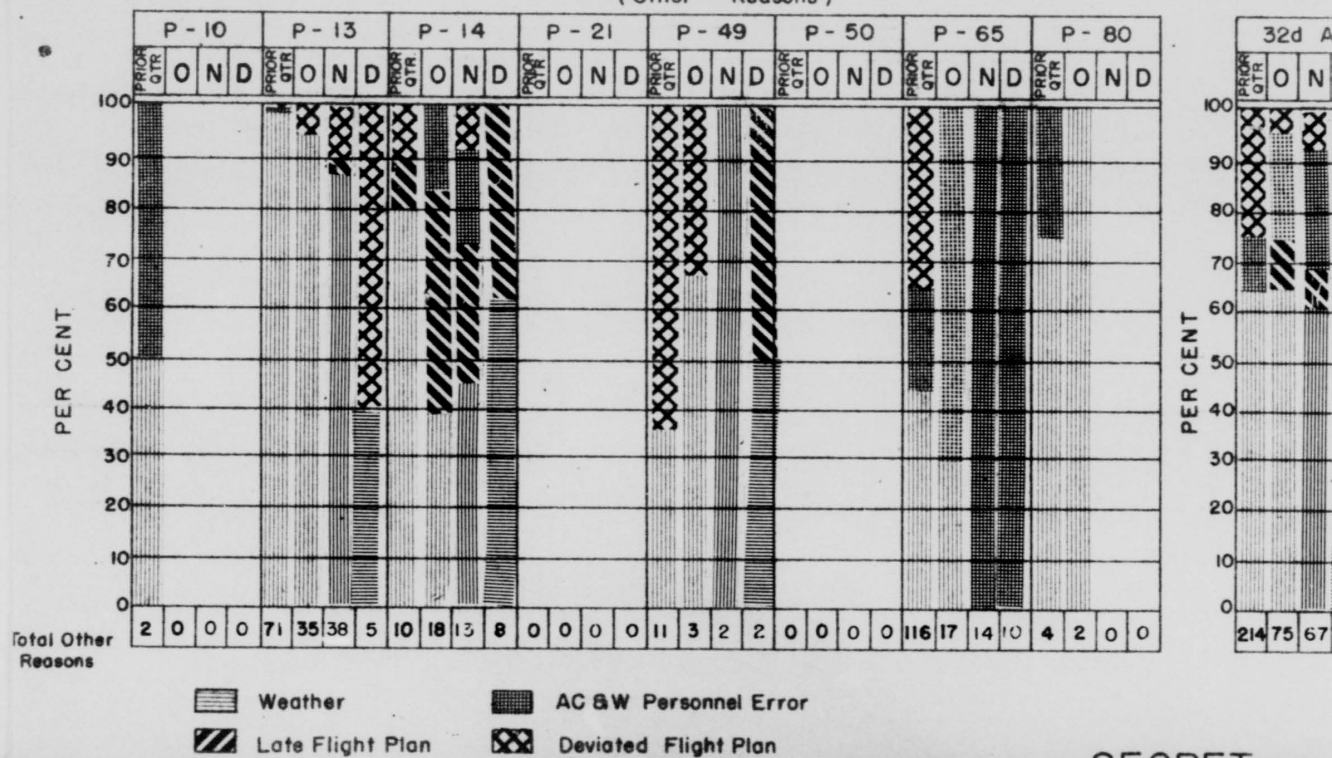


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32d AIR DIVISION (DEF)

NON-CORRELATIONS

(Other Reasons)



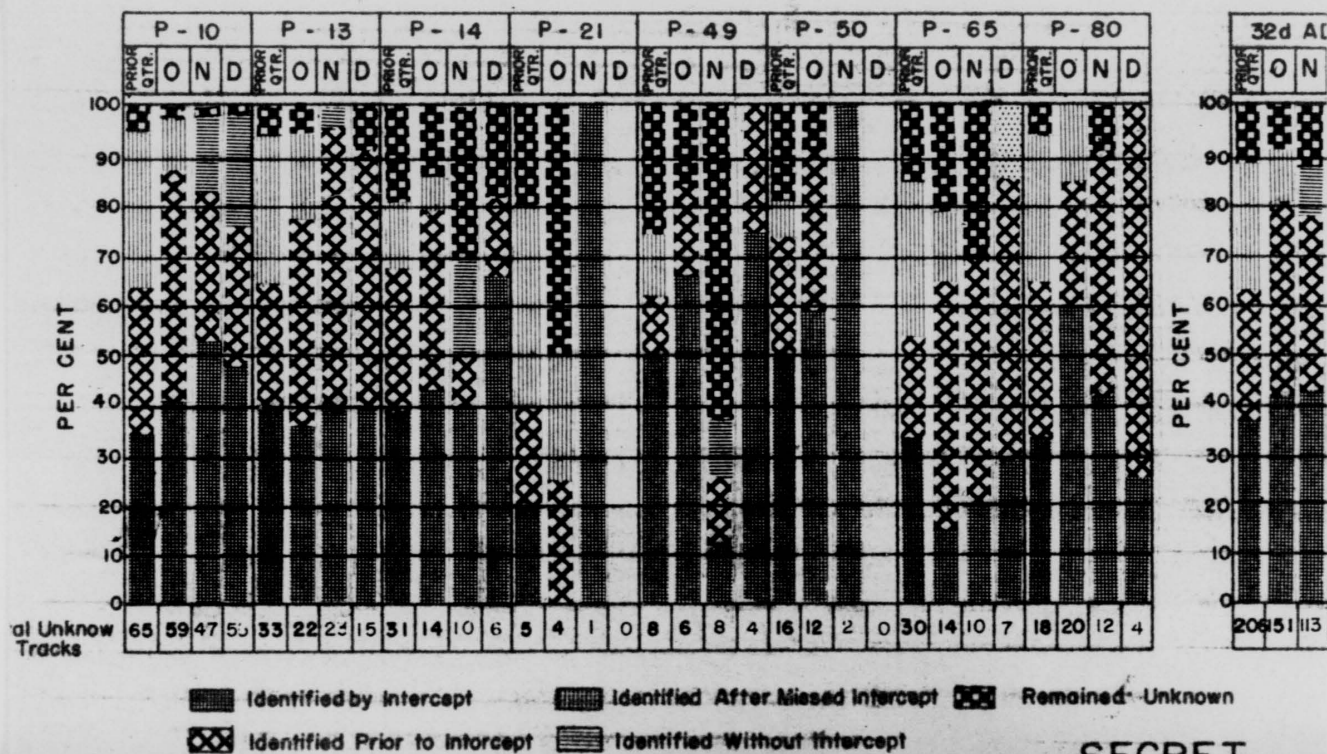
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32d AIR DIVISION (DEF)

IDENTIFICATION EFFECTIVENESS



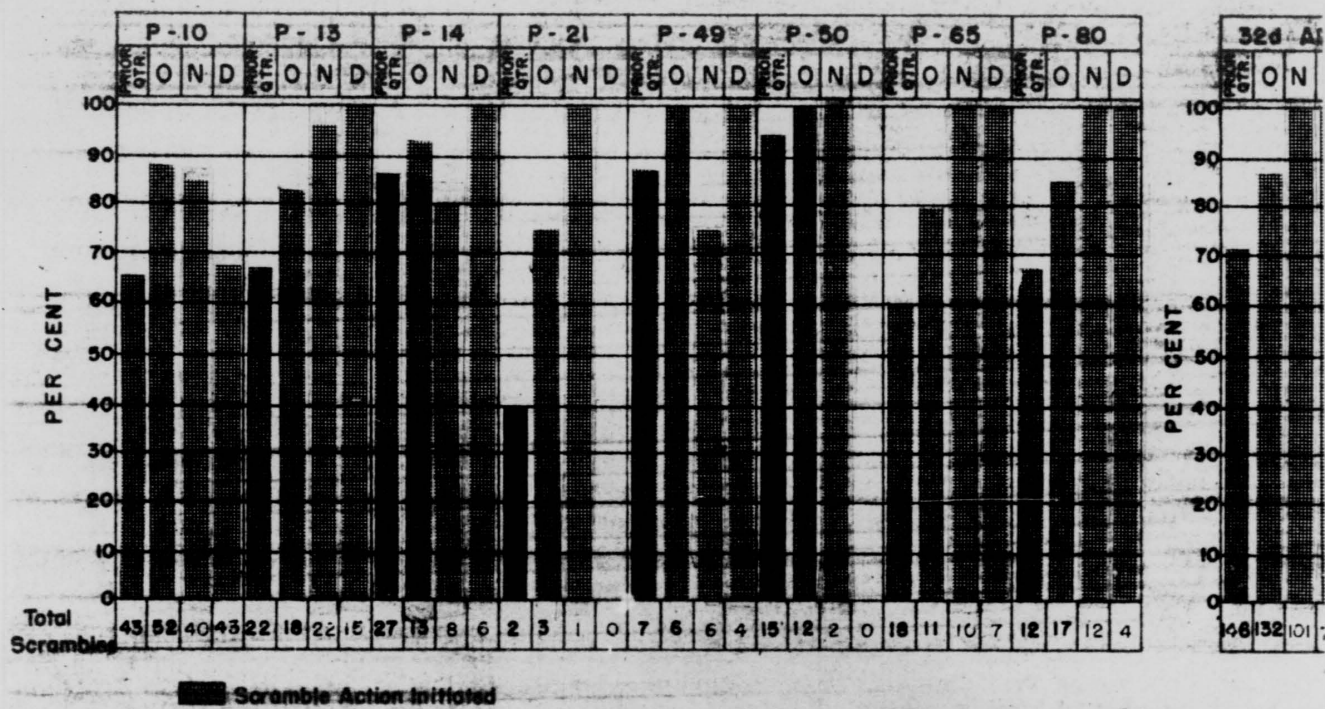
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32d AIR DIVISION (DEF)

SCRAMBLE ACTION



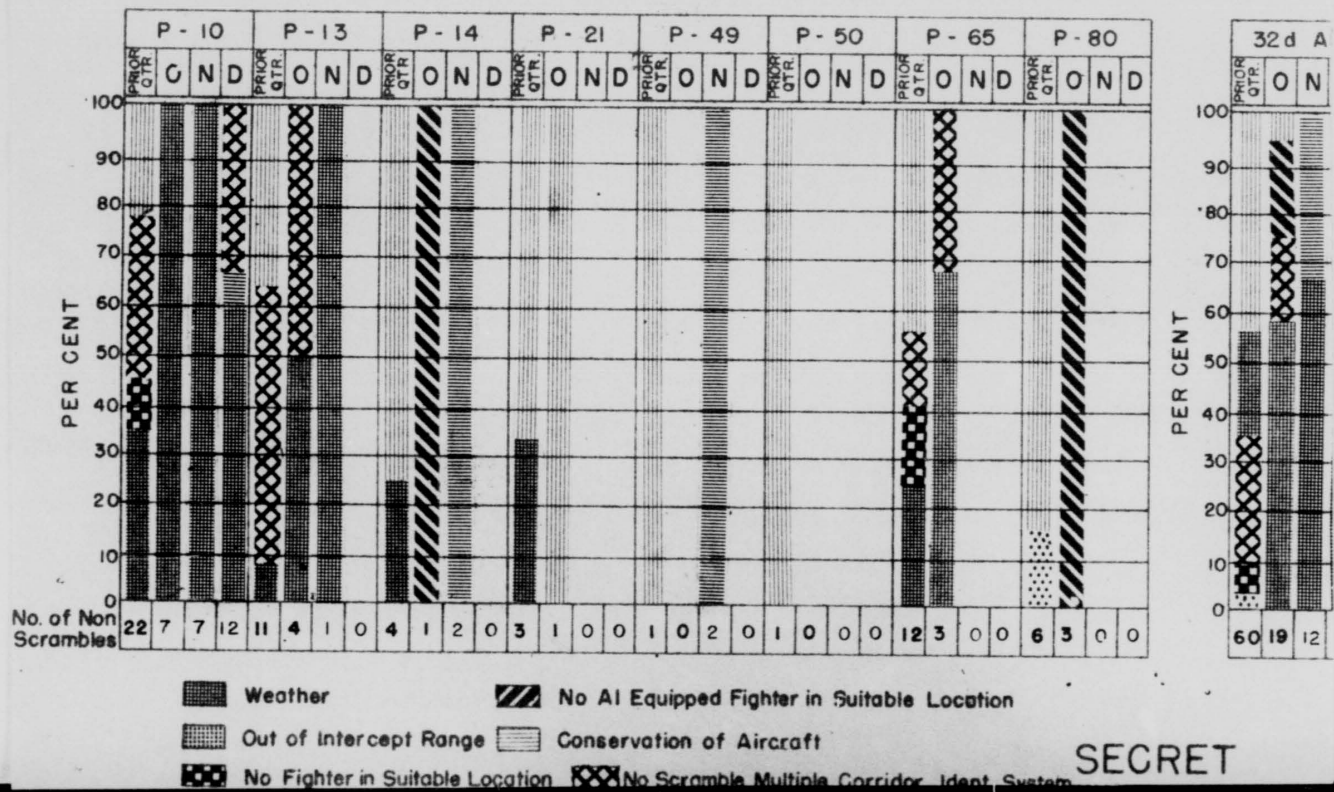
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32d AIR DIVISION (DEF)

REASONS FOR NO SCRAMBLE



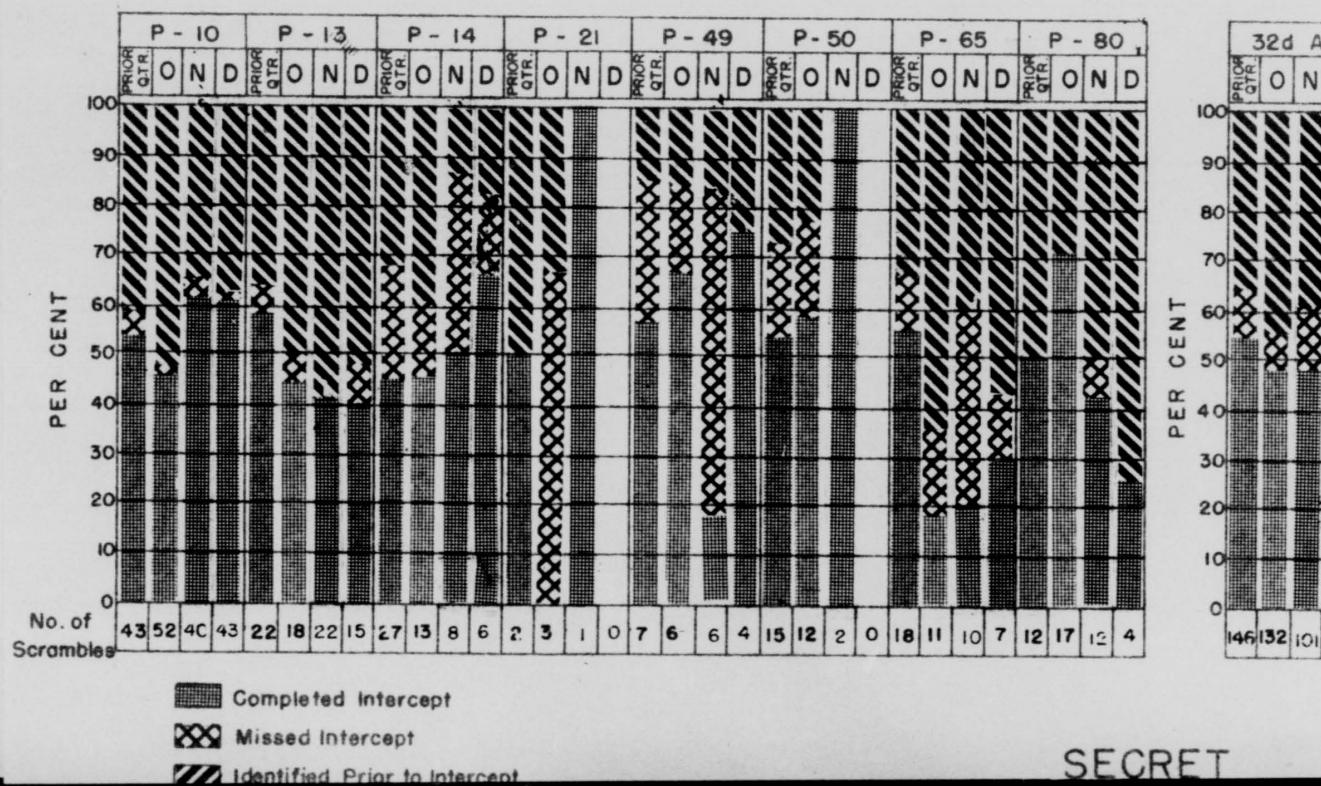
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32d AIR DIVISION (DEF)

INTERCEPT EFFICIENCY



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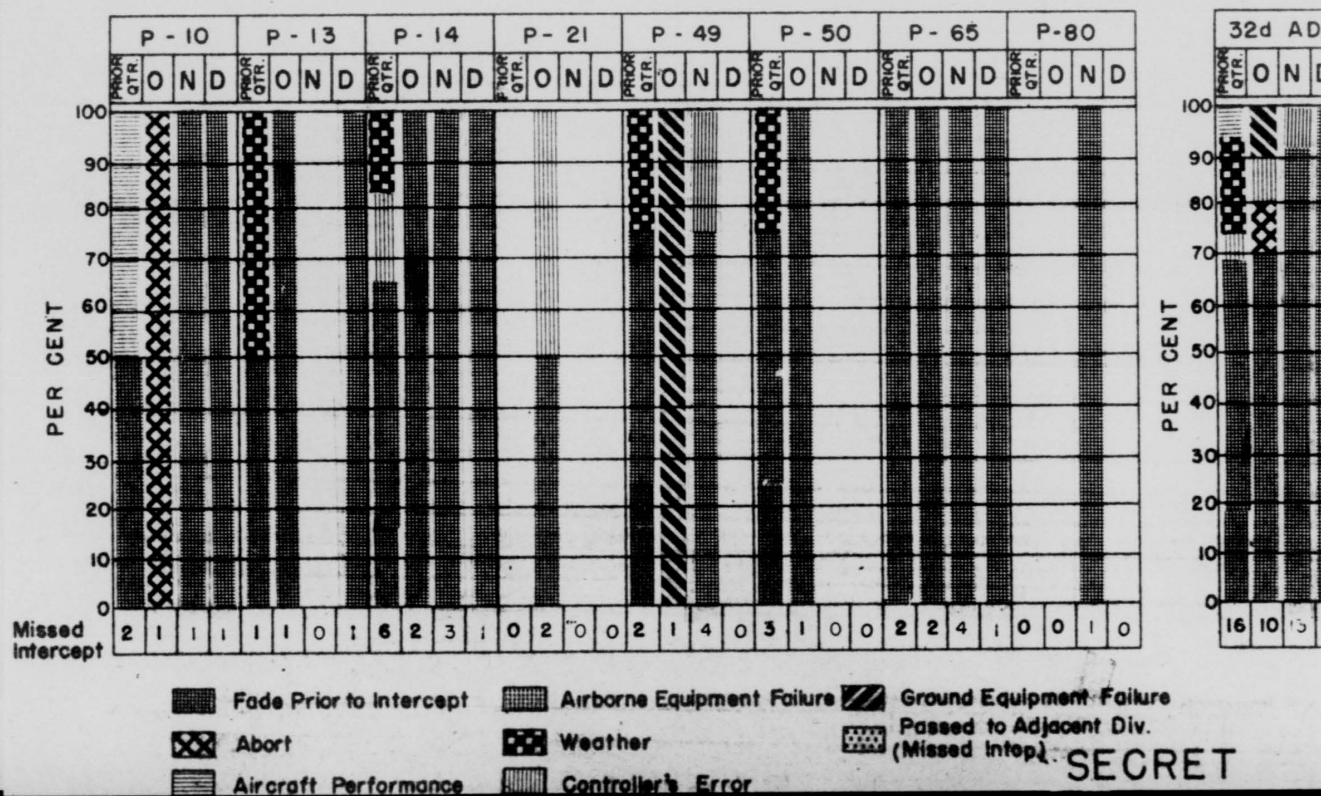
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32d AIR DIVISION (DEF)

REASONS FOR MISSED INTERCEPTS



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CO 518th Air Def Gp	1
CO 528th Air Def Gp	1
CO 564th Air Def Gp	1
CO 654th AC&W Sq	1
CO 655th AC&W Sq	1
CO 656th AC&W Sq	1
CO 762d AC&W Sq	1
CO 763rd AC&W Sq	1
CO 764th AC&W Sq	1
CO 765th AC&W Sq	1
CO 766th AC&W Sq	1
CO 27th FIS	1
CO 37th FIS	1
CO 47th FIS	1
CO 49th FIS	1
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CO 60th FIS	1
CO 74th FIS	1
CO 437th FIS	1

C O P Y

HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

OOT-A

20 Dec 1954

SUBJECT: Conduct and Objective of System Training

TO: Commander  
4707th Air Defense Wing  
Otis Air Force Base  
Falmouth, Massachusetts

Commander  
4711th Air Defense Wing  
Presque Isle Air Force Base  
Presque Isle, Maine

1. Questions and comments expressed during the recent Commander's Conference indicate that this headquarters has failed to convey the purpose and intent of training exercises to subordinate units. For this reason, attempt is made to discuss this objective and provide a more complete comprehension.

2. The objective of this training is stated in paragraph 3, 32d AER 50-16. Our existence is justified primarily to provide air defense of the sector and this item is the major portion of each unit's mission. This applies to units whose function is support of the system as well as those units directly concerned with the destruction of hostile aircraft. One cannot operate without the other, and likewise, proficiency of the system cannot be obtained unless we exercise and train the system as a whole. It is this, then, that we are primarily concerned with: integrated training to permit the system as a whole. It is this, then, that we are primarily concerned with: integrated training to permit the system to function in the most effective manner.

3. It should be readily evident that there is no progress if we continually do only what we know we are capable of performing. A marked increase in statistics would be possible if we selected strike routes to pass through the areas of greatest radar coverage, used slower targets placed the strike at a medium altitude, and scrambled only the minimum number of interceptors. By so doing, however, we are accomplishing only one thing and that is to insure a greater percentage of successful intercepts. If this is where we wish to concentrate training, i.e., strictly intercept practice, there would be no need to tie in the entire system, as each unit could schedule flights of two aircraft for this purpose during normal training. It should, therefore, be evident that the number of successful Intercepts has a relation to - but is not the major factor of whether of not an exercise is successful.

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Hq 32d AD(D) OOT-A Subj: Conduct and Objective of System Training

4. Adverse criticism was received following the recent exercises during which remote control was attempted. It was emphatically stated by many that remote control was completely unsatisfactory. However, it was found during these tests that the presence of contrails permitted successful interception in quite a few instances. Since the purpose of the strike aircraft is to simulate a hostile raid, if these strike aircraft had in actuality been hostile, our probability of successful intercepts would have been the same under those conditions.

5. It should be realized that we are not advocating remote control to replace individual close control. However, radar is not infallible and many situations could arise during which direct control would be impossible. For this reason, we must experiment with the logical approach to the problem and attempt to uncover some manner in which the system could overcome this problem. Complete success was not anticipated and results were far beyond expectations. Therefore, regardless of the large number of missed intercepts, this exercise was very successful in determining our capability under these circumstances.

6. In conclusion, it must be completely understood by all participants that system training is not designed for the sole purpose of practicing interceptions. It is designed to exercise, evaluate and train the entire system as a whole. Success or failure depends on what lessons we have learned, what areas need improvement through revision of directives or increased individual training, what policies we should adopt, and last what our effectiveness was against this particular strike.

ROBERT S. ISRAEL, JR.  
Colonel, USAF  
Commander



CONFIDENTIAL

C O P Y

HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

OCE

5 Nov 1954

SUBJECT: Inadequate Electronic Counter-measure Training

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

1. The electronic counter-measure Airborne Training Program for the Fighter-Interceptor Squadrons within the 32d Air Division is inadequate. During the fiscal year 1954 the Fighter-Interceptor Squadrons have received less than 10% of the programmed training. This percentage indicates that a deficiency does exist in the program and that the basic cause factors are lack of aircraft and equipment.

2. This division cannot maintain an aggressive training program and formulate the required policies and procedures for the employment of active electronic counter-measures if the ECM aircraft are not made available. At the present time every effort is being made to increase the effectiveness of anti-jamming training. This is being accomplished through the cooperation of the ECM section of the 4713th Radar Evaluation (ECM) Flight.

3. Training the Fighter-Interceptor pilots and Radar operators creates a different problem than the training of AC&W Squadron personnel. At the present time there is no method for simulation jamming of the airborne gunlaying equipment. All anti-jamming training for the Fighter-Interceptor pilots and Radar operators must be accomplished while airborne. Actual ECM training is being hindered by the lack of aircraft and equipment.

4. At the present time every effort is being made to increase the effectiveness of the anti-jamming training for the fighter-interceptor pilots and radar operators. They are required to attend lectures and the showing of training films of ECM. The serious gap in the program is the lack of actual airborne training missions which are necessary to train the pilots and radar operators the are of nullifying jamming.

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Hq 32d AD(D) OCE Subject: Inadequate Electronic Counter-measure Training

Therefore, the following recommendations are submitted for your consideration:

a. Additional X-band jammers be made available for installation in the B-29's of the 4713th Radar Evaluation (ECM) Flight.

b. Procure sufficient amount of X-band chaff and additional chaff dispensers for utilization in conjunction with the X-band jammers.

5. Past experience during exercises has indicated that it is necessary to immediately overcome the tactical advantage gained by the use of electronic counter-measures. A coordinated program for the improvement of electronic counter-measures equipment and techniques is a definite requirement. We are falling short of our goal in the present ECM Program due to a general lack of facilities to accomplish this training.

FOR THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant

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Newburgh, New York  
25 June 1954

Major Harold Hart  
32d Air Division (Defense)  
Syracuse Air Force Station  
Eastwood Station #6  
Syracuse, New York

Dear Major Hart:

Inclosed for your information is a copy of the Early Warning Plan for Exercise "Check Point". Appropriate action will be taken by your command in exploiting information from Situation A-5. In the interests of keeping senior intelligence agencies informed of the overall ADX scheme however, this plan has been forwarded to you.

By the time this letter arrives at your headquarters, you will be in receipt of the EADF and ADC operations plans for ADX "Check Point". Perusal of these plans will indicate that "Check Point", intelligence-wise, varies materially from previous exercises.

As noted in the Ops plans, there are large blank areas of intelligence knowledge insofar as Faker is concerned. These blank areas have been purposely included to provide a test of field intelligence collection capabilities. If we in EADF are to derive the maximum training benefit from this exercise, we must ensure that all field collection agencies fully understand the exercise EEIs and reporting procedures for their transmittal. Time spent in instructing subordinate units in these factors will pay off once the air battle commences.

EADF CPX "Brown Trout", while not a conclusive test, indicated that not all EADF units concerned were cognizant of the procedures for "Hells Bells" reporting. This form of reporting depends upon the teamwork of the fighter-interceptor pilot, the AC&W directors and division intelligence personnel. Unless the entire team knows the signals for the "Hells Bells" play, someone is bound to be caught napping when the ball is snapped. CPX "Brown Trout" indicated that when fighter control was passed from the fighter aircraft's associated GCI site to an adjacent GCI site, confusion existed as to the reporting responsibility of the adjacent GCI site. This problem deserves your attention prior to the exercise.

You will note from the EADF Ops Order that format intelligence reporting will be used throughout EADF, whenever applicable. We are now in the process of revising the tactics (T-1) report to include the detailed EEIs set forth in ADC Ops Order, Annex A, paragraph 2b(3) through

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(7). This revision will be forwarded to you on 28 June in sufficient copies to effect distribution to your subordinate units.

The necessity for maintaining security throughout "Check Point" will require special emphasis upon message preparation. Messages must be brief, concise, complete and accurate. Duplicatory transmissions must be avoided. The arbitrary re-sending of TT messages is not good intelligence or communications practice and imposes unwarranted loads upon the communications system. Proper screening of messages at division level can reduce the communications load throughout EADF. Squadron intelligence personnel should be cautioned against addressing messages to EADF-CIG during the exercise.

With regard to the maintenance of security, tactics of single Faker aircraft need not be classified except in instances where ECM is encountered. The tactics and ECM of formations of two or more Faker aircraft must be accorded appropriate security. This limitation will in many cases require the sending of TT messages which, under other ground rules, would ordinarily have been passed by TP. It is apparent that the use of TT messages will retard the normal flow of vital combat intelligence. Hq ADC has recognized that the timeliness of such combat intelligence will be prejudiced by this system of reporting. This fact does not, however, reduce our responsibility in EADF to strive for timely intelligence reporting within the framework of the ground rules prescribed.

ADX "Check Point" provides us an excellent opportunity to evaluate our progress over the past year, train intelligence personnel, highlight areas which required further attention and to measure our effectiveness.

I am sure that in EADF we possess the capability of fulfilling our intelligence mission. I am equally sure that this capability will meet the test of ADX "Check Point".

- 2 Incls  
1. Early Warning  
Plan for Exercise  
"Check Point"  
2. Cy Teletype ADDIN 1066

s/ R. W. Stewart  
Lt. Col, USAF  
for  
t/ ARAM S. TOOTELIAN  
Colonel USAF  
DCS/Intelligence



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C O P Y

Headquarters, Air Defense Command  
Ent Air Force Base  
Colorado Springs, Colorado  
Office Deputy Chief of Staff, Intelligence

MEMORANDUM FOR RECORD:

10 June 1954

SUBJECT: (UNCLASSIFIED) Early Warning Plan for Exercise "CHECK POINT."

1. The general situation, objectives, concept and supporting data including an Intelligence Annex for the Air Defense Exercise (ADX) "CHECK POINT", July 1954, are covered in Operations Order, Serial No. 7-54, "CHECK POINT", Headquarters, ADC, June 1953. Within the original concepts and objectives of this Exercise is the need to provide some advance warning to the Air Defense Command in order to permit sufficient time for deployment of forces and preparation to achieve maximum training benefit. This warning is to be provided under the supervision of the Deputy Chief of Staff/Intelligence, ADC in two general categories:

- a. From Simulated strategic intelligence sources, and
- b. From simulated or actual sightings of Faker aircraft en route outside of continental U. S. Air Defense Command Radar.

It is the purpose of this Memorandum for Record to outline in detail the program for providing that warning.

2. Based on the situation outlined in Intelligence Annex to ADC Operations Order 7-54, the Indications Branch of DI, USAF, AFOIN-2A1 is being requested to furnish the Air Defense Command simulated strategic intelligence. The purpose of this simulated intelligence is to form a sufficiently sound basis for the declaration of "Cocked Pistol" (Simulated Air Defense Readiness) at least eighteen hours prior to the actual penetration of the ADC radar screen by Faker aircraft, and further to warrant the declaration of "Big Noise" (Simulated Military Emergency) at least two hours in advance of penetration of U. S. Air Defense Command radar by Faker aircraft. It is not contemplated that this simulated strategic intelligence will be used by or passed to others than the Headquarters ADC Operations-Intelligence teams prior to eighteen hours in advance of radar penetration. The details of arrangements for this strategic intelligence are covered in separate letter Hq, ADC, ADDI, to DI, USAF dated 12 June 1954, Subject: "(Un-classified) Measurement of Warning, Exercise "CHECK POINT."

3. Warning from simulated or actual sightings of Faker aircraft outside the coverage of continental U.S. ADC radar is being provided for by letters to several commands. The warning messages which should result can provide two to four hours of warning prior to penetration of the Combat Zone. Fifteen sighting situations have been provided for by back tracking towards Soviet territory, certain of the tracks planned for Faker aircraft. The details of these tracks and sighting points together with agency responsible for initiating the report are shown on attached map. (Tab A) Four routes

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Hq ADC, ADDIN M/R Subj: (Uncl) Early Warning Plan for Exercise "CHECK POINT"

designated A, B, C and D have been projected backwards. The fifteen warning points are designated as A1 to A6, inclusive; B1 to B3, inclusive; C1 to C3, inclusive; and D1 to D3, inclusive.

4. To lend as much realism to the Exercise as possible and in addition to furnish a partial measurement of the warning capability of the commands concerned under existing procedures, the following commands are being asked to participate in a simulated or actual inflight reporting of Faker aircraft sightings:

Northeast Air Command  
Military Air Transport Service  
Air Defense Command-RCAF  
Alaskan Air Command  
Eastern Sea Frontier  
The U. S. Air Attache System (D/I, USAF)

5. Because of the extreme dependence which the Air Defense Command places on the receipt of such messages in the event of a real attack and because of the possibility of confusion between real messages and simulated messages of the same format, extreme care has been taken in the preparation and content of the simulated messages. Warning messages of this nature, whether real or simulated, must be transmitted in the clear and with high precedence if they are to provide the desired warning.

6. Tab B, attached hereto, is a listing of each of the fifteen desired simulated warning situations together with tabular information indicating the following:

Route and sighting designation; time and location of calculated sighting; Command, agency or individual responsible for dispatching message to ADC; narrative of simulated conditions surrounding the sighting, and action that should result; text and precedence of message to be dispatched to ADC; meaning of message to ADC on its receipt.

7. Each command mentioned in paragraph 4, above, will be given general information concerning the Exercise and the warning plan outlined in this Memorandum for Record, plus additional specific request for accomplishing its own contribution.

2 Incls:  
Tab A - Map  
Tab B - List

s/t/ W. M. BURGESS  
Brigadier General, USAF  
DCS/Intelligence

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TAB B TO ADC MEMORANDUM FOR RECORD SUBJECT: EARLY WARNING PLAN FOR EXERCISE  
"CHECK POINT"

List of Fifteen Desired Simulated Warning Situations

1. SITUATION A-1

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100330Z	70° 00'N, 28° 00'E	U.S. AA, Stockholm

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 20,000 to 30,000 feet at 100330Z, July 1954. Engines are distinctive in sound and could be heard by ground observers and identified visually under ideal conditions. It is considered possible that such a flight might be reported by Swedish ground observers or radar to Swedish Air Force authorities, and in view of assumed existing international situation might be evaluated by Swedish Air Force Headquarters as hostile aircraft possible en route to the United States. After certain delays for communication and evaluation, based on actual experience, such a report would eventually get to the U. S. Air Attache in Stockholm. It is assumed that he would then use fastest means of communication available and make report to Commander, Air Defense Command, Colorado Springs, Colorado, with information copy to D/I, USAF

Action and Message Requested of U. S. Air Attache, Stockholm, Sweden:

Based on his evaluation of the practicality of the simulated narrative and on his estimate of the time at which he might receive such a notice from the Swedish Air Force, the U. S. Air Attache is requested to dispatch the following message, precedence operational immediate, clear text, to Commander, Air Defense Command, Colorado Springs, Colorado, information to D/I, USAF, Washington 25, D. C.

"Situation Alfa-One Exercise CHECK POINT repeat Alfa-One considered feasible at filing time ~~his~~ message."

(signed) U. S. Air Attache  
Stockholm, Sweden"

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that U. S. Air Attache, Stockholm, believes procedures similar to those outlined in narrative are possible and that the time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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2. SITUATION A-2

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100345Z	70° 55'N, 02° 00'E	U. S. AA, Oslo

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 25,000 to 30,000 feet at 100345Z, July 1954. Engines are distinctive in sound and could be heard by ground observers and identified visually under ideal conditions. It is considered possible that such a flight might be reported by Norwegian ground observers or radar to Norwegian Air Force authorities, and in view of assumed existing international situation might be evaluated by Norwegian Air Force Headquarters as hostile aircraft possible en route to the United States. After certain delays for communication and evaluation, based on actual experience, such a report would eventually get to the U. S. Air Attache in Oslo. It is assumed that he would then use fastest means of communication available and make report to Commander, Air Defense Command, Colorado Springs, Colorado, with information copy to D/I, USAF.

Action and Message Requested of U. S. Air Attache, Oslo, Norway:

Based on his evaluation of the practicality of the simulated narrative and on his estimate of the time which he might receive such a notice from the Norwegian Air Force, the U.S. Air Attache is requested to dispatch the following message, precedence operational immediate, clear text, to Commander, Air Defense Command, Colorado Springs, Colorado, information to D/I, USAF, Washington 25, D. C.

"Situation Alfa-Two Exercise CHECK POINT repeat Alfa-Two considered feasible at filing time this message."

(signed) U. S. Air Attache  
Oslo, Norway"

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that U. S. Air Attache, Oslo, Norway, believes procedures similar to those outlined in narrative are possible and that time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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3. SITUATION A-3

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100500Z	70° 45'N, 02° 00'E	U. S. Air Attache London

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 25,000 to 35,000 feet at 100500Z, July 1954. Engines are distinctive in sound and could be heard by personnel aboard a surface vessel, and identified visually from either surface vessel or aircraft under ideal conditions. It is considered possible that such a flight might be reported through existing U.K. surface vessel or aircraft reporting system to the RAF authorities. In view of assumed existing international situation might be evaluated by the RAF as hostile aircraft possibly en route to the United States. After certain delays for communication and evaluation, based on actual experience, such a report would eventually get to the U. S. Air Attache in London. It is assumed that he would then use fastest means of communication available and make report to Commander, Air Defense Command, Colorado Springs, Colorado with information to D/I, USAF.

Action and Message Requested of U. S. Air Attache, London, U.K.

Based on his evaluation of the practicality of the simulated narrative and on his estimate of the time which he might receive such a notice from the RAF, the U. S. Air Attache is requested to dispatch the following message, precedence operational immediate, clear text, to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado, information to D/I, USAF, Washington 25, D. C.

"Situation Alfa-Three Exercise CHECK POINT repeat Alfa-Three considered feasible at filing time this message."

(signed) U. S. Air Attache  
London, U. K.

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that U. S. Air Attache, London, believes procedures similar to those outlined in narrative are possible and that time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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4. SITUATION A-4

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100630Z	67° 00'N, 22° 00'W	Military Air Transport Service

Narrative of Simulated Sighting:

Two B-36's scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 35,000 feet at 100630Z, July 1954. Aircraft were sighted by crew members of MATS C-54 at a distance of approximately four miles and identified as possible B-36 type. Under CIRVIS procedures (JANAP 146-C) such a sighting might be reported immediately to the Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado; Commander, Eastern Sea Frontier, New York, N. Y.; and Chief of Staff, United States Air Force, Washington 25, D. C.

Action and Message Requested of Military Air Transport Service, Atlantic Division:

It is requested that the pilot of a MATS aircraft actually in flight in the general area of the simulated sighting dispatch the following message, precedence operational immediate, clear text, to Commander Air Defense Command, Ent AFB, Colorado Springs, Colorado:

"Situation Able-four Exercise CHECK POINT repeat Able-four considered feasible at filing time this message."

(signed) Pilot USAF  
Military Air  
Transport Service

(Note: Commander, Eastern Sea Frontier and Chief of Staff, United States Air Force who are mandatory addressees under CIRVIS procedures will not be addressees on this exercise message).

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that Military Air Transport Service believes that the situation outlined in the narrative, other than the exact geographical position of the MATS aircraft, is realistic. The information will be used by ADC as warning data for the actual exercise.

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5. SITUATION A-5

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100704Z	64° 00'N, 32° 00'W	AFSS (Det 8, 8th RSM)

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 50,000 feet, at 100704Z, July 1954, at an approximate air speed of 340 knots. Assuming serious communications security violation at that point by the Faker Aircraft, Commander, Detachment 8, 8th RSM should determine considerable of the above information.

Action and Message Requested of Commander, Detachment 8, 8th RSM:

Assuming full operational capability of Detachment 8, Commander thereof might be expected to pass pertinent information direct to the Commander of the associated Air Division rather than to the associated AC&W Squadron. Therefore, it is requested that he send an appropriate message to Commanders, 32nd Air Division, beginning and ending with the words "Exercise CHECK POINT" and containing within the body the words "Situation alpha five repeat alpha five", with suitable precedence and classification.

Meaning of Message to Air Defense Command:

Action to be taken by Commander, 32nd Air Division and any other Air Defense Command recipient of this message should be as dictated by contents of the message under existing directives.

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6. SITUATION A-6

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100917Z	54° 00'N, 47° 30'W	Comdr, Eastern Sea Frontier

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 50,000 feet at 100917Z, July 1954. Engines are distinctive in sound and might be heard by personnel aboard a U.S. merchant vessel, and identified visually under ideal conditions. It is considered that if such a flight were sighted it would be reported through existing MERINT (JANAP 146-C) regulations. The report of such a sighting would eventually get to the Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado.

Action and Message Requested by Commander, Eastern Sea Frontier:

Accordingly it is requested that COMEASTSEAFRON either: (a) arrange for a test message from an actual ship in adjacent waters at that time; or (b) assume the receipt of such a message and allow for a realistic timelag for communications and evaluation.

After assumed or actual receipt of message it is requested that COMEAST SEAFRON take the normal MERINT action required by JANAP 146-C, except that addressees of resultant message be confined to Commander, EADF, and such Naval Commands as are desired by COMEASTSEAFRON. Message should be sent Precedence OPERATIONAL IMMEDIATE, in clear text, as follows:

"Situation Able-Six Exercise CHECK POINT repeat Able-Six considered feasible at filing time this message."

(signed) COMEASTSEAFRON

Meaning of Message Within Air Defense Command:

Commander, EADF, is being advised of the meaning and possibility of receipt of such a message and is being directed to relay it immediately to Commander, ADC, and meantime to take normal action as dictated by its meaning. The above message on receipt by ADC will confirm that COMEASTSEAFRON believes procedures similar to those outlined in narrative are possible and that time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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7. SITUATION B-1

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100237Z	70° 15'N, 31° 00'E	U.S. AA, Oslo, Norway

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been backtracked to Soviet territory and would have passed on climb over referenced point at about 20,000 feet, speed 280 knots heading 330° true at about 100237Z, July 1954. Radar station at VARDØ could conceivably point these tracks and determine number, course, speed and altitude. It is considered likely that such a plot would be reported through existing communications to Norwegian Air Force authorities, and in view of assumed existing international situation might be evaluated by Norwegian Air Force authorities as hostile aircraft possibly en route to the United States. Based on actual existing communication and evaluation time delays such a report would eventually get to the U. S. Air Attache in Oslo. It was assumed that he would use fastest means of communications available and make report to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado with information copy to D/I, USAF.

Action and Message Requested of U.S. Air Attache, Oslo, Norway:

Based on his evaluation of the practicality of the simulated narrative and on his estimate of the time which he might receive such a notice from the Norwegian Air Force, he will dispatch the following message, precedence operational immediate, clear text, to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado, with information copy to D/I, USAF, Washington 25, D. C.

"Situation Bravo-One Exercise CHECK POINT repeat Bravo-One considered feasible at filing time this message."

(signed) U. S. Air Attache  
Oslo, Norway

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that U.S. Air Attache, Oslo, Norway, believes procedures outlined in narrative are possible and that time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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8. SITUATION B-2

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
101000Z	73° 30'N, 82° 00'W	COC NEAC

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 34,000 feet at 101000Z, July 1954. Flight conceivably could have been tracked very briefly by radar at Thule AFB. It is considered likely that such a sighting would be reported through existing communications to COC NEAC. Further, in view of assumed existing international situation, the report might be evaluated by NEAC as possible hostile aircraft, possibly en route to the United States and reported by fastest means available to Commander, Air Defense Command.

Action and Message Requested of Commander, NEAC:

Subject to his evaluation of the practicality of the simulated narrative and after allowing for the time which it might take to receive and evaluate such a report from the radar at Thule, it is requested that Commander, NEAC transmit the following message by fastest means available, in clear text, to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado, Commander, EADF, Stewart AFB, Newburg h, N. Y., and to ADC, ADC-RCAF, St. Hubert, P.Q., Canada:

"Situation Bravo-two Exercise CHECK POINT repeat  
Bravo-two considered feasible at filing time this  
message."

(signed) Commander  
NEAC

Meaning of Message to Air Defense Command:

The above message upon receipt by addressees will confirm that Commander, NEAC, believes procedures outlined in narrative are possible and that the time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. Addressees are being informed of meaning and possibility of receipt of such a message. Upon receipt of the message they should take the normal action for purposes of Exercise CHECK POINT dictated by its meaning.

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9. SITUATION B-3

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
101200Z	60° 30'N, 78° 00'W	Air Officer Commanding ADC-RCAF

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would have passed over referenced point at 34,000 feet at 101200Z, July 1954. Engines are distinctive in sound and could be heard by ground observers and identified visually under ideal conditions. It is considered possible that such a flight might be reported through existing Canadian ground observer system to ADC RCAF authorities, and in view of assumed existing international situation might be evaluated by ADC RCAF Headquarters as hostile aircraft possibly en route to the United States. Based on actual existing communication and evaluation time delays such a report would eventually get to appropriate U.S. commands through AOC, ADC, RCAF who would use fastest means of communication available. (This flight may actually fly over referenced point at about given time and altitude and hence may actually be reported as described. In such an event the action requested below is obviated.)

Action and Message Requested of Air Officer Commanding ADC-RCAF:

Based on his evaluation of the practicality of the simulated narrative and on his estimate of the time which he might receive such a notice from the Canadian GOC, AOC, ADC, RCAF to dispatch the following message, precedence operational immediate, clear text, to Commander, Eastern Air Defense Force, Stewart AFB, Newburgh, N. Y., and Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado:

"Situation Baker-Three Exercise CHECK POINT repeat Baker-Three considered feasible at filing time this message."

(Signed) Air Officer Commanding  
ADC, RCAF

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that the Air Officer Commanding ADC, RCAF, believes procedures outlined in narrative are possible and that the time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by Commander, EADF and Commander, ADC as warning data for the actual exercise. Commander, EADF will be forewarned as to possibility and meaning of such a message.

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10. SITUATION C-1

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
10730Z	75° 00'N, 160° 00'W	COC Alaskan Air Command

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 30,000 to 35,000 feet at 100730Z, July 1954. It is conceivable that aircraft could be sighted and definitely recognized by crew of RB-29 Weather Reconnaissance Flight. Further, in the event of such a sighting a report would be made in accordance with existing CIRVIS (JANAF 146 C) regulations and in due course reach Commander, Air Defense Command, Colorado Springs, Colorado.

Action and Message Requested of Commander Alaskan Air Command:

Subject to evaluation of the practicality of the simulated narrative and his estimate of the time lag involved in receipt and evaluation of the sighting message, Commander Alaskan Air Command is requested to dispatch the following message by fastest possible means, in clear text, to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado:

"Situation Coca-One Exercise CHECK POINT repeat Coca-One considered feasible at filing time this message."

(signed) Commander  
Alaskan Air Command

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that the Commander, Alaskan Air Command believes procedure outlined in narrative are feasible and that the time of filing his message takes into consideration the time delays for transmission and evaluation that might have occurred under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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11. SITUATION C-2

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
101000Z	66° 00'N, 118° 00'W	AFSS (Det 2, 8th RSM)

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 34,000 feet, at 101000Z, July 1954, at an approximate air speed of 340 knots. Assuming serious communications security violation at that point by the Faker aircraft, Commander, Detachment 2, 8th RSM should determine considerable of the above information.

Action and Message Requested of Commander, Detachment 2, 8th RSM:

Assuming full operational capability of Detachment 2, Commander thereof might be expected to pass pertinent information direct to the Commander of the associated Air Division rather than to the associated AC&W Squadron. Therefore, it is requested that he send an appropriate message to Commander, 25th Air Division, beginning and ending with the words "Exercise CHECK POINT" and containing within the body the words "Situation Coaa two repeat coca two" with suitable precedence and classification.

Meaning of Message to Air Defense Command:

Action to be taken by Commander, 25th Air Division and any other Air Defense Command recipient of this message should be as dictated by contents of the message under existing directives.

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12. SITUATION C-3

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
101200Z	58° 00'N, 105° 00'W	Air Officer Com- manding ADC-RCAF

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would have passed over referenced point at 34,000 feet at 101130Z, July 1954. Engines are distinctive in sound and could be heard by ground observers and identified visually under ideal conditions. It is considered possible that such a flight might be reported through existing Canadian ground observer system to ADC RCAF authorities, and in view of assumed existing international situation might be evaluated by ADC RCAF Headquarters as hostile aircraft possibly en route to the United States. Based on actual existing communication and evaluation time delays such a report would eventually get to appropriate U.S. commands through ADC, ADC-RCAF who would use fastest means of communication available. (This flight may actually fly over referenced point at about given time and altitude and hence may actually be reported as described. In such an event the action requested below would be obviated).

Action and Message Requested of Air Officer Commanding ADC-RCAF:

Based on his evaluation of the practicality of the simulated narrative and on his estimate of the time which he might receive such a notice from the Canadian GOC, AOC, ABC-RCAF to dispatch the following message, precedence operational immediate, clear text to Commander, Eastern Air Defense Force, Stewart AFB, Newburgh, New York, and Commander, Air Defense Command, Colorado Springs, Colorado. Message:

"Situation Charlie-Three Exercise CHECK POINT repeat Charlie-Three considered feasible at filing time this message."

(signed) Air Officer Commanding  
ADC-RCAF

Meaning of Message to Air Defense Command:

The above message on receipt by ADC will confirm that the Air Officer Commanding ADC-RCAF, believes procedures outlined in narrative are possible and that the time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by Commander, EADF and Commander ADC as warning data for the actual exercise. Commander, EADF will be forewarned as to possibility and meaning of such a message.

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13. SITUATION D-1

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100710Z	61° 30'N, 176° 00'W	COC, Alaskan Air Command

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would have passed over referenced point at 35,000 to 40,000 feet at 100710Z, July 1954. AAC radar conceivably might pick up these tracks very briefly. Further, it is likely that such a sighting would be reported through existing AAC communications nets to the COC AAC where, in view of the assumed existing international situation, it might be evaluated by AAC as possibly hostile aircraft. In view of the tenuous nature of the sighting, Commander, AAC might or might not take action within his own area; but in light of the assumed general situation would be likely to pass the report to Commander, Air Defense Command.

Action and Message Requested of Commander Alaskan Air Command:

Subject to AAC evaluation of the practicality of the simulated narrative and the estimate of the time which it might take to receive and process such a notice from the radar AAC, it is requested that Commander, Alaskan Air Command dispatch the following message in the clear by appropriate precedence to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado:

"Situation Delta-One Exercise CHECK POINT repeat Delta-One considered feasible at filing time this message."

(signed) Commander  
AAC

Meaning of Message to Air Defense Command:

The above message upon receipt by ADC will confirm that the Commander, AAC, believes procedures outlined in narrative are feasible and that the time of filing his message takes into consideration the time delays that might have elapsed under actual conditions. The information will be used by ADC as warning data for the actual exercise.

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14. SITUATION D-2

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
100800Z	55° 00'N, 162° 30'W	Commander, Alaskan Air Command

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States will penetrate AAC radar at 40,000 feet at 100800Z, July 1954, and could be expected to cause Commander, AAC, under exercise conditions to call Applejack (Simulated Air Defense Warning Red) or Lemonjuice (Simulated Air Defense Warning Yellow). This action would be reported immediately to Commander, Air Defense Command by fastest means of communications available.

Action and Message Requested of Commander, Alaskan Air Command:

If Commander, Alaskan Air Command receives report of actual radar sighting of these Faker aircraft by 100805Z it is requested that he take action appropriate to the report. If radar sighting report is not received by 100805Z, however, it is requested that Commander, Alaskan Air Command transmit the following message in the clear by fastest means available to Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado, to provide the basis for declaring Big Noise (Simulated Military Emergency) at or about 100815Z:

"Exercise CHECK POINT Situation Delta-Two repeat  
Delta-Two Exercise CHECK POINT."

Meaning of Message to Air Defense Command:

The above message upon receipt by ADC will mean that the Commander, AAC did not receive the actual report of above radar sighting as scheduled.

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15. SITUATION D-3

<u>Time</u>	<u>Location</u>	<u>Reported by</u>
101130Z	54° 00'N, 140° 00'W	AFSS (Det 1, 8th RSM)

Narrative of Simulated Sighting:

Two B-36s scheduled to attack the United States have been theoretically backtracked to Soviet territory and would pass over referenced point at 34,000 feet, at 101130Z, July 1954, at an approximate air speed of 340 knots. Assuming serious communications security violation at that point by the Faker aircraft, Commander, Detachment 1, 8th RSM should determine considerable of the above information.

Action and Message Requested of Commander, Detachment 1, 8th RSM:

Assuming full operational capability of Detachment 1, Commander thereof might be expected to pass pertinent information direct to the Commander of the associated Air Division rather than to the associated AC&W Squadron. Therefore, it is requested that he send an appropriate message to Commander, 28th Air Division, beginning and ending with the words "Exercise CHECK POINT" and containing within the body the words "Situation delta three repeat delta three" with suitable precedence and classification.

Meaning of Message to Air Defense Command:

Action to be taken by Commander, 28th Air Division and any other Air Defense Command recipient of this message should be as dictated by contents of the message under existing directives.

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

OOT-FO

18 JUN 1954

SUBJECT: Air National Guard Participation in ADC Summer Exercise

TO: See Distribution

1. The Air Defense Command is conducting its summer exercise during the period 9-11 July 1954.

2. In the interests of combined training between units of your command and units of the Air Defense Command, it is strongly urged that your fighter-interceptor squadrons participate in this exercise. The training derived from this exercise will be beneficial in familiarizing your pilots with the techniques and capabilities of the present Air Defense system and enable them to obtain actual practice in intercepting bomber type aircraft. In addition it will greatly aid our units in working with your pilots.

3. Request you furnish this headquarters with the following information as soon as possible:

- a. Squadrons which will participate in this exercise.
- b. Available aircraft for each squadron by type:
  - (1) Jet
  - (2) Conventional
- c. Period of participation.

4. Full details regarding this exercise will be forwarded upon receipt from higher headquarters.

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JUN 1954

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Hq 32D AD(D) OCT-FO Subj: ANG Participation in ADC Summer Exercise

5. The period of the exercise is of a classified nature and disclosure will be on a "need to know" basis in accordance with the provisions of Air Force Regulation 205-1.

FOR THE COMMANDER:

*F E York*  
FREDERICK E. YORK  
Lt Colonel, USAF  
Adjutant

3 Incls:

1. Ltr Dept Army & AF  
NGB, NG AFOTO, Subj:  
ANG Participation in  
AD Ex, 11 May 54 (3 cys)
2. Ltr Dept Army & AF  
NGB, NG AFOTO, Subj:  
AD Ex, 12 May 54 (3 cys)
3. Ltr EADF, EACOT-TW  
Subj: ANG Participation in  
ADC Summer Ex, 10 Jun 54 (3 cys)

DISTRIBUTION:

Comdr, 101st FIW, Me ANG, Dow AFB,  
Bangor, Me (3 cys)  
Comdr, 102nd FIW, Mass ANG, Logan  
Muni Aprt, Boston, Mass (3 cys)  
Comdr, 107th FIW, N Y ANG, Niagara  
Falls Muni Aprt, Niagara Falls, NY (3 cys)

INFO:

The Adjutant General, State of Me  
Augusta, Me, (3 cys)  
The Adjutant General, State of Mass  
Boston, Mass (3 cys)  
The Adjutant General, State of N Y  
Albany, N Y (3 cys)

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Departments of the Army and the Air Force  
National Guard Bureau  
Washington 25, D.C.

NG AFOTO

11 May 1954

SUBJECT: (uncl) Air National Guard Participation in Air Defense Exercise

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

1. Reference Air Defense Command ADOOT-B letter, dated 12 March 1954, subject above. Air National Guard participation in subject exercise is considered very desirable by this Headquarters.
2. Adjutants General of all states will be contacted urging their whole-hearted support of the exercise. Proposed dates will be indicated for their planning purposes.
3. Further action by the National Guard Bureau is not contemplated other than authorizing conduct of the exercise and expenditure of funds that may be required. Complete coordination must be effected between the Air Defense Forces and the State Adjutants General offices.
4. The date of the proposed exercise falls during a rather critical period of the Air National Guard. Several fighter wings will have departed for field training. Others will be planning for their attendance. Three (3) wings will be without sufficient aircraft. These aircraft are being modified to a later configuration. Some units are scheduled for receipt of jet type aircraft during subject period. It is probable the pilots will be transitioning from conventional aircraft and not yet combat ready in jets. These problems are mentioned for consideration in the event Air National Guard participation is somewhat less than what is desired. Headquarters, USAF, and Air Defense Command may be assured however, that Air National Guard will participate to its maximum capabilities subject to above restrictions.

FOR THE CHIEF, NATIONAL GUARD BUREAU:

Info copy  
Hqs, USAF  
ATTN: AFOOP-OP-EM

s/t/ T. H. BAXTER, Col, USAF  
for WINSTON P. WILSON  
Brigadier General, USAF  
Chief, Air Force Division

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Departments of the Army and the Air Force  
National Guard Bureau  
Washington 25, D.C.

NG AFOTO

12 May 1954

SUBJECT: Air National Guard Participation in Air Defense Exercise

TO: The Adjutants General of all States and the District of Columbia  
(Except Hawaii, Puerto Rico, and Alaska)

1. The Air Defense Command, in conjunction with the Air Defense Command of Canada, is contemplating an exercise the 9th, 10th and 11th of July this year. The Air National Guard has been invited to participate. Headquarters, United States Air Force, requests our maximum support. The concept is a combined joint large-scale exercise involving those forces with an assigned or corollary mission of Air Defense. The primary purpose of the exercise is training, with emphasis placed on effectiveness of early warning, deployment, scramble control of Interceptors, and Interceptor tactics. Effectiveness of operational procedures and plans will be analyzed. The National Guard Bureau requests your Headquarters solicit the whole-hearted cooperation and support of the Fighter and AC&W units under your jurisdiction. Participation by the Air National Guard in this exercise will afford valuable training, in addition to indicating to qualified observers the Air Defense capabilities of the United States in an integrated D-day effort.

2. It is suggested that maximum unit benefit may be derived by re-scheduling unit drill assemblies to fall on the weekend of the exercise. The training and morale boost derived from participation as a unit in this maximum-effort, continent-wide, Air Defense project, is considered worth the additional problems which may be incurred by a change in unit drill assembly dates.

3. In the event re-scheduling is not possible, limited funds are available for pilot participation in an Active Duty for Training Status on the last two (2) days of the exercise (the 10th and 11th of July, 1954). Funds will be allotted on the basis of one (1) pilot per in-commission and available aircraft per Fighter Squadron on subject dates. Support personnel will participate in an Air Technician capacity. Officer pay will be chargeable to Project 526. Per diem will not be authorized. This letter does not constitute authorization to exceed yearly limitations of flying hours.

4. This letter is authority for Air National Guard Units to conduct the exercise on the dates indicated and in the manner prescribed above.

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NG-AFOTO

SUBJECT: Air National Guard Participation in Air Defense Exercise

5. The National Guard Bureau contemplates no further action at this level other than authorizing the expenditure of required funds as indicated in paragraph 3 above. The exercise dates are classified as "Secret." However, they may be released through command channels to squadron level. It should be emphasized that this information must be safeguarded as outlined in AFR 205-1, "Safeguarding Military Information," dated 15 December 1953. Air Defense Forces will contact the Air National Guard units through the State Adjutants General concerned to invite their participation in the exercise and effect whatever additional coordination is required.

6. This letter may be considered authority for the conduct of the exercise on the dates and subject to the restrictions indicated in paragraph 3 above.

FOR THE CHIEF, NATIONAL GUARD BUREAU:

Info copy:  
Hq, ADC  
Hq, USAF, AFOP

s/t/ T. H. BAXTER, Col, USAF  
For WINSTON P. WILSON  
Brigadier General, USAF  
Chief, Air Force Division

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HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EACOT-TW

10 JUN 1954

SUBJECT: (Unclassified) Air National Guard Participation in ADC Summer Exercise

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Eastwood Station #6  
Syracuse, New York

1. The National Guard Bureau has authorized participation of ANG fighter and AC&W units in the forthcoming nation-wide ADC summer exercise.
2. Copies of letters from the National Guard Bureau to the Commander, ADC and to the State Adjutants General authorizing and encouraging participation are attached as inclosures for your information.
3. It is desired that your command contact the ANG units in your sector and strongly urge a maximum effort during this exercise, emphasizing the combined training effort. Reference paragraph 3, inclosure 2, limited funds have been made available for pilot participation in an active duty status for the last two days of the exercise. Every effort should be made to encourage rescheduling of drill periods to occur during the exercise. ANG units may be contacted direct; however, the State Adjutants General will be informed of your actions and plans for the utilization of the units under their jurisdiction.
4. Your planning should include:
  - a. Adequate communication facilities.
  - b. Procedures for alerting ANG units.
  - c. Utilizing ANG fighter and AC&W units as teams where feasible.
  - d. Sufficient supplies of reporting forms for the ANG units. Normal forms will be used; i.e., 4A, 187, etc.
5. Action should be taken to use ANG AC&W units where spotty or no radar coverage exists. If the value of these units is considered to warrant

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EACOT-TW Subject: (Unclassified) Air National Guard Participation in  
ADC Summer Exercise (Cont'd)

their participation and equipment is operable, then communications facilities should be arranged. Where circuits do not exist a priority message request should be forwarded to this headquarters in accordance with EADF Regulation 100-3. It is requested you inform this headquarters of those AC&W units you invite to participate.

6. Your attention is invited to paragraph 4, inclosure 1.

7. Full details regarding this exercise will be forwarded your command upon receipt from Headquarters ADC. The dates of the exercise contained in inclosure 2 are firm. However, disclosure will be on a "need to know" basis in accordance with the provisions of Air Force Regulation 205-1 and will not be revealed to subordinate EADF units until notified by this headquarters.

8. This correspondence is classified Secret in accordance with paragraph 23c, Air Force Regulation 205-1.

BY ORDER OF THE COMMANDER:

2 Incls:

1. Ltr fr NGB, NG AFOTO  
Subj: (U) ANG Participation in ADef Exercise,  
11 May 54 (1 cy)
2. Ltr fr NG, NG AFOTO  
Subj: (U) ANG Participation in ADef Exercise,  
12 May 54 (Secret) (1 cy)

/s/ James R. Worline  
JAMES R. WORLINE  
Captain, USAF  
Asst Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

O O T

17 Sep 1954

SUBJECT: Turn Around Time

TO: Commander  
4707th Air Defense Wing  
Otis Air Force Base  
Falmouth, Massachusetts

Commander  
4711th Air Defense Wing  
Presque Isle Air Force Base  
Presque Isle, Maine

1. Statistics compiled by Headquarters, Air Defense Command after completion of exercise "Check Point", indicate excessive turn around times for aircraft after live firing missions.
2. Turn around times varied from eleven minutes to one hour and twenty-eight minutes. It was evident that armament personnel proficiency was the main determining factor. These organizations recently returned from Yuma had the lower times, with Yuma itself recording eleven minutes.
3. It is desired that increased emphasis be placed on the subject of turn around to include armament as well as fuel and oxygen.

BY ORDER OF THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

OOT-A

29 Jul 1954

SUBJECT: States of Preparedness and Conditions of Warning

TO: Commander, 4707th Defense Wing, Otis AFB, Falmouth, Mass.  
Commander, 4711th Defense Wing, Presque Isle AFB, Maine

1. During the recent air defense exercise "Check Point" there was considerable misunderstanding evidences concerning the relation between states of preparedness and conditions of warning. The main points were, (1) intercept alert status and, (2) action to be taken by personnel other than operations and direct support.

2. As presently directed by regulations, intercept aircraft must be on "readiness" (5 minutes) state or higher when any of the following situations exist: Air Defense Readiness; Warning Yellow; Warning Red. ADC Regulations 55-39, 40 and 41 explicitly direct this action and make no provision for deviation or exception.

3. To attain maximum immediate combat potential it is obvious that operations and direct support personnel must be available at duty sections, regardless of the degree of warning which exists. Maintenance, refueling, etc must necessarily continue even though hostile aircraft are overhead. It is not intended that complete reimplementation of the base defense plan take place each time the warning condition progresses from white to yellow or red. Personnel of other than operations and support sections should receive the information only for the purpose of taking passive defense measures against air attack, the same as is done with the civilian populace.

4. This headquarters is well aware of the hardship imposed upon aircrews as a result of sustained periods of "readiness" alert. Recommendations have been received and forwarded concerning revision to current regulations to alleviate this condition.

5. It is desired that proper briefing of personnel be made and that each individual of every organization understands thoroughly the contents of ADC Regulations 55-39, 40 and 41.

BY ORDER OF THE COMMANDER:

VIRGINIA L. SWEET  
1st Lt., USAF  
Asst Adjutant

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HEADQUARTERS  
655th ACGM Squadron  
Watertown Air Force Station  
Watertown, New York

OBJECT

SUBJECT: Radar Performance for "Operations Checkpoint"

TO: Commander  
32nd Air Division (Defense)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

1. In compliance with 32nd ADIV message ACP OCH 07009 dated 3 July 1954, the following information is submitted on the radar performance throughout "Operation Checkpoint":

2. AR/FPB-3

a. Anomalous Propagation - The occurrence of this phenomenon was recorded throughout the mission and its effect on radar performance is twofold. First, the increased PE pattern partially obscured more areas of coverage, at times extending out to 190 miles. The pattern was fluctuating and unpredictable. Generally speaking the Anomalous Propagation started at 0200 hours, EDT, 9 July reaching a peak at 0400 hours and decreasing to normal 0600 hours, increasing again at 1200 hours steadily until 2400 hours. On 10 July, the pattern decreased steadily to normal at 1000 hours and increased to a maximum at 2400 hours. The decrease set in again on 11 July and a normal pattern was recorded at 1000 hours 11 July 1954, when the last record was made. The antenna tilt (see below) was set at plus 3.3 degrees which cut down some on PE intensity. The general direction of the expanded PE pattern was always to the west-southwest over Lake Ontario. Because of the rapid change of the pattern, and its unpredictable nature, the affect on coverage cannot be determined. Determination of this affect would depend upon predetermination of the change in the normal vertical gradient of refractive index in the atmosphere. If the refractive index gradients are predictable and measureable in the requisite strength, which can be produced under some conditions by temperature gradients alone, then detailed explanations of reasons for abnormal radar performance can be given during Anomalous Propagation.

b. Unusual Breakdowns - Prior to the mission, the set had been experiencing an unknown trouble with the trigger. A spare electronic gate was requested from the Bendix Radio and prior to its arrival a set breakdown occurred on 9 July 1954 at 1016 hours to 1140 hours EDT. This was prior to the mission and operation was resumed on 100 HRF.

PAGE ONE OF TWO

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655th AGAW SQ. Watertown Air Force Station, Watertown N.Y. Subj: Radar Performance for "Operations Checkpoint".

The spare gate arrived at 2045 hours 9 July 1954. The delay in installation was due to the mission being in effect and final installation took only four minutes, after which normal operation was resumed.

On 10 July 1954, the "grass" level of the Lower Beam gradually deteriorated. Although the signal strength was good it was assumed that the system might go out, and at 1805 hours the Lower Beam pre-amp was changed. This operation took less than three minutes and was accomplished during a period of no traffic. Lower Beam operation was normal thereafter.

A system of stalo tuning was devised to enable a partial tune of the set while the antenna was rotating and this greatly increased the effectiveness of the equipment operating so long without normal P.M. Toward the end of the mission of 0508 hours 11 July 54, an HDS of the Upper and Lower Beam was taken and the figure was -107 dbm and -106 dbm respectively.

c. Antenna Tilt- In accordance with 32nd ADiv Msg ACF 7006 dtd 9 July, the Mechanical antenna tilt was raised to plus 3.3 degrees. This antenna tilt was operationally too high to provide adequate range of pickup. Most a/c in the Foker AF were of the B-29 and B-36 types flying at relatively low altitudes, 20-35,000 feet and with such a high antenna tilt 25% of the available radar range was wasted.

An evaluation of tactics should be concluded upon by a joint agreement between qualified C&E and Operational personnel to effectively use the available radar coverage. The conclusions on an antenna tilt for this station would have to be based on adjacent stations missions and coverage, this stations mission and coverage, type and number of a/c to be detected, altitude of a/c, HRF of equipment, etc.

3. AN/FPS-5

a. The height-finder gave average performance during the mission, and there were no breakdowns on this equipment. The average maximum range of detection was 55 miles and relative accuracy was within plus or minus 2,000 feet.

FOR THE COMMANDER:

RAYMOND J. MILLER  
2nd Lt., USAF  
Asst. Adjutant

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762D AIRCRAFT CONTROL AND WARNING SQUADRON  
NORTH TRURO AIR FORCE STATION  
North Truro, Massachusetts

ACQ OPS

14 Jul 1954

**SUBJECT:** (Unclassified) Equipment Performance During Operations  
"Check Point"

**TO:** Commander  
32d Air Division (Defense)  
Hancock Field, Eastwood Station 6  
Syracuse, New York

1. In compliance with your message ACF OCE-07009 (Unclassified) the following requested information is submitted concerning the performance characteristics of primary equipment:

a. There were no instances of anomalous propagation as outlined in ADC Brochure, dated 22 June 53. Heavy ducting, however, was experienced during hours 0400-1200 (EDST) daily. This propagation phenomenon caused permanent echoes and surface vessels to be picked up well beyond normal ranges. In some cases surface vessels were seen over 100 miles at sea. The antenna system was elevated .65 degrees, by authority of 32d Air Division, and this condition improved slightly. There were no unusual breakdowns during this exercise.

b. The operations of the height-finding (AN/CPS-6B) equipment was considered excellent. Maximum ranges obtained were from 138 to 142 miles for B-47 type aircraft above 10,000 feet altitude. These headings were from a broadside aspect. Average ranges were from 90-100 miles. Altitude errors varied plus or minus 1,000 feet depending on the operators proficiency. This is normal Technical Order operating limits for this type HRI equipment. Ducting, as mentioned above, did affect height readings as much as 1,000 feet, however skilled operators were aware of this condition.

FOR THE COMMANDER:

s/t/ JAMES J. DOUGHERTY  
Captain, USAF  
Adjutant

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762D AIRCRAFT CONTROL AND WARNING SQUADRON  
NORTH TRURO AIR FORCE STATION  
North Truro, Massachusetts

JUL 13 1954

ACQCS

SUBJECT: (Unclassified) Report on OA 347 Performance During Operation  
Check Point

TO: Commander  
32d Air Division (Defense)  
Hancock Field, Eastwood Station 6  
Syracuse, New York

1. In compliance with your message ACF005 07010 (Unclassified) the following requested information is submitted concerning the performance characteristics of OA 347/CPS-6B during operation Check Point:

- a. Maximum detection range was 210 miles at 35,000 feet altitude. The target was a B-36 type aircraft.
- b. The reliability of this equipment is considered fair. The OA 347 equipment has been operating on an evaluation basis and aircraft pickup has not at all times been consistent. Difficulty has been experienced in determining correct antenna tilt due in part to unusual ducting during this time of the year.
- c. The clipping diode V21404 failed at 1900 hours (EDST), 9 July 1954. Set was returned to operational status at 2005, 9 July 1954. A major difficulty was experienced at 1600 hours (EDST) on 10 July 1954, when the Motor Generator (400 cycle) unit became inoperative due to severe arcing in the exciter. This caused the commutator segments to be severely burned. Brushes were replaced immediately, however, no improvement was noted. The exciter was replaced and normal operation was resumed at 2045 hours. Probable cause of arcing was brush failure. No other difficulties were encountered during this mission.
- d. Not applicable. IFF equipment not presently installed on the OA 347/CPS-6B.

FOR THE COMMANDER:

JAMES J. DOUGHERTY  
Captain, USAF  
Adjutant

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HEADQUARTERS  
766TH AIRCRAFT CONTROL AND WARNING SQUADRON  
CASWELL AIR FORCE STATION  
Limestone, Maine

SUBJECT: Report of Radar Performance on ADX "Check Point"

TO: Commander  
32nd Air Division (Defense)  
Syracuse Air Force Station  
Eastwood Station 6  
Syracuse, New York

1. Reference your message ACF OCE 07009, dated 3 July 1954,  
the following information is submitted.

a. Anomalous propagation was experienced for approximately  
twelve (12) hours, during which time more than normal ground clutter  
prevailed. Target pickup of "Faker" aircraft was excellent consider-  
ing the antenna tilt, as directed by message ACF OCE 7006. During  
the period of ducting Quality Control percentage reached 130 per  
cent on large type aircraft.

b. The height finder performance was satisfactory with  
an average error of 2000 feet. Average maximum range was approxi-  
mately 100 miles.

FOR THE COMMANDER:

s/t/ DOYLE F. BOUTWELL  
Captain, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station, Eastwood Station C  
Syracuse, New York

OIN

1 July 1954

SUBJECT: Exercise "Check Point"

TO: See Distribution:

1. Perusal of EADF and ADC Operations Plans for ADX "Check Point", indicates considerable variance, intelligencewise, from previous exercises. There are large blank areas of intelligence knowledge insofar as Faker is concerned. These blank areas, primarily treating the B-36 and B-47 as never before seen aircraft, have been purposely included to provide a test of field intelligence collection capabilities.

2. If we in the 32d Division are to derive the maximum training benefit from this exercise, each unit must fully understand the exercise SAI's and reporting procedures for their transmittal. You will note from the EADF Operations Order that format intelligence reporting will be used throughout EADF, whenever applicable. References for reporting include: ADCR 200-2, ADCL 200-1, ADC Guide for Reporting Intelligence, EADF 200-2, EADF ADX "Check Point" Intelligence Reporting Procedures, and HELLS BELLS' reporting procedures.

3. Particular attention will be given to the "HELLS BELLS" reporting. It is necessary for close teamwork be developed in the reporting from the pilot to the AC&W Squadron and then from the AC&W Squadron to Division. Confusion has resulted in the past when fighter control was passed from the fighter aircrafts associated GCI site to an adjacent GCI site. The GCI site who is controlling the fighters at the time of a "HELLS BELLS" transmission from a pilot has the reporting responsibility, regardless of whether the pilot is assigned to the associated Fighter Squadron or not. Lets not get caught napping on "HELLS BELLS".

4. The necessity for maintaining security throughout "Check Point" will require special emphasis upon message preparation. Messages must be brief, concise, complete and accurate. Duplicatory messages will be avoided. Your intelligence messages will be addressed to this headquarters. You will not - repeat - will not address messages to EADF - CIC during this or any other exercise. Records will be kept of the times of receipt and transmission of intelligence messages by fighter and AC&W Squadrons and forwarded to this headquarters at the end of the exercise.

5. With regard to the maintenance of security, tactics of single Faker aircraft need not be classified except in instances where ECM is encountered. The tactics and ECM of formations of two or more Faker aircraft, as well as

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summaries of more than one single aircraft, must be accorded appropriate security. This limitation will in many cases require the sending of TT messages which, under other ground rules, would ordinarily have been passed by TP. It is apparent that the use of TT messages will retard the normal flow of vital combat intelligence. Hq ADC has recognized that the timeliness of such combat intelligence will be prejudiced by this system of reporting. This fact does not, however, reduce our responsibility to strive for timely intelligence reporting within the framework of the ground rules prescribed.

6. ADX "Check Point" provides us an excellent opportunity to evaluate our progress over the past year, train intelligence personnel, highlight areas which require further attention and to measure our effectiveness.

7. We are sure that in the 32d Air Division we possess the capability of fulfilling our intelligence mission. We are equally sure that this capability will meet the test of ADX "Check Point".

BY ORDER OF THE COMMANDER:

1 Incl:  
ADX "Check Point"  
Intel Rpt Pro

*Henry R. Brewer, Maj.*  
FOR VIRGINIA L. SWEET  
1st Lt, USAF  
Asst Adjutant

DISTRIBUTION: "B"

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HEADQUARTERS 32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station, Eastwood Sta  
Syracuse, New York

OPERATIONS ORDER  
NUMBER 23-54

This Operations Order pertains to operation "Check Point"

TASK ORGANIZATIONS:

Hq 4707th Defense Wing

P-21

P-50

Hq 4711th Defense Wing

P-49

P-14

General Electric Company, Syracuse, New York

1. GENERAL SITUATION: The task units listed will be prepared to provide necessary personnel to operate FPS-7 radar at General Electric Electronics Park, Syracuse, New York. This equipment will be utilized to provide additional surveillance for P-49 during operation "Check Point". In the event search facilities at P-49 become inoperable the GE FPS-7 will become the primary weapon of P-49.

2. MISSION: Operation "Check Point" has been specified as the period to conduct evaluation tests of the General Electric manufactured FPS-7 radar. In order that proper evaluation can be accomplished, sufficient personnel will be required to perform basic surveillance functions at the FPS-7 site. The secondary mission is to provide GCI back-up for P-49 in the event the primary weapon at P-49 is rendered inoperable.

3. TASK FOR SUBORDINATE UNITS:

- a. P-21 will provide 1 officer and 2 airmen.
- b. P-14 will provide 1 officer and 2 airmen.
- c. P-50 will provide 1 officer and 2 airmen.
- d. P-49 will provide 1 officer and 8 airmen. Additional officers and airmen will be provided by P-49 in the event a requirement for performing the

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secondary mission becomes necessary.

e. General Electric will provide necessary maintenance personnel to maintain equipment.

X. GENERAL INSTRUCTIONS:

Squadrons will issue necessary orders placing personnel on TDY to Headquarters 32d Air Division (Defense) for a period of five days. Necessary personnel will report to Headquarters, 32d Air Division (Defense) NLT 1300 hours 8 July 1954. P-49 will provide necessary forms for recording track information. All tracks initially picked up by GE equipment will carry P-49 track designator. 32d Air Division Project Officer for this exercise is Captain Leason, Chief of Electronic Division. Sufficient personnel will be made available at P-49 to enable relay of traffic to 32d Air Division, 27th Fighter-Interceptor Squadron, and to key UHF radio for possible GCI.

4. ADMINISTRATIVE AND LOGISTICAL MATTERS:

Messing, billeting and transportation will be available at Headquarters, 32d Air Division. Necessary logistics will be maintained on all tactical traffic handled in support of this operation. A critique will be held at Headquarters, 32d Air Division upon completion of the operation.

5. COMMUNICATIONS:

Two CFP tactical circuits are available between GE and P-49, 1 CN and 1 TL. Call sign for GE installation for purpose of this mission is NIGHTCAP REAR. All other communications normal. In event primary weapon is bent communication back-up facilities will be operated for NIGHTCAP REAR.

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32D A.D.(D.) Operations Order 23-54, dtd. 28 June, 1954

<u>DISTRIBUTION</u>	<u>No_cys</u>	
Defense Wings	3cys ea	ROBERT S. ISRAEL, JR.
AC&W Squadrons	3cys ea	Colonel, USAF
General Electric	3cys	Commander
32nd Air Div (Def)	10cys	

(TOTAL Copies - 31)

OFFICIAL

*William W. Greenhuff*  
WILLIAM W. GREENHUFF  
Colonel, USAF  
Deputy for Operations

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

ODO

12 Aug 1954

SUBJECT: Report of Exercise "Check Point"

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

1. The following report is submitted in accordance with confidential EADF message EA00T-TS C-770. Problem areas encountered are as follows:

a. During this exercise "Cocked Pistol" was declared by ADC at 2013Z on 9 July. "Apple Jack" was not declared by this division until 1055Z on 10 July. Therefore, we were on a condition of simulated air defense readiness for a period of more than 14 hours with little intelligence information to warrant such a move in evidence at this headquarters. It is felt that if personnel are going to be required to stay at their maximum combat effectiveness for this length of time, the division should be briefed as to the reasons for such a move and be kept fully informed on all of the latest intelligence.

b. Exercise "Check Point" was the first time that SCATER was tested to the extent that a radio call was made to all aircraft that could be contacted by military and civilian towers. To preclude the possibility of one aircraft near a sector boundary receiving two different messages, it was decided that SCATER would be tested upon receipt of a message from ADC. Upon receipt of "Lemon Juice" when SCATER would normally be implemented, EADF was queried for the implementing message and a negative reply was received. Finally, thirty minutes later we were informed that the SCATER implementation message had been passed a half hour before. It is felt that had this division been allowed to implement SCATER automatically with the "Lemon Juice", the test would have been much more successful and there would have been less confusion.

c. Fighter Status. Considerable confusion existed throughout the division concerning status of interceptors. It is believed that the necessity for disassociation of fighter status from conditions of warning was evidenced by the necessity to deviate from ADCR 55-40. This regulation states specifically that all interceptors

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Hq 32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

will be on "Readiness" or higher during a warning red or yellow. Additional comment of fighter status is contained in personal letter from commander this headquarters to commander your headquarters, subject "Condition of Warning and States of Preparedness" dated 4 August 1954.

d. Another problem area is that of selective alerts. Plans for the selective alerting of the civilian population are currently being formulated by the FCDA. However, we must have a system of selective alerts for our own military units. While we are under a Warning Red because one of our sub-sectors is threatened, another distant sub-sector might be clear and in that case maintenance and support people could be working instead of being in shelters.

e. Reports. When information is available from other sources, it is recommended that exercise reports be held to a minimum. This will permit operations personnel to visit subordinate units for personal observation. It is believed that deficiencies of the system may be more readily analyzed and corrected by this means than is possible by attempting to digest reports after completion.

2. Correspondence on specific operational problems is being prepared, in addition to the letter referenced in paragraph 1c above. These will be forwarded for individual consideration.

COMMUNICATIONS AND ELECTRONICS  
TACTICAL TELEPHONE FACILITIES.

3. The operational capability of the system is entirely too limited for use during the rapidly developing tactical situation. The initial telephone system provided for direct communications between counterparts at lateral and longitudinal levels of command. This system insured expeditious handling of tactical traffic with a minimum of delay. The advent of the tactical telephone switchboard is a step in the wrong direction. Since the inception of an air defense communications system, every effort has been made to provide the responsible commander with reliable and expeditious communications. The present trend in this field is toward automatic operation of all functions. Until such time as automatic devices are provided to initiate tactical action, display status information, and post track and final tactical action, sufficient separate tactical telephone lines should be authorized to preclude multiple use of existing telephone circuits. It is inconceivable that this system, which requires switchboard operators at both terminals, can function more efficiently than one which permits, direct, personal contact.

4. No effort was made to continue use of the tactical switchboard during exercise "Check Point". Shortly after the exercise

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Hq 32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

began this division was required to take tactical action on targets appearing within our area of responsibility. The switchboard became completely tied up and it was impossible for the division commander to talk to his subordinate commanders. Delays in passing information were numerous. Receipt of information from tactical units was late. The general situation was such that all ADCC functions were constantly delayed for several minutes. The development of weapons has progressed at such a rapid rate that dilution cannot be tolerated and every effort should be made to expedite the transmission of information.

5. This headquarters has modified the tactical switchboard terminations by installing DPDT switches on all tactical circuits terminating in the switchboard. These switches provide the commander with the capability of restoring the original system within a matter of seconds. Should your headquarters desire to retain the tactical switchboard, because of its flexibility during normal activity, it is suggested that a requirement be established to permit re-establishment of the original service in the event of an emergency. Should such a feature be desired by the 26th and 30th Air Divisions, schematics and instructions for the modification will be provided upon request.

6. A glaring deficiency in circuitry became evident during the exercise. The rapidly developing tactical situation necessitated increased emphasis on status information during periods when surveillance traffic is also of great importance. The joint use of ADDC-ADCC surveillance circuits is an undesirable arrangement. Provisions must be made for separate status circuits to the ADDCs to preclude bottlenecks in information vital to the Air Defense Commands.

7. During a rapidly developing situation the importance of warning and overlap telling became a very important function. In several instances telling was sufficiently delayed resulting in late scrambles which required the commander to initiate initial scramble action. The manual system of reporting and passing information is satisfactory. The available weapons are just fast enough to require additional circuits to speed the flow of information. Additional circuits installed to speed up our present system will later be utilized for data transmission between sites. We have accepted the fact that a greater number of circuits will be required when the Lincoln system is operational. Therefore, the present requirement for circuits and terminal equipment should reflect adaptability and freedom from obsolescence.

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Hq 32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

EMERGENCY HF AND VHF BACK-UP

8. The HF emergency land line back-up facilities were utilized to the best of capabilities. It is well realized that due to the following inadequacies these capabilities are limited:

- a. Limited number of assigned frequencies available.
- b. Assigned frequencies not ideal for various distances involved.
- c. Interference must be tolerated.
- d. Programmed stable fixed equipment and antenna farm re-engineered by AMC pending to date.
- e. Programmed HF radio teletype back-up equipment pending to date.
- f. Completion of remaining line of sight VHF/UHF back-up circuits pending or programmed.
- g. ALCOP requirement for direct HF back-up with headquarters ADC and this headquarters cannot be effected prior to receipt and installation of programmed equipment, although HF relay back-up between ADC and this headquarters can be effected at this date.

9. HF back-ups were delayed due to inexperienced personnel in isolated cases, although it is apparent that maximum utilization of present capabilities (personnel and equipment) are being effected with continued improvement.

10. Military MARS circuits were operated continuously and maintained contacts which indicated satisfactory alternate back-up communications was available should the necessity arise.

11. VHF/UHF Air-to-Ground. Additional common frequencies as proposed by ADC CEI are recommended. Additional GRR 27's are desired with improved remote control capabilities to effect frequency change, thereby allowing AC&W sites to pre-set an increased number of UHF channels with complete remoting capabilities. This type of remoting of equipment has been effected satisfactorily at some of our sites.

12. Cryptographic Systems.

- a. An appreciable increase in classified traffic resulted due to the exercise.
- b. On line circuits were not operational to both defense wings.

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32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

The on line circuit to the 4707th Defense Wing was operational part time. This did not decrease cryptographic traffic load as all classified messages were also addressed to the 4711th Defense Wing and other subordinate units resulting in the necessity for "In Clear" operations when operational necessity versus security dictated. Normal class "A" crypto system traffic increased appreciably and was handled expeditiously through heavy duty assignments and lengthened duty shifts. The handling of future exercise classified message traffic will be faster with improved security to wing level, although other slower class "A" systems will be taxed to their capabilities in the dissemination of classified traffic from this headquarters to addressees below wing level.

ELECTRONICS:

The most significant feature during this exercise was the directive received from EADF to raise the tilt angle of search antenna. Evaluation of search capability revealed a maximum decrease in pick-up range of only 25%. All units objected to this change in tilt angle. The primary reason given was the loss of range which they considered essential to surveillance. The net result, however, was quite obvious. This is the first exercise of this type that tracking of targets was continuous throughout the area. All high altitude aircraft were detected and tracked without fading. Low altitude coverage was average and did not suffer during the exercise. A suggested improvement for height finding information to the limit of radar coverage at all perimeter stations. Interior stations are mutually self sufficient and should be given second priority.

ECM.

ECM conducted by the invading forces during exercise "Check Point" did not hamper the AC&W squadrons operating capabilities. No intercepts were missed due to the electronic countermeasure activity against ground radar and only one was missed due to jamming of the airborne radar. Several instances the electronic jamming of the airborne radar aided the operator in completing their intercept.

It is believed that the ECM employed by the invading forces was insufficient to cover up their activity. The size force that was employed would certainly carry enough equipment to cover the different types of radar they would encounter. At no time were the FPS-5, Height Finder, and the FPS-3, Search Radar, jammed at the same time. Also the CPS-6B sites did not encounter jamming on the five beams at the same time. Therefore, it is recommended that in future missions the ECM phase of the mission be planned to be more realistic.

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Hq 32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

COMMUNICATIONS AND ELECTRONICS RECOMMENDATIONS.

13. General.

A great deal of emphasis is being placed on extracting the utmost in operational efficiency from our AC&W and fighter-interceptor units. Exhaustive studies have been made on problem areas that we are faced with from day to day. Tactical doctrines have been written on utilization and employment of available weapons in air defense. Exercises are held to determine whether or not our precepts are valid. Evaluation of all the above factors generally points to one glaring deficiency - an insufficient number of weapons. It is conceded that weapons are essential for defense. Conversely, efficient control of these weapons by our present manual air defense system.

Exercises conducted in the past have pointed out several glaring deficiencies in our system. These deficiencies can be broken down to reflect only those which directly effect the air battle. These deficiencies have existed for a long time and are preventing maximum utilization of our defense facilities. Specifically, the crippling factors are: Insufficient ECM training; inadequate direction capability due to the relative disparity in PPI and B-Scan spaces at the AC&W squadrons; internal tactical telephone equipment at AC&W squadrons do not provide for sufficient termination of circuits within ADCCs; employment of large masses of fighters is extremely difficult with the limited number of UHF channels and equipment available to the aircraft director; fighter-interceptor aircraft, current and programmed, must have the capability of channelization or an almost infinite number of frequencies - the present equipment restricts their use to a very limited area of operations, thus reducing their tactical potential as an effective weapon considerably.

The effectiveness of ECM against our present defense system cannot be minimized. The entire system urgently required additional ECM training. At best, our system is only as effective as its ability to detect targets and conduct interceptions, despite the type of electronic of communication emphasis be placed on equipping the 4713th RE (ECM) Flight or division headquarters with sufficient aircraft and equipment to carry out a program which will insure training not only AC&W unit personnel but also interceptor pilots.

Operational efficiency of our AC&W - Fighter-interceptor teams is directly proportional to the availability of C&E equipment. Unfortunately, a serious disparity exists between AC&W units as to the amount and type of equipment available for direction purposes.

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Hq 32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

The following graphic display will serve to illustrate this difference and aircraft direction capability:

P-Site	No PPI Scopes	No B-Scans Search & Surveillance for GCI	UHF Avail	UHF Monitor	Max ftrs Cont Cap.
P-10	11	5	8	4	24-32
P-13	10	5	5	4	15-20
P-14	8	5	5	4	15-20
P-21	11	5	5	4	15-20
P-49	5		5	4	15-20
P-50	5		8	4	15-20
P-65	5		5	4	15-20
P-80	7		4	4	12-16

Direction capability is based upon the number of UHF multi-channel transmitters available at each site and the ability of the director to control three to four aircraft or flights of aircraft simultaneously. In instances where B-Scans are not available for search and surveillance, a PPI scope must be used for this purpose. In each case, a PPI scope is located in the maintenance room to facilitate maintenance and to counter ECM. Prior to exercise "Check Point", all sites were directed to locally fabricate a dolly and cables to permit use of the maintenance PPI in the direction center. This step assured maximum utilization of all available equipment. The box score for operation effectiveness of our AC&W units is woefully low. Not only are they incapable of controlling all of our available fighters, but couldn't begin to accommodate all available supporting fighters, should the occasion arise.

The present tactical telephone systems installed at the AC&W units are rapidly becoming saturated. The basic GTA-3 and 3A equipment do not provide for sufficient key boxes to accommodate circuits necessary for all-out operation. The new GTA-6 equipment will solve this problem in the future. Unfortunately the requirement exists now, and has been with us since the P-sites were phased in. Under the present concept of operations, which demands expeditious communications, additional circuits are required for weapons status, overlap telling of plots and tracks between sites, scramble and status circuits to supporting fighter units, controller and surveillance and telling circuits to F-sites and gap-fillers, and any other circuits which will become necessary in the future.

Our present fighter aircraft are rather restricted to a relatively small area of operation. This restriction is imposed upon us by the absence of suitable UHF radio equipment in the aircraft. An urgent requirement exists for equipment capable of automatically tuning to any frequency within the UHF frequency band. UHF gear of this type will

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Hq 32d Air Div (D) ODO Subject: Report of Exercise "Check Point"

enhance the capability and flexibility of our weapons to a point where deployment and utilization of forces will be almost unlimited.

The present methods of operation requires that essential items of equipment be utilized for other than interception purposes. The AC&W sites at Lockport, New York and North Truro, Mass. have been committed to work with adjacent AOCs. This commitment necessitates release of one PPI scope to the AAA Liaison Officer. Another requirement which manifests itself during IFR weather conditions, is the need to provide for one to two PPI scopes for recovery positions. This problem has been experienced on several training missions and has had a deleterious effect on the GCI capability where continued tactical action is required.

Briefly, our present operational capability is being checked by a shortage of the following equipment:

- a. PPI scopes for GCI and Search.
- b. UHF multi-channel communications equipment on a basis of one set per controllers' PPI scope.
- c. Additional wire line units at directors' positions to provide for efficient hand-over of fighters between sites.
- d. ECM aircraft and jamming equipment (electronics and Mechanical) to insure the highest degree of proficiency in anti-jamming and deceptive measures which can be employed against an air defense system.

FOR THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant

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C O P Y

HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EA00T-TS

20 Aug 54

SUBJECT: Summary of Exercise Check Point

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Eastwood Station 6  
Syracuse, New York

1. Receipt is acknowledged of your summary of Exercise Check Point.
2. The report received was extremely satisfactory and gave an excellent summary of the problems encountered during the exercise. This headquarters incorporated the subject problems and recommendations in the EADF Check Point Critique.
3. The information submitted is most valuable and appropriate action will be taken by this headquarters to resolve the many problems presented.

BY ORDER OF THE COMMANDER

s/t/ J. W. FOUNTAIN, JR.  
Major, USAF  
Asst Adjutant

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CONFIDENTIAL  
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EA00E-TS

8 Nov 1954

SUBJECT: (Unclassified) Exercise Checkpoint - Comments and  
Recommendations

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Syracuse 6, New York

1. Reference your letter ODO, 11 August 1954, subject, Report of Exercise Check Point.
2. Attached is a list of the major problem areas encountered during Exercise Check Point. The listing briefly outlines the basic problem, the proposed action and the command that can achieve the final solution.
3. The basic problems were presented during the Check Point critique held at this headquarters 16 August and attended by your representatives. The problems are a summary of the divisions' comments, observers reports, battle staff comments and findings of the operational analysts. The broad brush summary does not outline many of the details submitted by your headquarters. However, such details are being considered as action is taken.
4. Where a higher headquarters is responsible for the final solution, this headquarters is taking the necessary action to bring the problem to their attention and is making appropriate recommendations.
5. In some instances your comments and recommendations referred to problems that can be resolved by your headquarters within the purview of existing authority and regulations. In such instances these comments and recommendations were not included in this headquarters' consolidation of Exercise Check Point problem areas.
6. As previously stated in our letter, subject as above, 20 August 1954, the information received was most valuable and is being utilized as a basis for action being taken by this headquarters.

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EACOT-TE Subject: (Unclassified) Exercise 'Check Point' - Comments  
and Recommendations (Contd)

7. Upon withdrawal of enclosure, the classification of this  
correspondence will be downgraded to Unclassified in accordance with  
paragraph 25g, Air Force Regulation 205-1.

BY ORDER OF THE COMMANDER:

1 Encl:  
Summary of Exercise  
'Checkpoint' Problems  
and Action Taken or'  
Rqrd (Confidential)

JAMES R. WORLINE  
Captain, USAF  
Asst Adjutant

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COPY

32D AIR DIVISION EXERCISE ACTIVITY 1954

1. 21 Jan 54 - AEW&C Msn, Jakman #1
2. 5 Feb 54 - Big Top
3. 10 Feb 54 - Heat Wave
4. 15 Feb 54 - EADF Opord 6-54
5. 18 Feb 54 - Blue Flag
6. Feb 54 - Brass Ring
7. 3 Mar 54 - Blue Ice
8. 20 Mar 54 - Dust Devil #2
9. 25 Mar 54 - EADF Opord 21-54
10. 1 Apr 54 - EADF Opord 15-54
11. 6 Apr 54 - Green Garters
12. 26 Apr 54 - Think Fast
13. 7 May 54 - Sky Scan
14. 9 May 54 - Full House
15. 12 May 54 - Think Fast 2
16. 20 May 54 - Brown Trout
17. 25 May 54 - Think Fast 3
18. 3 Jun 54 - Pogo Stick
19. 10 Jun 54 - Think Fast #4
20. 12 Jun 54 - EADF Opord 68-54
21. 17 Jun 54 - Pogo Stick #2
22. 24 Jun 54 - Think Fast 5
23. 30 Jun 54 - Think Fast 6
24. 7 Jul 54 - Check Point
25. 23 Jul 54 - EADF Opord 99-54
26. 9 Aug 54 - Sweet Lucy
27. 10 Aug 54 - Think Fast 7
28. 11 Aug 54 - Pin Point
29. 12 Aug 54 - RCAF, VHF, ECM & Chaff Msn
30. 15 Aug 54 - Pogo Stick #3
31. 20 Aug 54 - Wing Ding #1
32. 24 Aug 54 - Fast Freight
33. 25 Aug 54 - Think Fast 8
34. 2 Sep 54 - Hypodermic Charlie
35. 7 Sep 54 - Pogo Stick #4
36. 10 Sep 54 - Think Fast #9
37. 20 Sep 54 - Hypodermic Dog
38. 21 Sep 54 - Pogo Stick #5
39. 28 Sep 54 - Copper-Clad

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32D AIR DIVISION EXERCISE ACTIVITY 1954 (Cont'd)

40. 5 Oct 54 - C-A-2  
41. 7 Oct 54 - Pogo Stick #6  
42. 21 Oct 54 - Run In  
43. 28 Oct 54 - Lucky Buck  
44. 29 Oct 54 - Bull Market  
  
45. 1 Nov 54 - Cool Down  
46. 3 Nov 54 - Bull Market  
47. 4 Nov 54 - Hypodermic Easy  
48. 5 Nov 54 - Highball Msn  
49. 9 Nov 54 - Pogo Stick #7  
50. 17 Nov 54 - EADF Opord 146-54  
51. 23 Nov 54 - Pogo Stick #9  
52. 24 Nov 54 - Pogo Stick #8  
  
53. 1 Dec 54 - GOC Msn 32 Opord 7-55  
54. 3 Dec 54 - Pogo Stick #10  
55. 9 Dec 54 - Hypodermic Fox  
56. 10 Dec 54 - Twilight  
57. 16 Dec 54 - AAA Msn

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84-3-26 (SnrContr)

Morin Heights, Que, 7 Jun 54.

Air Officer Commanding,  
Air Defence Command, RCAF,  
RCAF Station, St. Hubert, Que.

Narrative Report - Exercise "Brown Trout" 1 ADCC

- 1 Exercise "Brown Trout", a synthetic exercise, was preceded by a build-up of intelligence information culminating in a report of many multi-engined aircraft at 76:48N; 32:16W at 25000 feet heading South-West. This information, representing the situation as of 0952Z, was received at 1100Z.
- 2 "Cocked Pistol" was declared at 1120Z by ADC/COC. All AC&W sqns in this Sector were actually alerted and the fighter sqns were synthetically alerted.
- 3 Numerous difficulties were experienced by units in telling the "canned" information supplied for this exercise, resulting in many delays in producing a correct air picture at 1 ADCC. The first synthetic plot in the Sector was scheduled for 1611Z, but was not shown on the ADCC GSM until 1626Z, a delay of 15 minutes. Shorter delays occurred as tracks progressed from one radar to another. Unit reports attribute these delays to inexperienced personnel.
- 4 It was noted during the exercise that the strength of tracks varied considerably, changing from a strength of eight to 69 in one case and from 66 to 6 in another. Attempts to determine the reason for these errors have not been successful. However, it is believed that a low readability factor on some lines was at least a contributing cause.
- 5 Because of the numerous errors that occurred during the exercise, it cannot be considered an unqualified success. The noting of these errors and corrective action taken, however, should prove beneficial. As a result of exercise "Brown Trout" and exercise "Blue Ice" (4 Mar 54), the recommendations outlined in paras 6 to 11 below, are made.
- 6 Synthetic tracks should be so arranged to permit an overlap of tracks when passing from one sub-sector to another. This will permit a more realistic display and also will permit a smoother handover from one unit to another. In addition the filtering processes of surveillance elements will be exercised.

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7 It is considered that fighter tracks could be introduced into synthetic exercises at GCI and ADCC level and thereby provide more realism. Since it is necessary to DR fighter tracks to determine the time and place of interception no great difficulty is envisaged in the plotting of these synthetic tracks on the GSM. It is recommended that this aspect of synthetic exercises be investigated and if considered beneficial, be introduced in the next appropriate exercise.

8 The need for additional communications particularly between ADCC's, was again very evident. The difficulties encountered in making contact with #3 ADCC make efficient operations impossible. The need for an additional line to 14 AC&W Sqn was once again most apparent, as indeed it is on day to day operations.

9 During exercise "Brown Trout", no requirement existed to utilize emergency equipment. It is recommended that in all future exercises simulated equipment failures be included to provide practice in the use of emergency and bak-up equipment and the procedures involved in their use.

10 The intelligence messages sent by 1 ADCC during exercise "Brown Trout" were not originated by the Controller as required by "Brown Trout" ground Rules, but instead by the 1 ADCC umpire. This deviation from the ground rules was considered necessary in order to reduce the work load of the controller who was kept very busy throughout the exercise. It was quite apparent that he (the Duty Controller) would not be able to cope with his primary job and act as IO as well. It is suggested that in future exercises, that an IO be provided at each ADCC to add a further touch of realism and to take care of intelligence requirements.

11 In view of the benefit that may be gained from exercises of this type, it is strongly recommended that further exercises be planned for the future.

12 Attached for information are copies of the exercise reports submitted by 11, 12 and 14 AC&W Sqn. (Attached to ADC HQ copy only.)

s/ J. K. Rogers S/Ldr  
t/ (W.R. Tew) S/L,  
for Sector Commander,  
1 Air Defence Sector HQ,  
Lac St. Denis, Que.

Encl. 3

cc: CO, 32 Air Div (USAF)  
Sector Cmdr, 2 ADCC, St. Margaret, N.B.  
Sector Cmdr, 3 ADCC, Edgar, Ont.

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 22)

3 July 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 35-54, the undersigned hereby assumes command of the 32d Air Division (Defense).

*Robert S. Israel Jr.*  
ROBERT S ISRAEL JR  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS)  
NUMBER 28)

8 August 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned assumes command of the 32d Air Division (Defense) during the temporary absence of COLONEL ROBERT S. ISRAEL JR 354A.

DISTRIBUTION A

JAMES O. BECKWITH  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 29

10 August 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned hereby assumes command of the 32d Air Division (Defense).

*Robert S. Isomel Jr.*  
ROBERT S. ISOMEL JR.  
Colonel, USAF  
Commander

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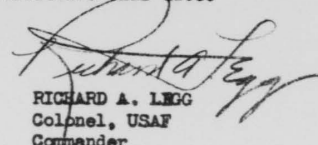
HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 31

14 August 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned assumes command of the 32d Air Division (Defense), during the temporary absence of COLONEL ROBERT S. ISRAEL JR 354A, effective this date.



RICHARD A. LEGG  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 32

18 August 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned hereby assume command of the 32d Air Division (Defense).

*Robert S. Israel Jr.*  
ROBERT S ISRAEL JR  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 33

7 September 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned assumes command of the 32d Air Division (Defense) effective this date, during the temporary absence of COLONEL ROBERT S. ISRAEL, JR 354A.

DISTRIBUTION:  
A

RICHARD A. LEGG  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 34

10 September 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned hereby assumes command of the 32d Air Division (Defense).

*Robert S. Israel Jr.*  
ROBERT S. ISRAEL JR.  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS;  
NUMBER 37)

25 October 1954

ASSUMPTION OF COMMAND. Under the provisions of Air Force Regulation 24-1, the undersigned assumes command of the 32d Air Division (Defense) effective this date, during the temporary absence of COLONEL ROBERT S. ISRAEL JR 354A.

DISTRIBUTION:  
A

RICHARD A. LEGG  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS)  
NUMBER 38)

30 October 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned hereby assumes command of the 32d Air Division (Defense).

*Robert S. Israel Jr.*

ROBERT S. ISRAEL JR  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS)  
NUMBER 45)

22 November 1954

ASSUMPTION OF COMMAND. Under the provisions of Air Force Regulation 24-1, the undersigned assumes command of the 32D Air Division (Defense) effective this date, during the temporary absence of COLONEL ROBERT S ISRAEL JR 354A.

DISTRIBUTION:  
▲

  
RICHARD A LEGG  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS )  
NUMBER 46)

23 November 1954

ASSUMPTION OF COMMAND

Under the provisions of Air Force Regulation 24-1, the undersigned hereby assumes command of the 32d Air Division (Defense).

*Robert S. Israel Jr.*  
ROBERT S. ISRAEL, JR.  
Colonel, USAF  
Commander

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)(ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS)  
NUMBER 39)

8 November 1954

STAFF ANNOUNCEMENT

Announcement is made of the appointment of Colonel Gordon F. Thomas 4524A USAF as Acting Deputy Commander effective this date during the temporary absence of Colonel William H. Clark, 1002A, USAF.

BY ORDER OF THE COMMANDER:

OFFICIAL:

GORDON F. THOMAS  
Colonel, USAF  
Acting Deputy Commander

*Everitt W Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS)  
NUMBER 44)

20 November 1954

STAFF ANNOUNCEMENT

COLONEL WILLIAM H CLARK 1002A USAF, reassumes duty as Deputy Commander, this headquarters, effective this date, vice COLONEL GORDON F THOMAS 4524A USAF Acting Deputy Commander, reld.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS)  
NUMBER 20)

30 June 1954

STAFF ANNOUNCEMENT

MAJOR HENRY R BROWN AO337538, United States Air Force, is appointed Adjutant effective 1 July 1954 vice LIEUTENANT COLONEL FREDERICK E YORK AO560499, United States Air Force, relieved..

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Virginia L. Sweet*

VIRGINIA L SWEET  
1st Lt, USAF  
Asst Adjutant

FREDERICK E YORK  
Lt Colonel, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 21

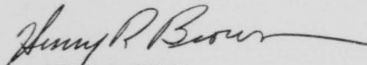
1 July 1954

STAFF ANNOUNCEMENT

1. LIEUTENANT COLONEL FREDERICK E YORK AO569499, United States Air Force is assigned additional duty as Director of Civilian Defense, vice MAJOR DONALD R CASETY AO908475, United States Air Force, relieved.
2. MAJOR DONALD R CASETY AO908475, United States Air Force is appointed Director of Office of Information Services.

BY ORDER OF THE COMMANDER:

OFFICIAL:



HENRY R BROWN  
Major, USAF  
Adjutant

HENRY R BROWN  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS  
NUMBER 43

19 November 1954

STAFF ANNOUNCEMENT

LIEUTENANT COLONEL FREDERICK E YORK AO569A99, United States Air Force, this headquarters, is assigned duty as Director of Civil Defense.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 26

5 August 1954

STAFF ANNOUNCEMENT

MAJOR EVERITT W HOWE 6854A, United States Air Force, is appointed Adjutant effective 6 August 1954 vice MAJOR HENRY R BROWN A0337538, United States Air Force, relieved.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Virginia L. Sweet*  
VIRGINIA L SWEET  
1st Lt, USAF  
Asst Adjutant

VIRGINIA L SWEET  
1st Lt, USAF  
Asst Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 27

7 August 1954

STAFF ASSIGNMENT

LIEUTENANT COLONEL HAROLD C DAWSON 5612A, United States Air Force, this headquarters, is assigned as Chief of Staff, Comptroller, effective 1 July 1954.

BY ORDER OF THE COMMENDER:

OFFICIAL:

*Virginia L. Sweet*

VIRGINIA L SWEET  
1st Lt, USAF  
Asst Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 30

11 August 1954

STAFF ASSIGNMENT-AMENDMENT

So much of General Orders Number 27, this headquarters, 1954 pertaining to Staff Assignment of LIEUTENANT COLONEL HAROLD C DAWSON 5612A, United States Air Force, as reads "is assigned as Chief of Staff, Comptroller" is amended to read "is assigned as Deputy Chief of Staff, Comptroller" and as reads "BY ORDER OF THE COMMANDER" is amended to read "BY ORDER OF THE COMMANDER."

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)(ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS)  
NUMBER 41)

15 November 1954

STAFF ANNOUNCEMENT

MAJOR HENRY R BROWN AO337538, United States Air Force, this headquarters, is assigned additional duty as Deputy Chief of Staff, Comptroller, effective 15 November 1954.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS)  
NUMBER 23)

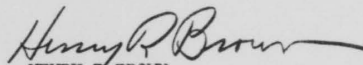
6 July 1954

STAFF ANNOUNCEMENT

Under the provisions of Air Force Regulation 35-54, MAJOR MYLES A KING 14001A, United States Air Force is assigned duty as Commander, Headquarters Squadron Section Headquarters 32d Air Division (Defense) vice, LIEUTENANT COLONEL FRANK L FENN 2910A, United States Air Force.

BY ORDER OF THE COMMANDER:

OFFICIAL:



HENRY R BROWN  
Major, USAF  
Adjutant

HENRY R BROWN  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 36

18 September 1954

STAFF ANNOUNCEMENT

Under the provisions of Air Force Regulation 35-54, CAPTAIN PHILIP A MANCUSO AO2057652, United States Air Force is assigned duty as Commander, Headquarters Squadron Section, Headquarters 32d Air Division (Defense) vice MAJOR MYLES A KING 14001A, United States Air Force.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 35

15 September 1954

STAFF ANNOUNCEMENT

CAPTAIN GARLAND H SPICER JR 25789A USAF (Detachment 16-12th Weather Squadron), is appointed Staff Weather Officer, this headquarters, effective 11 September 1954, vice MAJOR JAMES B PLANCK AO742777 USAF, with concurrence of Commander, Air Weather Service.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*  
EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station  
Syracuse 6, New York

GENERAL ORDERS)  
NUMBER 42)

18 November 1954

STAFF ANNOUNCEMENT

MAJOR ALBERT TOME A0855125 USAF (Detachment 16-12th Weather Squadron),  
is appointed Staff Weather Officer to Commander 32nd Air Division (Def),  
this headquarters, effective 6 November 1954, vice CAPT. L. G. R. H. H. SPICER  
JR 25789A USAF, with concurrence of Commander Air Weather Service.

BY ORDER OF THE COMMANDER:

OFFICIAL: \_\_\_\_\_

EVERITT W. HOWE  
Major, USAF  
Adjutant

*Everitt W. Howe*  
EVERITT W. HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE) (ADC)  
Syracuse Air Force Station, Eastwood Station 6  
Syracuse, New York

GENERAL ORDERS  
NUMBER 24

7 July 1954

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DISCONTINUANCE OF THE OFFICE OF COMPTROLLER.....	II
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I. DISCONTINUANCE OF THE OFFICE OF EXECUTIVE OFFICER---Announcement is made of the discontinuance of the Office of Executive Officer, this headquarters, effective 30 June 1954.

II. DISCONTINUANCE OF THE OFFICE OF COMPTROLLER---Announcement is made of the discontinuance of the Office of Comptroller, this headquarters, effective 30 June 1954.

III. ESTABLISHMENT OF THE OFFICE OF THE DEPUTY CHIEF OF STAFF COMPTROLLER---Announcement is made of the establishment of the Office of the Deputy Chief of Staff Comptroller, this headquarters, effective 1 July 1954.

IV. REASSIGNMENT OF THE DIRECTORATE OF FLYING SAFETY---Announcement is made of the change of assignment of the Directorate of Flying Safety from the Office of the Deputy Chief of Staff Operations to the Office of the Deputy Commander, this headquarters, effective 1 July 1954.

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General Orders Number 24, 7 July 1954 (Continued)

V. DISCONTINUANCE OF THE DIRECTORATE OF MAINTENANCE---Announcement is made of the discontinuance of the Directorate of Maintenance, this headquarters, effective 30 June 1954.

VI. DISCONTINUANCE OF THE DIRECTORATE OF SUPPLY SERVICES---Announcement is made of the discontinuance of the Directorate of Supply Services, this headquarters, effective 30 June 1954.

VII. DISCONTINUANCE OF THE DIRECTORATE OF INSTALLATIONS---Announcement is made of the discontinuance of the Directorate of Installations, this headquarters, effective 30 June 1954.

VIII. DISCONTINUANCE OF THE DIRECTORATE OF MILITARY PERSONNEL AND PERSONNEL SERVICES---Announcement is made of the discontinuance of the Directorate of Military Personnel and Personnel Services, this headquarters, effective 30 June 1954.

IX. DISCONTINUANCE OF THE DIRECTORATE OF INDIVIDUAL TRAINING AND GROUND SAFETY---Announcement is made of the discontinuance of the Directorate of Individual Training and Ground Safety, this headquarters, effective 30 June 1954.

X. ESTABLISHMENT OF THE DIRECTORATE OF PERSONNEL TRAINING---Announcement is made of the establishment of the Directorate of Personnel Training, this headquarters, effective 1 July 1954, with assignment to the Office of the Deputy Chief of Staff Personnel.

XI. ESTABLISHMENT OF THE DIRECTORATE OF PERSONNEL SERVICES---Announcement is made of the establishment of the Directorate of Personnel Services, this headquarters, effective 1 July 1954, with assignment to the Office of the Deputy Chief of Staff Personnel.

XII. ESTABLISHMENT OF THE DIRECTORATE OF MILITARY PERSONNEL---Announcement is made of the establishment of the Directorate of Military Personnel, this headquarters, effective 1 July 1954, with assignment to the Office of the Deputy Chief of Staff Personnel.

XIII. DISCONTINUANCE OF THE DIRECTORATE OF CONTROL CENTER---Announcement is made of the discontinuance of the Directorate of Control Center, this headquarters, effective 30 June 1954.

XIV. DISCONTINUANCE OF THE DIRECTORATE OF COMMUNICATIONS---Announcement is made of the discontinuance of the Directorate of Communications, this headquarters, effective 30 June 1954.

XV. ESTABLISHMENT OF THE OFFICE OF INFORMATION SERVICES---Announcement is made of the establishment of the Office of Information Services, this headquarters, effective 1 July 1954.

XVI. ESTABLISHMENT OF THE DIRECTORATE OF COMMUNICATIONS ELECTRONICS---Announcement is made of the establishment of the Directorate of Communications Electronics, this headquarters, effective 1 July 1954, with assignment to the Office of the Deputy Chief of Staff Operations.

General Orders Number 24, 7 July 1954 (Continued)

- XVII. ESTABLISHMENT OF THE DIRECTORATE OF COMBAT OPERATIONS---Announcement is made of the establishment of the Directorate of Combat Operations, this headquarters, effective 1 July 1954, with assignment to the Office of the Deputy Chief of Staff Operations.
- XVIII. ESTABLISHMENT OF THE ARMY AAA LIAISON OFFICE---Announcement is made of the establishment of the Army AAA Liaison Office, this headquarters, effective 1 July 1954.
- XIX. ESTABLISHMENT OF THE NAVAL LIAISON OFFICE---Announcement is made of the establishment of the Naval Liaison Office, this headquarters, effective 1 July 1954.
- XX. ESTABLISHMENT OF THE STRATEGIC AIR COMMAND LIAISON OFFICE---Announcement is made of the establishment of the Strategic Air Command Liaison Office, this headquarters effective 1 July 1954.
- XXI. ESTABLISHMENT OF THE AIR RESCUE SERVICE LIAISON OFFICE---Announcement is made of the establishment of the Air Rescue Service Liaison Office, this headquarters, effective 1 July 1954.
- XXII. ESTABLISHMENT OF THE AIR INTELLIGENCE SECURITY SERVICE LIAISON OFFICE---Announcement is made of the establishment of the Air Intelligence Security Service Liaison Office, this headquarters, effective 1 July 1954.
- XXIII. ESTABLISHMENT OF THE WEATHER LIAISON OFFICE---Announcement is made of the establishment of the Weather Liaison Office, this headquarters, effective 1 July 1954.
- XXIV. ESTABLISHMENT OF THE CIVIL AERONAUTICS ADMINISTRATION LIAISON OFFICE---Announcement is made of the establishment of the Civil Aeronautics Administration Liaison Office, this headquarters, effective 1 July 1954.
- XXV. ESTABLISHMENT OF THE FEDERAL COMMUNICATIONS COMMISSION LIAISON OFFICE---Announcement is made of the establishment of the Federal Communications Commission Liaison Office, this headquarters, effective 1 July 1954.
- XXVI. ESTABLISHMENT OF THE FEDERAL CIVIL DEFENSE ADMINISTRATION LIAISON OFFICE---Announcement is made of the establishment of the Federal Civil Defense Administration Liaison Office, this headquarters, effective 1 July 1954.

BY ORDER OF THE COMMANDER:

OFFICIAL:

*Everitt W. Howe*

EVERITT W HOWE  
Major, USAF  
Adjutant

EVERITT W HOWE  
Major, USAF  
Adjutant

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RESCUE COORDINATION CENTER  
5TH AIR RESCUE GROUP(ARS-MATS)  
SYRACUSE AIR FORCE STATION  
SYRACUSE, 6, NEW YORK

RCC

3 August 1954

SUBJECT: Monthly Activity Report of RCC Activities, 1-31 July 1954

TO: Commander  
5th Air Rescue Group (ARS-MATS)  
Westover Air Force Base, Massachusetts

1. RCC personnel:

Senior Controller	Major	Henry Schmaltz
Operations Specialist	S Sgt	Thomas R Tipton

2. During the month of July 1954, there were a total thirty-one alerts, of which nineteen were actual and twelve were false. Of the nineteen actual alerts, eight were in-flight emergencies, one of which ditched and all eleven crew members were picked up by an SA-16 from the 46th Air Rescue Squadron; four were overdue aircraft, either from not closing out flight plans or failing to make position reports; six involved crashed aircraft, and one was the evacuation of the pilot of a previous crash from a civilian to a military hospital. Of the twelve false reports, two were reports of seaweed being mistaken for sea-marker dye; two were reports of crashes; two were aircraft inadvertently flying triangular patterns on training flights; five were Mode 4, either inadvertent transmissions or faulty equipment, and one was the practice dropping of experimental equipment being mistaken for an aircraft in distress.

3. Thirty-four aircraft were scrambled or diverted on seventeen of the thirty-one missions as follows:

a. On 2 July, one F-94 was diverted, one H-19 and one C-45 were scrambled on a Mayday call from an F-94 which later crashed near Utica, N.Y.; all were ADC aircraft.

b. On 7 July, a T-33 lost on a cross-country flight from Tinker AFB to Andrews AFB, was located by a GCI station of the 32d Air Division and vectored to the 26th Air Division area, intercepted by an F-86 from McGuire AFB, and escorted to a safe landing at McGuire AFB.

c. On 8 July, the pilot of a T-33 who became lost, and was seriously injured in the ensuing crash, was evacuated from a civilian to a military hospital; an H-19, escorted by an SA-16, both from the 46th AR Sq, performed the mission.

d. On 10 July, a Navy aircraft report dye-marker northeast of Boston; an ADC F-94 was diverted to investigate; also, a Coast Guard boat was dispatched; seaweed was all that was located at the position of the report, and was presumed to be the basis for the alert.

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RCC Subj: Monthly Activity Report of RCC Actys, 1-31 July 1954

3 Aug 54

e. On 12 July, a Navy AD-4 crashed approximately twenty miles northeast of Boston; a Coast Guard UF-1G and HOS-4 investigated the crash.

f. On 13 July, an ADC F-94 was scrambled to investigate a C-54 which was transmitting a Mode 4 emergency signal; the aircraft was intercepted by the F-94, communications established, and it was determined that the C-54 had faulty IFF equipment.

g. On 14 July, a PB7Y which was transmitting a Mode 4 was intercepted by two ADC F-94's; the IFF equipment was found to be operating on the wrong channel.

h. On 15 July, an ADC T-6, a Coast Guard UF-1G and an Air Force crash boat investigated another dye-marker report. This report also turned out to be seaweed mistaken for dye-marker.

i. On 15 July, an SA-16 from the 46th AR Sq intercepted and escorted to Westover AFB a C-54 which had one engine inoperative on an over-water flight.

j. On 16 July, a B-29 reported that it had collided with another aircraft over Cape Cod; two SA-16's were scrambled from the 46th AR Sq to investigate; it was later determined that the B-29 had hit a tow target cable; the B-29 landed safely at Logan Airport, Mass. One of the SA-16's was diverted by the Roslyn RCC to Chestertown, Md, for possible assistance on the explosion and fire disaster.

k. On 20 July, an SA-16 was diverted from a local training flight at Westover AFB to investigate a Mode 4; however, before the SA-16 could reach the area of the signal, a T-33 reported that he had a faulty IFF transmitter.

l. On 23 July, two F-86's from Westover AFB were diverted to check an aircraft flying a triangular pattern; the aircraft was an F-86 on an ARDC special mission flight, and was not in any difficulty.

m. On 24 July, one SA-16 from the 46th AR Sq and one from the 49th AR Sq started searching for an overdue civilian aircraft; however, the aircraft was located at another airport, and had failed to close the flight plan.

n. On 27 July, an ADC F-86 from Burlington, Vt, was diverted to investigate an aircraft flying a triangular emergency pattern; the intercepted aircraft was an RCAF C-47 on a training mission.

o. On 28 July, an F-94 was scrambled to investigate an aircraft crash report, with negative results.

p. On 29 July, an SA-16 from the 46th AR Sq, an ADC H-19, C-47 and an F-86 were scrambled to investigate a crash report in the Saranac Lake area with negative results.

q. On 29 July, a Navy P2V, on a round-robin flight from Brunswick, Me, ditched approximately 100 miles at sea; two SA-16's from the 46th AR Sq and two Coast Guard UF-1G's were scrambled on the mission; a 46th Sq SA-16 picked up the entire crew of eleven survivors.

RCC Subj: Monthly Activity Report of RCC Actys, 1-31 July 1954

3 Aug 54

4. Official visits:

a. On 2 July, Major Ismail Gurlap, of the Turkish Air Force, visited the 32d Air Division and was briefed on Air Rescue Service, the Air Rescue Squadron and its equipment, and the function of the RCC, by Major Schmaltz.

b. On 6 July, twenty-one Civil Defense Officials from New Hampshire, headed by the Executive Secretary of the Governor, visited the ADCC, and were briefed by Major Schmaltz about Air Rescue Service and the RCC.

c. On 8 July, the RCC Senior Controller attended a CAA conference on "Scatter" (Security Control of Air Traffic and Electromagnetic Radiations) regulations and procedures at the 32d Air Division headquarters.


d. On 10 July, Major Schmaltz visited the General Electric, Electronics Park at Syracuse, NY, in connection with ADC operation "Check Point".

e. On 15 July, Burton M Cross, Governor of Maine, and his council and Civil Defense Officials visited the ADCC and were briefed by Major Schmaltz on Air Rescue Service and the RCC. Mayor Donald Monds, of Syracuse, was also a member of the party.

5. The Air Defense Command's annual nation-wide exercise was held during the weekend of 11-13 July. The exercise lasted two and one-half days and was designed to test the defenses of the nation. With all of the aerial activity which accompanied the exercise, this RCC was alerted on only one emergency. This excellent record can be attributed to the unusually clear weather which prevailed over the Division area during the entire exercise.

6. On 12 July, the flight of Vice-President Richard Nixon to the Governor's Conference at Glens Falls, NY, was monitored by the RCC.

Info cpy to:  
16th ARS  
19th ARS  
26th AD RCC  
32d AD  
ADC  
EADF

  
HENRY SCHMALTZ  
Major, USAF  
Senior Controller

RESCUE COORDINATION CENTER  
5TH AIR RESCUE GROUP (ARS-MATS)  
SYRACUSE AIR FORCE STATION  
SYRACUSE, 6, NEW YORK

RCC

7 September 1954

SUBJECT: Monthly Activity Report of RCC Activities, 1-31 August 1954

TO: Commander  
5th Air Rescue Group (ARS-MATS)  
Westover Air Force Base, Massachusetts

1. RCC personnel:

Senior Controller	Major	Henry Schmalz
Duty Controller	1st Lt	Alain F. [unclear]
Operations Specialist	S Sgt	Thomas R. [unclear]

2. During the month of August 1954, there were a total of forty-four alerts, of which thirty-two were actual and twelve were false. Fifteen of the actual alerts were in-flight emergencies, eleven were overdue, three were crashes and two were bail-outs. Of the twelve false reports, there were two reports of emergency distress transmissions with negative results; one was an erroneous report of a Navy aircraft which had departed on a flight with a limited fuel supply, however, the flight was completed successfully; there were three reports of crashes; however, the ensuing search and investigations revealed negative results; one was a report of a Mode 4 transmission which was GCI station and for identification and was picked up by another station and resulted in the alert; there was one report of an aircraft in an emergency triangular pattern, however, after a fighter interception, it was determined that the aircraft was on a training flight; a GCI report of an aircraft with one engine inoperative, proved to be a Mirack Air Line DC-3 on a training flight; three were reports of overdue aircraft, two of which were located at their destinations, and the flight plans had not been filed.

3. There were seventeen aircraft scrambled or diverted on nine of the forty-four missions as follows:

a. On 3 Aug, an H-19 of the 16th Air Rescue Squadron and a Quest Hawk HO4S were scrambled to assist on the crash landing of the Air France Constellation at Preston, Connecticut.

b. On 6 Aug, an ADC H-19 was scrambled when a Navy F4U was reported to have taken off from Griffiss AFB with only eight minutes fuel; this proved to be incorrect, as the aircraft completed the flight successfully.

c. On 9 Aug, three ADC aircraft were diverted and one scrambled on a report of an aircraft crash in Vermont; an SA-16 of the 16th Squadron, on a cross-country flight from Westover AFB was diverted to the search area; the search produced negative results and the report was considered false.

297 2

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RCC Subj: Monthly Activity Report of RCC Awtys, 1-31 Aug 54

7 Sep 54

d. On 13 Aug, an SA-16 of the 49th Sq was airborne to search for a civilian aircraft that was reported overdue during the night; however the state police located the aircraft at another airport and the search was concluded.

e. On 13 Aug, an SA-16 and an H-19 of the 49th Air Rescue Squadron at Selfridge AFB, Mich, were scrambled on receipt of an alert that a KB-30 near Clevel-ville, Ohio, had two engines inoperative, one of which was on fire, and that the crew of sixteen was bailing out; all personnel bailed out successfully and were picked up by the local police prior to the arrival of the rescue aircraft, and taken to Lockbourne AFB, Ohio.

f. On 15 Aug, an H-19 of the 49th Sq was scrambled after an F-86 crashed near Bradley Field, Connecticut; the pilot died in the crash.

g. On 16 Aug, an F-86 was scrambled to "lead down" a T-38, inbound to Westover AFB with airspeed and altimeter instruments inoperative; after the interception, the altimeter of the F-86 became inoperative, and another F-86 was scrambled and escorted both aircraft down safely.

h. On 17 Aug, an SA-16 was scrambled to intercept and escort a C-54 with one engine inoperative; the C-54 was inbound to Westover AFB from New York.

i. On 28 Aug, a SAC H-19 was scrambled to pick up the pilot of an F-86 who had bailed out near Bangor, Maine.

#### 4. Official visits:

a. On 6 Aug, Major Schmaltz visited base operations at Griffiss AFB, and briefed the civilian employees on Air Rescue Service procedures.

b. On 19 Aug, Major Schmaltz visited base operations at Wheeler-Sackville at Ft Drum, NY (Army), and briefed the operations personnel on Air Rescue Service facilities and procedures.

c. On 26 Aug, Major Schmaltz visited base operations at Burlington, Vt, and briefed the operations personnel and the ADC helicopter pilots on the responsibilities and functions of the RCC. Also, this date, GCI station "Hosoco" was visited and a briefing on rescue matters was conducted with the operations personnel.

d. On 27 Aug, Col Isr. J., Commander of the 301 Air Division, and Major Schmaltz, met Squadron Leader Reaslip, RCAF, and Mr Frank Piasocki, founder of the Piasocki Helicopter Corp, Norton, Pa, at Hancock Field; coordination with the RCAF rescue facilities and RCC's were discussed. The local television station featured the story which described the latest in rescue facilities and techniques, including the H-21, which was being flown to Canada.

e. 1st Lt Alton Flaughar arrived on 25 Aug for duty with the RCC; on 28 Aug, he was placed on temporary duty at 5th Air Rescue Group headquarters for preparing records and an indoctrination of Air Rescue Service policies and procedures.

RCC Sub : Monthly Activity Report of RCC Adm, 1-31 Aug 51

7 Sep 51

6. ADC missions "Fog Sitch #1", "Thunder Post #7", "Sweet Loop", "Pin Point" and "Wing Ding" were monitored by the RCC during the month of August.

Info cys to:  
46th ARS  
49th ARS  
26th AD RCC  
32d AD  
ADC  
EADF

*Henry Schmalz*  
HENRY SCHMALZ  
Major, USAF  
Section Controller



RESCUE COORDINATION CENTER  
5TH AIR RESCUE GROUP(ARS-MATS)  
SYRACUSE AIR FORCE STATION  
SYRACUSE 6, NEW YORK

RCC

1 October 1954

SUBJECT: Monthly Activity Report of RCC Activities, 1-30 September 1954  
(RCS: 5th ARG O-5)

TO: Commander  
5th Air Rescue Group (ARS-MATS)  
Westover Air Force Base, Massachusetts

1. RCC personnel:

Senior Controller	Major	Henry Schmalz
Duty Controller	1st Lt	Alton Flaugner
Duty Controller	2d Lt	Charles B Weir
Operations Specialist	S Sgt	Thomas R Tipton

2. During the month of September 1954, there were a total of twenty-six alerts, of which nineteen were actual and seven were false. Of the nineteen actual alerts, ten were in-flight emergencies, three were overdue, two were crashes and there were four other miscellaneous type missions. Of the seven false missions, there were two accidental Mode 4 transmissions, one from an aircraft in flight and one by ground maintenance personnel; there was one overdue, but a ramp check located the aircraft at the point of departure; one was a report of a crash that was subsequently disproved; there were three reports of aircraft flying triangular emergency patterns, however, when intercepted, two were found to be on instrument training flights and the other was circling down through a hole in the undercast for a landing.

3. There were eleven aircraft scrambled or diverted on six of the twenty-six missions as follows:

a. On 1 Sep, two P86's (ADC) were diverted and an H19 (ADC) scrambled to search for a C45 with one engine inoperative and which later made a forced landing; there were no injuries and the crew was evacuated to Niagara Falls by helicopter.

b. On 3 Sep, an ARS SAL6 was diverted and an ADC H19 scrambled to search for classified scientific equipment released from a "Moby Dick" balloon. The balloon was originally mistaken for a parachute and rescue action initiated. The equipment was later located and recovered.

c. On 9 Sep, a report of a parachute sighting by a Trans-Canada Alouette crew turned out to be a civilian who had become airborne by attaching himself to approximately 60 "war-surplus" weather balloons filled with natural gas. The incident occurred near Albany, N.Y., covering approximately twenty-five miles, soaring to an altitude of approximately 6000 feet before landing. The balloon enthusiast was taken into custody by the New York State Police. An ARS SAL6 was diverted to search, however the "balloonist" had landed safely by the time the aircraft arrived in the search area.

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RCC Subj: Monthly Activity Report of RCC Actys, 1-30 Sep 54

4 Oct 54

d. On 10 Sep, an ADC F94 was diverted to intercept a B29 returning from a radar calibration mission with one engine inoperative; the B29 landed safely.

e. On 23 Sep, two ANG F94's were scrambled by GCI to intercept an aircraft flying a triangular emergency pattern; the aircraft was a MATS (Navy) R6D on a training flight; the aircraft and personnel were OK.

f. Also, on 23 Sep, two ADC F86's were diverted by GCI to intercept and escort a lost B25 to Dow AFB; the aircraft landed at Dow OK.

4. Official visits:

a. On 30 Aug, Major Schmaltz gave a briefing about Air Rescue Service and the RCC and showed the training film "Arctic Geography" to the Syracuse Filter Center of the Ground Observer Corps. This visit was inadvertently omitted from the August report.

b. On 7 Sep F/O L.C. Torpe of the RCAF visited the ADCC and was briefed about Air Rescue Service and the RCC.

c. On 14 Sep, F/O Forbes Skeaf and a crew of three from the RCAF were at the ADCC for cross-training; they were briefed on Air Rescue Service and the RCC.

d. On 15 Sep, Mr Paul C Oscanyan, communications officer for the 2nd Region headquarters of the Federal Civil Defense, was briefed on Air Rescue Service and the functions of the RCC during his temporary duty at the ADCC.

e. On 21 Sep, 1st Lt Robert E Kastner, of the 26th Air Division RCC visited the RCC.

f. On 23 Sep, Major Schmaltz visited the South Weymouth Naval Air Station and the GCI station P-10.

5. On 10 Sep, 1st Lt Alson Flaughner returned from temporary duty at 5th Air Rescue Group headquarters. On 30 Sep, 2d Lt Charles B Weir reported for duty with the RCC.

6. On 24 Sep, the RCC monitored the annual tactical effectiveness mission of the 46th Air Rescue Squadron.

7. Also, on 24 Sep, an SA16 and crew from the 49th Air Rescue Squadron was utilized in the static display at Hancock Field as part of the Kiwanis Kids Day program. The films "Air-Sea Rescue" and "Sikorsky Aircraft" were shown in connection with the program. After the program concluded, the SA16 crew visited the ADCC and were briefed on the RCC and air defense.

8. 32d Air Division missions "Hypodermic Charlie" and "Hypodermic Dog" were monitored by the RCC during the month of September.

Info cws:  
45 & 49th ARS  
26th AD RCC  
32d AD, EADP & ADC

*Henry Schmaltz*  
HENRY SCHMALTZ  
Major, USAF  
Senior Controller

RESCUE COORDINATION CENTER  
5TH AIR RESCUE GROUP(ARS-MATS)  
SYRACUSE AIR FORCE STATION  
SYRACUSE 6, NEW YORK

RCC

3 November 1954

SUBJECT: Monthly Activity Report of RCC Activities, 1-31 October 1954

TO: Commander  
5th Air Rescue Group (ARS-MATS)  
Westover Air Force Base, Massachusetts

1. RCC personnel:

Senior Controller	Major	Henry Schmaltz
Duty Controller	Captain	Guy T Humphreys
Duty Controller	1st Lt	Alson Flaughter
Duty Controller	2nd Lt	Charles B Weir
Operations Specialist	S Sgt	Thomas R Tipton

2. During the month of October 1954, there were a total of fifty one alerts, of which twenty eight were actual and twenty three were false. Of the twenty eight actual alerts, eighteen were in-flight emergencies, two were overdue, one was a bailout and eight were crashes. Of the twenty three false alerts, one was caused by a simulated flame-out procedure; seven flights failed to close out their flight plans involving seven military and one civilian aircraft, five were accidental Mode 4 transmissions; five were reports from the Ground Observer Corps of aircraft in some type of difficulty; one was a report of a bailout from a Marine jet and four were reports of aircraft crashes.

3. There were twenty one aircraft scrambled or diverted on fourteen missions as follows:

a. On 1 Oct, an ADC F94 was scrambled on an unidentified aircraft that was identified later as a Pan-American DC4 with one engine inoperative; the pilot did not request any assistance.

b. On 1 Oct, an SA-16 was scrambled to locate an F86 from Westover which was lost on a local flight. The SA-16 was recalled when it was determined that the F86 was practicing emergency in-flight procedures.

c. On 2 Oct, an SA-16 was scrambled on a midair explosion report in the Connecticut area. No aircraft were reported missing and the explosion was attributed to a jet going through the sonic barrier or using the afterburner.

d. On 5 Oct, an SA-16 was diverted to investigate a report of an aircraft on fire in flight; the only aircraft that could be located in the search area were an XB45 and an XB50. It was determined that these aircraft were not in any difficulty and the SA-16 returned to Westover AFB.

e. On 7 Oct, an F86 was diverted in the Niagara Falls area to check on a forced landing of a T6; neither crew member of the T6 was injured.

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RCC Subj: Monthly Activity Report of RCC Actys, 1-31 Oct 54

3 Nov 54

f. On 18 Oct, an SA-16 was scrambled to intercept and escort a C118 to Westover AFB with one engine inoperative; both aircraft landed safely.

g. On 20 Oct, an SA-16 was scrambled to intercept and escort a C54 to Westover AFB with one engine inoperative; both aircraft landed safely.

h. On 20 Oct, an ARS SA-16, 2 SAC H19, and four ADC aircraft (B25, L20, H13 & H19) were scrambled to search for an RCAF pilot that had bailed out of a jet aircraft; the body of the pilot was located, SAC and ADC aircraft returned to their bases, mission was completed, and the SA-16 was recalled before it reached the search area.

i. On 22 Oct, an SA-16 was scrambled to intercept and escort a C124 that was having navigation difficulties; however, the C124 received aid from GCI before the SA-16 intercept, and the ARS aircraft was recalled.

j. On 26 Oct, an SA-16 was diverted on a lost C45; however, GCI had located the aircraft and gave the pilot a heading to a base before the SA-16 reached the search area, therefore the SA-16 was recalled.

k. On 27 Oct, two RCAF fighters were scrambled by GCI to lead down a third fighter that was having radio difficulties in IFR weather; the aircraft landed safely.

l. On 28 Oct, an ADC F94 was scrambled on to investigate a Mode 4; the intercepted aircraft was a Navy sea target plane with a malfunctioning IFF.

m. On 28 Oct, an airline Convair was diverted to investigate a crash report that turned out to be a large bonfire.

n. On 30 Oct, an SA-16 and an H19 were scrambled to search for an overdue civilian aircraft; weather necessitated the return of the aircraft; the missing aircraft was located later.

4. Official visits:

a. On 11 Oct, Major Schmalts visited the Fulton, N.Y. CAP Squadron, giving a short talk about the RCC and showing the two training films "Air-Sea Rescue" and "Sikorsky Helicopters".

b. On 14 Oct, Major Schmalts, Captain Humphreys and 1st Lt Flaughner visited the Syracuse Ground Observer Corps Filter Center.

5. Personnel changes:

a. On 4 Oct, 2nd Lt Weir departed on an emergency leave, returning on 10 Oct.

b. On 11 Oct, Captain Guy T Humphreys reported for duty with this RCC.

RCC Subj: Monthly Activity Report of RCC Actys, 1-31 Oct 54

3 Nov 54

6. During the month of October 1954, the following missions were monitored by the RCCs: "Rum-1" (ADC-SAC), "Lucky Buck" (ADC-SAC) and "Bull Market" (ADC-SAC). Two separate Presidential flights were monitored by the RCC.

Info sys tes  
46th ARS  
49th ARS  
26th AD RCC  
32d AD  
ADC  
EADF

*Henry Schmalz*  
HENRY SCHMALZ  
Major, USAF  
Senior Controller



RESCUE COORDINATION CENTER  
5TH AIR RESCUE GROUP(ARS-MATS)  
SYRACUSE AIR FORCE STATION  
SYRACUSE 6, NEW YORK

RCC

3 January 1955

SUBJECT: Monthly Activity Report of RCC Activities, 1-31 December 1954  
(RCS: 5ARG 0-3)

TO: Commander  
5th Air Rescue Group (ARS-MATS)  
Westover Air Force Base, Massachusetts

1. RCC personnel:

Senior Controller (OIC)	Major	Henry Schmalta
Duty Controller	Captain	Guy T Humphreys
Duty Controller	1st Lt	Alson Flaughter
Duty Controller	1st Lt	Charles B Weir
Operations Specialist	S Sgt	Thomas R Tipton

2. During the month of December 1954, there were a total of forty three alerts, thirty four of which were actual and nine were false. Of the thirty four actual alerts, twenty four were inflight emergencies, four were overdue, three were bailouts, two were crashes and one was an emergency landing in a corn field. Of the nine false alerts, five were overdue reports in which flight plans had not been closed out properly, two were reports of crashes caused by low flying aircraft, one was a noise phenomena caused by a power station which was reported as a low flying aircraft in distress and one was an accidental SOS transmission caused by maintenance personnel.

3. There were twenty eight aircraft and several surface vessels scrambled or diverted on eight missions as follows:

a. On 7 December, eight aircraft: four ARS (3 SA16 & 1 H19), two Coast Guard (1 UFLG & 1 helicopter), and two ADC (1 C45 & 1 T11) were scrambled and several surface vessels (Coast Guard & Air Force Crash Boat Sq) were dispatched to search for the pilot of an F86 who had bailed out while on an overwater mission (Reference mission #5-46-82-7 December 54).

b. On 8 December, an ADC C45 was scrambled to intercept and escort a civilian aircraft (Stinson) down through the overcast; the pilot was lost and was experiencing radio and electrical difficulties.

c. On the night of 19 December, an ARS SA16 was diverted to render assistance to an F94 which was reported to be on fire; the crew later successfully bailed out.

d. On 17 December, four F86's and two H13's (all ADC) were scrambled to investigate a report of a crashed jet which later proved to be false.

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RCC Subj: Monthly Activity Report of RCC Active 1-31 Dec 54

3 Jan 55

e. On 20 December, an ARS HQ9 (46th ARS) was scrambled on the crash of a Navy AF-Guardian; the pilot had bailed out, it was learned later.

f. On 22 December, a 16th ARS SAL6 was scrambled to investigate a SOS transmission; after becoming airborne, the SCS was traced to a hanger at Westover AFB, and was accidentally caused by maintenance personnel.

4. Official visits:

a. On 1 December, Major Schmaltz briefed six ADC and two RCAF officers that were on a cross-training program at the ABCC on the responsibilities of the RCC. On 7 December, eight more ADC officers were briefed about the RCC.

b. On 8 December, "Deacon" Bob Doubleday, prominent radio announcer for station WSYR in Syracuse, visited the 32d Air Division. Mr Doubleday's farm programs have a wide coverage in central and upstate New York. Major Schmaltz briefed Mr Doubleday about Air Rescue Service and the RCC, and how the local radio stations can aid in locating a missing aircraft.

5. Training missions:

a. One ADC mission (Pogo Stick #10) was monitored by the RCC during the month of December 1954.

6. Miscellaneous:

a. On 1 December, the Syracuse RCC became fully operational, providing service 24 hours a day, 7 days a week.

b. On 9 December, the Syracuse RCC assumed control of mission #5-46-83-8 December 1954; on 11 December the mission was suspended.

c. On 13 December, two flights, and on 23 December one flight, of the Presidential aircraft were monitored by the RCC.

d. On 19 December, the flight of Brig Gen Thomas J DuBose, Commanding General of Air Rescue Service, was monitored from Washington, D.C. to Westover AFB, Mass.

Info cys to:

46th & 49th ARS  
26th & 32d AD RCC  
ADC  
EADF

*Henry Schmaltz*  
HENRY SCHMALTZ  
Major USAF  
Senior Controller

RESCUE COORDINATION CENTER  
5TH AIR RESCUE GROUP (ARS-MATS)  
SYRACUSE AIR FORCE STATION  
SYRACUSE 6, NEW YORK

RCC

3 December 1954

SUBJECT: Monthly Activity Report of RCC Activities, 1-30 November 1954  
(RCS 5ARG C-3)

TO: Commander  
5th Air Rescue Group (ARS-MATS)  
Westover Air Force Base, Massachusetts

1. RCC personnel:

Senior Controller (OIC)	Major	Henry Schmaltz
Duty Controller	Captain	Guy T Humphreys
Duty Controller	1st Lt	Alson Flaughter
Duty Controller	1st Lt	Charles B Weir
Senior Operations Specialist	S Sgt	Thomas R Tipton

2. During the month of November 1954, there were a total of fifty two alerts, of which twenty seven were actual and twenty five were false. Of the twenty seven actual alerts, fourteen were inflight emergencies, four were from overdue aircraft, one a bailout, five were crashes and three were for miscellaneous reasons, such as lost hunters and a free-balloon enthusiast. Of the twenty five false alerts, six were accidental or inadvertent Mode 4's, ten were crash reports, one was a report of a parachute sighting, four were caused by flight plans which were not closed out properly and four were reports of inflight emergencies.

3. There were twenty five military and an unknown number of CAP aircraft scrambled on eight missions as follows:

- a. On 1 Nov, an ARS SA16, two Coast Guard UFLG's and two ADC F94's were scrambled on an aircraft transmitting a Mode 4. On interception, it was found to be a Navy tow target aircraft with malfunctioning IFF equipment.
- b. On 2 Nov, an ADC F86 was scrambled from Burlington, Vt, to intercept and escort another F86 which was having communications equipment difficulties to a safe landing.
- c. On 4 Nov, a Coast Guard UFLG was scrambled from Salem, Mass, to intercept and escort a C118 enroute to Westover AFB with one engine inoperative.
- d. On 7 Nov, the CAP from the Syracuse-Auburn, NY, area dispatched several aircraft to search for a reported bailout-parachute sighting; the mission turned out to be false.
- e. On 11 Nov, an ADC HL9 was scrambled from Burlington, Vt, when an F86 made a crash landing at the airfield.
- f. On 23 Nov, an ADC F89 from Presque Isle, Me, was diverted to

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RCC Subj: Monthly Activity Report of RCC Actys, 1-30 Nov 54

3 Dec 54

intercept and escort another F89 having communications equipment difficulty.

g. On 30 Nov, two F86's were scrambled to investigate an aircraft flying a triangular emergency pattern; interception revealed the aircraft to be a B29 on a training mission, in no difficulty, and had inadvertently flown the emergency pattern.

h. On 30 Nov, thirteen aircraft were scrambled to search for a Northeast Airlines DC3 with seven persons on board. At the time of this report the DC3 had not been located.

4. Official visits:

a. On 3 Nov, Major Schnaltz visited the 49th Air Rescue Squadron at Selfridge Air Force Base, Michigan.

b. During the month of November, twelve officers from the 32d Air Division GCI sites undergoing cross training at the ADCC were briefed on the activities and responsibilities of the RCC by the Senior Controller.

c. On 18 Nov, WO H M Brown and Chief H E Brunet, of the Oswego Coast Guard Station, visited the RCC and were briefed on the activities and responsibilities of the RCC.

5. Personnel changes:

a. On 1 Nov, 2nd Lt Charles B Weir received his promotion to 1st Lt.

b. On 9 Nov, Lt Flaughter departed on a ten day leave.

c. On 25 Nov, Capt Humphreys departed on five day leave.

6. Miscellaneous events:

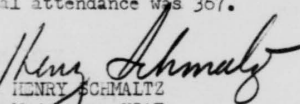
a. During the month of November, three Presidential flights were monitored by this RCC.

b. Two flights of the presidential aircraft were monitored by the RCC, during which the Queen Mother of England and Viscount Montgomery were passengers.

c. Seven ADC special training missions were monitored by the RCC during the month of November.

d. During the month of November, training films "Survival In The Aleutians" and "E-1 Survival Kit" were shown to three Air Reserve and one CAP squadrons and 32d Air Division personnel; total attendance was 367.

Info cys to:  
46th & 49th ARS  
26th & 32d AD RCC  
ADC  
EADF

  
HENRY SCHMALTZ  
Major USAF  
Senior Controller

C O P Y

THE POST STANDARD, Syracuse, New York, Monday, December 20, 1954

AIR RESCUE CENTER ON CONSTANT ALERT TO AID DISTRESSED

By Joseph Morgenstern

One of its engines out and losing altitude fast, a Navy P2V Neptune flashed a distress signal shoreward from 150 miles at sea earlier this year. Then the big plane was on the water, and within minutes it sank.

When the first distress call was heard on shore it was relayed to the Air Rescue Co-ordination Center attached to the 32d Air Division in Syracuse. Immediately the Syracuse center dispatched an Air Rescue Service amphibian from Westover AFB, Mass. In one hour the SA-16 rescue plane made an open sea landing in the Atlantic off New York, and took the Neptune's seven-man crew from their life rafts. Only an airplane was lost in the mishap--no lives.

SERVICE CLIENTS

Air Rescue Service performance is measured in lives saved--9,680 in Korea alone. An airliner down in the hills of New Hampshire, a deer hunter lost in the Adirondacks, a seaman stricken with acute appendicitis aboard an ocean-going vessel: These are ARS' clients.

They may be reached by helicopter, crash boat, amphibian, light plane, parachute or police car. That they are reached--soon, and with aid--is Air Rescue's mission, the daily work of men whose code pledges them "...to save life and to aid the injured... placing these duties before personal desires and comforts...that others may live."

Commanding the Rescue Coordination Center in Syracuse is Major Henry Schmaltz, an Air Rescue helicopter pilot since 1946. During a three-year duty tour in Europe he evacuated victims of the Po River floods in 1952, and the Holland floods in 1953. In addition to flying helicopters ("choppers," he calls them), Major Schmaltz holds a rating the the Air Force's versatile SA-16 Albatross, a "triphilian," which can operate from land, water or ice.

FULLY OPERATIONAL

On December 1 this year the Syracuse Air Rescue Co-ordination Center became fully operational, capable of assuming control of search and rescue missions throughout the 32d Air Division's area. By sharing geographic jurisdiction with the 32d (four New England states and most of New York) the rescue unit gains access to its elaborate control network.

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C O P Y

Flanked by telephone switchboards and facing a large plexiglass plotting board, Major Schmaltz and his four-man staff sit at the nexus of New York-New England rescue operations. With him are Captain Guy Humphreys, Lt. Alson Flaugher, Lt. Charles Weir, and S/Sgt Thomas R. Tipton

TOOLS OF SERVICE

Many and diverse tools are at their disposal. Air Rescue Service squadrons at Westover AFB in Massachusetts and Selfridge AFB, Michigan, furnish helicopters and amphibians. Two 63' crash boats stand ready at Niagara; other boats are stationed at Lake Champlain and Otis AFB on Cape Cod. An Army helicopter from Ft. Devens, Mass. is available as also Strategic Air Command 'chopper' in Maine.

Valuable help comes from Civil Air Patrol Wings in all the New England states and New York. More than 250 CAP light planes and their civilian pilots participate in local search efforts: Their uncommon talent is the ability to fly slowly, to scrutinize the trees and buses of an assigned area for traces of a crash.

AIRCRAFT AVAILABLE

Additional aircraft of the Air Defense Command may be commissioned for rescue work. Planes assigned to the 32d Air Division, for example, are utilized for a search whenever necessary.

Heading Air Rescue's equipment list is the SA-16 Albatross. This amphibian plane carries a six man crew plus a para-rescue team. ARS planes are assigned specific areas to search, and the SA-16's wide range recommends it for the job.

Helicopters are used for searching a concentrated area and reaching survivors when they are found. The H-19, a Sikorsky helicopter, will cruise at about 60 knots per hour on a search; at that speed it can stay aloft about five hours.

EVERY CALL EMERGENCY

Pessimists by profession and optimists by nature, the Air Rescue Men must assume every call to be an emergency until proved otherwise.

"We get calls about smoke, about low-flying planes, about everything in the world including actual crashes," Major Schmaltz said.

The Ground Observer Corps provides Air Rescue with much needed information. Aircraft spotters' sightings can establish a probable flight path for a missing plane, thereby confining the search area significantly. Moreover, the GOC's fine fabric of telephone lines connects Air Rescue's staff with thousands of potential reporters.

MEDICAL HISTORICAL  
of the  
32d AIR DIVISION (DEFENSE) REPORT

ADJ  
K. DIV - 32-111  
July, Dec. 1954  
V. 8  
RETURN TO  
Director  
Research Studies Institute  
Air Force Research Branch  
Maxwell Air Station  
Alabama



AN AIR DEFENSE MEDICAL FACILITY  
1 JULY - 31 DECEMBER 1954

PREPARED BY  
THE DIVISION MEDICAL AND DENTAL SECTIONS  
HEADQUARTERS 32d AIR DIVISION (DEFENSE)  
SYRACUSE AIR FORCE STATION SYRACUSE, NEW YORK

3-28887-13A

MEDICAL HISTORICAL REPORT  
of the  
32D AIR DIVISION (DEFENSE)

RCS-1-AF-D2

AN AIR DEFENSE MEDICAL FACILITY

Headquarters, 32d Air Division (Defense)  
Syracuse Air Force Station, Syracuse 6, New York

1 July 1954 - 31 December 1954

Historical Personnel:

CHARLES J. NOGA  
Major, USAF (DC)  
(Dental Professional Services)

NICKOLAS F. KOEYLK  
Captain, USAF (MSC)  
(Administration)

WILLIAM T. SHULTZ  
1st Lt., USAF (MC)  
(Medical Professional Services)

CHAIN OF COMMAND

UNITED STATES AIR FORCE  
AIR DEFENSE COMMAND  
EASTERN AIR DEFENSE COMMAND  
32D AIR DIVISION (DEFENSE)

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FOREWORD

This history of Air Defense Medical Facilities including AC&W Squadrons, covering the period July through December 1954, is presented so that a comparison can be made with other Air Defense Medical Facilities similar to the 32d Air Division (Defense).

The primary aims of the medical and dental sections was to protect and maintain the health of all Air Force personnel. The steady decrease in trained medical personnel over this six month period covered by the historical report, at times, presented problems in maintaining good medical services, however, steps have been taken to eliminate as many problems as possible in order to bring about greater effectiveness of the medical service.

CHAPTER I - BROAD OBSERVATIONS

HEALTH OF THE COMMAND

The general health of the command has been good. Outpatient care and hospitalization (when required) was satisfactory. Upper respiratory infections were a large factor in outpatient care. However, most of the cases were treated satisfactorily without hospitalization.

Most injuries were of a minor nature and did not require hospitalization. There were only three deaths as a result of injuries throughout the command.

MISSION OF COMMAND

The mission of the 32d Air Division (Defense) in order of general priority are: To conduct the air defense of the United States within a sector<sup>1</sup> of a region designated for Eastern Air Defense Force. To support the operations of the Strategic Air Command, the Tactical Air Command and the Military Air Transport service, as directed by Headquarters, Eastern Air Defense Force. To participate in the collateral mission of anti-submarine warfare as directed by Headquarters, Eastern Air Defense Force. To administer, equip, train and prepare for combat, in accordance with directives, policies and schedules issued by Headquarters, Eastern

1. As defined in par 1, a, EADF Reg No 23-5 dtd 26 Jul 54. (s.d.A)

Air Defense Force, such units and combat crews of the United States Air Force as may be designated, assigned or attached to the 32d Air Division (Defense).

TYPE OF MEDICAL SUPPORT

The following types of medical support to the division were necessary during the months July through December 1954: To formulate and interpret policies regarding maintenance and improvement of health standards. To plan and determine personnel, materiel and facilities requirements necessary to the medical service mission. To confer with commanders and staff members concerning established manning, equipping and operating of medical facilities and units. To advise the commander on matters affecting the health and physical welfare of personnel. To monitor and supervise medical service of subordinate units, including the clinical medicine, preventive medicine and aircrew effectiveness programs. To supervise expenditure of medicine project funds.

MEDICAL RELATIONSHIP - COMMAND AND STAFF

Relationship between the command and medical staff continues to be excellent. The Division Commander, Colonel Robert S. Israel, Jr., has constantly insisted that all sections of the Division Headquarters give full cooperation to the medical staff. Continued aid in effecting greater utilization of available medical personnel, by freeing medical officers from detailed administrative duties not required by regulations, was also given by the command.

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The command continues to assign priority to military aircraft for the division surgeon in order that he might complete his necessary staff visits to AC&W Squadrons with expediency.

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CHAPTER II - PLANS AND HOSPITALIZATION

MEDICAL ORGANIZATION

During the period of this report, the medical organization of the 32d Air Division (Defense) was based upon the principle of providing medical care and accomplishing medical administrative duties for the Aircraft Control and Warning Squadrons and the personnel assigned to the dispensary at Headquarters, 32d Air Division (Defense).

The dispensary consisted of an out-patient clinic and a small flight surgeon's office for the maintenance of health of flying personnel assigned to this station. Since there had been a flight surgeon assigned to this dispensary, physical examinations of flying personnel were conducted excepting for x-ray examinations. The latter was accomplished at an Air Force hospital 45 miles distant.

Personnel of the dispensary continued to conduct the preventive medicine program for the station.

Organization of medical services for the station itself proved adequate with few exceptions. Cases of minor illnesses and cases requiring medical observation could not be handled at this base because no medical beds were authorized. Such cases were treated in quarters or evacuated to either the USAF hospitals located at Griffiss Air Force Base or Sampson Air Force Base.

The operation of the dispensaries in the various assigned AC&W squadrons was also considered adequate with few exceptions. Laboratory



examinations could not be conducted due to lack of facilities and lack of trained personnel. The same applied to x-ray examinations. Therefore, such exams had to be evacuated to the nearest USAF hospitals, at distances from the squadrons ranging from eight to one hundred twenty miles.<sup>1</sup> These situations involved the loss of an appreciable number of man hours.

Liaison and relations between the division surgeon and the various medical facilities were excellent as to authority and responsibility with emphasis also with the AC&W Squadron Commanders.

The AC&W Squadrons of this division are located in the northeastern states of Maine, Vermont, Massachusetts and New York.<sup>2</sup> To provide adequate medical care for these sites, a dispensary is set up at each site with at least one independent duty technician on duty.<sup>3</sup> With the exception of the 654th AC&W Squadron at Brunswick, Maine, the independent duty technicians perform their duties in small one or two room dispensaries, (usually located in BOQ's). These rooms are considered adequate. The technicians also conduct preventive medicine programs for their sites and prepare medical reports for submission to the Division Surgeon at Syracuse Air Force Station. Five contract civilian physicians (one-quarter time) also take care of the sick and wounded at the different sites except for Brunswick, Me.

1. Data on the distances of U. S. Govt. Operated Medical Facilities that are nearest to Air Force Stations of the 32d Air Division (Defense). (s.d. B.)
2. Area of Responsibility Chart (s.d. C.)
3. No independent duty technician is stationed at the 654th AC&W Squadron which is a tenant of Brunswick Naval Air Station, Brunswick, Maine. Since this Naval Station has an infirmary, the Air Force medics assigned perform duties which are primarily administrative in nature and Air Force personnel have the use of the Naval Infirmary.

The services of the civilian physician at squadrons in the field were necessary because of the distances of the sites from Federal medical facilities. At the dispensary, Headquarters, 32d Air Division (Defense), a civilian physician (three-quarter time) was necessary to provide for both military and dependent medical care.

MEDICAL ADMINISTRATION

A Medical Administrative Officer was present for duty from August 1954 through 31 December 1954. The medical administration of the Headquarters Squadron Section and its dispensary was greatly improved. The medical administration reporting of AC&W Squadrons of the division appeared to be strengthening. Due to the close liaison with medical personnel at the sites, and the more frequent medical staff visits, reports and information required by the division contained few discrepancies.

MAN POWER

On-the-job training of WAF personnel continues, but to a limited degree. It was impossible to undertake a comprehensive training program because of the heavy work load both administrative and professional. However, this limited on-the-job training was creditable in that, without it, the medical services rendered to WAF personnel and female dependents would necessarily have been reduced or eliminated. The T/D<sup>1</sup> only authorizes two AFSC's in the 902 career field. Proper coverage, including dispensary CQ, cannot be provided under such authori-

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1. Non-T/O Personnel Authorized Table, July 1954, Revised. (s.d. D)

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zation. It was necessary to maintain medical services with overages in personnel to the extent that some personnel were not working in their career fields. This was particularly true with the WAF personnel.

FUNDS

Medical service funds allocated for the period July 1954 through 31 December 1954 were approximately as follows:<sup>1</sup>

a. Personnel:

Civilian doctors	\$ 5,963.00
Medical and Dental (Military)	\$ 42,313.00

b. Administrative TDY (Staff Visits) \$ 2,287.00

c. Operational TDY (Dental Vans) \$ 4,362.00

d. Supplies

Medical	\$ 2,429.00
Dental	\$ 731.00
Local Purchases	\$ 370.00

TOTAL \$ 58,505.00

HOSPITAL CONSTRUCTION

The dispensary, Division Surgeon's office and the Dental Clinic<sup>2</sup> occupy space on part of the ground floor of a large BOQ type building. No new plans for any additional medical construction has been submitted.

1. The above breakdown of funds is not exact but is an approximation due to the unavailability of complete records, however, it is considered to be an approximate estimate.
2. Floor plan, Medical and Dental Section, 32d AD(D). (s.d. E.)

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MEDICAL MATERIEL

The inadequate and makeshift furniture used in the waiting room of the dispensary has been replaced by modern up-to-date type furniture. All required medical supplies have been obtained from Griffiss Air Force Base without any difficulty. Excellent liaison was maintained with their Medical Supply Section. All AC&W sites assigned also had no difficulty in obtaining expendable medical supplies from their respective support base. Requisitioning of medical supplies is based on column A, ECL 20-90-10 dated 1 January 1953.<sup>1</sup>

AIR EVACUATION AND TRANSPORTATION OF THE SICK AND WOUNDED

Air evacuation from Hancock Field, approximately one mile from the Headquarters 32d Air Division (Defense), is available. Due to the close proximity of two Air Force Hospitals, evacuation was accomplished by the ambulance assigned.

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1. Authority established by AF Pamphlet 160-8-901 dtd 17 Apr 53.

CHAPTER III - MEDICAL STAFFING AND EDUCATION

RATIO OF MEDICAL PERSONNEL

The ratio of medical personnel to total command remained approximately the same during the months of July through December 1954.<sup>1</sup> During December, turnover of medical personnel diminished the effectiveness of the preventive medicine and staff visit programs to a degree. Although operating on slim margins, the services of various medical programs have been satisfactory.

REPLACEMENTS

Replacement of experienced medical personnel lost to overseas assignments and discharges<sup>2</sup> during December were made by inexperienced airmen with PAFSC's 90010 and utilization AFSC's 90230. Of six replacements only one indicated that he had any desire to be in the medical career field. Evaluation of the 90010 replacements could not be made at this time because of a short period of assignment. Since 31.8% of the personnel from this station are WAFs, two WAFs possessing PAFSC 90230 were assigned 19 November 1954 and have proven to be satisfactory.

CAREER FIELDS

The designation of career fields for medical service personnel

1. Chart-Ratio of Medical Personnel to total command strength.(s.d. F)
2. Medical and Dental Personnel strength, 1 July 1954 and 31 December 1954. (s.d. G)



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proved to be adequate. All professional medical personnel were non-regular. However, highly qualified, top three grade airmen generally expressed the intention of continuing their careers in the service but not with the AC&W Squadrons in this area. They indicated that they would reenlist at larger bases, preferably at hospitals located in warmer climates. Personnel of the lower four grades, especially WAF personnel, do not favor the service as a career.

TRAINING AND EDUCATION

Excellent opportunities for further education in various fields could be secured through USAFI courses, local vocational schools and the University of Syracuse. However, at the AC&W Squadrons, only USAFI courses are available. Medical personnel, in general, showed no signs of wanting to better their education during this report period. In the month of November, the base surgeon applied for the Primary Course in Aviation Medicine with expectations of being accepted for the School of Aviation Medicine, Randolph Field, Texas, held during February 1955.

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CHAPTER IV - PROFESSIONAL SERVICES

PHYSICAL STANDARDS

No problems were encountered which would reflect upon the inadequacy of physical standards for military service and the maintenance of physical fitness.

An aviation Medical Examiner has been present and had found that the physical standards set for flying personnel are adequate.

AVIATION MEDICINE

The morale and general health of flying personnel were good. There has been no undue increase in upper respiratory disease during this period and there has been no serious stress or fatigue producing factors during this time.

The practice of clinical medicine and physical examinations continues to be seriously limited due to the lack of size and equipment of the medical facility. This station operated only a small outpatient dispensary in a portion of a BOQ without x-ray and limited laboratory facilities and all such examinations had to be requested of the USAF Hospital, Griffiss AFB, Rome, New York, 45 miles distant. In-patient medical care of flying personnel was also rendered by this hospital.

There were approximately 69 pilots, 6 others and 15 crew chiefs assigned or attached to this headquarters for flying. Consequently, many man-hours were lost on annual physicals performed because

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personnel have to travel to Griffiss Air Force Base to obtain the necessary x-ray and laboratory studies. Efforts to obtain more adequate space and increase authorization of personnel are being continued.

There were periodic flying safety meetings. Adequate flying safety material was available at all times to the pilots. Personal equipment was satisfactory in quality and quantity during this report period.

Fire and crash facilities are provided by the city of Syracuse whose airport is utilized by this station for their flying operations. Casualties would ordinarily be hospitalized in civilian hospitals of the city of Syracuse until it was safe to move them to Air Force Hospitals.

#### MEDICAL SPECIALTIES

No specialties were practiced, excepting for aviation medicine and no professional personnel with specialty classifications were present for duty.

Any specialty treatment that arose was referred to either the USAF Hospital, Griffiss Air Force Base, Rome, New York or the USAF Hospital, Sampson Air Force Base, Geneva, New York.

#### PREVENTIVE MEDICINE

Environmental Sanitation. Environmental sanitation problems encountered between 1 July and 31 December 1954 were satisfactorily

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solved. Most of the AC&W Squadrons and Headquarters 32d Air Division have had difficulty with the operation of their filter beds, settling tanks and/or sewage lines. Recommendations for corrective measures was made by the Sanitary Engineer, Eastern Air Defense Force. Corrective action taken at Headquarters 32d Air Division is as follows: Modification which included the installation of cleanout reverse "Y's", the extension of all distribution laterals to the end of sewer beds and the installation of removable test plugs for cleanout purposes. A complete cleaning by removing all solids from the Imhoff septic tanks, sewer pump tank, and chlorine contact chamber and the complete cleaning and flushing of all distribution laterals and mains was also accomplished. Since this cleaning has been completed, there have been no further problems pertaining to the sewage disposal mechanisms.

Personnel Hygiene. The sanitary discipline and the physical condition of troops remains satisfactory. Bathing facilities are adequate, but are being used to the maximum due to constant increase of personnel housed on the base. This is especially true in WAF barracks. This problem will be modified when the Headquarters Squadron Section orderly room moves into the new administration building and either WAF or male airmen move into the building occupied by the orderly room personnel.

Communicable Disease. Common respiratory diseases, showing the usual seasonal incidence, were the only types of communicable diseases requiring control. The percentage this year is slightly higher, but it is probably due to the fact that the influenza immunizations were not given until the middle of November 1954, and the overly crowded

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conditions in the barracks.

Atomic, Biological and Chemical Warfare Activities. No training of personnel was undertaken in defense against atomic, biological and chemical agents.

Preventive Medicine Team. The function of the preventive medicine program has increased in the last two months of the report period. The Division Surgeon and a Staff Sergeant, AFSC 90651 or the MSC officer and Airman First Class, AFSC 90651 were making staff visits to the AC&W Squadrons. This situation burdens the Division Surgeon's office and Medical Administration Office considerably. Although this station is authorized a veterinary technician, AFSC 90870, Technical Sergeant, one has not been assigned since December 1953.

#### OUTPATIENT CARE

Outpatient care of military personnel throughout the command has been adequate. There is close liaison with nearby hospitals to which patients can be sent for hospitalization, consultation service and laboratory tests.

Each of the sites is manned by at least one independent duty technician and a part-time civilian doctor who handles the outpatient care of personnel assigned. A base surgeon is stationed at the Headquarters Squadron Section of the 32d Air Division (Defense) and with the aid of trained medical technicians, handles the outpatient care of all Army, Navy and Air Force Personnel stationed in the Syracuse Area.

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DEPENDENT CARE

Dependent care is generally satisfactory throughout the command. Dependent care at the AC&W Squadrons is limited to emergency care only.

There is a part-time civilian doctor employed at this Headquarters who has charge of the outpatient care of all military dependents residing in the Syracuse area.

SUPPORT OF SPECIAL PROGRAMS

Blood Donor Program. A blood donor file is kept up to date at each installation throughout the division for use in contacting voluntary blood donors in the event of an emergency.

The Red Cross blood collecting facilities have been made available and response throughout the command has been satisfactory.

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CHAPTER V - DENTAL SERVICE

MISSION

The command dental service provided care for Headquarters, 32d Air Division (Defense) at Syracuse with a base dental clinic and for eight (8) AC&W Squadrons with three (3) mobile dental clinics. In addition, service was provided for attached ground<sup>1</sup> observer squadrons and other incidental units in the Syracuse area. Dependents of military personnel were given as much treatment as personnel and facilities would allow.

It has been the policy of the division dental service that priority for definitive dental treatment be given in the following order:

- a. personnel in need of emergency treatment
- b. personnel requiring numerous extractions
- c. personnel in need of prosthetic appliances
- d. personnel needing extensive dental restorations and/or periodontal treatments.

To assure the arrival of a mobile dental clinic at each AC&W site approximately every six months, the division dental surgeon prepares, whenever practicable, a schedule of visits for a period of three months in advance. Tours of duty at each site have ordinarily lasted from six to eight weeks, however, when necessary, the tours may be extended to insure proper dental attention for all

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1. 32d AD Reg. 160-6, Dental Service for AC&W sites and GOS Det., dated 29 July 1953.

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members of this command. Frequency and length of visits has been determined by the dental health of personnel at all AC&W sites in the division as determined from the Report of Dental Health Classification submitted by each squadron every month.<sup>1</sup> Dental examinations have been accomplished on all personnel on each site at which a period of six months has elapsed since the previous visit. As many oral prophylaxes as possible were accomplished during each visit.

ORGANIZATION

It has been recognized that the shortage of dental officers and an almost greater shortage of trained male dental technicians has been Air Force wide. Despite this shortage, it was still considered necessary to make note of ideal requirements for complete dental service to this division because many of our personnel sent overseas go to remote and often completely isolated areas where no dental officer is available. It might be mentioned at this time that the number of assigned enlisted personnel has been far below the present authorizations and that present authorizations are far below actual personnel requirements. It has been estimated, through use of the manning tables and according to the dental equipment authorized, that proper and complete dental service could have been afforded this division with seven (7) dental officers and fourteen (14) airmen.

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1. 32d AD Reg 160-7, Report of Dental Health Classification, dated 11 Aug 53.

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PERSONNEL

At the end of December 1954 there were five dental officers and five airmen assigned to the dental service. During the period of 1 July 1954 to 31 December 1954, two dental officers were separated from service and two dental officers reported for duty. One airman was discharged during this period and one was assigned. One airman, 90910 with utilization AFSC 90930, was forecasted for arrival approximately 11 December 1954. Subject airman had not reported at termination of this report period, 31 December 1954.<sup>1</sup>

On-the-job training was modified in accordance with new directives and has progressed satisfactorily during this period.

One officer, but no airmen, were promoted during this six month period.

The duties of all enlisted men were further increased due to the lack of sufficient airmen to properly distribute the workload and the replacement of one trained airman (90950) by an untrained airman (90910).

Laboratory technicians continued to spend most of the time working as chair assistants, performing only limited laboratory work. Airmen were still required to operate and maintain other types of non-dental equipment installed in mobile dental trailers in addition to standard dental equipment.

Morale remained at a high level during this period despite extra

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1. Information received in January 1955 that assignment of subject airman had been cancelled.

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workload on both officers and airmen.

RESEARCH

No research has been possible during this period.

EQUIPMENT AND SUPPLIES

Three mobile dental clinics were available for furnishing dental service to AC&W Squadrons and Ground Observer Detachments. Each was equipped with a complete two-chair unit, x-ray facilities and a prosthetic laboratory.

With the coming of colder weather in the months of October, November and December, the problems of operating mobile dental clinics began to mount. There has been a growing reluctance on the part of AC&W Squadron Commanders to allow the mobile dental clinic to be housed in their respective motor pools during cold weather. This problem was discussed with Lieut. Col. Bernard B. Morgan, EADF Dental Surgeon, during a staff visit in September 1954. It was suggested by him that arrangements be made with all squadron commanders to have boiler-room personnel at each site check the operation of space heaters at least every three hours during off duty periods. This continuous operation may lead to overwork of the space heaters during prolonged cold periods, causing them to operate erratically.

In August 1954, one mobile dental clinic was sent to the auto maintenance shop at Griffiss Air Force Base for the purpose of

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installing a new air conditioning unit and overhauling vital operating equipment. The mobile dental clinic was returned in September with all work completed. A perfunctory check of repairs and modifications supposedly made showed many of these repairs were highly unsatisfactory or not completed. The mobile dental clinic was returned immediately to Griffiss Air Force Base for correction of discrepancies. Maintenance personnel estimated that the mobile dental clinic would be ready in approximately one month. In view of this fact, one of the other mobile dental clinics remained at Syracuse. This was done in order to avoid any further delay in preparing it to go to Griffiss Air Force Base as soon as the mobile dental clinic was returned completely reconditioned. During its stay at Syracuse, the mobile dental clinic was used to orientate two new dental officers with its function and operation. At the conclusion of the period covered by this report, the mobile dental clinic sent to Griffiss Air Force Base still has not been returned.

In contrast to the above, it should be noted that supply problems have diminished a great deal during this report period primarily due to the cooperation of a new medical supply officer, 1st Lt. Eller, USAF (MSC), Griffiss Air Force Base, Rome, New York, who has honestly and sincerely tried to understand and help solve the supply problems arising due to our unusual functional structure.

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CHAPTER VI - VETERINARY SERVICE

Veterinary service during this period was provided to all units of this command by support bases.

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SUPPORTING DOCUMENTS

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EADFR 23-5

EADF REGULATION )  
:  
NUMBER 23-5 )

HEADQUARTERS EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.  
26 July 1954

## ORGANIZATION - FIELD

Mission of 32d Air Division (Defense)

(Supersedes EADFR 23-5, 24 Nov 53, and EADFR 23-5A, 22 Apr 54)

1. Mission. The missions of the 32d Air Division (Defense) in order of general priority are:

a. To conduct the air defense of a sector of the Eastern Air Defense Force region. That sector is defined as: that area of the Continental United States north of a line beginning on the U.S.-Canada international boundary at  $42^{\circ} 18' N - 80^{\circ} 30' W$ ; thence east to  $42^{\circ} 15' N - 79^{\circ} 45' W$ ; thence south and east along the New York State border to  $42^{\circ} 00' N - 78^{\circ} 28' W$ ; thence northeast to  $42^{\circ} 36' N - 76^{\circ} 55' W$ ; thence south and east to  $42^{\circ} 25' N - 75^{\circ} 25' W$ ; thence south and east to  $42^{\circ} 00' N - 74^{\circ} 28' W$ ; thence east to  $42^{\circ} 00' N - 73^{\circ} 35' W$ ; thence north and east to  $42^{\circ} 03' N - 73^{\circ} 30' W$ ; thence east along the southern border of Massachusetts to the Atlantic coast; thence extending out to sea on an azimuth of  $122^{\circ}$  true to the limit of radar surveillance and controlled fighter-interceptor capability, and including the area eastward to the limit of radar surveillance and controlled fighter-interceptor capability, adjacent to the Eastern Seaboard of the Continental United States north of the above described line to a line beginning at a point  $44^{\circ} 30' N - 67^{\circ} 07' W$ ;  $44^{\circ} 30' N - 66^{\circ} 45' W$ ;  $43^{\circ} N - 65^{\circ} 47' W$ ; then extending through a point at  $41^{\circ} N - 61^{\circ} 20' W$  to the limit of radar coverage and controlled fighter-intercept capability.

b. \* \* \* \*

BY ORDER OF THE COMMANDER:

OFFICIAL:

GEORGE F. SMITH  
Brigadier General, USAF  
Vice Commander

t/s/J. W. FOUNTAIN, JR.  
Major, USAF  
Asst Adjutant

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*Nickolas F. Kobylak*  
NICKOLAS F. KOBYLAK  
Capt., USAF (MSC)  
Div Med Sv Admin

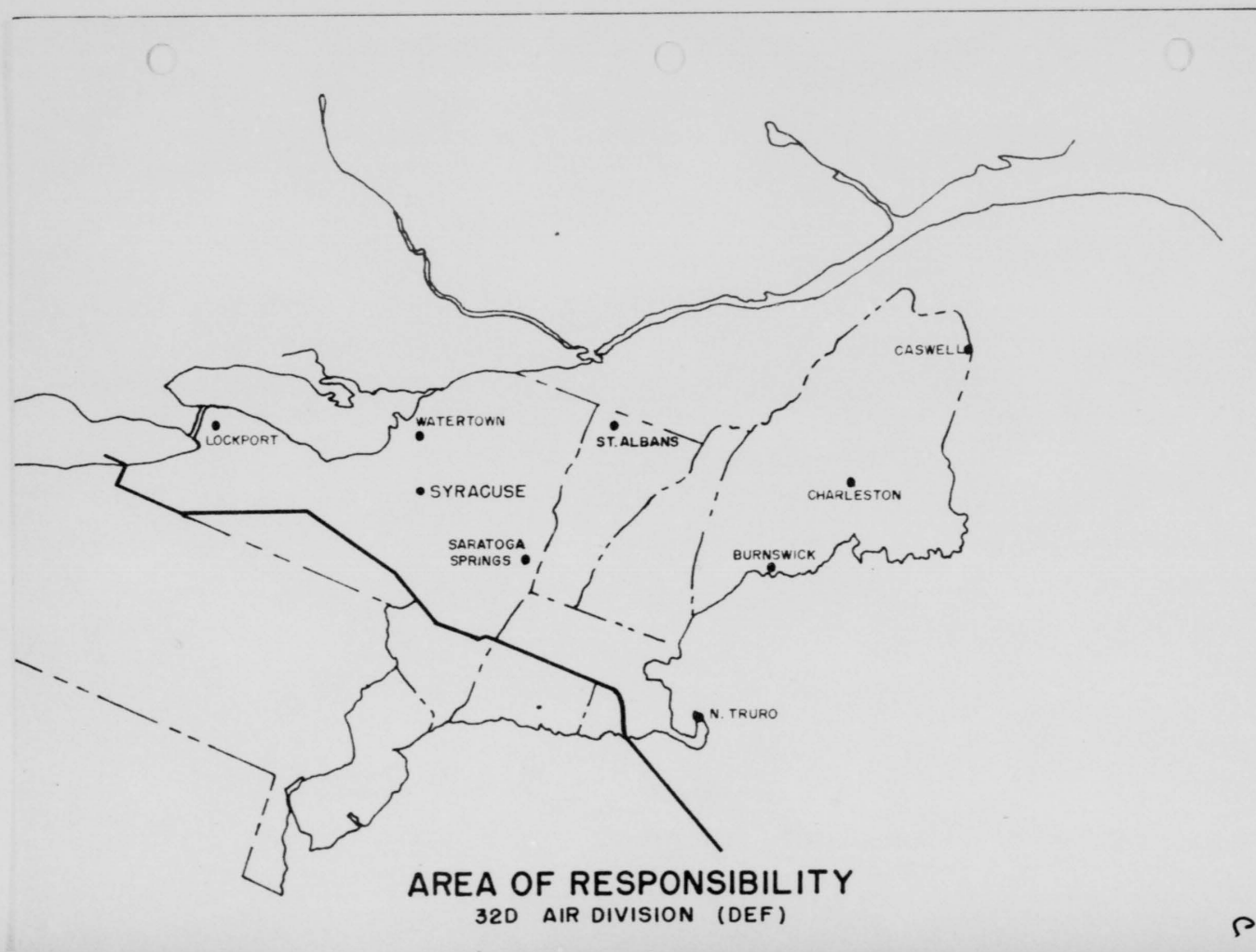
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DATA ON THE DISTANCE OF US GOV'T OPERATED MEDICAL FACILITIES THAT ARE NEAREST TO AIR FORCE STATIONS OF  
THE 32D AIR DIVISION (DEFENSE)

AF STATION NUMBER	NAME OF AF STATION	LOCATION OF AF STATION	NAME OF THE NEAREST US GOV'T OPERATED MEDICAL FACILITY	TYPE OF FACILITY	DISTANCE FROM AF STATION
654th	Brunswick Air Force Station	Brunswick, Maine	U.S. Navy Station Infirmary	Infirmary	Located on Station
655th	Watertown Air Force Station	Watertown, New York	2845th USAF Hospital Griffiss AFB Rome, New York	Hospital	80 miles
656th	Saratoga Springs Air Force Station	Saratoga Springs, New York	U.S. Army Dispensary Schenectady Army Gen. Dep. Schenectady, New York	Dispensary	30 miles
762d	North Truro Air Force Station	North Truro, Massachusetts	564th USAF Hospital Otis Air Force Base Falmouth, Massachusetts	Hospital	65 miles
763d	Lockport Air Force Station	Lockport, New York	USAF Infirmary Niagara Falls AFB Niagara Falls, New York	Infirmary	6 miles
764th	St. Albans Air Force Station	St. Albans, Vermont	517th USAF Infirmary Ethan Allen AFB Winooski, Vermont	Infirmary	30 miles
765th	Charleston Air Force Station	Charleston, Maine	506 Tac Hospital Dow AFB Bangor, Maine	Hospital	26 miles
766th	Caswell Air Force Station	Limestone, Maine	42 Tac Hospital Limestone AFB Limestone, Maine	Hospital	8 miles

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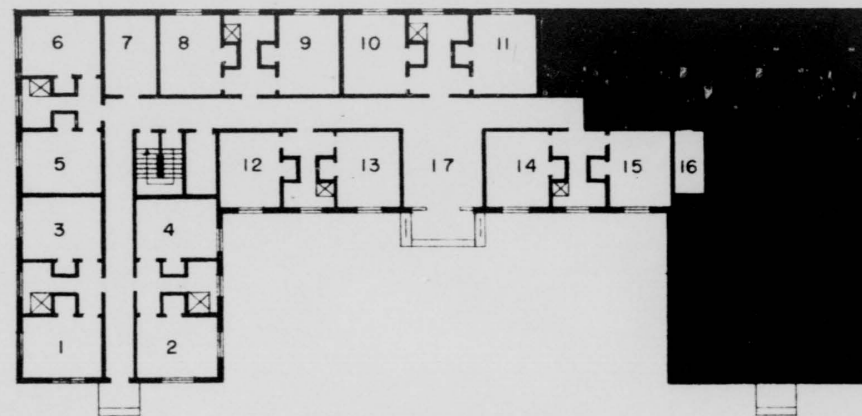


\*TD FOR MEDICAL - DENTAL SECTIONS

HEADQUARTERS, 32D AIR DIVISION (DEFENSE) AS OF JULY 1954

TITLE	AFSC	TOTAL CIVILIAN	TOT OFF	GEN	COL	LT COL	MAJ	CPT	LT
			TOT AMN	MSG	TSG	SSG	A/1C	A/2C	A/3C
Med Svs Administrator	99025		1					1	
Medical Staff Officer	99316		1			1			
Medical Officer General	99326	2							
Medical Officer General	99326		1					1	
Dental Officer General	99826		5				1	4	
Medical Service Specl	90250		2				2		
Medical Service Supv	90270		1		1				
Med Administrative Aprn	90631		1					1	
Senior Medical Adm Specl	90651		2			2			
Med Administrative Supv	90670		1	1					
Veterinary Technician	90870		1		1				
Dental Apprentice	90930		2					2	
Dental Specialist	90950		2				2		
Sr Dental Lab Specialist	90951		2			2			
Dental Supervisor	90970		1		1				

\*Taken from Non T/O Personnel Authorization Table, P.A.V., July 1954



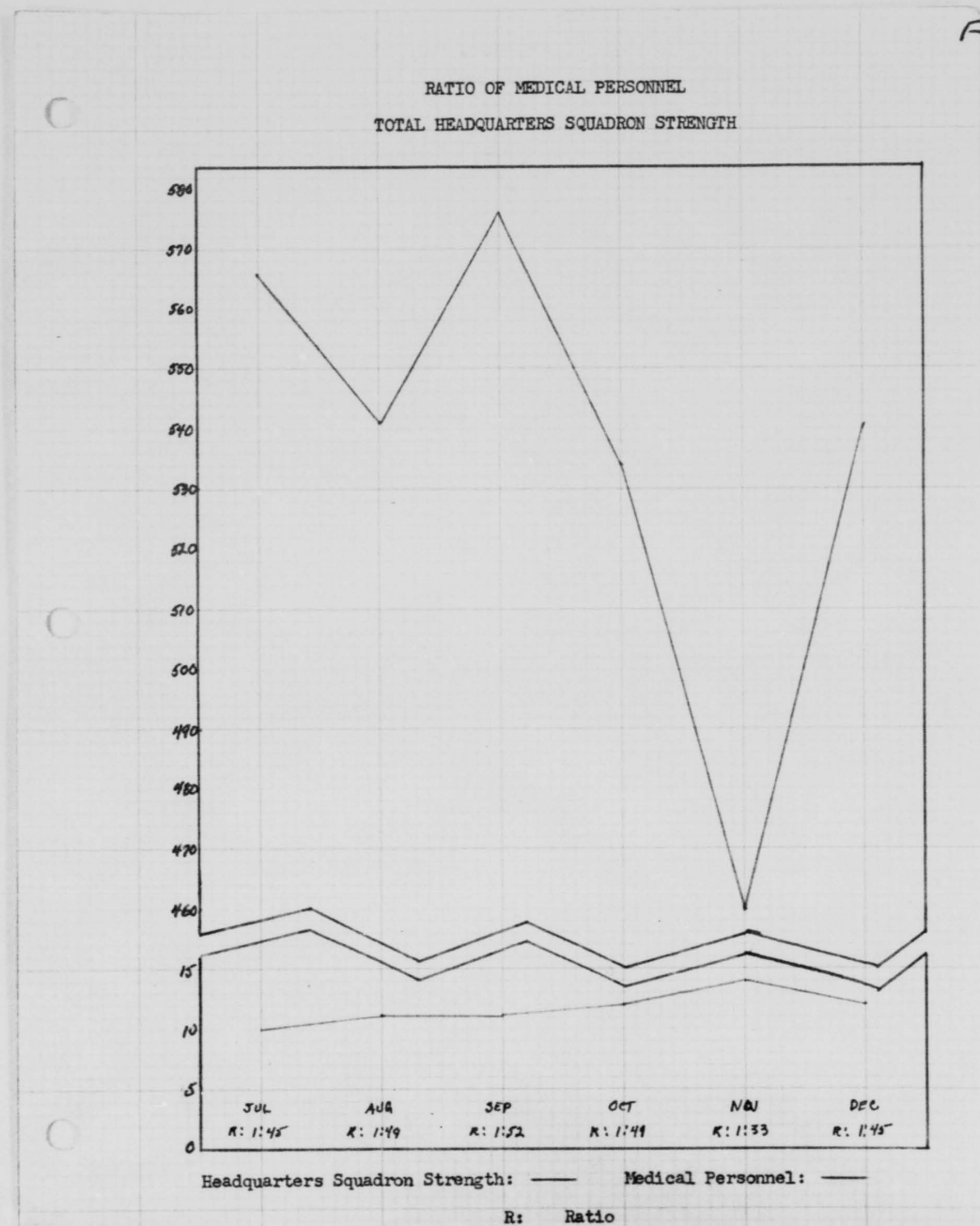
1. Dental Operating Room
2. Dental Operating Room
3. Dental Laboratory
4. Dental Administrative Office
5. Dental Surgeons Office
6. Division Surgeon
7. Dental Supply Room
8. Medical Administrative Office

FLOOR PLAN

MEDICAL & DENTAL SECTION

32d A D (D)

9. Medical Administrative Office
10. Sick Call Office
11. Base Surgeons Office
12. Physical Examination Room
13. Physical Examination Room
14. Treatment Room
15. Treatment Room
16. Medical Supply Room
17. Waiting Room



MEDICAL AND DENTAL PERSONNEL STRENGTH  
1 JULY 1954 AND 31 DECEMBER 1954

<u>1 JULY 1954</u>			<u>31 DECEMBER 1954</u>		
<u>NAME</u>	<u>PRINCIPAL DUTY TITLE</u>	<u>AFSC</u>	<u>NAME</u>	<u>PRINCIPAL DUTY TITLE</u>	<u>AFSC</u>
<u>OFFICE OF THE SURGEON AND</u> <u>DIVISION MEDICAL ADMINISTRATIVE SECTION</u> <u>AT HQ, 32D AD(D)</u>					
Major G. K. Reberdy	Med Off. General	9326	Major G. K. Reberdy	Med Off. Avn Med	9356
Capt. N. F. Kobylk	Med Admn	9025	Capt. N. F. Kobylk	Med Admn	9025
S/Sgt G. A. Wetherbee	Sen Med Admin Spec1	90651	1/Lt. W. T. Shultz	Med Off. Gen	9326
A/lc L. O. Dunson	Sen Med Admin Spec1	90651	A/lc L. O. Dunson	Sen Med Admin Spec1	90651
Miss E. E. Lynch	Clerk-Steno (Civ)	70251	A/3c J. A. Zaccari	Div Med Admin	90010
			Mrs. B. J. Baranello	Clerk-Steno (Civ)	70251
<u>DENTAL SECTION AT HQ, 32D AD(D)</u>					
Major C. J. Noga	Dental Off. Gen	9826	Major D. J. Noga	Dental Off. Gen	9826
Capt. J. D. Herzog	Dental Off. Gen	9826	Capt. G. C. Lutfy	Dental Off. Gen	9826
1/Lt. G. C. Lutfy	Dental Off. Gen	9826	1/Lt. R. J. Vanacek	Dental Off. Gen	9826
Capt. E. J. Marino	Dental Off. Gen	9826	1/Lt. R. R. Hooper	Dental Off. Gen	9826
1/Lt. J. F. Principe	Dental Off. Gen	9826	1/Lt. J. F. Principe	Dental Off. Gen	9826
A/lc R. D. Bergeron	Sen Dental Spec1	90950	S/Sgt L. H. Huls	Sen Dental Spec1	90950

MEDICAL AND DENTAL PERSONNEL STRENGTH  
1 JULY 1954 and 31 DECEMBER 1954

<u>1 JULY 1954</u>			<u>31 DECEMBER 1954</u>		
<u>Name</u>	<u>Principal Duty Title</u>	<u>AFSC</u>	<u>Name</u>	<u>Principal Duty Title</u>	<u>AFSC</u>
<u>DENTAL SECTION (CONTINUED)</u>					
S/Sgt L. F. Huls	Sen Dental Spec1	90950	A/1c R. D. Bergeron	Sen Dental Spec1	90950
A/1c F. P. Kwapniewski	Sen Den Lab Spec1	90951	A/1c F. P. Kwapniewski	Sen Den Lab Spec1	90951
A/1c A. W. Zedella	Sen Dental Spec1	90950	A/1c R. A. Callender	Den Lab Apr	90931
A/2c R. A. Callender	Den Lab Apr	90931			
<u>BASE DISPENSARY AT HQ. 32D AD(D)</u>					
S/Sgt C. A. Burgess	Med Sv Supv	90270	S/Sgt C. A. Burgess	Med Sv Supv	90270
A/1c A. A. Munoz	Med Sv Apr	90230	A/1c A. A. Munoz	Sen Med Sv Spec1	90250
A/2c E. A. Metz	Sen Med Sv Spec1	90250	A/1c E. A. Metz	Sen Med Sv Spec1	90250
A/3c M. E. Griffin	Med Helper	90010	A/3c R. J. Richardson	Med Sv Apr	90230
Dr. J. M. Katz	3/4 Time Civ Phys	9326	A/3c D. E. Olson	Med Sv Apr	90230
			Dr. J. M. Katz	3/4 Time Civ Phys	9326(MD)
<u>654th AC&amp;W SQ. BRUNSWICK, ME.</u>					
T/Sgt G. M. McNeil	Med Sv Supv	90270	S/Sgt G. M. McNeil	Med Sv Supv	90270

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MEDICAL AND DENTAL PERSONNEL STRENGTH  
1 JULY 1954 and 31 DECEMBER 1954  
(CONTINUED)

<u>1 JULY 1954</u>			<u>31 DECEMBER 1954</u>		
<u>NAME</u>	<u>Principal Duty Title</u>	<u>AFSC</u>	<u>Name</u>	<u>Principal Duty Title</u>	<u>AFSC</u>
<u>655th AC&amp;W SQ. WATERTOWN, N.Y.</u>					
T/Sgt A. A. Wickins	Med Sv Supv	90270	T/Sgt A. A. Wickins	Med Sv Supv	90270
S/Sgt W. F. Berard	Med Sv Supv	90270	T/Sgt W. F. Berard	Med Sv Supv	90270
A/2c C. C. Roach	Sen Med Sv Spec1	90250	A/2c C. C. Roach	Sen Med Sv Spec1	90250
Dr. L. C. Battista	¼ Time Civ Phys	9326(MD)	Dr. L.C. Battista	¼ Time Civ Phys	9326(MD)
<u>656th AC&amp;W SQ. SARATOGA SPRINGS, N.Y.</u>					
T/Sgt W. E. Clark	Med Sv Supv	90270	T/Sgt W. E. Clark	Med Sv Supv	90270
S/Sgt J. L. Colburn	Sen Med Sv Spec1	90250	A/2c N. N. Galvin	Sen Med Sv Spec1	90250
A/2c N. N. Galvin	Sen Med Sv Spec1	90250	Dr. C. Collins	1/4 Time Civ Phys	9326 (MD)
Dr. C. Collins	1/4 Time Civ Phys	9326(MD)			
<u>762D AC&amp;W SQ. NORTH TRURO, MASS.</u>					
T/Sgt W. L. Leutzinger	Med Sv Supv	90270	T/Sgt W. L. Leutzinger	Med Sv Supv	90270
T/Sgt A. V. Poor	Med Sv Supv	90270	T/Sgt A. V. Poor	Med Sv Supv	90270
A/2c J. W. Snyder	Med Sv Apr	90230	A/2c J. W. Snyder	Med Sv Apr	90230
Dr. T. F. Perry	1/4 Time Civ Phys	9326(MD)	Dr. T. F. Perry	1/4 Time Civ Phys	9326(MD)

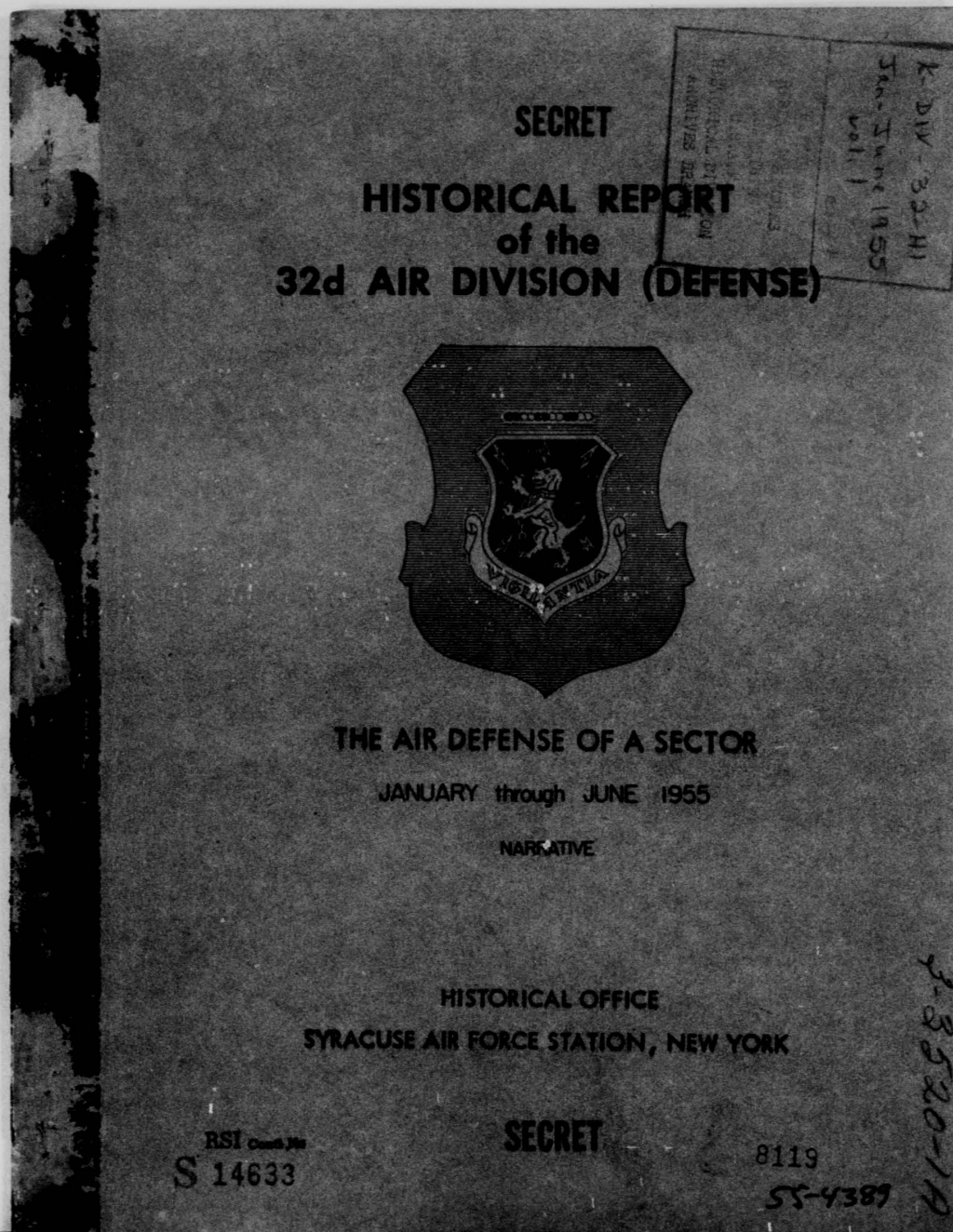


MEDICAL AND DENTAL PERSONNEL STRENGTH  
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<u>763D AC&amp;W SQ. LOCKPORT, N.Y.</u>					
M/Sgt J. A. Wright	Med Sv Supv	90270	M/Sgt J. A. Wright	Med Sv Supv	90270
S/Sgt W. Ash	Med Sv Supv	90270	S/Sgt W. Ash	Med Sv Supv	90270
			A/3c G. L. Pretzer	Med Sv Apr	90010
<u>764TH AC&amp;W SQ. ST. ALBANS, VT.</u>					
T/Sgt L. D. Mitchell, Jr.	Med Sv Supv	90270	S/Sgt S. L. Levandowski	Sen Aero-Med Spec1	90150
S/Sgt C. S. Smiley	Med Sv Supv	90270	A/3c J. J. Rao	Med Sv Apr	90010
A/1c S. L. Levandowski	Sen Aero-Med Spec1	90150	Dr. C. D. Marshall	1/4 Time Civ Phys	9326(MD)
Dr. C. D. Marshall	1/4 Time Civ Phys	9326(MD)			
<u>765TH AC&amp;W SQ. CHARLESTON, ME.</u>					
T/Sgt R. A. Hubbert	Med Sv Supv	90270	T/Sgt R. A. Hubbert	Med Sv Supv	90270
A/1c R. P. Hicks	Med Sv Supv	90250	A/3c D. P. Yascavage	Med Sv Apr	90010
Dr. L. J. Stitham	1/4 Time Civ Phys	9326(MD)	A/3c J. J. Travalini	Med Sv Apr	90010
			Dr. L. J. Stitham	1/4 Time Civ Phys	9326(MD)

MEDICAL AND DENTAL PERSONNEL STRENGTH  
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 (CONTINUED)

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<u>Name</u>	<u>Principal Duty Title</u>	<u>AFSC</u>	<u>Name</u>	<u>Principal Duty Title</u>	<u>AFSC</u>
<u>766TH AC&amp;W Sq. LIMESTONE, ME.</u>					
T/Sgt D. F. Humphreys	Med Sv Supv	90270	S/Sgt D. L. Green	Sen Med Sv Spec1	90250
S/Sgt D. L. Green	Sen Med Sv Spec1	90250	A/3c D. R. McCarthy	Med Sv Apr	90010



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HISTORICAL REPORT  
of the  
32D AIR DIVISION (DEFENSE)  
Number Eighteen

THE AIR DEFENSE OF A SECTOR  
January through June 1955

RCS: AU-D5

Chain of Command  
Eastern Air Defense Force  
Air Defense Command  
United States Air Force

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*Robert S. Israel Jr.*  
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Brigadier General, USAF  
Commander



FOREWARD

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This history is generally styled after the previous histories of my predecessor, Keith B. Berwick. Qualifying this further, his outline and last minute suggestions were followed, but not without some deviation. With all fairness to him, he cannot be held responsible for any grammatical eccentricities within the narrative.

The narrative has eight volumes of supporting documents which are obtainable at the Division Historical Office. The indexes to these are incorporated within the narrative to expedite referencing. Also on file at the Division Historical Office are the other reference materials, such as Air Defense Command and Eastern Air Defense Force histories.

Appreciation is extended to those staff members who consistently yielded their files, time, and good nature for the benefit of accuracy. Beneficial criticism and suggestions were voiced from a number of quarters, more notably Brigadier General Robert S. Israel, Jr., Colonel Leslie C. Heartz, and Lieutenants Edmund Eglinski and Joseph N. Morgenstern. Lieutenant Eglinski also wrote portions of the work dealing with Anti-aircraft Artillery and Nike, and Command Post Exercises "Snow Bird" and "Low Blow".

Many of the supporting documents were typed by Mrs. Thelma Hammer. The balance of the documentation and the narrative was typed time and again by Miss Barbara Wyllie. Her consistently good nature never seemed to be taxed, even though she accepted rejection and disapproval in much the same frame of mind as the historian.

Airman First Class Bess Melvin contributed valuable effort by assisting Miss Wyllie in the latter stages of completing the history. Mrs. Keith Berwick designed the covers, and Mr. Robert Horrigan bound the volumes.

Syracuse Air Force Station  
8 December 1955

Nathaniel Huggins, III

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CHAPTER ONE: DETECTION

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Canada

The air defense of the United States is inextricably interwoven with that of Canada.<sup>1</sup>

As the potential threat of enemy airpower and associated nuclear weapons increases in magnitude, time is of the essence; in the case of air defense, it becomes the most formidable and ominous aspect of all. Some comfort can be found in Canada's vast area, and the fact that there is a widespread radar network covering a major portion of this area.

The period under study saw no major changes in the Canadian radar network to the North of the 32d Air Division Sector. At the

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1. Joint Progress Report, July 1954, p 4.

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close of the period, there were 13 radar stations in operation on a 24 hour basis.<sup>2</sup> Of these, nine were operating 16 hours as early warning stations; the other eight hours were spent on ground controlled intercepts. The other four were early warning stations, although one was an ADDC. The ground controlled intercept limitations imposed upon the nine ADDCs are a result of communications and manning.<sup>3</sup>

At first glance, the problems involved in such a system

2. The following is an extract from the 32nd ADiv Hist Rept 17, p 33, giving the names and control centers and other pertinent data of the 13 radar stations above the 32d Air Division sector.

Maritime, 2 ADDC, Ste. Margaret, N.B.			
C-5	Ste. Margaret, N.B.	DC/CC	FPS-3
C-11	Halifax, N.S.	EW	CPS-6B
C-34	Sydney, N.S.	EW	FPS-3
C-33	Moisie, P.Q.	EW	FPS-3
Eastern Sector, 1 ADDC, Lac St. Denis, P.Q.			
C-2	Lac St. Denis, P.Q.	DC/CC	CPS-6B
C-6	Ste. Marie, P.Q.	DC	CPS-6B
C-1	Mont Apica, P.Q.	DC	FPS-3
C-7	Parent, P.Q.	DC	FPS-3
Central Sector, 3 ADDC, Edgar, Ont.			
C-4	Edgar, Ont.	DC/CC	FPS-3
C-8	Sennetree, P.Q.	DC	FPS-3
C-3	Foymount, Ont	DC	FPS-3
C-9	Falconbridge, Ont	DC	FPS-3
C-10	Remore, Ont.	EW	FPS-3

C-10 at Remore was USAF-manned, and was under the operational control of the 30th ADiv. These resources are described in some detail and portrayed on a map in 32d ADiv Hist Rept 15, pp 12-16.

3. EADF General Commentary on State of Combat Readiness, 30 June 1955, p 14.

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as a radar network seem almost superhuman; not so much from the standpoint of the unit per se, but cross-border coordination with the radar network of another nationality - more specifically that of the 32d Air Division. The problem in its simplest state can be one of terminology; from there, it can mushroom into a complex involving every problem that has ever arisen in a radar network. Much of this had been solved by systematically standardizing regulations involving flight plans, cross-bordering training,<sup>4</sup> and other forms of indoctrination too numerous to mention. The success of this is readily discernable when one is confronted with the following extracts of letters relating to USAF - RCAF exchange visits.<sup>5</sup>

The visits were arranged for the expressed purpose of reviewing communications facilities. The visitors displayed the greatest interest in facilities and equipment directly relating to the C&E field and in particular to maintenance. Visitors were of high intelligence with above average technical knowledge in the AC&W field. Their questions were of an informative type and it is believed that the real object of the visit was the same as the expressed objective.

And Again:

GCI Director was intelligent and well informed, highly literate. Enlisted personnel were capable and well trained. All four were supervisory personnel; expressed desire for further exchange visits between their personnel and ours.

- 
4. Ltr & Inds, Senior Director to 766th AC&W Sq., "(UNCL) Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru 20, 1954", undated (s.d. 4).
- 2/ 1. Ltr, 32d ADiv to EADF, "Report of Disclosure of Classified Information to Foreign Nationals", 19 Jan 55, (s.d. 5/1).
2. Ltr & Ind, 27th FIS to 32d ADiv, "Visits of Foreign Nationals", 31 Mar 55, (s.d. 5/2).

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On 2 December 1952, the Air Defense Commands of USAF and RCAF held a conference at which the entire concept of joint operations between the two was outlined. This embodied the basics of air defense, such as sector and subsector boundaries, Canadian Air Defense Identification Zones (CADIZ), Perimeter Identification Zones (PIZ), "Q" Areas, and Security Identification Zone (SIZ),<sup>6</sup> to the

6. It is perhaps better to outline and briefly describe them as outlined in RCAF AC&W Instructions, Inst 5-10, 1 Aug 54, pp 1-2.

Canadian Air Defense Identification Zone (CADIZ) - An Airspace of defined dimensions extending upwards from the surface of the earth in which flights at or above 4,000 feet over the immediate territory must be conducted in accordance with certain rules designated to facilitate the ready identification of aircraft. Track identification within a CADIZ is required as outlined in para (10) of this instruction. The boundaries of the CADIZs are outlined in AC&WI 5-8.

Perimeter Identification Zones (PIZ) - A designated airspace from the ground up in which track identification is required as outlined in para (10) of this instruction. The boundaries of the PIZ are outlined in Appendix "A" to this instruction.

"Q" Areas(s) - An area designated by the AOC ADC surrounding aerodromes or adjacent to airways, wholly within Canada in which originating tracks may be assumed to be friendly in that their originating point is known, but their actual identity as to specific aircraft may not be known. The boundaries of the "Q" Areas are outlined in Appendix "B" to this instruction.

Security Identification Zone (SIZ) - An airspace of defined dimensions designated by the Department of Transport, extending upwards from the surface of the earth to an altitude of 4,000 feet above the immediate terrain, through which southbound flights must be conducted in accordance with certain rules designated to facilitate ready identification of the aircraft. Track identification within a SIZ is required as outlined in para (10) of this instruction. The boundaries of the SIZ are outlined in Appendix "B" to AC&W 5-8.

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seemingly more intangible areas (delicate ones, at that) of risks of engagement. All of these possible trouble areas were nullified, when they were outlined in a series of ADC Regulations.

The operational subsector boundaries of various USAF AGEN squadrons have remained relatively unchanged. Two letters from EADF to the 32d Air Division did outline a few changes in sector operation, but it affected only those stations in the 30th Air Division whose operational sectors were entirely within Canada.<sup>7</sup> It did not affect 32d Air Division policy.

However, the division was not entirely dissociated from these sector adjustments in June; this headquarters sent a letter to ADC with comments and recommendations as to the "Relocation of Security Identification Zone (SIZ)".<sup>8</sup> This headquarters felt that the SIZ should be moved farther North, and for four apparently very excellent reasons. The first is the fact that it would give more time for intercepts; secondly, the vital target areas will then be somewhat isolated, or at least farther from the SIZ, giving them more protection in terms of time. Thirdly, the relocation of the SIZ to the 48th parallel would ease the problem of flight plan correlation, giving the correlation line more proximity to the reporting points.

- 
- 2/ 1. Ltr, EADF to 32d ADiv, "(Unclassified) Operational Subsector Boundaries", 2 May 55 (s.d. 7/1).  
 2. Ltr, EADF to 32d ADiv, "(Unclassified) Operational Subsector Boundaries", 26 May 55 (s.d. 7/2).  
 3. Ltr, 32d ADiv to EADF, "Relocation of Security Identification Zone" (SIZ)", 1 Jun 55 (s.d. 8).

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Lastly, a greater civilian population in this area would do well to augment GAC activity. Also, the latest radar coverage charts would indicate that there is better coverage along this parallel than the two preceding ones. In terms of chief Canadian cities, it should be noted that the 48th Parallel is well above Ottawa and Montreal, these being the largest from the standpoint of a civilian and industrial complex. From the standpoint of our own defenses, the major one being Loving Air Force Base, this roughly gives it an added 70 miles of Northern protection. In terms of the future, with the new SAC base at Flattsburg, New York, under construction, it would do well to have this parallel utilized as a basis for the SYZ.

Of course, the prime element behind this reasoning is that of time; any geographic extension to the North will give the air defense mission additional latitude; certainly this applies to the industrial complexes of the larger Northern cities, but more specifically, it embodies a wider margin of warning for the Strategic Air Command bases located within the Northern extremities of the United States.

There were still some major problems in the radar system. One of the most important was that of the Air-Filed Flight Plan; the lack of communication between Goose Bay and the Moncton ARTC Center; i.e., the flight plans were not identified as to whether they were air-filed or ground-filed. Consequently, the 766th AC&W Squadron would receive these reports from Boston, and they would immediately declare the flights unknown. The result was the scrambling of active

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air defense planes from the Presque Isle area, thereby jeopardizing the defense of Presque Isle and Loring Air Force Bases. As was pointed out by this headquarters, this problem could be alleviated by having the Montreal ATTC Center specify what type of plan has been filed when relaying the information to the Boston ATTC Center.<sup>9</sup> Once again, communications was at fault; a fault that can be relieved to a great extent by standardization of communications directives.<sup>10</sup> This also has been very apparent when reciprocal operations between RCAF and USAF fighter-interceptors and their allied radar stations are discussed in Chapter IV.

Having largely supplanted their operational deficiencies with more emphasis on training, the air defense system of Canada has well established itself as a definite deterrent to attack. Granted, their full operational capabilities have not been reached; they suffer from many of the inadequacies that the air defense system of the United States suffered from in its early stages, mainly manning and communications. But nonetheless, it is a positive system, its inherent

9. Ltr, 32d ADiv to BMDP, "Air-filed Flight Plans", 5 May 55 (s.d. 9).

10. A major step in this direction is the letter from Headquarters, USAF, implementing a new directive to be applicable for all "United Kingdom, Canada, US Joint, and Intra-Air Force Use". It is a standardization of tape relay procedures for all those units incorporating tape facilities.

Ltr 2 Inis, Hq USAF to ADC, "(Unclassified) Implementation of ACP 127(B), Communications Instructions Tape Relay Procedures", 29 Mar 55 (s.d. 10).

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strength within the Canadians themselves, and a vast land area to the North. The latter perhaps is a basic weakness; this remains to be seen.

#### Picket Vessels

With the operational characteristics of aircraft steadily increasing, there is a naturally more versatility within their capability to deliver an attack. This attack does not have to come directly from a polar route, but can be a flanking attack by way of the sea. Also, consideration has to be given to the fact that antisubmarine operations (ASW) should have a high priority, as newer types of submarines will have the deadly potential of launching missiles many miles from shore, and can undertake mining operations.

Shore based planes are handling the major portion of the ASW operations; two different type ships have been put into use as Picket Vessels (PVs) for early warning purposes, and are manning six stations off shore. Two of these stations are within the 32d Air Division sector, and their highly successful operations have been a great asset to early warning. Colonel Robert S. Israel, Jr., in a letter addressed to the Commander of Escort Squadrons 16, acknowledged their contribution toward the air defense effort, noting in particular the accuracy of their reports, and the excellent cooperation shown by the personnel on these ships.<sup>11</sup>

11. Ltr, Col Robert S. Israel to Cmdr, Escort Squadron 16, "Letter of Appreciation", 29 Mar 55 (s.d. 11).

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The two stations within the 32d Air Division sector are both approximately 100 miles from shore. Both stations can be defined as a square, 25 miles on each side, with a fixed geographic point in the center. Any report of aircraft from the two PVs is given in relation to this point. Station 1 is manned by Destroyer Escort Radar (DER) ships, and station 2 is manned by modified Liberty Ships known as Ocean Radar Station Ships (YAGRs). These are the two basic types of PVs. It is interesting to note that when these ships are on station, they are under the operational control of CINCONAD, not the Navy.<sup>12</sup> Both stations are respectively working with the 654th AC&W squadron and the 752nd AC&W Squadron. The system is designed so that Air Force planes may have joint operations with the PVs, the latter acting as OOI stations when the need arises.<sup>13</sup> The PVs paint all tracks, flash them back to their shore stations, treating them as unknown until their respective shore stations advise them as to the identity of the unknown.<sup>14</sup> Problems of coordination have been stemming from the

12. These ships are at their duty station for only one week. While sailing for their stations, or returning, they revert to immediate operational control of Commander Eastern Sea Frontier (CESF) and Commander Destroyers Atlantic (COMDESLANT).

13. There is one problem that should be mentioned at this point; there is a general apprehension of ADC pilots to fly over water for sustained flights. This can be understood if they are not thoroughly familiar with ditching operations. More to the point, so much fuel may be required to get to the intercept area that will greatly restrict the time element in the air for the purpose of the intercept, or combat.

14. Interview with Lcdr B. Sevilla, Navy Liaison Officer to this headquarters, 11 Oct 55. Credit is due Lcdr Sevilla for his help in discussing most of the material on PVs.

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inadequacy and lack of communications between the AC&W Squadrons and their sea-going counterparts. The PVs have been consistently picking up tracks 200 miles from their shore stations; sometimes this has been extended as far as 240 miles. Unfortunately, flight plan correlation sometimes has not been received by the PVs, and after one to five minutes, tactical action has to be taken; this requires scrambling air defense planes from the mainland to intercept planes that are usually civilian aircraft on overseas flights.<sup>15</sup>

Another problem which became quite evident was that of ASW operations.<sup>16</sup> OPX "Low Blow" brought this to a head, even though it

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- 15/ 1. Memorandum, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of Activities for period ending 28 February 1955" 1 Mar 55 (s.d. 15/1).  
It was also noted in this memorandum that the PVs do not have the necessary performance data of USAF planes that they have to control. This material was requested from Operations and training, this Headquarters, and was forwarded at a later date to Picket Vessel Headquarters within a month.
2. Ltr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of Activities for period ending 31 Mar 55", 1 Apr 55 (s.d. 15/2).

16. Interview with Lcdr B. Sevilla, 12 Oct 55. It was pointed out that the problem is nullified to a great extent, with better training and indoctrination for Navy Pilots. The violations and consequent intercepts were a result of new units coming in to the air defense area, and not familiar with any changes in operational procedure, or the planes being blown off course. The 654th AC&W Squadron at Brunswick Naval Air Station is the unit which is now indoctrinating pilots on new procedures for ASW operations.

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only simulated emergency operations.<sup>17</sup> It simply brought out the fact that AEW control will require more coordination than heretofore has been experienced, the ideal end being contact with these plans at all times, or at least previously filed flight plans. This will save undue tactical action for planes on alert status. Also, the 763d AC&W Squadron at North Truro pointed out that the FVs are potential AC&W squadrons, and should therefore receive all mission information that any of the shore based AC&W squadrons would normally receive. This was brought out in the first "Seed Apple" mission.<sup>18</sup>

17. Commander Sevilla also mentioned in a subsequent activities report that "the problem of how to handle AEW hunter/killer flights, that will have to be scrambled upon receipt of contact reports, still remains. This type of flight cannot be pre-scheduled or planned, and will require authorization from the division commander under emergency conditions."

Itr, Lcdr, B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of activities for period ending 1 May 55 (s.d. 17).

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1. Itr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF "Summary of Activities for period ending 15 March 1955", 18 Mar 55 (s.d. 18/1). It should be noted here that it is not the intent of the Historian to dealve too deeply into the various ramifications of a particular phase of air defense. On the contrary, the Historian merely wants to point out that problems do exist, in varying degree, and that there is action being taken to solve them. For further information on the subject, refer to the following:
  2. Memorandum, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of activities for period 1 January to 15 January 1955", 18 Jan 55 (s.d. 18/2).
  3. Itr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of Activities for period ending 15 May 55", 18 May 55 (s.d. 18/3).
  4. Itr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of activities for the period ending 15 April 1955" 18 Apr 55 (s.d. 18/4).
  5. Itr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of activities for period ending 15 Jun 1955" 15 Jun 55 (s.d. 18/5).
  6. Itr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of activities for period ending 30 Jun 1955" 5 Jul 55 (s.d. 18/6).

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At the end of the period under study, the YAGRs came into being, making it possible for all six of the stations at sea to be manned. Prior to this, the DEBs were working overtime, the net result being only two of the six stations manned. Of the six commissioned DEBs, two were always scheduled to be in training, two more were in port for leave and upkeep, and the other two on station. Only in an emergency could three stations be manned, producing a grave situation considering the effectiveness of the PVs as mentioned earlier.

The YAGRs are still in an early stage of development. They have certain communications and training problems to surmount, but they have already shown their worth. They also have some electronics equipment inadequacies, a phenomenon not peculiar to the Navy alone. The only other problem is the fact that they stand six weeks at sea, which may be detrimental for morale.

Station 1 has its main difficulty that of communications, UHF and point to point, to be specific. The frequencies are subject to change,<sup>19</sup> and occasionally the PV and its aircraft may not be able to make contact with each other, even though they are tuned to the same frequency. The point to point communications system sometimes makes it difficult for PVs to make contact with their shore stations. This becomes self-evident considering the amount of unnecessary intercepts

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19. Ltr & Incls, Hqs USAF to ADC, "Frequency Assignments", 25 Mar 55 (s.d. 19).

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that are made on ASW and civilian overseas flights.

To complicate matters further, atmospheric conditions at certain seasons of the year in the North Atlantic tend to interfere with communications. Also, with days of consistently foul weather,<sup>20</sup> it is possible that a PV can be blown off course because they cannot take out fixes; this causes them to use Long Range Navigation (LORAN) which may be inoperative, due to the atmospheric conditions previously mentioned.

Aside from the fact that the radars have to be kept in calibration, something inherent within the equipment, regardless of its location, the PVs have other problems that they have to contend with; a morale problem does exist, considering that there is no war, and there is no outlet for the crews until they get to their home port. A ship requires more upkeep than does a shore station, and when not manning their stations, the ships have to undergo training for normal Navy operations.

To further coordination between the activities of the Navy and the Air Force, a training program has been established whereby Air Force pilots are trained to work with the PVs and, by the same token,

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20. In mentioning foul weather, it would be opportune to briefly discuss the equipment on the PVs from the standpoint of operation. The height finding equipment is stabilized by a gyroscope, thereby counteracting any pitching or rolling of the ship during the time of tracking. The search equipment does not have the gyroscopic stabilizer, as the ship's movement does not necessarily hinder its operation.

Interview with 1/st Lt. Ralph Prettlyman, Office of Communications and Electronics, this Headquarters, 12 Oct 55.

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Navy controllers are trained to work with Air Force planes. An exchange program has been recommended to further any cross-training activity within an already very successful system.<sup>21</sup>

Texas Towers

Texas Towers (TT) were introduced as a seaward extension of radar coverage, to work with PVs and shore based radar stations. Their concept stems from the oil-drilling rigs that are common to the Gulf Coast of the United States; perhaps somewhat awkward and spidery looking in appearance, they have nonetheless proven themselves in the eternal battle of the sea. The first one to be launched will be sited at Station 3, and will be known as Georges Shoal Air Force Station.<sup>22</sup> This Headquarters was officially informed on 22 July 1955, that the new station was to become a part of its command.<sup>23</sup>

The first TT was launched as scheduled 20 May 1955, but not without some difficulty. One of the skids collapsed at the launching ceremony, delaying floating operation 13 days. The entire process of the launching and its subsequent siting and erection at sea was highly

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21. As in fn 14.

22. Another milestone in the development of Air Force operational procedure; for the first time, Air Force personnel would be manning a station at sea, which heretofore was generally considered to be the domain of the Navy or Coast Guard. By the same token, it was noted earlier that the Air Force basically has operational control over the PVs when at their stations. (see fn 12).

23. Ltr, EADF to 32d ADiv, "Texas Tower Status", 22 Jul 55 (s.d. 23).

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dramatic, and perhaps somewhat ominous, if one recalls the old superstition of mariners who feel that a faulty launching foreshadows future troubles. There may be some truth in this superstition; at the time of its erection at sea, a hurricane with the otherwise pleasant name of "Connie" was bearing down upon the Atlantic Coastline. It was only through tremendous and heroic effort that the crews on board were able to reinforce three of the legs with concrete, thus making it secure from the pounding of the sea.

The introduction of Georges Shoal Air Force Station was not without some difficulty, bringing with it problems that were peculiar to it alone. Of major importance was the entire concept of logistical support for this seaward outpost; there were two aspects that had to be considered, foremost of which was the type of vessel or specific method to be used for replenishing its supply of fuel oil, gasoline and water. The concept of a specially equipped ship was introduced in December, 1954, by the District Public Works Office, First Naval District.<sup>24</sup> It was suggested that if the Air Force felt that a special ship could be financed, the above office would make arrangements for its design. It was pointed out that the ship would have to have fuel and water tanks, high pressure pumps for transferring the liquids to the tower, cargo storage, and an unobstructed forward deck. Rather than design a ship to these needs, it would seem that modifications

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24. Ltr, District Public Works Office, First Naval District, to Lt. Col. L. B. Reppert, "Supply Ship for Texas Towers", 13 Dec 54 (s.d. 24).

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could be made on a tanker to suit the purpose; at least this was suggested in the first indorsement.<sup>25</sup> In the meantime, design data and criteria recommendations were requested so the Air Force could investigate the possibilities of the procurement program.

In an exchange of correspondence between USAF and ADC, the feasibility of utilizing helicopters for support purposes (other than fuel, etc.), was suggested by USAF;<sup>26</sup> this would alleviate the costly situation of procuring a special ship for the purpose, as a tanker could readily fill the bill for fuel and water. ADC approved the plan but stressed that back-up surface transport should be ready at a moments notice. They pointed out that it was within the realm of possibility that a helicopter could cause considerable trouble in support operations merely by developing engine trouble or weathered in for days.

The implementation of the back-up plan was at the discretion of the Commander of the 762d AC&W Squadron at North Truro.<sup>27</sup> It was further suggested by ADC that the back-up surface transport reserving agreement be accomplished with either the Navy, Coast Guard, or Military Sea Transport Service (MSTS). ADC further requested that it be advised as to any decision made on this matter. Headquarters USAF replied that a conference was scheduled for 16 May 1955, whereby the

25. Ind, Lt. Col. L.B. Reppert to Public Works Officer, First Naval District, "Supply Ship for Texas Tower", 15 Dec 54 (s.d. 25).

26. Ltr & Inds, Hq AF to ADC, "Supply Ships for Texas Towers", 10 Jan 55 (s.d. 26).

27. Ltr, Inds, & Incl, USAF to ADC, "Logistical Support for Texas Towers" 25 Mar 55 (s.d. 27).

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entire problem would be discussed with MSTB. At the end of the period under study, there was no final solution to this problem; however, the operational plan and logistic support plan was to be consummated by 1 September 1955.<sup>28</sup> It has been decided that the 762d AC&W Squadron will control all logistic support, under the auspices of the 4707th Air Defense Wing, Otis Air Force Base; the only exception will be the communications and electronics equipment, which will be logistically controlled by the 4700th Air Defense Group, Stewart Air Force Base.<sup>29</sup>

From the standpoint of operations, the other chief problem was that of personnel. More in particular, the length of time to be assigned to the station for duty purposes, and the AFSCs required to efficiently perform the mission. ADC concurred with the overall concept of the proposed EADF Operations Plan for Texas Towers, and the correspondence was forwarded to this Headquarters for staff notation.<sup>30</sup> The 4707th Air Defense Wing also brought up many of the same questions concerning personnel to EADF. A reply by indorsement also included the scheduled manning list, which, seemingly accurate, did have at least one discrepancy; this perhaps could have been avoided if this

28. As in fn 23.

29. EADF Logistics Plan, Texas Tower No. 2, 22 Jul 55 (s.d. 29).

30/ 1. Ltr & Incl, EADF to ADC, "(Unclassified) Texas Tower Program" 7 Feb 55 (s.d. 30/1).  
 2. Ltr & Incl, EADF to 32d ADiv, "(Unclassified) Texas Tower Program", 21 Apr 55 (s.d. 30/2).  
 3. DF, OFR, to ODO, CCG, MEM, PDP, CIG, "Texas Tower Program", 26 Apr 55 (s.d. 30/3).

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Headquarters  
A had been advised of this correspondence.<sup>31</sup> It was not until EADF sent an info copy to the 32d Air Division that it became aware of the situation.

The operation of TT #2 will be in three phases; Phase I will be the manual operation as a direction center in conjunction with the direction center at North Truro. In Phase II, there will be remote operation of the search radar video and air/ground communications to North Truro. The last phase, "the centralized collecting of all radar data by a SAGE Direction Center"<sup>32</sup>, will tie in the tower with the ultimate in air defense, whereby electronics and automation will handle the major part of surveillance and detection.

Phase I, or the initial step in operations, is scheduled to commence during the month of March 1956.<sup>33</sup> If the future success of

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- 31/ 1. Ltr, 4707th ADW to EADF, "Project Texas Tower", 25 May 55 (s.d. 31/1).  
 2. Incl & Incl, EADF to 4707th ADW, "Project Texas Tower" 9 Jun 55 (s.d. 31/2).  
 3. Memo, DO to CCG, undated (s.d. 31/3).  
 4. The discrepancy was the fact that Mr. Gerald C. Early, Diesel Operator Technician of the Madigan Corporation assigned to this Headquarters, noted in one of his staff visit reports that there was nobody assigned to the tower who was completely familiar with its complex generating and refrigeration equipment. Mr. Early points out that "past experience in this division with airmen operating diesel and steam plants have not produced the best results due to a lack of job stability, knowledge and interest on the part of the operators. This installation (TT#2) is vastly more complex, from a power and utilities standpoint than an other shore side AC&W site. If this tower is to operate more efficiently, the best qualified personnel should be used." He therefore recommends an experienced marine engineer, with high qualifications, to be permanently assigned to the tower. Ltr, Incl & Incl, 32d ADiv to 4707th ADW, "Report of Technical Field Visit on Texas Tower #2, 27 May 55 (s.d. 31/4).  
 32. 1. EADF Operational Plan, Texas Tower No. 2, 1 Sep 55 p 2.  
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the Texas Towers can be measured by the success of the PVs, rest assured that they will meet their anticipated qualifications as early warning stations at least from the standpoint of accuracy and consistency of tracks.

Airborne Early Warning and Control

The original theory of Airborne Early Warning and Control (AEW&C) was to make a typical AC&W site airborne, thus extending the seaward coverage of the United States Coastline, placing the Air Defense Combat Zone farther from the mainland.<sup>34</sup> The AEW&C aircraft are modified versions of the military C-121 Super Constellations; carrying a crew of 17 men, they will be able to stay on station for at least eight hours. The aircraft are equipped with height finding and search radars, the antennas of which are housed under two radomes. Regardless of the seemingly grotesque appearance of these planes, they have nonetheless proven themselves as stable and reliable aircraft.<sup>35</sup>

(Continued from preceding page)

2. ADC, (U) Operational Plan for Texas Towers (DRAFT), 22 Apr 55, p 3 (s.d. 32/2).
33. EADP Operational Plan, Texas Tower No. 2, 1 Sep 55, Annex A, Part II p 2.
34. Interview with Captain Allen C. Durgin, OP&R this Headquarters 12 Oct 55.
35. For the purposes of air defense, it was indeed fortunate that the Super Constellation was in production. Having previously run the gamut of design and flight testing, the immediate need of a plane for the air defense mission was a reality requiring only modification.

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The planes themselves are able to act as direction centers; thus, they can work jointly with the FVs and TTs, as both become available for early warning use. Their main responsibility will be radar coverage at lower altitudes, cruising from 5,000 to 15,000 feet.<sup>36</sup> In this manner, they eliminate two problems inherent with land based radar; that of ground obstruction, or clutter, and the curvature of the earth.

At this time, the operational capabilities of the equipment are being determined, as well as operational procedures.<sup>37</sup> The Air Proving Ground Command is the agency determining the suitability of the equipment. As of their last report, there were roughly three factors that would seriously hinder the operation of the aircraft and its mission. It was felt that the CIC should have a display board whereby the air situation in the aircraft's sector could be easily seen.<sup>38</sup> It was also pointed out that the mission would be seriously handicapped until an improved antenna stabilization system was incorporated within the APS/45 height finder. As the situation stands now, the height finders give erratic presentation of the targets, causing

36. Operational Plan for Seaward Extension of the Air Defense Command Zone, 20 Jun 55, Section I, p 2.

37. As in fn 34.

38. Air Proving Ground Command Final Report on Phase I of Operational Suitability Test of the RC-121C&D Airborne Early Warning and Control Aircraft, Project No. APG/ADA/85-A-1, 5 Nov 54, p 5, 17.

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erroneous altitude readings.<sup>39</sup> The Air Proving Ground Command also felt that it could be expected for personnel to have trouble locating malfunctions within the complex electronic systems; they noted that error averaged over 18 per cent with trained personnel at Lockheed Aircraft Corporation. Naturally, this percentage can be increased when squadrons personnel start trouble shooting techniques, as they will not have had the experience of Lockheed personnel.<sup>40</sup>

The future programming of AEW&C aircraft is phased into two periods, roughly analogous to the last two of the Texas Towers.<sup>41</sup> The first phase is conceived around the principles of quantity (1958), whereas the second is based upon the quality of the forces available in 1960.<sup>42</sup> They may be able to start operations in March, 1956.<sup>43</sup>

By the end of the period under study, the 551st AEW&C Wing had received its full complement of five assigned squadrons, three of which are aircraft, the other two being maintenance.<sup>44</sup> Although attached to Otis Air Force Base for administrative and maintenance

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39. Ibid, p 5, 13, 16.

40. Ibid, p 12.

41. Operational Plan for Seaward Extension of the Air Defense Combat Zone, 20 Jun 55, Section V, pp-9-11.

42. Ibid, Section V, p 9.

43. As in fn 34.

44/ 1. ADC GO 10, 4 Apr 55 (s.d. 44/1).

2. ADC GO 16, 4 May 55 (s.d. 44/2).

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support, the 551st ADM&C Wing is assigned to the 8th Air Division for operations, training and general supervision. It is programmed to be assigned to the Eastern Air Defense Force in July, 1956.<sup>45</sup> Along with Picket Vessels, Texas Towers, and the shore side AC&W sites, the introduction of the AEW&C network will give much-needed control and coverage to the large population and industrial centers of the Northeast United States. It will not be impregnable, for no radar network is; but it will afford a greater latitude in time.

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The 551st AEW&C Wing had the following strength, as established by the above general orders. It was composed of three AEW&C Squadrons, those being the 960th, 961st, and 962d. For support purposes, the 551st Electronics Maintenance Squadron and the 551st Periodic Maintenance Squadron were also assigned. The 551st AEW&C Wing is based at Otis. Each of the three AEW&C squadrons were to be assigned 10 planes, although only seven RC 121Ds had been received; these were assigned to the 960th. The next squadron scheduled for the plans is the 961st, which should receive theirs in the first quarter of FY 56. EADF Command Data Book, 31 Mar 55, p 3.05.

45. Interview with Brigadier General Robert S. Israel, Jr., 12 Oct 55.

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CHAPTER II: IDENTIFICATION

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The Permanent Radar Network

The period under study saw no major changes within the basic structure of the permanent sites. Changes effected were modifications of equipment. The improvement of the basic radars through modification and training of personnel to operate them more efficiently, especially from the standpoint of controlling intercepts, were the fundamental objectives in a stage of operation leading to the centralization of control within the Air Defense System. This centralized control will be SAGES, the semi-automatic ground environment system. The eight principles for the defense of this sector, and eventually for SAGES were the eight permanent sites within the 32d

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Air Division.<sup>46</sup>

All of the sites within the division sector were capable of performing their mission as Direction Centers, and with few exceptions virtually bore the brunt of all radar surveillance.<sup>47</sup>

46. The eight permanent sites and their respective equipments are outlined below.

<u>Site</u>	<u>Location</u>	<u>Unit</u>
P-10	N. Truro, Mass.	762d AC&W Sq.
P-13	Brunswick NAS, Me.	654th AC&W Sq.
P-14	St. Albans, Vt.	764th AC&W Sq.
P-21	Lockport, N. Y.	763d AC&W Sq.
P-49	Watertown, N. Y.	655th AC&W Sq.
P-50	Saratoga Springs	656th AC&W Sq.
P-65	Charleston, Me.	765th AC&W Sq.
P-80	Caswell, Me.	766th AC&W Sq.

<u>Search</u>	<u>Height</u>	<u>IFF</u>
CPS-6B		GPX-6;GPA-16
CPS-6B		GPX-6;GPA-16
CPS-6B		GPX-6;GPA-16
CPS-6B		GPX-6;GPA-16
FPS-3	FPS-5	GPX-7;GPA-16
FPS-3	FPS-5	GPX-7;GPA-16
FPS-3	FPS-5	FPX-7;GPA-16
FPS-10		GPX-16

The CPS-6B's and the FPS-10 radars both have height and search capabilities, which accounts for the apparent lack of height equipment in the above chart. All the radars have corresponding IFF equipment, different nomenclature, but basically the same. EADF Command Data, 30 Jun 55, p 5.06.

47. Ltr, 32d ADW to Wgs. "Destination of operational functions of AC&W Squadron," 13 Jul 55 (s.d. 47). There are four M-sites (surveillance sites) scheduled for operation in conjunction with the permanent radars in the sector. M-104 at Fort Dearborn, New Hampshire (644th) and M-110 at Bucks Harbor, Maine (907th) had taken beneficial occupancy at the end of the period under study. The other two sites are M-102 at Barrington, Nova Scotia (672d) and M-103 at North Concord, Vermont (911th). They were scheduled for operation in January of 1957, and April of 1957, respectively. EADF Command Data Book, 30 Jun 55, p 3.05.

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With the advent of more potent Soviet attack capabilities, modifications were in line for the P-sites to adequately enable performance of missions. Three of the eight sites are equipped with AN/FPS-3 radars, and the other five had AN/CPS-6B's or a variation of the latter, AN/FPS-10. The problem of modification for the AN/FPS-3 was relatively simple, when compared to the other modifications within the field. To increase the range from 5 to 10% in the AN/FPS-3, the GPA-27 component was to be installed in the field.<sup>48</sup> The ultimate hope was that all AN/FPS-3 radars in the field could be so modified. For the time being a total of 49 FPS's in the permanent network and Mobile system, of the Air Defense Command as a whole, were set aside as primary.<sup>49</sup>

It was also pointed out by ADC that the proposed modifications would require no further additions to the physical plants at the sites. This entire operation will neatly coincide with the advent of SAGE.<sup>50</sup>

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48. ADC History, July - December 1954, pp 2-3.  
"The GPA-27 introduced a new transmitter principle featuring the klystron tube, capable of two megawatts of power. A significant feature of the modification was that there would be dual search components (dual channel), insuring continued use of a search beam during maintenance."

49. Ibid, p 3.  
Coupled with this would also be the AN/FPS-7, new search radar, and the fact that the modification of the AN/FPS-3's would increase their coverage to 65,000 feet.

50. Ibid, p 4.

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The more bleak aspects of modification were to be seen in the AN/CPS-6's. From experience in the past, this radar had been susceptible to many "bugs". It should be pointed out that these bugs resulted from the modifications more than from deficiencies in the basic radar. The radar was designed for a specific operating potential. Rapidly increasing aircraft performance made that potential inadequate for the task.

Therefore, the best thing to do under the circumstances was to modify. The end result was better range and performance to cope with more modern aircraft - albeit countered by a certain degree of instability in operation. Thus, when the OA-347 modification kit was installed in the radars, the result was a regrettable inadequacy in design.<sup>51</sup> It was successful insofar as increasing the blip/scan

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<sup>51/</sup> These radars were modified with the OA-347 "kit". More specifically, the basis of these kits was the QK-254 magnetron tube, which, if working normally, could increase the range capability of the radar as much as 65%. However, due to tube failure above 1.5 megawatts, the overall potential of the radars was reduced accordingly (the tubes had been designed for 2 megawatt operation).

Of minor interest were modifications coming from the field, as suggested by the AC&W sites themselves. For further study, the following documents were noted:

1. Ltr & Inds, 655th AC&W Sq to 4711th ADW, "Modification of Electronics Equipment", 12 Apr 55 (s.d. 51/1).
2. Ltr, Incls & Inds, 655th AC&W Sq to 4711th ADW, "Modifications for Evaluation Purposes", 20 May 55 (s.d. 51/2).
3. Ltr & Inds, 762d AC&W Sq to 4707th ADW, "Request for Change of Antenna Tilt", 14 Apr 55 (s.d. 51/3).
4. Ltr & Inds, 762d AC&W Sq to 4707th ADW, "Relocation of Radar Equipment to Modified Operations Building", 24 Jun 55 (s.d. 51/4).

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ratio and scope definition,<sup>52</sup> but has never lived up to its promising potential as presented on the drafting boards.

All of the five sites within the 32d Air Division equipped with the AN/CPS-6B received the OA-347 kits. Together these provided interim equipment which must serve until the installation of General Electric's new FPS-7, a radar whose coverage capability has proven to be 100,000 feet - presently satisfactory for adequate radar coverage.

The 655th, 656th, and 765th AC&W Squadrons were burdened with AN/FPS-5 height finders, which, for all intents and purposes, were totally inadequate for the air defense mission. Compared to other radar height finders, the AN/FPS-5's power is low. Furthermore, it has been out of production for some time; parts are increasingly difficult to obtain.<sup>53</sup>

The three squadrons were scheduled to receive the new AN/FPS-6's within the year, thereby increasing their effectiveness against high altitude aircraft and giving the squadrons a greater capability. By the same token, the other five P sites were to receive the AN/FPS-6's for backup height finding. None of the AN/FPS-6 equipment had been installed at any of the eight sites at the end of the period.<sup>54</sup>

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52. As in fn 50.

53. 32d Air Division (Defense) Staff Commentary, Mar 55, p 6 (s.d. 53).

54. EADF Command Data Book, 30 Jun 55, p 5.06.

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Another problem paramount in importance is the lack of plan position indicators (PPI) at the P-sites.<sup>55</sup> Because these are used for intercepts, it becomes necessary that there be enough for controlling as many planes as we are able to scramble, within a minimum amount of time.

This shortage of PPI's could conceivably prove disastrous. Direction centers might become saturated and control capability, offensive as well as defensive, might be lost within the air defense sector. Five of the P-sites within the Division have requested more scopes. Because of the scarcity of these scopes, it remains to be seen who will receive them. One trouble breeds another. The scarcity

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- 55/ 1. Ltr, & Ind, Hq 32d ADiv to EADF "Request for Additional Plan Position Indicators". 16 Mar 55 (s.d. 55/1).  
 2. Ltr, Hq 32d ADiv to 4707th ADW, "Assignment of Plan Position Indicators", 6 Apr 55 (s.d. 55/2).

There are four main types of scopes used at radar sites within this command. All have as their main component a cathode ray tube, in front of which is an overlay. The PPI scope is used for intercepts, having a series of concentric circles on its face which determines range; the azimuth is determined by reading the border of the overlay on which are the degrees of the compass. The B-Scan is used for sector scanning and heavy traffic areas. The range is read from the bottom to top; a series of parallel lines on the front of the scope indicate 10 mile distances. Azimuth is read along the bottom of the overlay. The B-Scan is used in conjunction with PPI, as it is merely a "close-up" of the PPI, covering either 45 or 90 degrees of one of the four quadrants on the PPI scope. The Height Range Indicator (HRI) is used for determining height, by reading range (in miles) along the bottom, and height (in feet) from the bottom up. The other basic scope is the A-Scan, which indicates range in more exact and easy to read terms. It is basically the same as the HRI, but differs in that it is amplitude modulated; the range is given as a more pronounced blip upon the scope.

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of the scopes has resulted in a director deficiency both in numbers and proficiency. To aggravate the situation, directors are not easy to retain. By the time a director has become proficient in his field, he is generally ready for discharge.<sup>56</sup> Until a qualified replacement can fill his position, or another can be trained to comparable standing, the affected AC&W Squadron will suffer from inadequacies in controlling that can only result in the compromise of the defense of their sector.

In a letter to EADP, Colonel Israel pointed out that the authorization for directors is based upon normal peacetime operation,<sup>57</sup> certainly not in accord with the mission of the 32d Air

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56. The problem of controllers is of major importance. Most of the controllers are graduates of ROTC, and many of them have little or no inclination of a career in the Air Force, especially after serving at radar sites in Korea, or even in ADC. Many of the AC&W Squadrons offer little in the way of an exciting life, being isolated and inaccessible during the winter months. Also, housing conditions - alas, not earmarked for radar sites alone, but for many of the other bases - has bred considerable contempt for this aspect of the service.

- 57/ 1. Ltr & Incl, Col Israel to EADP, "Operational Requirement (Director Authorization) 24 Jun 55 (s.d. 57/1).  
2. DF, Capt. Stark to Col. Hartz, "Staff Visit", 28 Jun 55, (s.d. 57/2).

From the viewpoint of an AC&W Squadron, see DF OOT-A to OOT, "Informal Report of Staff Visit" to 656th AC&W Squadron, 17 Jun 55, (s.d. 57/3).

The Historian finds this situation alarmingly grave in its ramifications, and hard to understand. The entire operation of air surveillance within this sector or any other, is based upon the fact that an attack can come at any time. Peacetime and wartime are synonymous when one considers air defenses; a difference of a few hours can mean war, and certainly the process of mobilization and manning cannot be accomplished in such time as to have

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Division, or any command under ADC whose mission is substantially the same. The problem appeared again in milder fashion, but nonetheless significant: This headquarters noted that it was hard to differentiate between combat-ready directors and those on training level. Clarification of ADCR 50-22 was requested so as to give a true picture of strength within an AC&W unit.<sup>58</sup> The training picture can be illustrated by the fact that when the CAA queried a director, it was discovered that he was not too familiar with air traffic control procedures and standards.<sup>59</sup>

The deficiencies of the PPI scopes and director authorization have plagued all units concerned for the entire period under study. ADC finally did authorize more PPI scopes, but data pertaining to the delivery date, location and priority had not been received at EADF at the close of the period. Both problems are clearly interrelated.

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adequate control capabilities within an AC&W Site.

For a detailed and complete analysis of the problem, the enclosure to the above letter is excellent. It is a study made by Captain Allen C. Durgin, Manpower Management Officer, this headquarters, entitled "Controller Authorizations at Assigned AC&W Squadrons", (s.d. 57/1).

- <sup>58/</sup> 1. Ltr, 32d ADiv to EADF, "Evaluation of Directors", 5 Oct 55, (s.d. 58/1).  
 2. Ltr & Ind 655th AC&W Sq to 32d ADiv, "Revision to ADC examination 50-20. "Controller-Director Examination", 4 Feb 55, (s.d. 58/2).  
<sup>59.</sup> Ltr & Inds, ADC to EADF, "Separation Criteria", 1 Mar 55 (s.d. 59).

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During the entire period under consideration, EADF complained of director deficiency, which resulted in the AC&W Squadron's inability to exercise effective control over all their associated interceptors.<sup>60</sup>

To counteract those director deficiencies that existed within the AC&W Squadrons, a command post exercise called "Humbug" was established. This exercise utilized magnetic tapes on which were recorded hypothetical missions. These tapes were fed into the 15-J-1C Simulator enabling directors to practice intercepts.

In December, this Headquarters sent tapes to both Wings, for implementing "Humbug".<sup>61</sup> This was followed by an operations order, outlining the details of the exercise. The 655th, 656th, and 763d AC&W Squadrons were to participate in this mission, attempting to determine the feasibility of such a system.<sup>62</sup>

It was evidently successful, for the next operations order of a "Humbug" exercise also included the GOC Filter Centers and the Associated AAOCs as participants.<sup>63</sup> The best aspect of these

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- 60/ 1. EADF General Commentary on State of Combat Readiness, Jan 55  
 2. EADF General Commentary on State of Combat Readiness, Feb 55  
 3. EADF General Commentary on State of Combat Readiness, Mar 55  
 4. EADF General Commentary on State of Combat Readiness, Apr 55  
 5. EADF General Commentary on State of Combat Readiness, May 55  
 6. EADF General Commentary on State of Combat Readiness, Jun 55

61. Ltr, 32d ADiv to both Wings, "System Training Exercises", 31 Dec 55 (s.d. 61).

62. Hq 32d ADiv (Def) Operations Order 5-55, undated (s.d. 62).

63. Hq 32d ADiv (Def) Operations Order 10-55, 7 Mar 55 (s.d. 63).

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system training exercises was the fact that they did not involve air defense aircraft. It still gave a good approximation of the intercept or combat situation, as seen from this Headquarters.<sup>64</sup>

Aside from the basic radars previously discussed, additional electronic equipment used in conjunction with the radars included the AN/GPA-16 IFF, and the AN/GTA-6A Telephone Central Group.<sup>65</sup> The AN/GPA-16 was designed to be used with the Mark X IFF, giving more flexibility in coding procedures by making them harder to detect. All of the permanent sites, with the exception of P-80 at Caswell, were equipped with the AN/GPA-16 IFF. During the period under study, the operational suitability test of the equipment, known as "Project Pin Ball",<sup>66</sup> was under way with units in the 30th Air Division. The AN/GPA-16, utilized the principle of the Selective Identification

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64. Ltr, 32d ADiv to both Wings, "Synthetic Training Exercise", 3 May 55 (s.d. 64).

65. Ltr, Ind & Incls, EADF to 32d ADiv, "(Unclassified) AN/GTA-6A and TA-277 Program", 5 Apr 55 (s.d. 65).

66/ 1. Ltr, EADF to 32d ADiv, "(Unclassified) Transmittal of Director Check List for Project "Pinball", 31 Mar 55 (s.d. 66/1).  
2. Ltr & Incls, EADF to 32d ADiv, "(Unclassified) Transmittal of GPA-16 Code Sheets", 30 Mar 55 (s.d. 66/2).

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Feature (SIF).<sup>67</sup> To test the efficiency of the SIF equipment installed at the permanent sites, it was found that those AC&W Squadrons reporting fighter detection without IFF at RCI (Radar Controlled Intercept) ranges varied from 70 to 90 per cent.<sup>68</sup> This certainly indicates the need for IFF.

Any equipment as complex as radar and its components demands the most stringent maintenance possible.<sup>69</sup> The problem in itself is not as simple as one would be led to believe, for the entire concept of periodic overhaul and maintenance must be viewed from the standpoint of radar surveillance. Once a radar site is subjected

67. There are two main components to the SIF. The aircraft is equipped with a Transponder (receiver-transmitter) and the AC&W site has the Interrogator-responder (receiver-transmitter). The identification is accomplished in video terms on the PFI scopes. Behind the blip on the scope will appear one, two, or four slashes. These respectively indicate normal return, Flight Leader Identification, or emergency - "May Day"; of course, these returns are all safeguarded by electronic means, through the use of codes. The new equipment gives more versatility for coding, making them harder to detect. Interview with 1/st Lt. Ralph Prettyman, Office of Communications and Electronics, this Headquarters, 21 Oct 55.  
Ltr, 32d ADiv to both Wings, "In-flight Checks of Emergency IFF", "Code 4", 12 Feb 55, (s.d. 67).

68. TWX ACFOCE 06108, 32d ADiv to EADF, 18 Jun 55 (s.d. 68).

69/

1. MDM Hist Rept, Jan 55 (s.d. 69/1).
2. MDM Hist Rept, Feb 55 (s.d. 69/2).
3. MDM Hist Rept, Mar 55 (s.d. 69/3).
4. MDM Hist Rept, Apr 55 (s.d. 69/4).
5. MDM Hist Rept, May 55 (s.d. 69/5).
6. MDM Hist Rept, Jun 55 (s.d. 69/6).
7. Ltr, & Inds, 4711th ADW to 32d ADiv "Operational Station Effectiveness RCS ADC-V50", 13 Apr 55. (s.d. 69/7).
8. Ltr, 32d ADiv to 4707th ADW and 4711th ADW, "Station Status Reporting Procedure", 9 May 55. (s.d. 69/8).

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to overhaul, it simply ceases operation, leaving a gap in the air defense network. This gap is partially filled with the van-mounted AN/TPS-1C,<sup>70</sup> but naturally cannot be expected to furnish adequate coverage, because it has no height-finding capabilities.

In October of 1954, the Division sent a proposed schedule for major maintenance for 1955, to EADF. The Division requested that the schedule be followed, as it then would be able to meet all operational commitments for the year.<sup>71</sup> ADC replied that it would be impossible for them to incorporate the Division's proposed schedule into the Master Plan for the AN/CPS-6B radars. This had been already coordinated through staff agencies at ADC, and forwarded to the three Defense Force Headquarters. ADC said that they would give consideration to the Division's recommendations for the overhaul schedule for the AN/MPS-7 and AN/FPS-3 radars, but pointed out that it was impossible to arrange a schedule that would be completely agreeable or convenient for all the division concerned. The two main points brought

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70. Ltr , 32d ADiv to EADF "Mobile Radar Set AN/TPS-1C", 22 Apr 55 (s.d. 70).

71. Ltr & Inds, 32d ADiv to EADF, "Radome Painting and Annual overhaul schedule for 1955", 16 Oct 54 (s.d. 71).

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out by ADC in relation to this were the following:<sup>72</sup>

Schedules must be arranged to avoid lack of radar coverage in any area. Separate scheduling by individual Air Divisions could result in adjacent stations in non-operational status at the same time.

Schedules for adjacent Air Divisions must be centrally controlled to permit a practical degree of efficiency in utilization of the limited depot maintenance facilities which are available to units of this command. Attempting to meet separate schedules arranged by individual Air Divisions would require a prohibitive amount of duplication of expensive depot maintenance facilities.

It had been noted by ADC that the radar squadrons are losing perspective as to what their operational responsibilities are. Some of the major commands and civil agencies were consistently bombarding the sites with various requests for navigational assistance and flight following. ADC noted this was not the responsibility nor the intended purpose of the radars, and insisted that air traffic control centers, under the jurisdiction of the CAA, were to handle such matters.<sup>73</sup> From evidence received at this Headquarters, and

72. Ind. ADC to EADF, "Radome Painting and Annual Overhaul Schedule for 1955", 30 Dec 54 (s.d. 72).

Much the same problem was seen in the overhaul of the AN/FPS-3 radars, at least insofar as it affected the Division's proposed schedule for overhaul, and what it received.

1. Ltr & Inds, ADC to EADF, "AN/FPS-3 Depot-Level Overhaul Schedule for 1955 (Uncl)", 5 Jan 55 (s.d. 72/1).
2. TWX ACPOCE 05095, 32 ADiv to 654th and 656th AC&W Sqs, 17 May 55 (s.d. 72/2).

73. Ltr & Inds, ADC to EADF, "Use of ADC Radars for other than Air Defense", 11 Apr 55, (s.d. 73).

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correspondence sent from here, it is plain that action was necessary. The best way to handle such a situation was to work with airline and private civilian pilots. Pilots were briefed at an AC&W site, showing what problems are peculiar to the Air Defense Mission, and how these can be alleviated by better understanding and cooperation with pilots flying civilian aircraft.<sup>74</sup> Many of the violations of air traffic procedures are attributable to civilians, and any indoctrination for them should produce a clearer and more sympathetic attitude toward personnel at the sites.

Quality Control

After a period of intensive study of the problem, perhaps the most significant contribution for determining the effectiveness of the air defense radar network was introduced by ADC in January 1955.

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- 74/
1. Ltr & Incls, 655th AC&W Sq to Airport Manager, 19 Apr 55. (s.d. 74/1).
  2. Ltr, Colonel Robert S. Israel to President, Northeast Airlines, 6 May 55 (s.d. 74/2).
  3. Ltr, Colonel Robert S. Israel to President, Mohawk Airlines, 30 May 55 (s.d. 74/3).
  4. Ltr, 32d ADiv to 26th ADiv, "Visit of Airlines Personnel to ADDC's", 3 Jun 55 (s.d. 74/4).
  5. Ltr, 32 ADiv to 655th AC&W Sq, "Visits of Airline Personnel to ADDC's", 3 Jun 55 (s.d. 74/5).

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This involved the principle of Quality Control, a term more commonly associated with mass production rather than with the AC&W System.

Simply defined in terms of the radar network, it is a process "...utilizing successive flights entering a surveillance area",<sup>75</sup> whereby "...a radar stations performance is based on the long range pick-up of flight plan aircraft"<sup>76</sup> By using this system, two fundamental concepts for efficient operation were established. Firstly, criteria can be established whereby minimal requirements are set up for all the sites, standardizing the procedure for determining station effectiveness. Secondly, it will be possible to check (and compare) performance data at the sites.<sup>77</sup>

ADC stated that the 32d Air Division was to evaluate Quality Control within the EADF area, and that it was at the discretion of the defense force commander whether or not other divisions could participate.<sup>78</sup> EADF also placed the 26th and 30th Air Divisions

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75. Ltr & Ind, ADC to All Defense Forces, "Operational Station Effectiveness (RCS ADC-V501).

76. Ibid.

77. Ibid.

78. Ibid.

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in the program, and stated that procedure would conform to EADF Regulation 55-9, modified where necessary to conform with the basic let-let from ADC.<sup>79</sup>

Performance data had been requested from the AC&W Squadrons, and the material furnished merits examination. The 763d ACYW Squadron noted two discrepancies, but not with their equipment. The following was noted by this squadron:<sup>80</sup>

The most serious problem has been the inability to obtain sufficient flight plans. This station does not have an assigned identification function; therefore, flight plans are not passed by the ATCC's. A total of 521 quality control checks were made during the first 23 days of the test period. An average of 21 each day is not considered sufficient to make adequate checks on radar performance.

And again:

Many flights used for quality control purposes are failing to give a true picture of radar performance. 35%, or 182 out of 521 of the performance checks made were on aircraft with large reflecting surfaces at altitudes 3,000 to 6,000 feet. By referring to the Quality Control Chart, it can be easily seen that these aircraft could give readings of 100% [due to nearness to the station] when actual radar performance is well below that figure.

However, equipment and maintenance inadequacies were brought out during the period, some of which were quite serious. Three of the AC&W Squadrons were seriously handicapped by operational

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- 79/ 1. Ind to above, EADF to Divisions and Wings, "Operational Station Effectiveness (RCS ADC-V501)", 22 Jan 55 (s.d. 75).  
 2. EADF Regulation 55-9, "Quality Control", 12 May 54 (s.d. 79/2).
80. Ltr, 763d AC&W Sq to EADF, "Operational Station Effectiveness", 3 Mar 55 (s.d. 80).

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deficiencies of the OA-347 modification kit.<sup>81</sup> The 656th AC&W Squadron suffered from an inadequate supply of the 4J59 magnetron, consequently remaining ROCP for 122 hours.<sup>82</sup> The 654th AC&W Squadron was six men under authorized strength, but was able to perform necessary maintenance. It should be noted, however, that this is not a realistic picture, and consequently, does point out a weakness.<sup>83</sup>

The nature of the complaints registered by units from the 4711th Air Defense Wing were similar to those noted above. The 655th AC&W Squadron felt that there was a lack of sufficient flight plans, as did the 765th AC&W Squadron.<sup>84</sup> The 764th and 766th both experienced difficulty with the OA-347 Modification Kit, resulting in false readings.<sup>85</sup>

In conclusion, the prospects of the AC&W system may seem outwardly dim, but such is not the case. The problems facing the individual AC&W sites have a more tangible relation to their effectiveness, and remedial action can be taken, knowing full well what is to be expected of each site. The final result is better coordination between the personnel at each site. A higher competitive spirit is achieved, and greater efficiency than heretofore had been experienced.

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81. Ltr, 4707th ADW to EADF, "Operational Station Effectiveness (RCS: ADC-V501)", 9 Mar 55 (s.d. 81).

82. Ibid.

83. Ibid.

84. Ltr & Ind, 4711th ADW to 32d ADiv, "Operational Station Effectiveness", 5 Mar 55 (s.d. 84).

85. Ibid.

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Supplemental and Gap Filler Radars

ADC had scheduled three phases for the Mobile Program; the end result being 83 supplemental radars. The first phase was to see 41 completed by June 1957. The second phase (having been reduced in number by five) was to have 23, all but two of which were to be likewise operational by June 1957. Twelve of the 24 radars of the third phase were to be operational by the same date, the remainder being scheduled for operation the following June.<sup>86</sup>

M-104 at Rye, New Hampshire (644th) and M-110 at Bucks Harbor, Maine (907th), although on station, were not in operation at the end of the period under study. In April, both were relieved from attachment to Headquarters Squadron Section, this Division, for administrative and logistical support.<sup>87</sup> M-102 at Barrington, Nova Scotia (672d) and M-103 at North Concord, Vermont (911th), were scheduled for beneficial occupancy in April 1956 and November 1955, respectively.<sup>88</sup>

It should be mentioned that the Mobile program is very misleading by name. The radars used for the mobile system are van-mounted, and for all intents and purposes, could be moved. But the equipment is as permanent as the sites themselves, and there is no

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86. ADC Hist Rept, July - December 1954, p 43.

87. 32d ADiv GO 7, 26 Apr 55 (a.d. 87).

88. EADF Command Data Book, 30 Jun 55, p 3.05.

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mobility involved with M-site operations.<sup>89</sup>

From the standpoint of operations, the M-sites are now in an interim phase, which will be concluded when EADF goes through its organizational change in March 1956. M-103 and M-110, although scheduled to be direction centers, will not assume operational responsibility for their programmed subsectors until March 1956. For the time being, they will tell track information to appropriate AC&W Squadrons within their field of operations. By the same token, although not geographically located within the sector of the 762d AC&W Squadron, M-104 will report to this Squadron until it receives its subsector responsibility.<sup>90</sup> M-102, evidently too far removed from an operation

89. The radar equipment programmed for the M-sites is outlined below excerpts from 32d ADiv (Def) program Bulletins.

Site	Search		Height	
	Primary	Emergency	Primary	Emergency
M-102	FPS-3A		FPS-6A	FPS-4A
M-103	FPS-8		FPS-6A	MPS-14A
M-104	TPS-1D	TPS-1D	--	
M-110	FPS-8	GPS-3	FPS-6A	FPS-6A

1. Program Bulletin, 32d ADiv (Def), Jan 55 (s.d. 89/1).
2. Program Bulletin, 32D ADiv (Def), Mar 55 (s.d. 89/2).
3. Ltr & Incl, 32d ADiv to 4711th ADW, "Report of Staff Visit on Power Plant at the 907th AC&W Squadron", 27 Apr 55 (s.d.89/3).
4. Ltr & Ind, 4707th ADW to 32d ADiv, "Proposed modification of Radar Installation at M-104", 27 Apr 55 (s.d. 89/4).
5. Ltr & Ind, EADF to 32d ADiv, "(Uncl) ADC Revised Radar and Radar Tower Requirements", 3 Jun 55 (s.d. 89/5).

90. Ltr & Ind, EADF to 32d ADiv, "(Secret) Interim Reporting Procedures for "M" sites", 29 Jun 55 (s.d. 89/5).

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date consistent with the above programming, will undoubtedly receive word on its subsector boundaries at a later date.

The Radar Gap Filler program was encouraging, indeed. By the end of the period under study, nine of the proposed Gap Fillers that had been sited and reported were approved by ADC.<sup>91</sup> The radars to be used at these sites are the AN/FPS-14.<sup>92</sup> This Headquarters believed that seven more sites would complete the operational requirements for this Division - for the time being. Six of the remaining seven sites are scheduled to go into the northeastern area of the

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The programmed organizational changes for the EADF region will be the addition of three air divisions, bringing up the total to seven. By the same token, the AC&W sites will receive new operational subsector boundaries. This major change in organization and responsibility heralds the advent of SAGE, the remote control of air defense.

91. DF, Colonel Heartz to Colonel Israel, "Radar Gap-Fillers", 20 Jun 55, (s.d. 91).

The figures quoted are not to be confused with the EADF Command Data Book, 30 Jun 55, which only credits the 32d Air Division with four Gap Filler sites. The discrepancy comes from the fact that the EADF Command Data Book derives its information from the previous edition of the ADC Data Book, which, in this case, is March 1955.

- 92/
1. EADF Command Data Book, 30 Jun 55, p 3.07.
  2. Ltr, 32d ADiv to Commandant, 3d Naval District, "Radar Gap-Filler Site", 17 Jun 55 (s.d. 92/2).
  3. TWX ACFOCE 05084, 32d ADiv to EADF, 13 May 55 (s.d. 92/3).
  4. Ltr, 32d ADiv to Director Conservation Dept, Albany, New York 16 May 55 (s.d. 92/4).
  5. Ltr, 32d ADiv to Director Conservation Dept, Albany, New York 17 Jan 55 (s.d. 92/5).

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The sector and the last one to be sited will be in the southwestern area.<sup>93</sup> The numbers quoted here seem rather insignificant when one is confronted with the astonishing number requested by ADC for the United States and Canada. The request sent to Headquarters, USAF, was no less than 421.<sup>94</sup> Of these 421, 100 were supplementary facilities for the Pinetree Line extensions.<sup>95</sup> The Gap Filler Sites are producing one problem that is somewhat akin to Texas Towers - that of inaccessibility. Many of the sites will be snow bound in the winter months, and this will evidently be surmounted by the use of helicopters.<sup>96</sup>

The Ground Observer Corps

After a period of criticism, as seen in the latter half of 1954, the GOC emerged as a cohesive and reliable unit, with tangible evidence to back it up. Heretofore, it had experienced considerable trouble in manning filter centers with Air Force personnel.

93. As in fn 91.

94. ADC Hist Rept, July - December 1954, p 46.

95. As in fn 94.

96/ 1. Ltr & Inds, ADC to EADF, "Helicopter Facilities for Gap Filler Sites", 11 Mar 55 (s.d. 96/1).  
2. Ltr & Ind, EADF to 32d ADiv, "Helicopter for Float Equipped Helicopters", 27 Jun 55 (s.d. 96/2).

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It was only through the persistent efforts of Mr. Harry A. Mapes, Maine Director of Civil Defense and Public Safety, that the filter centers received their full complement of the required Air Force personnel.<sup>97</sup> This, coupled with the results of Operation Sky Scan, produced the first real evidence proving that the GOC was a reasonably reliable system. Its reliability was limited only by the foulest weather and night operations.<sup>98</sup>

The exercises producing consistent results were those sponsored by EADF - Skytrains - and those sponsored by the Division, given the incongruous appellation of Hop Toad exercises.<sup>99</sup> The

97. 32d ADiv Hist Rept 17, July through December 1954, pp 5-6.

98. This is not to say that GOC activities are not worth the effort when visibility is obstructed by night or weather conditions. Even as human eyes are compensating for the deficiencies of radar, the number of engines in the unknown plane(s) - human ears still play a decisive role. A story is brought to the mind of the Historian whereby a GOC post is manned by blind civilians; their extreme sensitivity to sound has endowed them with an uncanny ability to determine the size of the aircraft, and its direction.

99/ 1. TWX, ACFOOT-A 04075, 32d ADiv to Group TA, 18 Apr 55 (s.d. 99/1).  
2. TWX, ACFOOT-A 05106, 32d ADiv to Group TA, 19 May 55 (s.d. 99/2).  
3. 32d ADiv Operations Order 9-55, 1 Mar 55 (s.d. 99/3).  
4. 32d ADiv Operations Order 23-55, 1 Jun 55 (s.d. 99/4).

These exercises were not put to the sole use of training GOC. The advent of prescheduled aircraft, already assigned to a mission, could give other units an opportunity to test their effectiveness also. Consequently, the information concerning these exercises was transmitted to some of the augmentation units, with the expressed purpose of testing the capability of propeller-driven aircraft in detection and/or interception of jet aircraft.

6. TWX, ADFNAVY 03041, 32d ADiv to Nav Air Sta, Niagara Falls, New York, 9 Mar 55 (s.d. 99/5).  
7. TWX, ACFOOT 03032, 32d ADiv to Nav Air Sta, South Weymouth, Massachusetts, 7 Mar 55 (s.d. 99/6).

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former are staged on a monthly basis, whereas the latter are conducted bi-monthly. They are training exercises in which positive evaluation of GOC tracking and plotting procedures are compared to actual pilot reports and radar fixes through the AC&W sites.<sup>100</sup>

The end result of these exercises is better spirit on the part of the volunteers, the feeling that they are necessary, and that their efforts are appreciated. Those civilian volunteers who have shown themselves as consistently good leaders were rewarded with trips to Eglin Air Force Base, to see the annual Firepower Demonstration. They were also invited to attend one of the periodic detonations of an atomic bomb at Yucca Flats.<sup>101</sup> Aside from any personal satisfaction that may be gained from the lowest level of the Air Defense Mission, the rewards themselves can be considered enticing enough to enlist civilian volunteers. If there would be any doubt in the mind of the skeptic, the following is an extract from correspondence from this Headquarters to the 4707th and 4711th Air Defense Wings:<sup>102</sup>

It is desired that a strenuous effort be expended to effect the necessary coordination and exchange of information between direction centers and Filter Centers to realize the potential of this integrated system.

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100. Interview with Captain Archie Paris, 4673d GOS, this Headquarters 21 Nov 55.
101. Interview with A/lc Richard Crossley, 4673d GOS, this Headquarters, 21 Nov 55.
102. Ltr, 32d ADiv to both Wings, "Air Surveillance Procedure", 7 Apr 55 (s.d. 102).

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It is further desired that this letter be brought to the attention of all supervisory personnel and that they be made aware of the emphasis that this Headquarters is placing on the GOC program.

Of course, the enthusiasm shown by the Division toward the GOC would have its counterpart within the GOC personnel themselves, both military and civilian. More posts have to be required to lengthen the GOC tracks. This can only be accomplished by recruiting more civilians, impressing them with the fact that they are needed, and can, in a humble but important way, fulfill their part of the air defense system. Considerable headway has been gained: the number of organized posts has steadily increased over the period of January to June.<sup>103</sup>

For the purposes of training and indoctrination, four other means have been used successfully to date. Civilians from the five detachments under the 4673d Ground Observer Squadron were sent to the GOC Training School at Tyndall Air Force Base, where identification, plotting, and reporting procedures were studied. Civilian volunteers were also airlifted to Otis Air Force Base to observe scramble procedure, then to AC&W sites to observe how their filter centers work in conjunction with the radar system. Finally, they were invited to the ADCC at Syracuse, where they were given a chance to see the Air Defense Mission in operation at Division Level.<sup>104</sup>

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- 103/
1. 4673d GOS Monthly Summary, Jan 55 (s.d. 103/1).
  2. 4673d GOS Monthly Summary, Feb 55 (s.d. 103/2).
  3. 4673d GOS Monthly Summary, Mar 55 (s.d. 103/3).
  4. 4673d GOS Monthly Summary, Apr 55 (s.d. 103/4).
  5. 4673d GOS Monthly Summary, May 55 (s.d. 103/5).

104. As in fn 101.

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Probably the most beneficial program seen during the period under study was the 90-Day Test of Subsector Plan, providing more interest on the part of the Air Force, improving community relations, and economizing on GOC activities. A sergeant was assigned to each subsector, thereby cutting down the excessive amount of travel incurred by road teams working directly out of filter centers.<sup>105</sup> It also gave a certain degree of stability, insofar as the military personnel were concerned, as they were always within reach of the people they were to train and help.

The final step in organizational change within the structure of the GOC at Division Level was the detachment of the 4673d Ground Observer Squadron from Headquarters Squadron Section, 32d Air Division (Defense).<sup>106</sup> Henceforth, the GOC would be logistically and administratively independent.

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105. Ltr, 4673d GOS to 32d ADiv, "Analysis of 4673d GOS 90 Day Sub-Sector Plan", 7 Jul 55 (s.d. 105).

106. 32d ADiv GO 7, 26 Apr 55 (s.d. 87).

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CHAPTER III: INTERCEPTION AND/OR DESTRUCTION

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The Fighter-Interceptors

The period under study saw the 32d Air Division equipped with a formidable array of AI fighter-interceptors. All armed with the 2.75 inch rocket, the aircraft had impressive destruction potential. Rocketry practice and meets were beginning to develop this potential which heretofore had been only latent. This, coupled with the increasing effectiveness of the permanent radar network, saw the enhancing of the AI aircraft as the highly lethal weapon for air defense.

At the close of the period, there were nine fighter-

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interceptor squadrons under the Division command.<sup>107</sup> The six squadrons equipped with F-86D's and F-89D's were seriously effected with turbine wheel failure. The failure was attributed to the entrance guide vane assemblies on J-47 and J-35 engines.<sup>108</sup> As a result, Project "Hot Wheel" was originated. All the defective wheels were sent to the Oklahoma City Air Material Area (OCAMA) for inspection

107. The deployment of the fighter-interceptor squadrons throughout the Division and their associated planes are outlined below.

## 4707th Air Defense Wing

<u>Location</u>	<u>Designation</u>	<u>Command</u>	<u>Primary Aircraft</u>
Niagara Mun Aprt, NY	47th	ADC	F-86D
Otis AFB, Mass.	58th	ADC	F-94C
Otis AFB, Mass.	437th	ADC	F-94C
Westover AFB, Mass.	60th	SAC	F-86D

## 4711th Air Defense Wing

Griffiss AFB, NY	27th	AMC	F-94C
Dow AFB, Me.	49th	SAC	F-86B
Ethan Allen AFB, Vt.	37th	ADC	F-86D
Presque Isle AFB, Me.	82d	ADC	F-89D
Presque Isle AFB, Me.	318th	ADC	F-89D

For further detail concerning future programming and deployment, refer to EADF Command Data Book, 30 Jun 55, p 3.03.

108. The guide vane assembly is basically a serrated notch on the edge of the turbine wheel which holds one of the pinned type turbine blades. Although all the engines were not affected by this failure, they were all to be inspected. It was better to catch those engines with a doubtful life expectancy, rather than wait for their individual failures. Interview with M/Sgt Albert M. King, Office of Material, this Headquarters, 24 Nov 55.

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and repair.<sup>109</sup> The urgency of this situation can be seen by the fact that all the ADI repairable wheels were to be inspected at OCAMA at the rate of 50 per day, seven days a week. This schedule would hold until all wheels had been inspected, no exceptions being made to the commitment.<sup>110</sup>

The month of February saw the start of the most important airlift of the period. Taking priority over all the other airlifts, turbine wheels were dispatched from the Division to Tinker Air Force Base for this project.<sup>111</sup> Alert requirements were established by EADF on a minimal basis.<sup>112</sup>

ALERT REQTS-DIV COMMANDERS MAY DEPLOY FORCES UNDER OPERATIONAL CON TO MEET MIN ALERT REQTS SPECIFIED IN ADC OFR ORD 3-54.

The scheduling of wheels for this inspection had the following priority:<sup>113</sup>

IN PUT OF WHEELS WILL BE FR QUOTE ENG BUILD-UP UNQUOTE, QUOTE BASE S UP UNQUOTE AND QUOTE INSTLD IN ACFT UNQUOTE, IN THAT ORDER.

109. TWX, EAMDM 164, EADF to all applicable units, "Hot Wheel", 11 Feb 55 (s.d. 109).

110. Ibid.

- 111/ 1. TWX, EAMDM 175, EADF to all applicable units, "Hot Wheel", 12 Feb 55 (s.d. 111/1).  
2. TWX, EAMAC-ACM 228, EADF to all applicable units, "Project Hot Wheel", 21 Feb 55 (s.d. 111/2).

112. As in fn 111/2.

- 113/ 1. TWX, EAMDM 175, EADF to all applicable units, "Hot Wheel", 12 Feb 55 (s.d. 111/1).  
2. TWX, EAMAC-ACM 182, EADF to all applicable units, "Project Hot Wheel", 15 Feb 55 (s.d. 113/2).

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The 82d and 318th Fighter-Interceptor Squadrons were severely hit by guide vane assembly failures, although able to maintain alert commitments.<sup>114</sup> However, the situation was serious enough (60 Failures) to warrant a specialist. Mr. Allen E. Isselhardt, specialist from OCAMA, arrived at Presque Isle to personally expedite matters. He requested assistance from OCAMA in the form of more guide vane assembly kits, replacement parts, and personnel to install them on the affected aircraft.<sup>115</sup> At the end of the period under study, Project "Hot Wheel" was in high gear throughout the Division. It was scheduled to terminate in early August.<sup>116</sup>

Of course, it can be seen that these turbine wheel failures seriously affected the active air defense capability of the Division. Perhaps even more serious was the fact that rocketry practice was jeopardized for the 318th FIS.<sup>117</sup> The 82d FIS was scheduled to stand alert for the 318th while it deployed to Moody for practice. The J-35A-35 failures in both squadrons resulted in a delay of two and one half months for the 318th's rocketry practice.<sup>118</sup>

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- 114/ 1. TWX, DWMNT 638-B, 4711th ADW to applicable units, 17 Feb 55 (s.d. 114/1).  
2. TWX, DWMNT, 655-B, Colonel Greenfield to Colonel Israel, 18 Feb 55, (s.d. 114/2).

115. As in fn 114/1.

116. Interview with Captain Alfred E. Lang, Jr., OOT, this Headquarters 6 Dec 55.

117. Ltr & Inds, 528th ADG to 4711th ADW, "Delay of Rocketry Practice for the 318th Fighter Interceptor Squadron", 7 Mar 55, (s.d.117).

118. 32d ADiv Staff Commentary, Feb 55, p 3 (s.d. 118).

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It should also be noted that "Hot Wheel" accounted for the major part of flying time deficiency within the 37th, 49th, 82d, and 318th Fighter-Interceptor Squadrons.<sup>119</sup>

The only other project of major consequence in the Division was Phase III of "Lock-On". This operational suitability test of the F-89D was only in the planning stages during the period under study, but warrants discussion. The test was scheduled for the 318th FIS at Presque Isle, working in conjunction with the 766th AC&W Squadron at Caswell, Maine. Its purpose was to test intercept techniques with the latest configuration of the F-89D, after it had received its "Hot Wheel" modification and rocketry training at Moody Air Force Base.<sup>120</sup>

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119. Ltr & Incl, 4711th ADW to 32d ADiv, "Flying Time Deficiency (RCS: ADC-FB)", 15 Apr 55 (s.d. 119).
120. The two previous phases to "Lock-On" were with the F-94C and F-86D aircraft. Other projects affecting the F-94C and F-89F aircraft were "Hop-Up" and "Pull-Out". "Hop-Up" was in two phases. The first was no less than 187 modification on the airplanes, engines, automatic pilots and control systems. Phase II saw another 164 modifications to the same equipment, making a total of 351. "Pull-Out" affected the F-86D. This project embodied over 300 modifications. The two main modifications concerned the fuel control system and modification of the airframe so as to interchange the -17B with the -33 engines.
1. ADC Hist Rept, July - December 1954, pp 66-68.
  2. Interview with P/Sgt Albert M. King, Office of Material, this Headquarters, 1 Dec 55.
  3. Ltr & Incl, EADP to 27th FIS, "Report of Staff Visit", 23 Mar 55 (s.d. 120/3).

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Because of the proximity of the Canadian Border to the probable test area, the 471th Air Defense Wing suggested the following:<sup>121</sup>

It is also requested that 32d Air Division brief adjacent USAF stations on the conduct of Project "Lock-On" to prevent Canadian aircraft taking tactical action which might interfere with the 318th Fighter-Interceptor Squadron interceptors.

In other words, this would avoid unnecessary intercept of "Lock-On" aircraft which may be just outside the correlation limits. Reaching the value of the USAF system to its North, this Headquarters voiced disapproval.<sup>122</sup>

By eliminating coordination between the 766th ACDW Squadron and adjacent USAF ACDW units, operation of the system is defeated. In this manner, it is impossible to evaluate the operating units in relation to the air defense system if they are isolated from the system. System operation is entirely dependent on integral functions of which early warning, overlap telling and coordination are major factors.

#### Support of the Fighter-Interceptors

One problem that consistently hindered operations for the 47th and 42d Fighter-Interceptors Squadrons was that of runway conditions. Both New and Fresque Isle Air Force Bases are plagued

121. 43r & 42d, 22 Feb 55 to EAD, "Unclassified) Phase III of Project Lock-On (P-30)", 4 Mar 55 (s.d. 121).

122. 3d Ind to 42d, 24 Mar 55 to EAD, "Unclassified) Phase III of Project Lock-On (P-30)", 29 Mar 55 (s.d. 121).

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with particularly severe winters.<sup>123</sup> Frost heaving, then thawing in Spring produces rough and hazardous runways. The severity of the situation for the 49th FIS prompted its commander, Major John A. Bell to note the following:<sup>124</sup>

Extensive flying training will be impossible and active air defense missions will involve an unacceptable flying safety risk during certain periods.

It was further pointed out that the age of the runways, coupled with the lack of sealant prior to the winter months were the responsible

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123. The weather problem can be better understood when one considers the following report from the 47th FIS at Niagara Falls:

a. The weather, during the reporting period (January March 1955<sup>7</sup>), was under 500' with visibility of one (1) mile or better for 347 hours. The length of missions flown during these hours is shortened in order to comply with the provisions of AFR 60-16.

b. Winds, above 30 knots and over 30° crossed from the landing runway, existed for 55 hours of the reporting period.

c. There were 51 hours of freezing precipitation during the reporting period.

d. There was no alternate available for 377 hours of the reporting period when the field was IFR.

e. Weather ceilings prohibited operational test flights for 829 hours of the reporting period.

Ltr & Inds, 47th FIS to 518th ADG, "Flying Time Deficiency Report- January thru March 1955, RCS ADC F-8", 5 Apr 55 (s.d. 123)

124. Ltr & Inds, 49th FIS to 4711th ADW, "Operational Deficiencies at Dow Air Force Base", 7 Mar 55 (s.d. 124).

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elements.<sup>125</sup> Of course, the tremendous gross loads of the SAC tankers accelerated the deterioration. By the same token, the taxiways were affected in much the same manner, and the prospects of foreign object damage to jet engines had to be considered.<sup>126</sup>

Construction on the runways meant blasting. Because of the sensitivity of blasting caps to radar beams, the base's GCA had to be shut down. A bitter experience in the past resulted in a major aircraft accident because the GCA had to be turned off prior to some unannounced blasting.<sup>127</sup> Although construction was well under way at the close of the period, the base was still to see construction activity well into the fall.

Likewise the 82d FIS at Presque Isle witnessed the same situation:<sup>128</sup>

IT IS THE OPINION OF THIS HQ THAT THE 82ND FIS WILL NOT BE COMBAT READY IN THE SPRING OF 1955 DUE TO HAZARDOUS AND DETERIORATED PARKING APRON PD

Unfortunately, previous emergency construction, on a temporary apron, was damaged by heavy rain.<sup>129</sup> With severe frost damage (-55 degree temperatures) and spring thaw in the near future, Presque Isle asked EADP to expedite their request for funds necessary for repairs.<sup>130</sup>

125. Ibid.

126. Ibid.

127. Ibid.

128. T/O, DO 11B, 52Rth ADG to EADP, 8 Feb 55 (s.d. 128).

129. Ibid.

130. Ibid.

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EADF concurred with their overall plan, and notified them accordingly.<sup>131</sup>

The runway situation was equally as bad:<sup>132</sup>

EAST-WEST RUNWAY WILL BE COMPLETELY UNUSABLE THIS SPRING AND SUMMER. REPAIRS TO RUNWAY BEYOND CAPABILITIES OF REGULARLY ASSIGNED PERSONNEL AT THIS BASE. RUNWAYS PRESENTLY UNSAFE FOR JET AIRCRAFT TAKE-OFF OR LANDINGS AND USED AS TAXIWAY.

THE USE OF EAST-WEST RUNWAY FOR TAXI WOULD SERIOUSLY HAMPER AIR DEFENSE OPERATIONS.

AND ALSO REDUCE CONSIDERABLY THE COMBAT EFFECTIVENESS OF THE FIGHTER SQUADRONS.

By the end of June, construction was well ahead on the parking apron, run-up pads, and the east-west runway.<sup>133</sup> Primary in import was the fact that the mission of Presque Isle Air Force Base was not being jeopardized. Also important was the fact that "Lock-On" was scheduled to be run at Presque Isle. Both active air defense missions and operational suitability testing could therefore be accomplished.

The 49th FIO at Dow suffered from other operational deficiencies. There were three of major importance, all of which stemmed from the fact that the primary mission of Dow was changed. In the past, it had supported the 506th Strategic Fighter Wing; now it had been assigned the mission of supporting two or three refueling squadrons. This being the case, Dow was being virtually stripped of support facilities for jet aircraft. The three deficiencies were lack of jet engine

131. TWX, LHMIS 0-12 206, EADF to 528th ADG, "Repair of Existing Aft Parking Area", 17 Feb 55 (s.d. 131).

132. TWX, DO-16-B, 528th ADG to EADF, 15 Feb 55 (s.d. 132).

133. Interview with M/Sgt Albert M. King, Office of Material, this Headquarters, 29 Nov 55.

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build-up capability, loss of field maintenance support, and all SAC support after 30 September 1955.<sup>134</sup> (The 49th then to be deployed to Ranscom Field).<sup>135</sup>

Field maintenance support was solved by the activation of the 4060th Armament Squadron at Dow Air Force Base, 8 March 1955.<sup>136</sup> This squadron provided armament and electronic field maintenance support.<sup>137</sup> It was also suggested by EADF that any other support deficiencies should be solved by coordination with the 506th Strategic Fighter Wing.<sup>138</sup>

A staff visit by EADF revealed that the Acting Director of Material, 4060th Air Refueling Squadron, was not aware of this new commitment. It was only through notification by EADF, rather than the 8th Air Force Commander, that the 4060th was to learn of its new responsibility.<sup>139</sup> Even with this administrative oversight, the 49th had at the close of the period most of the equipment necessary to perform field maintenance.<sup>140</sup>

134. Ltr & Inds, 49th FIS to 4711th ADW, "Operational Deficiencies at Dow Air Force Base", 7 Mar 55 (s.d. 124).

135. EADF Command Data Book, 30 Jun 55, p 3-03.

136. TWX, EADF, to 4711th ADW, 15 Mar 55, (s.d. 136).

137. Ibid.

138. Ibid.

139. Ltr, EADF to 49th FIS, "Report of Staff Visit", 8 Apr 55, (s.d.139).

140/ 1. TWX, EAMAC-ACS 11912, EADF to Dayton AFD, Ohio, 26 Mar 55 (s.d. 140/1).

2. NRS; MEM to applicant, Staff Visit, 11 Apr 55 (s.d.140/2).

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The programmed deployment of the 329th FIS to Griffiss Air Force Base presents complications that were not solved by the end of the period under study. There was simply not enough maintenance space available for the 329th, unless the 4713th Radar Evaluation Flight was deployed elsewhere. Colonel Israel recommended that the 4713th be re-assigned to McGuire, Stewart, or Granger Air Force Base. The vacancy in maintenance space could then be filled by the 329th, which is equipped with F-94C Fighter-Interceptors.<sup>141</sup>

There were other phases of maintenance and support of the fighter interceptors that were of importance. Paramount of these was the reservicing time for the F-89D. This took into consideration personnel proficiency, rocket handling and refueling facilities, and the degree of caution exercised with such procedures.<sup>142</sup>

(Continued from Preceding Page)

The concept of maintenance also brings to mind ear protection from the high level noise of jet engine operation. Ear plugs, are being used presently, but cannot be considered adequate with more powerful jet engines on the scene.

3. Ltr & Ind, EADF to 32d ADiv, "Ear Protection from High Noise Hazards", 9 May 55 (s.d. 140/3).

141. Ltr & Ind, 49th FIS to EADF, "Provision of Maintenance Space for the 329th Fighter Interceptor Squadron", 9 Mar 55 (s.d. 141).

142. Ltr & Ind, EADF to 32d ADiv, "Baservive of Fighter-Interceptors" 6 Jan 55 (s.d. 142).

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The Aircrews

The services of Northrop Aircraft and Lear, Incorporated, were used for the purposes of aircrew indoctrination. The Northrop F-89 High Speed Indoctrination Team went to the 528th Air Defense Group to illustrate operational characteristics of the F-89.<sup>143</sup>

By the same token, Lear, sent engineer pilots to squadrons equipped with the F-86D. The purpose of these visits was to familiarize pilots with the Lear P-5 Autopilot.<sup>144</sup>

EADF established new criteria for operating procedures with the F-86D, pending revision of proper technical orders. This dealt with over-temperatures on the J-47 engine.<sup>145</sup> Transition training was also seen at Wing level, with the 4711th Air Defense Wing training crews from the 4707th Air Defense Wing. The purpose of this training was to check out more aircrews in the F-89D.<sup>146</sup>

Although there were instances of complacency on the part of some of the younger pilots, proficiency was good. The men are well-trained for flying the aircraft. An example of this may be seen

143. The team is composed of two civilians who spend a week at the base requesting their services. Through lectures, slides, and flights, personnel are briefed on the F-89 performance characteristics.  
Ltr & Incls, EADF to 528th ADG, "F-89 High Speed Indoctrination Team", 9 Feb 55 (s.d. 143).

144. Ltr, Incl, & Incls, ADG to EADF, "Itinerary of Lear Service Test Engineer Pilots", 21 Mar 55 (s.d. 144).

145. Ltr & Incl, EADF to 32d ADiv, "Pilot Operating Procedures (F-86D)", 7 Mar 55 (s.d. 145).

146. Ltr & Incls, 4711th ADW to 528th ADG, "Check-out of Aircrew in F-89D Aircraft", 11 Feb 55 (s.d. 146).

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in an inspection report of the 17th FIS, which suffered from torque arm failures. The lack of major accidents was attributed to the pilots, and the cooperation shown by the base crash crews.<sup>147</sup>

Brigadier General Donald Smith, Vice Commander of EASE, noted that the drop in accidents and near accident reports within the command reflected favorably upon the skill of the pilots.<sup>148</sup> He further suggested that outstanding acts of pilots should receive recommendation. Colonel Israel likewise endorsed this plan wholeheartedly, noting that pilots should receive "...written and verbal commendation..." for outstanding performances under emergency conditions.<sup>149</sup>



Throughout the period of this history, valuable

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147. Ltr, 32d ADiv Office of Inspector General to 32d ADiv, "General Inspection of the 17th Fighter-Interceptor Squadron", 6 Jan 55 (s.d. 147).
148. Ltr & Ind, B/Gen Donald S. Smith to 32d ADiv, "Special Recognition for Exceptionally Distinguished Flying", 13 Feb 55 (s.d. 148).
149. Ind to above, Colonel Robert S. Israel, Jr., to both wings, "Special Recognition for Exceptionally Distinguished Flying," 17 Feb 55 (s.d. 149).

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assistance was rendered the Division by Air Rescue Service.<sup>150</sup> To realize the benefits of this organization requires the cooperation of the men who may need its help. EASF noted that rated personnel should be fully acquainted with "...the capabilities and limitation of Air Rescue Service."<sup>151</sup>

To ease the problem of overwater intercepts for ABO it was suggested that an SA-16 be scrambled to fly near the interceptor's path. This would be for intercepts that were 50 miles or farther from landfall.<sup>152</sup> The purpose behind this was to alleviate any misgivings for ABO pilots who may have to ditch. The idea of ABO planes following them would be comforting, indeed.

The plan was put into effect, if only from the standpoint of communications, since ARS did not have the personnel and

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- 150/ 1. Ltr, Maj Henry Schmalz to 5th Air Rescue Group, "Monthly Activity Report of RCG Activities, 1-31 January 1955", 3 Feb 55 (s.d. 150/1).
2. Ltr, Maj Henry Schmalz to 5th Air Rescue Group, "Monthly Activity Report of RCG Activities, 1-28 February 1955", 3 Mar 55 (s.d. 150/2).
3. Ltr, Maj Henry Schmalz to 5th Air Rescue Group, "Monthly Activity Report of RCG Activities, 1-31 March 1955", 4 Apr 55 (s.d. 150/3).
4. Ltr, Maj Henry Schmalz to 5th Air Rescue Group, "Monthly Activity Report of RCG Activities, 1-30 April 1955, 3 May 55 (s.d. 150/4).
5. Ltr, Maj Henry Schmalz to 5th Air Rescue Group, "Monthly Activity Report to RCG Activities, 1-31 May 1955 & Jun 55 (s.d. 150/5).
6. Ltr, Ind, & Incl, 4711th ADW to 32d ADiv, "Local Crash Rescue Plans", 14 Feb 55 (s.d. 150/6).
151. Ltr & Incl, EASF to 32d ADiv, "Local Crash Rescue Plans", 20 Dec 54 (s.d. 151).
152. See p 9 fn 13.  
Ltr & Incl, EASF to 32d ADiv, "Contingency Air Rescue Plan", 12 Jan 55 (s.d. 152).

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aircraft available at the time. From the statistics gathered from the ADCCs of this Division and the 26th Air Division, the 5th Air Rescue Group would be able to ascertain the additional equipment and aircraft needed for the plan.<sup>153</sup> This Headquarters was not affected by this plan as there were no manpower or material changes at Division level. Also, the communications were satisfactory from the ADCC to 5th Air Rescue Squadron.<sup>154</sup> At the end of the period under study, the plan still saw alerting procedures in use, but the ARS aircraft were not being scrambled.<sup>155</sup>

In April, Headquarters, 5th Air Rescue Group (ARS-MATS) announced the location of three Rescue Control/Coordination Centers. One of these was located at Headquarters, 32d Air Division(Defense).<sup>156</sup>

Other training courses for aircrews that were initiated during this period were Survival Training and a Crash Rescue Training School.<sup>157</sup>

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153. Ibid.  
The shortage of air rescue planes was also felt by the 528th ADG. Their request for assignment of a H-19 Helicopter brought out the fact that USAF has too few of these planes to fill the increasing demand.  
Ltr & Inds, 528th ADG to 4711th ADW, "Request for Assignment of One H-19 Helicopter", 27 May 55 (s.d. 153).

154. Ind, 32d ADiv to EADF, "Precautionary Air Rescue Plan", 25 Mar 55 (s.d. 152).

155. Interview with Capt. Guy T. Humphrey ARS, this Headquarters, 5 Dec 55.

156. 5th Air Rescue Group GO 2, 21 Apr 55 (s.d. 156).

157/ 1. Ltr & Inds, EADF to 32d ADiv, "Survival Training", 17 Jan 55 (s.d. 157/1).

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Rocketry

Actual air defense can only be as strong as the weapons themselves. When pitted against an enemy in combat, all of the fighter-interceptors have a terrifying potential for destruction. But this potential requires the most exacting and demanding qualities from the men who fly and maintain these planes, and the directors at the ACMH sites.

More specifically, the three main air defense planes use as their armament 2.75" folding fin rockets. Air-to-air combat is no longer a question of visual gunnery between planes, but can be more adequately described as an art in itself. It places demands upon men that ten years ago would have been viewed as completely unreasonable. Likewise, equipment has been installed in aircraft that ten years ago would have appeared impossible to accomplish.

One of the best ways to acquire rocketry proficiency (which was consistently low throughout the period) is to participate in rocketry meets, whereby a competitive spirit plays a big role. The prize, of course, is to represent the Division at the EADF Rocketry Meet at Yuma, New Mexico.<sup>158</sup> Consequently, much time was spent by the

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2. Ltr & Incls, 560th AOG to 4707th ADW, "Request for F-89D and F-86D Static Display to support Crash Rescue Training School", 15 Mar 55 (s.d. 157/2).

- 158/ 1. Ltr & Incl, EADF to 32d ADiv, "Rules for the 1955 USAF Fighter Weapons Meet", 19 Apr 55 (s.d. 158/1).
2. Ltr, 32d ADiv to both wings, "Yuma Projects Reports", 25 Mar 55 (s.d. 158/2).

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Wings in preparing for various meets throughout the period under study.<sup>159</sup>

In May 1955, preliminary steps were undertaken for both of the Wings to locate areas that would satisfy range requirements for rocketry exercise. As was suggested by EADF, the ranges had to have the following minimum factors: a minimum geographical area of 800 square miles (20 x 40 mile sides); each Wing should have at least one range for use; the ranges should have reasonable proximity to an ACGW Squadron and the stagingbase for the interceptors; and lastly the logistical support capabilities of the staging bases would have to be considered.<sup>160</sup>

The 4707th Air Defense Wing chose the Casco Bay area, Maine, and the 4711th Air Defense Wing took over the area known as Oriehaven, Machias, Seal Island, Maine. The latter range more than fulfilled the bill, at least in terms of size. Actually, these were the only two areas available to the Division for rocketry use, as the prohibitive size required automatically eliminated the other possibilities.

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- 159/
1. 4711th ADW Operations Order 3-55, 13 Apr 55 (s.d. 159/1).
  2. 4707th ADW Operations Plan 1-55, 9 May 55 (s.d. 159/2).
  3. 4711th ADW Operations Order 4-55, 27 May 55 (s.d. 159/3).
  4. 4711th ADW Operations Order 5-55, 6 Jun 55 (s.d. 159/4).
  5. 32d ADiv Operations Order 26-55, 20 Jun 55 (s.d. 159/5).
  6. TWX, ACP OCE 05002, (s.d. 159/6).
  7. Ltr & Ind, EADF to 32d ADiv, "Local Expenditure of 2.75 Practice Rockets", 24 Mar 55 (s.d. 159/7).

160. Ltr & Ind, EADF to 32d ADiv, "Requirements for Weapons Ranges", 2 May 55 (s.d. 160).

- 161/
1. As in fn 160.
  2. Ltr, 32d ADiv to EADF, "Bombing and Gunnery Range Utilization Report 21 (RCS: AF-F11) 24 Jun 55 (s.d. 160/2).

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One aspect of rocketry that has been the subject of much conjecture is that of firing error indicators. A device is desperately needed whereby the accuracy of a rocket can be determined, assuming it to be a near miss. The frangible targets now in use are considerably smaller than would be a hostile aircraft. It is unfair to assume that the proficiency of an ADC pilot and radar observer is at stake, merely because the results of their pass at a target indicate no hits. At the end of the period under study, there was no apparent answer to this question. Realizing the ramifications of this, ADC dispatched a letter to EADF, encouraging any intelligent proposals to solve this problem (from the subordinate units).<sup>162</sup>

By the same token it should be noted that the problem of a suitable frangible target was solved in much the same manner ". Through the joint efforts of various individuals, manufacturers, and the Air Force organizations."<sup>163</sup> Up to the present time, it was mainly through the ingenuity of the various organizations, that a suitable target and tow plane for rocketry purposes was found. During the period under study, the 4707th Air Defense Wing was utilizing a nylon marquisette self-reflecting target, and the 4711th Air Defense Wing was using the bomb type target reflector.<sup>164</sup> Perhaps both of these have certain limitations which restrict their effectiveness, but for the

162. Ltr & Inds, ADC to EADF, "Firing Error Indicator for Frangible Target System", 7 Jan 55 (s.d. 162).

163. As in fn 162.

164. Ltr, Colonel Israel to Comdr, EADF, "(Unclassified) Weapons Training, 28 May 55 (s.d. 164).

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time being, they were a good temporary measure.

The T-33 has been the workhorse of the rocketry system if only for the rather ignominious task of fulfilling the bill as a tow ship. Unfortunately, it has little range and ceiling capability, because of the tremendous drag imposed upon the plane. It also does not present a very realistic picture in terms of speed. The 4707th Air Defense Wing appears to be satisfied with the C-119 as a tow vehicle, if only in terms of the endurance and launching capabilities of the plane.<sup>165</sup> It should be pointed out that it still has as distinct liabilities the prospect of lower altitudes and slower speeds; a checkmate where good features nullify others. It should be noted at this point that the Division was particularly interested in procuring these aircraft, as was ADC in assigning these planes to units with the expressed purpose of using them to support the fighter-interceptors.<sup>166</sup>

Probably the most tangible result of the rocketry program for the period under study was that of better proficiency gained by the men working with - and against - the targets. An intangible result of this practice was experience gained by skilled personnel maintaining and adjusting the fire control systems. A better target had

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165. DF, 4707th ADW, "Wing Rocketry Program", 15 Jun 55 (s.d. 165).

166/ 1. TWX, AL/EAMAC-ACS 283, 2 Mar 55 (s.d. 166/1).  
 2. Ltr & Ind, EADF to 32d ADiv, "Assignment of C-119 Aircraft", 29 Apr 55 (s.d. 166/2).  
 3. Ltr & Ind, EADF to 32d ADiv, "C-119 Utilization", 4 May 55, (s.d. 166/3).

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been perfected, along with more consistent tow capabilities as shown by the C-119 aircraft. Certainly the most promising aspect is that of the rocketry meet, whose potential is unlimited, all factors taken into consideration.<sup>167</sup>

Anti-Aircraft Artillery and Nike

Anti-aircraft artillery defenses in the Division were materially strengthened with the activation of Nike batteries at Niagara Falls and Boston.<sup>168</sup> In addition to the Nike, there are 90mm gun defenses at Niagara and Boston. Skysweeper defenses are at Loring Air Force Base. Hampering the effectiveness of these defenses was the lack of ECM training available.<sup>169</sup> This problem area is acute, and materially affects the AAA defense.

Possibly the most important thing about the AAA in this Division is the marvelous cooperation between Army and Air Force

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167. The program was not without minor incidents or recommendations for improvement. For further details, the following is suggested.
1. TWX, FIMCE 6-286, "Preliminary Report of Accidental Firing of Rockets, RCS: 3-AF-X9", June 55 (s.d. 167/1).
  2. TWX, EACST-3-C 708, 27 May 55 (s.d. 167/2).
  3. Ltr, Director of Material, 4707th ADW to 4707th ADW, "Advisory Staff Visit, 60th Fighter-Interceptor Squadron, Westover Air Force Base, Mass., 10 Jan 55", 24 Jan 55 (s.d. 167/3).
  4. "Report of Staff Visit to 4711th Defense Wing", undated, (s.d. 167/4).
168. Interview with Lt. Col. James N. Lewis, AAA Liaison Officer assigned to this Headquarters, 24 Nov 55.
169. Ltr & Incl, 30th ADiv to 32d ADiv, "Report of Staff Visit to 32d Air Division (Defense), Eastern Anti-Aircraft Command, 26th Air Division (Defense)", 16 Mar 55 (s.d. 169).

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personnel. For example, a letter to the AAA liaison officer at Headquarters, 32d Air Division, from the Commander of the 548th AAA Battalion at Loring noted the following:<sup>170</sup>

Initially, numerous administrative and operational details peculiar to this particular operation complicated the problem. By means of excellent coordination and cooperation with the operating crews of the 766th AC&W Squadron, all such details have been expeditiously solved.

And again:

Major Mack, Commanding Officer, Captain Franson, Operations Officer, the officers and men of the 766th AC&W Squadron are commended for their fine spirit of cooperation and helpfulness.

The point has been further substantiated by the AAA liaison officer assigned at this Headquarters, who stressed this excellent state of understanding and cooperation. Contributing to the good feelings, and possibly growing out of them, orientation briefings for AAA personnel were initiated at this Headquarters.<sup>171</sup>

To insure the effectiveness of AAA units within the Division sector, exercises were held on a monthly basis for their benefit. The purpose was to perfect tracking capability and passage of information between AAA units and Air Force units at all levels.<sup>172</sup>

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170. Ltr & Ind, 548th AAA BN to AAA Liaison Officer, this Headquarters, "Air Force Cooperation", 7 May 55 (s.d. 170).

171. As in fn 168.

172/ 1. 32d ADiv Operations Order 12-55, 8 Apr 55 (s.d. 172/1).  
2. 32d ADiv Operations Order 16-55, 16 May 55 (s.d. 172/2).  
3. 32d ADiv Operations Order 25-55, 15 Jun 55 (s.d. 172/3).

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CHAPTER IV: OPERATIONAL TACTICS AND TECHNIQUES

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Detection and Identification

With the Division completely equipped with AI Fighter-interceptors, the prospects seemed good for attaining positive identification and interception of all unknown planes. But as was pointed out, there were deficiencies in the field which would weaken these prospects. The radars had limitations; two of the first line fighter interceptors were experiencing difficulty with turbine wheel failure; two of the fighter interceptor squadrons faced poor runway conditions with the advent of Spring, and there was always the question of crew proficiency and training.

Rather than tax the combat ready interceptor crews with excessive and costly false intercepts, other steps had been taken to

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ease the problem of identification. The period under study did not see the introduction of new methods, but saw the problem as one of perfecting methods which had been introduced at an earlier date.

The MCIS (Multiple Corridor Identification System) was one of these methods. Overwater flights approaching the coast could be detected and identified by the relatively simple process of channeling these flights into imaginary corridors. A homing beacon serves as a guide to these corridors. The one glaring weakness with the MCIS was the fact that both civilian and military aircraft comply with it only on a voluntary basis. Since 100 per cent participation has not been attained, the chief problem here is to convince those who do not participate that there is a well-grounded need for this system.<sup>173</sup>

The most significant means for the ready identification of aircraft was the use of the ADIZ. With the proper correlation of previously filed flight plans, the identification of aircraft was at least simplified. This resulted in less false alerts and scrambles on the part of active air defense aircraft. As can be expected, there were violations of this too, one of which brought out a loose interpretation of policy within this command. An unknown was detected by FV Station 2, and no scramble action was initiated. The tactical

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<sup>173/</sup> For a more complete discussion of the MCIS, refer to 32d ADiv Hist Rept 14, pp 195-197.

1. Ltr, 32d ADiv to 762d AC&W Sq, "Briefing Stations- Nantucket MCIS", 25 Jan 55. (s.d. 173/1).
2. Ltr, 32d ADiv to 4707th ADW, "MCIS Summary - Yarmouth/Nantucket Area - November 1954", 7 Jan 55 (s.d. 173/2).
3. Ltr, 32dADiv to 4711th ADW, "MCIS Summary - Yarmouth/Nantucket Area - November 1954", 17 Jan 55 (s.d. 173/3).
4. Ltr, 32d ADiv to EADF, "MCIS Summary - Yarmouth/Nantucket Area - November 1954", (s.d. 173/4).

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action was sent to the ADCC as NSCA (No scramble - conservation of aircraft). Within two days after the violation, Colonel Israel re-emphasized Division policy in a letter sent to the 4707th Air Defense Wing.<sup>174</sup>

It is again emphasized that the term NSCA will not be used as a reason for no scramble on unknown aircraft, since it is not and never has been the policy of this headquarters to conserve aircraft when an unknown is in the Division sector.

The increasing amount of ADIZ violations was noted with alarm by ADC. A large amount of military violations was incurred by ADC pilots themselves. But whether the violations amounted to two or twenty, it was enough to prompt ADC to insure that all commanders were aware of the situation. Again they emphasized that all crews were to be cognizant of ADIZ procedures.<sup>175</sup>

The other chief military offender was the Strategic Air Command.<sup>176</sup> At least once in the past this problem prompted the Division to complain to EADF.<sup>177</sup> During April 1955, no less than 15 SAC

174. Ltr, Colonel Robert S. Israel, to 4707th ADW, "Unknown Aircraft", 12 Feb 55 (s.d. 174).

175. Of the 38 violations incurred by ADC pilots, only two were attributed to the Division.  
Ltr & Inds, ADC to EADF, "ADC ADIZ Violations", 12 Mar 55 (s.d. 175).

176/ 1. Ltr, 32d ADiv to EADF, "Identification of Strategic Air Command Aircraft", 18 Apr 55 (s.d. 176/1).  
2. Ltr, 32d ADiv to 42d Air Refueling Sq, Loring AFB, "Deviation from Authorized Procedure for Operation of an Aircraft within an Air Defense Identification Zone", 24 May 55 (s.d. 176/2).  
3. Ltr, 32d ADiv to Commander, Westover AFB, "Violation of Warning Area", 10 Jun 55 (s.d. 176/3).

177. Ltr & Inds, 766th AC&W Sq to 4711th ADW, "Identification of Strategic Air Command (SAC) Aircraft", 16 Nov 1954, (s.d. 228/4 to 32d ADiv Hist Rept 17).

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aircraft approached the Division Sector, naturally causing alarm within the system. It was determined that the flight plans had never been relayed to the air defense system, due to improper relaying procedures and communications failures.<sup>178</sup>

Two other forms of defense practices that were being perfected were SCATER, and its counterpart, CONELRAD. In the event that SCATER would have to be implemented, air navigation aids would be turned off as they became no longer required. Basically, this was the control of electromagnetic radiations. SCATER would also control the amount of civilian and non-tactical aircraft that could be airborne at one time. The overall capability of the air defense system would then not be taxed during an emergency.<sup>179</sup> An operational suitability test was determining the possibility of remote controlling CAA navigational aids. The results of the test were not encouraging, for it was determined that it would not be too difficult for an enemy to assume control of the aids. This could be simply achieved by tapping in on the landline, resulting in unstable security control. Unfortunately, there are many of these aids controlled by remote processes,

178. Ltr, 32d ADiv to EADF, "Identification of Strategic Air Command Aircraft", 18 Apr 55 (s.d. 176/1).

179. More detail on SCATER and CONELRAD can be found in 32d ADiv Hist Rept 16, pp 83-87.  
Ltr & Ind, EADF to 32d ADiv, "Supplement to SCATER - Civil Defense Aircraft Operations", 16 Jun 55 (s.d. 179).

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and this Headquarters requested that the security aspects of the program be re-evaluated.<sup>180</sup>

CONELRAD is the systematic control of electromagnetic radiations emanating from civil radio stations. If this is to be successful, it demands close coordination with civil agencies, more specifically the FCC and FCDA.<sup>181</sup> It is the Air Division Commanders' responsibility to implement the CONELRAD plan. A particular amount of effort was expended working with other agencies to determine their own capabilities, and establish a chain of alerting responsibility.<sup>182</sup> A CONELRAD alert was staged on 25 May 55 to test the adequacy of the alerting system. The major factor to be considered here was that of

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- 180/ 1. DF, OCE to CAA, ODO, OOT-A, "Operational Suitability Test of Remote Radio Control for Conelrad", 21 Feb 55 (s.d. 180/1).  
2. Ltr, 32d ADiv to EADF, "Control of Unattended Navigational Aids", 23 Mar 55 (s.d. 180/2).
- 181/ 1. Ltr, Colonel Robert S. Israel to M/Gen M. R. Nelson, 15 Jan 55, (s.d. 181/1).  
2. Ltr & Incl, Colonel William H. Clark to both Wings, "Dissemination of Intelligence to FCDA Liaison Officers", 12 Mar 55 (s.d. 181/2).  
3. 32d ADiv War Mobilization Plan 2-54, 1 Nov 54, pp 3-4 (s.d. 181/3).
- 182/ 1. Ltr & Ind, EADF to 32d ADiv, "(Uncl) Cambridge Research Center CONELRAD Plan", 11 Mar 55 (s.d. 182/1).  
2. Ltr & Ind, EADF to 32d ADiv, "(Uncl) First Coast Guard District CONELRAD Plan", 28 Apr 55 (s.d. 182/2).  
3. Ltr, 32d ADiv to Treasury Department, "(Unclassified) CONELRAD Plan", 27 May 55 (s.d. 182/3).  
4. Ltr & Ind, Hq CAP to 32d ADiv, "CAP CONELRAD PLAN", 27 May 55 (s.d. 182/4).

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time, as this was singularly the most important element of the alerting procedure. This headquarters felt that a conference should be scheduled so as to simplify alerting procedures. It was noted that some of the units did not receive any notification of the alert, and, in other instances, too much time was taken for alerting.<sup>183</sup>

#### Standing Alert

An improper interpretation of policy concerning operations will occasionally result in an aircraft accident - a bitter lesson learned the hard way. But it at least serves as an example to others, resulting in more efficient and stringent rules for operation. There was no exception for crews of fighter-interceptors who were standing alert status, as an accident prompted Colonel Israel to write the following:<sup>184</sup>

During the investigation of a recent aircraft accident which involved the loss of pilot and aircraft, it was found that pilots on "readiness" status are permitted to sleep when not actually flying. This is in conflict with the spirit and intent of directives from higher headquarters.

It is the policy of this headquarters that effective immediately pilots on "readiness" will remain awake and ready to perform the assigned mission at all times.

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- <sup>183/</sup> 1. TWX, ACPOCE 05030, 32d ADiv to Group TA, 9 May 55 (s.d. 183/1).  
 2. TWX, ACPOCE 05116, 32d ADiv to Group TA, 23 May 55 (s.d. 183/2).  
 3. Ltr, 32d ADiv to EADF, "CONELRAD TEST (Alerting Facilities) RCS: AP-H24 (OT)", 8 Jun 55 (s.d. 183/3):

- <sup>184.</sup> Ltr Colonel Israel to both Wings, "States of Alert", 3 Feb 55, (s.d. 184).

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Alert duty schedules will be so arranged to insure pilots do not become overtired and the effectiveness of the assigned mission impaired.

Coincidentally, the following day, ADC sent a letter to EADF which sounded the same theme as a result of another accident within its command. Once again, pilot fatigue was the responsible element. It was stressed by ADC that proper scheduling of alert crews to facilitate adequate rest was paramount if the team efficiency of these men was not to be impaired.<sup>185</sup>

Maintaining alert status is not an easy job. It is tedious, demanding, and places the crews involved under a tension that can only be terminated by a scramble or relief crew. As long as the need for ADC exists, this relentless aspect of its mission will likewise exist. ADC has alleviated the problem to some extent. It demands that all interceptor crews be briefed prior to air defense training missions, and when they are scheduled to go on alert duty.<sup>186</sup>

Another accident led EADF to emphasize the fact that it is the responsibility of the unit commanders to maintain strict compliance with ADCR 55-13, and that crews be scrambled for active air defense missions only. By the same token, the Division held

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185. Ltr & Inds, ADC to EADF, "Requirement for Alert Crew Rest", 4 Feb 55 (s.d. 185).

It is not the intent of the historian to discuss the concept of operations from such a negative viewpoint. On the contrary, one must look upon the entire network of ADC and its subordinate commands in very broad terms, using the few unfortunate occurrences to illustrate the specifics of command policies, and why their need is so important for the success of the mission.

186. ADCR 55-13, "Standard Briefing Procedures", 31 Mar 55. 55-4389

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strict compliance to the above principle, emphasizing that the fighter-interceptors on a "Readiness" status will be scrambled for active air defense missions only.<sup>187</sup>

Scramble

Colonel Israel pointed out that the mission of air defense will be accomplished regardless of weather conditions. He noted further that any relaxation of the air defense mission as a result of weather will only weaken our overall determination to effect the mission.<sup>188</sup> Under two circumstances only could this policy be compromised:<sup>189</sup>

During conditions of hazardous flying weather, such as severe thunderstorms, hail, freezing rain, sleet, etc., it is entirely possible that the weather minima established for an air base will be above those requiring a mandatory scramble. Under these conditions, commanders specified above are responsible for determining and notifying the appropriate AC&W squadron when, in his opinion, these hazardous flying conditions warrant a mandatory scramble restriction.

Runway conditions and/or other circumstances which make ground operation and/or take-offs hazardous should be treated in the same manner as those weather conditions hazardous to flying, and mandatory scramble restriction established. This restriction will apply to ground operation and take-offs only as recovery at an alternate base is a planned factor when considering a scramble.

187. Ltr & Ind, EADF to 32d ADiv, "Employment of Active Air Defense Aircraft", 5 May 55 (s.d. 187).

188. Ltr, Colonel Robert S. Israel, to both Wings, "Weather Minima Established for Fighter-Interceptor Squadrons with the 32d Air Division (Defense)", 10 Feb 55 (s.d. 188).

189. Ibid.

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The Division also suggested some changes to ADC Regulation 55-30<sup>190</sup> on scramble procedure.

As a result of two aircraft accidents, certain procedures were outlined for the benefit of personnel working under the jurisdiction of the Division. Formation take-offs were banned after disastrous results in the form of two planes completely destroyed and five men fatally injured.<sup>191</sup> EADF stressed that all Mobile Control Officers would be aware of flame patterns from afterburners, during take-offs and landings, as outlined in ADCR 55-14.<sup>192</sup> Aside from those experiences above, the Division clarified other policies which would only result in perfecting scramble procedure.<sup>193</sup>

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190. Ltr, 32d ADiv to EADF, "Recommended Changes to Air Defense Command Regulation 55-30", 8 Apr 55 (s.d. 190).
191. TWX, ACFOOT-FO 04065, 32d ADiv to NG units, 14 Apr 55 (S.d. 191).
192. Ltr & Ind, EADF to 32d ADiv, "Operational Procedures", 13 Jan 55, (s.d. 192).
- 193/ 1. Ltr, 32d ADiv to both Wings, "Reporting of Scramble Status", 1 Feb 55 (s.d. 193/1)  
 2. Ltr, 32d ADiv to both Wings, "Employment of Interceptors for Identification Purposes", 30 Jun 55 (s.d. 193/2).

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Recovery

Recovery demands the most exacting rules of play. The period under study saw concerted emphasis and effort placed upon the operational concept of GCA, as this is the key for successful recovery operation.

Headquarters USAF had to face the bitter and exasperating realization that the mobile GCA program was suffering from personnel inadequacies. So much so, that the entire mobile GCA operational concept for the Zone of the Interior had to be manned on a minimal basis. Briefly summarized, the conditions attributable to the manning problem are overseas commitments, loss of personnel, and slow promotion rates due to the considerable time spent in training.<sup>194</sup> However, as more trained personnel are ready for GCA operation, the problem would be alleviated. At the end of the period under study, minimal requirements were to be considered adequate.

Even though handicapped, the program was considered adequate enough to provide continuous GCA coverage at bases where there was a mobile GCA unit. Thus, the overall capability of ADC as an all-weather system would not be compromised. USAF established minimal requirements for performing the assigned mission. The two most important were "Continuous scramble monitoring capability during IPR

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194. Ltr & Inds, USAF to ADC, "Mobile GCA Operational Concept for the Zone of the Interior", 10 Jan 55 (s.d. 194).

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conditions", and "Continuous IFR operation with multiple recovery capability".<sup>195</sup>

During the inspection of the 32d Air Division by EADF, it was noted that scramble and recovery procedures for the Division were "Satisfactory".<sup>196</sup> This was the result of decentralized control for scrambling. The only exceptions were when several unknowns entered the sector simultaneously; or when tactical action demanded centralized control.<sup>197</sup>

At the end of the period under study, there were eight fighter recovery circuits operating within the Division.<sup>198</sup> Earlier

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195. Ind, ADC to EADF, "Mobile GCA Operational Concept for the Zone of the Interior", 11 Feb 55 (s.d. 195).
196. Rept, EADF to 32d ADiv, "Report of Special Inspection FY-55, of the 32d Air Division (Defense), Syracuse Air Force Station, Syracuse 6, New York", 11 Feb 55, p 6 (s.d. 196).
197. Ibid.
198. The GCI GCA recovery circuits are outlined below.

<u>AC&amp;W Site</u>	<u>TO</u>	<u>Circuit Number</u>
P-80	Fresque Isle	Commercial
P-80	Loring	2692
P-21	Buffalo Approach Cont.	2723
P-50	Westover	2102
P-14	Burlington	2721
P-10	Otis	2608
P-49	Griffiss	653
P-65	Dew	303

DF, OCE to Colonel Shelton, "GCI GCA Recovery Circuits", 6 May 55 (s.d. 198).

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in the year, EADF had stressed the importance of recovery circuits, noting that some of the fighter-interceptor bases within its command had not initiated requests. EADF felt that this condition could not be tolerated, as it affected its overall combat capability.<sup>199</sup>

Fighter recovery procedures were consistently being amended for various bases. This was accomplished so as to strengthen flexibility of operation, and increase the safety factor.<sup>200</sup>

199. Ltr & Inds, EADF to 32d ADiv, "ADDC-GCA/RAPCON Circuits for Fighter Recovery", 15 Mar 55 (s.d. 199).

- 200/
1. Ltr, Encls & Inds, 4711th ADW to 528th ADG, "Jet Penetration and Instrument Approach Procedures", 21 Jan 55 (s.d. 200/1).
  2. Ltr, & Inds, 564th ADG to 4707th ADW, "Standard Instrument Approach Procedures, Automatic Direction Finding", 19 May 55 (s.d. 200/2).
  3. Ltr, Incl & Ind, 4707th ADW to 32d ADiv, "Standard Jet Penetration for Niagara Falls Municipal Airport", 4 Jan 55 (s.d. 200/3).
  4. Ltr & Inds, 518th ADG to EADF, "Additional UHF Air-Ground Frequency Requirement for Niagara Falls Airport", 16 Apr 55 (s.d. 200/4).
  5. TWX, ACFOPR 04068, 32d ADiv to both Wings, 13 Apr 55 (s.d. 200/5).
  6. Ltr & Inds, Colonel Harry L. Downing to 4711th ADW, "GCA Minimums", 21 May 55 (s.d. 200/6).
  7. 32d ADiv Operations Plan 3-55, "Sector Defense", undated, p 5 (s.d. 200/7).
  8. Ltr & Inds, EADF to 4711th ADW, "Communications Equipment for the Use of Scramble Control Officers", 25 Apr 55 (s.d. 200/8).

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Air Battle Control

As had been seen in previous chapters, the art of GCI involves the most refined capabilities of men and machines. To realize the potential of GCI requires elaborate and comprehensive tactics for intercept procedure. During the previous period, the division produced its own tactical doctrine for the employment of interceptors. Through the results of exercises and systems training, amendments were incorporated within this doctrine, which refined the principles for these tactics.<sup>201</sup>

At the same time, Intercept Tactics for Air Defense was being compiled by WADF. The final ADC draft of this plan was forwarded to the Division, and sent to the field for a 90 day trial period.<sup>202</sup> Throughout the trial period, it was made clear that the initiation of hostilities or national emergency would warrant reverting to the present 32d Air Division tactical doctrine.<sup>203</sup> ADC accepted the WADF tactical air doctrine as standard for all fighter-interceptor units, after some minor changes were accomplished.<sup>204</sup>

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- 201/ 1. 32d ADiv Tactical Doctrine for Employment of Fighter-Interceptors in Air Defense Operations, 20 Oct 54 (s.d. 256 for 32d ADiv Hist Rept 17),  
 2. Amendment I, undated, (s.d. 201/2).  
 3. Amendment II, undated, (s.d. 201/3).

202. Ltr & Incl, 32d ADiv to all units, "Intercept Tactics for Air Defense", 8 Feb 55 (s.d. 202).

203. Ibid.

204. Interview with Captain Edward H. McEachron, OOT-A, this Headquarters 30 Nov 55.

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The importance of developing intercept techniques was reflected throughout the period in wing operations orders.<sup>205</sup> The basis to all this is the 90° beam collision intercept using the "E" series fire control systems. This system is dependent upon radar. The fighter-interceptor is vectored toward the approaching unknown, and then its own radar (fire control system) will take it to the target. All things being equal, the system works. But if the enemy should use ECM (Electronics Counter Measures), the plane's fire control has to be able to counteract this jamming. Counter measures have been designed and produced which can cope with a certain amount of this activity, but it is not infallible. The 4707th Air Defense Wing proposed that T-33 aircraft, equipped with an X Band microwave beacon equipment, be used to compensate for jamming activity.<sup>206</sup> The T-33 would trail a bomber stream, thus bringing the fighter-interceptors in the general direction of the enemy aircraft.<sup>207</sup> EADF replied that there were several methods for air to air homing presently being tested by the Air Proving Ground, and not to consider this particular method until the results were received on the others.<sup>208</sup>

205/ 1. 4711th ADW Operations Order 12-54, 23 Dec 54, (s.d. 205/1).  
 2. 4711th ADW Operations Order 1-55, 16 Feb 55, (s.d. 205/2).  
 3. 4711th ADW Operations Order 2-55, 7 Apr 55, (s.d. 205/3).

206. Ltr & Incls, 4707th ADW to 32d ADiv, "Proposed Use of Airborne X Band Beacon for Air Defense", 17 Mar 55 (s.d. 206).

207. Ibid.

208. Inl, EADF to 32d ADiv, "Proposed Use of X Band Beacon for Air Defense", 12 Apr 55 (s.d. 208).

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The prospects of ECM also saw the introduction of BROFICON (Broadcast Fighter Control). Assuming that UHF ground to air frequencies could be jammed, other means had to be readily available for control of interceptors. Consequently, commercial transmitters were to be used by ADC controllers. Their messages would be sent to the interceptors over engineered circuits, being picked up by the radio compass receivers in the planes.<sup>209</sup> This Headquarters suggested that pilots experiencing jamming activity "...revert immediately to a prearranged standard broadcast frequency...", without trying to make further contact with their director in the jammed frequency.<sup>210</sup>

Another important feature in the decentralization of control was the establishment of an alternate command post. There is the possibility that the Headquarters, 32d Air Division (Defense) could be isolated from its subordinate units by communications failure during an emergency. It was decided that an alternate command post would be established at the 656th AC&W Squadron, Saratoga Springs, New York. This Squadron would then be able to assume control of the air battle, using its direction center as a control center.<sup>211</sup>

209. ADC History 7, pp 150-151.

210. Ltr & Ind, EADP to 32d ADiv, "[Unclassified] BROFICON Implementation", 29 Apr 55 (s.d. 210).

211/ 1. 32d ADiv Alternate Command Post Plan 5-55, 15 Mar 55, (s.d. 211/1).  
2. Change #1 to ALCOP 5-55, 10 May 55 (s.d. 211/2).

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USAF - RCAF Coordination

Effective in April, the United States, United Kingdom, and Canada adopted new and standardized nomenclature for all Soviet aircraft. By doing this, better cross-border telling and tracking could be accomplished - in the event of an emergency.<sup>212</sup> All Soviet aircraft with the same missions were assigned names starting with the same first letters, e.g., "Barge", "Badger", "Bison", etc., all being strategic bombers.

It was noted by the Division that the conversion of RCAF from UHF to VHF caused considerable communication trouble. Once again, the Division was suffering from frequency congestion.<sup>213</sup> Aircraft equipment limitations, plus the weight involved in more radio equipment, precluded more channels. It was suggested by this Headquarters that extra ground equipment be installed to meet these requirements. Then tactical frequencies could be assigned to interceptor units and AC&W Squadrons alleviating the shortage of aircraft channels. Aside from more flexibility in operation, there would be less time lost in channeling interceptors on different frequencies. Further, it was suggested that the RCAF AC&W Squadrons be given authorization to use these frequencies as they would be controlling

212. DF, OIN to all concerned, "New Designation of Soviet Aircraft", 8 Apr 55 (s.d. 212).

213. Ltr, 32d ADiv to EADF, "Tactical Frequency Assignment", 15 Mar 55 (s.d. 213).

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USAF planes.

215  
Cross-training was accomplished during the period under study. One practice Air Defense Mission brought out minor recommendations for better USAF-RCAF coordination. Most of the recommendations centered around USAF aircraft serviceability at St. Huberts.

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Two "Thinkfast" exercises brought out the fact that RCAF ADCC's were giving good track information, although not consistent. But once again, it was tangible evidence that the Canadian system was a good system in being, although it still had rough spots which required smoothing.

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- 214/  
1. Ibid.  
2. Ltr, 32d ADiv to 27th FIS "Information on Adjacent Canadian Subsectors", 11 Jan 55 (s.d. 214/2).
- 215  
Ltr, & Inds, 60th FIS to Cmdr, 60 FIS, "USAF-RCAF Cross-Training", 12 Apr 55 (s.d. 215).
216.  
Ltr, 32d ADiv to Sector Commander, 1 ADCE, "Practice Air Defense Mission Conducted on 8 Jun 55 With Canadian ADCC "Crystal", 22 Jun 55 (s.d. 216).
- 217/  
1. Ltr, 32d ADiv to EADF, "Report of Exercise "Thinkfast #13", 31 Mar 55 (s.d. 217/1).  
2. Ltr, 32d ADiv to EADF, "Report of Exercise "Thinkfast #14", 30 Apr 55, (s.d. 217/2).

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CHAPTER V: TRAINING MISSIONS AND EXERCISES

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Without daily implementation of routine tests and exercises, the only tangible results of the effectiveness of the Division can be seen in the Operations Summaries.<sup>218</sup> Here can be seen the daily effectiveness of detection, identification and interception - albeit against unknowns that are friendly; but it is a measure of certainty.

At least once a year, a nation-wide exercise was implemented. The previous period saw this in the form of Operation

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- 218/
1. 32d ADiv Operations Summary, Jan 55 (s.d. 218/1).
  2. 32d ADiv Operations Summary, Feb 55 (s.d. 218/2).
  3. 32d ADiv Operations Summary, Mar 55 (s.d. 218/3).
  4. 32d ADiv Operations Summary, Apr 55 (s.d. 218/4).
  5. 32d ADiv Operations Summary, May 55 (s.d. 218/5).
  6. 32d ADiv Operations Summary, Jun 55 (s.d. 218/6).

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Check Point. Here, all the elements of air defense were pitted against the best that SAC had to offer. Perhaps milder in proportion, but as serious in consequence, were those exercises implemented on a quarterly basis. These were Command Post Exercises (CPXs) known as "Snow Bird" and "Low Blow". These exercises are calculated to test and evaluate decision capabilities, and train units participating. The results then show deficiencies within the air defense system.

Snow Bird and Low Blow

During CPX "Snow Bird", confusion resulted when the AAA introduced tracks into the system.<sup>219</sup> Although the reason for the confusion was discovered to be "personnel error", it nonetheless emphasized the need for careful planning and exact instructions.

This exercise also pointed out that a separate circuit is needed for intelligence. During certain periods throughout the exercise, there were communications overloads.<sup>220</sup> The only feasible solution here is to have more adequate communications lines, or utilize wire recorders as had been recommended.<sup>221</sup>

It was also recommended by the Office of Communications and Electronics, this Headquarters, that all GCI Stations be equipped

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219. CPX "Snow Bird", Narrative and Summary, undated. (s.d. 219).

220. Ibid, Comments and Recommendations.

221. Ibid, Intelligence.

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with back-up height and search radar. By so doing, normal operation can continue if the primary radar is destroyed or disabled.<sup>222</sup>

Similarly, CPX "Low Blow" revealed new problem areas. One of the most serious was the time delay in getting authorization to activate augmentation forces.<sup>223</sup>

The time delay lies not in the period required to bring personnel to duty, but in the cumbersome process of obtaining authorization for activation.

This Headquarters also noted another possible problem area, dangerously serious, if only from the standpoint of the civilian populace. It involved the term "military emergency" used when SCATER is implemented. Colonel Israel felt that civilians may not understand that "military emergency", refers to a "State of events" not necessarily disastrous. It is conceivable that <sup>the</sup> civilian population would panic if they learned of a "military emergency" <sup>224</sup>.

Routine Missions and Exercises

Less spectacular but equally important training missions

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222. Ibid, Communications and Electronics.

223. Ltr, 32d ADiv to EADF, "Report of Participation in CPX "Low Blow", 30 Apr 55 (s.d. 223).

224. Ibid.

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were constantly being flown. Detection, tracking and Interception techniques were tested under the auspices of Big Photo exercises.<sup>225</sup>

The cross border variant of this was seen in cooperation with the Canadian ADCC at Lac St. Denis.<sup>226</sup> Variations of the Big Photos were to be seen in Page Stick and Thinkfast exercises, which were implemented by the Division and EADF, respectively.<sup>227</sup>

In addition to these, Electronic Counter Missions (ECM) were being flown, to train and test radar and AAA observers. Throughout the period under study, these missions were consistently hampered by inadequate types of aircraft, insufficient numbers of aircraft, and inadequate training materials.<sup>228</sup>

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225. 32d ADiv Hist Rept #17, p 97.

226. As in fn 216.

227. 32d ADiv Hist Rept #17, p 98.

228/ 1. Ltr, 32d ADiv to 4713th Radar Evaluation (ECM) Flight, "Report of Electronics Countermeasure Activities (RCS: ADC-H5-EADF-2), 9 Jun 55 (s.d. 228/1).  
 2. DF, OCE to ODO, "General Inspection of 654th AC&W Squadron", 6 Jan 55 (s.d. 228/2).  
 3. Ltr, 32d ADiv to EADF, "AAA Tracking Missions", 5 Jan 55 (s.d. 228/3).  
 4. DF, Lt. Col. Lewis to CO 15th AAA Group, "ECM Missions", 27 Jun 55 (s.d. 228/4).  
 5. TWX, ACFOCE 05009, 32d ADiv to 518th ADG, undated (s.d. 228/5).  
 6. TWX, ACFOCE 05065, 32d ADiv to all applicable units, 12 May 55 (s.d. 228/6).  
 7. TWX, ADFOCE 05153, 32d ADiv to all applicable units, 26 May 55 (s.d. 228/7).

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APPENDIX: ORGANIZATIONAL TRANSITIONS

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Headquarters, 32d Air Division (Defense)

Throughout the period of this history, Colonel Robert S. Israel, Jr., continued in command of the Division. During one temporary absence of Colonel Israel, Colonel Richard A. Legg, Commander of the 4707th Air Defense Wing, temporarily assumed command of the Division.<sup>229</sup> The office of Deputy Commander was discontinued, being established as The Office of Vice-Commander.<sup>230</sup> Prior to this, the

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229/ 1. 32d ADiv GO 3, 7 Mar 55, (s.d. 229/1).  
2. 32d ADiv GO 4, 28 Mar 55 (s.d. 229/2).

230. 32d ADiv GO 6, 22 Apr 55 (s.d. 230).

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Deputy Commander was Colonel William H. Clark. As a result of the change in office designation, Colonel Clark was appointed Vice-Commander.<sup>231</sup> He was relieved in June due to reassignment.<sup>232</sup>

Colonel William W. Inghatt, Deputy for Operations, was also assigned additional duty as Acting Vice Commander.<sup>233</sup> Colonel Gordon F. Thomas remained in position as Inspector General throughout the period, but did relieve Colonel Inghatt as Acting Vice Commander in June.<sup>234</sup>

There were relatively few changes within the staff during the period. First Lieutenant William T. Schultz was appointed Division Surgeon, relieving Major George K. Reberly.<sup>235</sup> Lieutenant Colonel Carl L. Chido was assigned duty as Deputy for Material, relieving Major William P. Daniels.<sup>236</sup> Major Henry R. Brown, who was Acting Deputy Comptroller, was relieved by Captain Guy H. Foster.<sup>237</sup>

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231. Ibid.

232. 32d ADiv GO 6, 1 Jun 55 (s.d. 232).

233. 32d ADiv GO 9, 10 Jun 55 (s.d. 233).

234. 32d ADiv GO 10, 16 Jun 55 (s.d. 234).

235. 32d ADiv GO 1, 5 Jun 55 (s.d. 235).

236. 32d ADiv GO 2, 11 Feb 55 (s.d. 236).

237. Ibid.

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Captain Foster was subsequently assigned duty as Deputy for Comptroller.<sup>238</sup>

Attached to Headquarters, 32d Air Division (Defense) were other units which gave it invaluable support. These were Flight 3-D of the 4602d AISS, and Detachment 16 of the 12th Weather Squadron.

Headquarters, 4707th Air Defense Wing

Colonel Richard A. Legg remained in command of this Wing. His position was temporarily filled during two absences by Colonel Stanley E. Matthews and Colonel Fred G. Hook, Jr.<sup>239</sup> Two officers from Headquarters, 4707th Air Defense Wing, one from the 654th AC&W Squadron and six from the 656th AC&W Squadron were awarded the Armed Forces Reserve Medal.<sup>240</sup>

Headquarters, 4711th Air Defense Wing

Colonel William D. Greenfield assumed command of the

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<sup>238</sup>. 32d ADiv GO 5, 31 Mar 55, (s.d. 238).

<sup>239</sup>/ 1. 4707th ADW GO 2, 8 Mar 55 (s.d. 239/1).  
2. 4707th ADW GO 4, 28 Mar 55 (s.d. 239/2).  
3. 4707th ADW GO 6, 16 May 55 (sd 239/3).  
4. 4707th ADW GO 7, 31 May 55 (s.d. 239/4).  
5. 4707th ADW GO 1, 6 Jan 55 (s.d. 239/5).

<sup>240</sup>/ 1. 4707th ADW GO 3, 23 Mar 55 (s.d. 240/1).  
2. 4707th ADW GO 5, 7 Apr 55 (s.d. 240/2).

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4711th Air Defense Wing in January.<sup>241</sup> During the period under study, there were five occasions when his command position was temporarily filled by other members of Wing.<sup>242</sup> Colonel James F. Reed temporarily assumed command on four occasions, and Colonel Harry L. Downing assumed command once.

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- 241/ 1. 4711th ADW GO 1, 12 Jan 55 (s.d. 241/1).  
2. 4711th ADW GO 2, 12 Mar 55 (s.d. 241/2).

- 242/ 1. 4711th ADW GO 3, undated (s.d. 242/1).  
2. 4711th ADW GO 4, 17 Mar 55 (s.d. 242/2).  
3. 4711th ADW GO 5, 9 Apr 55 (s.d. 242/3).  
4. 4711th ADW GO 6, 13 Apr 55 (s.d. 242/4).  
5. 4711th ADW GO 7, 15 Apr 55 (s.d. 242/5).  
6. 4711th ADW GO 8, 16 Apr 55 (s.d. 242/6).  
7. 4711th ADW GO 9, 5 Jun 55 (s.d. 242/7).  
8. 4711th ADW GO 10, 8 Jun 55, (s.d. 242/8).

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- 17 Ltr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of activities for period ending 1 May 55".

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- 18/5 Ltr, Lcdr B. Sevilla to Cdr, Naval Forces, ECADF, "Summary of Activities for period ending 15 Jun 1955", 15 Jun 55.
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- 173/2 Ltr 32d ADiv to 4707th ADW, "MCIS Summary - Yarmouth/Nantucket Area - November 1954", 7 Jan 55.
- 173/3 Ltr 32d ADiv to 4711th Defense Wing, "MCIS Summary - Yarmouth/Nantucket Area - November 1954", 17 Jan 55.

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173/4 Ltr, 32d ADiv to EADF, "MCIS Summary - Yarmouth/ Nantucket Area - November 1954", undated.

174 Ltr, Colonel Robert S. Israel to 4707th ADWm "Unknown Aircraft", 12 Feb 55.

175 Ltr & Inds, ADC to EADF, "ADC ADIZ Violations", 12 Mar 55.

176/1 Ltr, 32d ADiv to EADF, "Identification of Strategic Air Command Aircraft", 18 Apr 55.

176/2 Ltr, 32d ADiv to 42d Air Refueling Sq, Loring AFB, "Deviation From Authorized Procedure for Operation of an Aircraft Within an Air Defense Identification Zone", 24 May 55.

176/3 Ltr, 32d ADiv to Commander, Westover AFB, "Violation of Warning Area", 10 Jun 55.

179 Ltr & Ind EADF to 32d ADiv, "Supplement to SCATER - Civil Defense Aircraft Operations", 16 Jun 55.

180/1 DF, OCE to CAA, CO, OOT-A "Operational Suitability Test of Remote Radio Control for Conelrad", 21 Feb 55.

180/2 Ltr, 32d ADiv to EADF, "Control of Unattended Navigational Aids", 23 Mar 55.

181/1 Ltr, Colonel Robert S. Israel to M/Gen M.R. Nelson, 15 Jan 55.

181/2 Ltr & Incl, Colonel William H. Clark to both wings, "Dissemination of Intelligence to FCDA Liaison Officers", 12 Mar 55.

181/3 32d ADiv War Mobilization Plan 2-54, 1 Nov 54, pp. 3-4.

182/1 Ltr & Ind, EADF to 32d ADiv, "(Uncl), Cambridge Research Center CONELRAD Plan", 11 Mar 55.

182/2 Ltr & Ind, EADF to 32d ADiv, "(Uncl) First Coast Guard District CONELRAD Plan", 28 Apr 55.

182/3 Ltr, 32d ADiv to Treasury Department, "(Uncl) CONELRAD Plan," 27 May 55.

182/4 Ltr & Ind, Hq CAP to 32d ADiv, "CAP CONELRAD PLAN", 27 May 55.

183/1 TWX, ACFOCE 05030, 32d ADiv to Group TA, 9 May 55.

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183/2 TWX, ACFOCE 05116, 32d ADiv to Group TA, 23 May 55.

183/3 Ltr, 32d ADiv to EADF, "CONELRAD TEST (Alerting Facilities) RCS: AF-H24 (OT)", 8 Jun 55.

184 Ltr, Colonel Israel to both Wings, "States of Alert", 3 Feb 55.

185 Ltr & Inds, ADC to EADF, "Requirement for Alert Crew Rest", 4 Feb 55.

187 Ltr & Ind, EADF to 32d ADiv, "Employment of Active Air Defense Aircraft", 5 May 55.

188 Ltr, Colonel Robert S. Israel, to both Wings, "Weather Minima Established for Fighter-Interceptor Squadrons with the 32d Air Division (Defense)", 10 Feb 55.

190 Ltr, 32d ADiv to EADF, "Recommended Changes to Air Defense Command Regulation. 55-30", 8 Apr 55.

191 TWX, ACFOOT-FO 04065, 32d ADiv to NG units, 14 Apr 55.

192 Ltr & Ind, EADF to 32d ADiv, "Operational Procedures", 13 Jun 55.

193/1 Ltr, 32d ADiv to both Wings, "Reporting of Scramble Status", 1 Feb 55

193/2 Ltr, 32d ADiv to both Wings, "Employment of Interceptors for Identification Purposes", 30 Jun 55.

194 Ltr & Inds, USAF to ADC, "Mobile GCA Operational Concept for the Zone of the Interior", 10 Jan 55.

195 Ind, ADC to EADF, "Mobile GCA Operational Concept for the Zone of the Interior", 11 Feb 55.

196 Rept, EADF to 32d ADiv, "Report of Special Inspection, F/Y 55, of the 32d Air Division (Defense), Syracuse Air Force Station, Syracuse 6, New York", 11 Feb 55., p. 6.

198 DF, OCE to Colonel Shelton, "GCI GCA Recovery Circuits", 6 May 55.

199 Ltr & Inds, EADF to 32d ADiv, "ADDC-GCA/RAPCON Circuits for Fighter Recovery", 15 Mar 55.

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- 200/2 Ltr, & Inds, 564th ADG to 4707th ADW, "Standard Instrument Approach Procedures, Automatic Direction Finding", 19 May 55.
- 200/3 Ltr, Incl & Ind, 4707th ADW to 32d ADiv, "Standard Jet Penetration for Niagara Falls Municipal Airport", 4 Jan 55.
- 200/4 Ltr & Inds, 518th ADG to EADF, "Additional UHF Air-Ground Frequency Requirement of Niagara Falls Airport", 16 Apr 55.
- 200/5 TWX, ACFOPR 04068, 32d ADiv to both Wings, 13 Apr 55.
- 200/6 Ltr & Inds, Colonel Harry L. Downing to 4711th ADW, "GCA Minimums", 21 May 55.
- 200/7 32d ADiv Operation Plan 3-55, "Sector Defense", undated, p. 5
- 200/8 Ltr & Inds, EADF to 4711th ADW, "Communications Equipment for The Use of Scramble Control Officers", 25 Apr 55.
- 201/1 32d ADiv Tactical Doctrine for Employment of Fighter-Interceptors in Air Defense Operations, 20 Oct 54, Amendment 1, undated.
- 201/2 Amendment II, undated.
- 202 Ltr & Incl, 32d ADiv to all units, "Intercept Tactics for Air Defense", 8 Feb 55.
- 205/1 4711th ADW Operations Order 12-54, 23 Dec 54.
- 205/2 4711th ADW Operations Order 1-55, 16 Feb 55.
- 205/3 4711th ADW Operations Order 2-55, 7 Apr 55.
- 206 Ltr & Inds, 4707th ADW to 32d ADiv, "Proposed Use of Airborne X Band Beacon for Air Defense", 17 Mar 55.
- 210 Ltr & Ind, EADF to 32d ADiv, "(Uncl) BROFICON Implementation", 29 Apr 55.
- 211/1 32d ADiv Alternate Command Post Plan 5-55, 15 Mar 55
- 211/2 Change #1 to ALCOP 5-55, 12 May 55.

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- 212 DF, OIN to all Concerned, "New Designation of Soviet Aircraft", 8 Apr 55.
- 213 Ltr, 32d ADiv to EADF, "Tactical Frequency Assignment", 15 Mar 55.
- 214/2 Ltr, 32d ADiv to 27th FIS "Information on ADjacent Canadian Sectors", 11 Jan 55.
- 215 Ltr, & Inds, 60th FIS to Cmdr, 60th FIS, "USAF-RCAF Cross-Training", 12 Apr 55.
- 216 Ltr, 32d ADiv to Sector Commander, 1 ADCC, "Practice Air Defense Mission Conducted on Jun 8 55 with Canadian ADCC 'Crystal'", 22 Jun 55.
- 217/1 Ltr, 32d ADiv to EADF, "Report of Exercise 'Thinkfast #13'", 30 Mar 55.
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- 223 Ltr, 32d ADiv to EADF, "Report of Participation in CPX  
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- 228/1 Ltr, 32d ADiv to 4713th Radar Evaluation (ECM) Flight,  
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- 228/2 DF, OCE to ODO, "General Inspection of 654th AC&W Squadron",  
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- 228/3 Ltr, 32d ADiv to EADF, "AAA Tracking Missions", 5 Jan 55.
- 228/4 DF, Lt. Col Lewis to CO 15th AAA Group, "ECM Missions",  
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- 228/5 TWX, ACF OCE 05009, 32d ADiv to 518th ADG, undated.
- 228/6 TWX, ACF OCE 05065, 32d ADiv to all applicable units, 12 May 55.
- 228/7 TWX, ACF OCE 05153, 32d ADiv to all applicable units, 26 May 55.
- 229/1 32d ADiv GO 3, 7 Mar 55.
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- 230 32d ADiv GO 6, 22 Apr 55.
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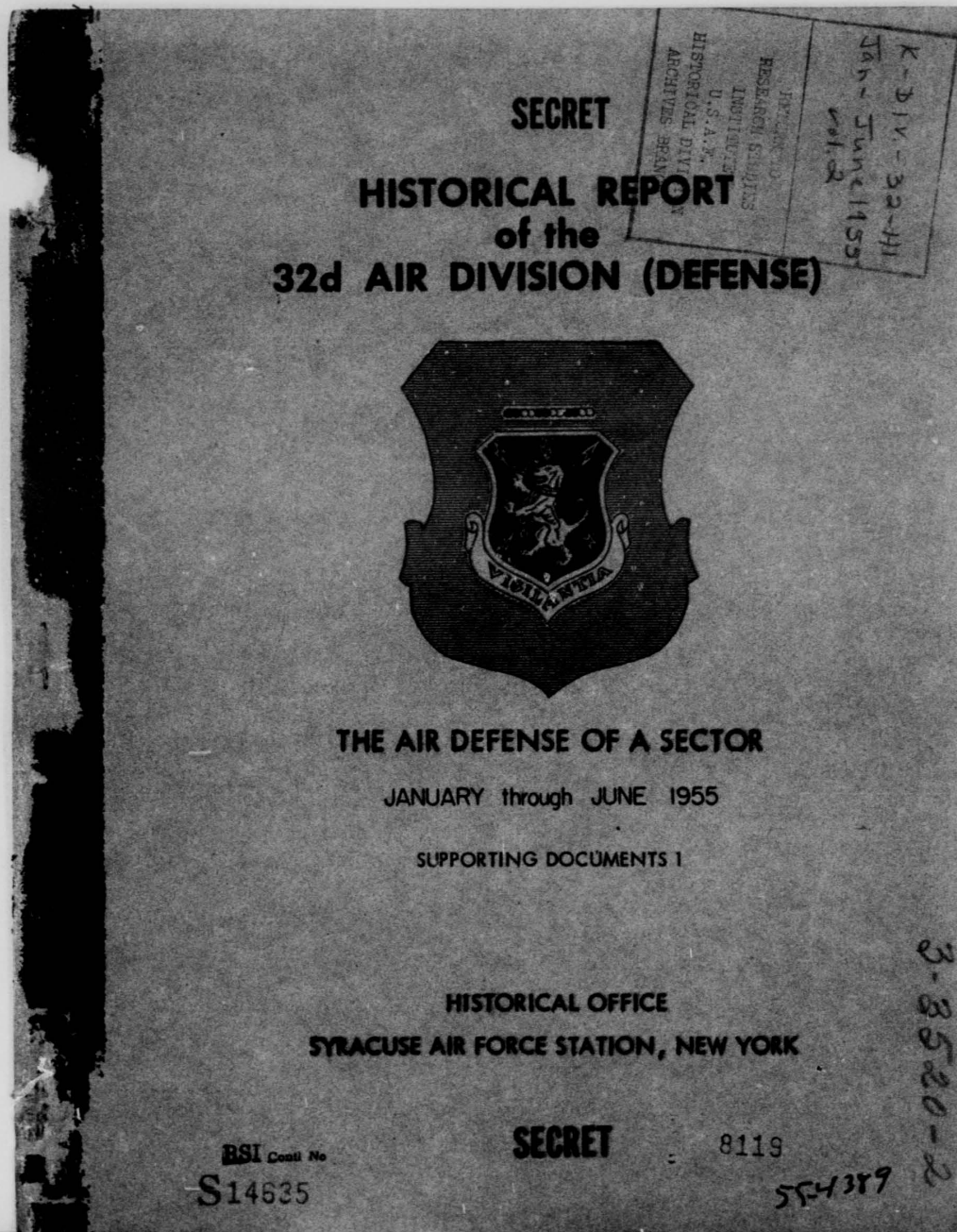
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HISTORICAL REPORT  
OF THE  
32D AIR DIVISION (DEFENSE)  
Number Eighteen  
THE AIR DEFENSE OF A SECTOR  
January through June 1955

RCS: AU-D5

SUPPORTING DOCUMENTS

VOLUME I

(Documents 4 thru 44/2)

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C O P Y

HEADQUARTERS  
766TH AIRCRAFT CONTROL AND WARNING SQUADRON (ADC)  
CASWELL AIR FORCE STATION  
Limestone, Maine

ACU OPS

SUBJECT: (UNCL) Cross Training at St. Margarets, 21st AC&W Squadron,  
December 12 thru 20, 1954

TO: Commander  
766th AC&W Squadron  
Caswell Air Force Station  
Limestone, Maine

1. GENERAL: The 21st AC&W Squadron, St. Margarets, New Brunswick Canada is located approximately fourteen (14) road miles southeast of Chatham, New Brunswick. The site is situated adjacent to a highway and is easily reached from Chatham. Station Chatham is a Royal Canadian Air Force pilot training base. It also supports the AC&W Squadron with some medical care and various forms of administrative work. The site itself is manned by approximately 300 officers and men. Of the enlisted personnel, approximately one half are female. On base quarters for enlisted personnel are modern but overcrowded. All married personnel live in or near Chatham. There is a sergeant's mess and club in addition to the airmen's mess and lounge. Messing facilities in general are excellent. There is also a canteen provided for airmen in the same building as the airmen's lounge. The operations building is a five story structure, easily accessible to the people who work there. Base security appears good. A civilian guard is on the entrance to the Operations Building and issues a pass to the men as they enter.

2. COMMUNICATIONS: The communications system itself is quite elaborate. On the fifth floor of operations is the wire room. In it are enough facilities to adequately serve a city of ten thousand people. Despite this maze of wires, the setup has its shortcomings. At present eleven (11) VHF channels are available for control purposes. One UHF channel, Guard, is installed but inoperative. A new UHF transmitter-receiver site is being constructed and should be operational by March 1955. Internally, communications are used extensively in operations due to the complexity of the setup. A teletype system is used to receive all flight plan information and most of the weather.

3. RADAR: The squadron has an FPS-3 radar set with eighteen (18) PPI scopes and six (6) height finder indicators. As can be expected much of the equipment is rarely, if ever, needed or used. Height finding

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Ltr. Hq 766th AC&W Sq, Caswell AF Sta., Limestone, Me., Subj: (UNCL)  
Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru  
20 1954 (Cont'd)

equipment is unoperative at present. Normally the antenna is operated at five (5) RPM. During evenings from 1630 hours to 0800 hours they change to 3.3 rpm. MTI is used over the first fifty miles and proves quite effective. Most of the ground clutter appears to the west and northwest. This is due to a small range of mountains whose height varies from 1800 to 2600 feet. The the north and south the terrain is flat and to the northeast and east is the Gulf of St. Lawrence. On occasion some echoes are detected eastward. Temperature inversions enable the radar to pick up the coast of Prince Edward Island. Quality control is similar to the EADF area. A target simulator is installed but is as yet inoperative.

4. OPERATIONS: The operations building is five stories high. On the roof of the building is the antenna encompassed in the Artic Tower. On either side of the Operations Building are two (2) four story buildings. On the roof of each is a height finder also covered by a balloon. On the first floor are two large rooms, in which has a horizontal plotting board, to display all necessary traffic. One board is used by surveillance. All traffic is plotted here. The other board is the same, but on it are plotted fighters, unknowns, and mission aircraft. This board is viewed by the control section and by Sector (ADCC). Both rooms have tote boards two (2) floors high. The expansive setup carries to all floors. Sector being located on the third floor; the scope rooms on the fourth. Other sections such as the operations office, radar maintenance, intelligence, communications, training and the canteen are located in various parts of the building. St. Margarets is headquarters for "Sector 2" a classification parallel to our air division. As mentioned, it also contains a Direction Center; the 21st AC&W Squadron. The Direction Center has an early warning site located at Seven Islands, for whom it handles identification. At the time of this cross training tour, however, the 21st AC&W Squadron was also responsible for identifying the adjacent direction centers (Halifax) traffic and its early warning site (Sydney),. This posed quite a problem, much as if P-80 would be obliged to handle P-65's traffic. It was only a temporary problem though since Halifax was led to be operational in early January 1955. It is the responsibility of the 21st AC&W Squadron to warning tell all hostile unknown mission or keystone tracks in its area to adjacent U.S. sites.

5. TRAINING: Officer Controllers (Canada retains the term "Controller") are handicapped by the absence of a tactical fighter squadron. Station Chatham has a good number of F-86's and T-33's, but the mission

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Ltr. Hq 766th AC&W Sq, Caswell AF Sta., Limestone, Me., Subj: (UNCL)  
Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru  
20 1954 (Cont'd)

there is training. Most of the controllers work on the scope pertains to giving vectors to the gunnery range and letdowns. Most controllers had a vague idea about the lead collision course intercept technique, but only those recently trained at Tyndall Air Force Base had any actual experience with this type intercept. RT procedures are excellent. Most of the controllers were World War II veterans and all but two were rated. One controller is a woman. No controller is allowed to work with aircraft unless he has been to controller school at Tyndall Air Force Base.

6. PERSONNEL: The NCO's as a group were very well trained and qualified. All had good job knowledge. However, usually only one non-com, the crew chief, worked on a crew. One other worked days in surveillance and another NCO was in charge of the scope room. It appeared that as crew chiefs, the NCO's did not take charge of their crews to run them efficiently as they might. The airmen appeared to be very well trained in the theory. During our stay, training classes were observed and it was found that all airmen were taught the use of the E-6B computer, general principles of electronics, air defense, etc. Nevertheless this training is not overly well applied possible due to lack of motivation. Few of the airmen seemed to grasp the importance of the mission and of their purpose. The majority of the airmen were between the ages of 18 and 21. The female influence seemed to hamper efficiency to an extent.

7. CONTROL: As mentioned previously, controllers do not work with aircraft here to the extent that most of our direction centers do. The Duty Controller has an office where he and the operations have good view of the air situation being presented below them. The Fighter Marshal however, does not have this view. He is in a closed office with two (2) PPI scopes and must be called by the Duty Controller to take over any active air defense missions or handling of aircraft. Although the high tote board space is abundant, no room is allotted to the condition of airborne fighters (ie: time airborne, type mission, combat qualified, etc.). This plus closer coordination between tower and the site, would aid in control. Off times and down times are not passed from the tower. Only one IFF interrogation unit is installed in the entire site. This hampers smooth control procedure during busy periods. Weather dissemination and display is not always up to date or accurate. Many airfields in the United States that could serve as excellent recovery bases for Chatham aircraft have old weather conditions, therefore possibly inaccurate. No UHF channels are available to controllers, thus making it impossible to handle most United States fighter aircraft. As mentioned UHF equipment should be available for use soon.

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C O P Y

Ltr. Hq 766th AC&W Sq, Caswell AF Sta, Limestone, Me., Subj: (UNCL)  
Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru  
20 1954 (Cont'd)

8. SURVEILLANCE: This section of operations is the seat of many of the problems encountered at St. Margarets. With the additional temporary responsibility of identifying Halifax traffic, a good number of built in shortcomings are present. Horizontal plotting has no set-up to ascertain the time of the plots observed. The board is difficult to read from the ID section, due to its horizontal position. The ID people do not have a high vantage point to view the tracks being plotted. High tote work is cumbersome and slow. Many mistakes were observed on the high tote work. Flight plans are received at Sector by teletype from Moncton, then passed to the Direction Center. Flight plan information is sometimes late or inaccurate. It takes longer by teletype to query any flight plan questions. Communications in the north-east area present many of the problems surveillance has to cope with. These problems are not the fault of St. Margarets. Communications delay between Goose Bay and Moncton is very poor, as is the fact that Sydney does not have a direct line to the adjacent ADCC on New Foundland. This necessitates a call to ADC at St. Huberts. They in turn have to patch in the two adjacent sites. There is no duplication of call boxes, therefore tying up one complete set of lines. Warning telling is difficult due to the fact that no times are put on track moves. In the past few months quite a bit of improvement has been seen between Caswell and St. Margarets. This seems due to increasing proficiency of Canadian personnel and the solving of many problems by cross training which offers understanding and familiarity with local conditions.

9. In summation, these seem to be the principal shortcomings observed while cross training:

- a. Lack of tactical fighter squadron to work with.
- b. Attempt to man important dias positions (ie Ops "B", II section) with relatively inexperienced personnel.
- c. Lack of knowledge of mission and lack of motivation among many of the airmen.
- d. The setup is far too elaborate and bulky.
- e. Communications, internally and with the sector pose a few problems.
- f. Overlap telling from NEAC is usually late and spasmodic.
- g. Lack of supervision.

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Ltr. Hq 766th AC&W Sq, Caswell AF Sta, Limestone, Me., Subj: (UNCL)  
Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru  
20 1954. (Cont'd)

- h. Poor coordination between the floor, ID section and control due to size.
- i. Lack of recreational facilities for airmen.
- j. Overcrowded quarters for airmen constitute a morale problem.

s/t/ CHARLES F SCHREIBER  
1st Lt., USAF  
Senior Director

ACU ADJ (undated)

1st Ind

HQ 766TH ACWRON, Caswell AF Sta, Limestone, Me

TO: Commander, 4711th Air Defense Wing, Presque Isle Air Force Base,  
Presque Isle, Maine

1. Recommend that information be passed to Canadian Sites on our problem in present day lead collision intercepts. If they understand some of our critical problems it may tend to keep them more interested in giving more and better early warning.

2. Reports from all directors from this station are very similar. Therefore, it is recommended that the RCAF place TDY to this station for an indefinite period one of their controllers. The short cross-training period is not long enough; if this RCAF controller would work with us and give periodic reports to the Canadian ADCC, and furnish this organization with an information copy, the present situation of not having too much reliance on information from the Canadians would possibly be eliminated.

3. The internal problem of equipment location can not be judged at this level since it is a Canadian System. However, it is felt that a closer relationship between the station would certainly be of benefit to both units and the Air Defense Command in general.

s/t/ JOHN C MACK  
Major, USAF  
Commander

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C O P Y

Hq 766th AC&W Sq ACU OPS Subject: (UNCL) Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru 20, 1954

DWOAC (undated) 2nd Ind 2 Mar 1955

HQ 4711TH AIR DEFENSE WING, Presque Isle AFB, Maine

TO: Commander, 32nd Air Division (Defense), Syracuse Air Force Station, Eastwood Station 6, Syracuse, New York

1. Concur with recommendation in paragraph 1, 1st Indorsement. Without E-4, E-5 and E-6 equipped aircraft, the Canadians cannot possibly understand the complexities of present day lead collision intercepts. The necessity for early warning has doubled since the days of the Non-AI Fighter-Interceptor aircraft. A great deal of planning must be accomplished the minute an E-4, E-5, or E-6 aircraft in scrambled to accomplish a lead collision intercept. Such things as target speed, target altitudes, target course, angle off, displacement, etc., must be known before a true 90 degree beam intercept can be accomplished. It becomes mandatory, therefore, to obtain the earliest early warning possible to insure that these become known quickly. Without benefit of Canadian early warning, the perimeter defense of this country is seriously jeopardized.

2. Concur with recommendation in paragraph 2, 1st Indorsement. If RCAF directors were placed TDY to our squadrons for an indefinite period, they would learn and pass to other RCAF personnel some of the complexities of our modern air defense system. We would benefit by their written reports and possibly learn of some of our deficiencies that have overlooked.

3. Reference paragraph 3, basic letter. It is interesting to note that the 21st AC&W Squadron, an FPS-3 site, has 18 PPI scopes. If this is typical of a Canadian GCI site, possibly some arrangement could be made to transfer to our sites those extra scopes that the Canadians probably never use. It is an acknowledged fact that one of the paramount deficiencies in our air defense is the lack of PPI scopes. This headquarters feels that the lack of PPI scopes seriously hampers our Air Defense capability. This can be noted when engaged in training missions employing mass against mass. We have found through experience with 4711th Air Defense Wing Hypodermic missions that a maximum of three aircraft can be controlled efficiently on one PPI scope. Therefore, an increase in the number of PPI scopes would increase our capability.

4. It is understood that action is being taken at higher headquarters to obtain additional scopes. As far as can be determined, this action has been pending for approximately one year. Until such time

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C O P Y

Hq 766th AC&W Sq ACU OPS Subject: (UNCL) Cross Training at St. Margarets, 21st AC&W Squadron, December 12 thru 20, 1954

DWOAC (undated) 2d Ind (Cont'd)

as we can see tangible results, it is recommended that consideration be given to the suggestion in paragraph 3 above.

s/t/WILLIAM D. GREENFIELD  
Colonel, USAF  
Commander

GOT-A (undated) 3d Ind 18 Mar 55

HQ 32D AIR DIVISION (DEFENSE), Syracuse Air Force Station, Syracuse 6  
New York

TO: Commander, Eastern Air Defense Force, Stewart AFB, Newburgh, N.Y.

1. This report of cross training visit is forwarded for your information.
2. Recommendation that RCAF Directors be placed on temporary duty with USAF AC&W squadrons for the purpose of becoming proficient in lead collision course interceptor control is concurred with. It is believed that proficiency could be gained far more readily in this manner than by passing control for practice intercepts. Techniques developed during the past several years could be imparted to the RCAF personnel, thus eliminating the trial and error period through which our direction centers have progressed. In addition, UHF installations are incomplete at most RCAF AC&W squadrons adjacent to this sector which precludes interceptor handover. Problems related to UHF control frequencies are elaborated upon in detail in letter this headquarters, subject: "Tactical Frequency Assignment", dated 14 March 1955.

WILLIAM H. CLARK  
Colonel, USAF  
Beputy Commander

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C O P Y

HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

OIN

19 January 1955

SUBJECT: Report of Disclosure of Classified Information to Foreign  
Nationals

TO: Commander  
Eastern Air Defense Force  
ATTN: Deputy for Intelligence  
Stewart Air Force Base  
Newburgh, New York

1. In accordance with paragraph 10, ADCR 205-1, the following consolidated report is submitted on the visit of Squadron Leader D. D. Biggs and Flight Leader F. P. Bouszuk to this headquarters 30 November 1954, to the 655th AC&W Squadron 1 December 1954, and to the 764th AC&W Squadron 2 December 1954.
2. Both visitors are members of the Royal Canadian Air Force, stationed at ADCC No. 1, Lac St. Denis, Quebec, Canada.
3. The visits were arranged for the expressed purpose of reviewing communications facilities. The visitors displayed the greatest interest in facilities and equipment directly relating to the C&E field and in particular to maintenance. Visitors were of high intelligence with above average technical knowledge in the AC&W field. Their questions were of an informative type and it is believed that the real object of the visit was the same as the expressed objective. Only oral and visual means were utilized in transmitting classified information to the two visitors.
4. The highest classification of material and equipment included in these visits was SECRET.

FOR THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant

5/1

C O P Y

27TH FIGHTER INTERCEPTOR SQUADRON  
Griffiss Air Force Base, Rome, NY

FIS27-INTELL

31 March 1955

SUBJECT: Visits of Foreign Nationals

TO: Commander  
32d Air Division (Def)  
Hancock Field, Eastwood Station 6  
Syracuse, New York  
ATTN: Intelligence Officer

1. In accordance with AFR 205-1, par 66, the following report is submitted:

a.	Popham, D.E.	F/O	GCI Director Canadian
	Pelser, R.F.	Cpl	Director Center Technician, Canadian
	Benjamin, C.M.	LAC	Director Center Technician, Canadian
	Sandom, C.M.	LAW	Director Center Technician, Canadian

b. Official Duty Letter for Proceeding to the USA. No. 23011.  
Issued at RCAF Station, Foymont, Ontario. 6654th AC&W Squadron, Watertown, NY. TWX CFAP18 08/2138Z RCAF, Foymont, Ontario.

c. Observing F-94C Flight Operations

d. How the F-94C compared with the CF-100?  
How a typical ADC squadron operates?  
Comparison of RCAF and USAF life.

e. Cross-training

f. Cross-training

g. GCI Director was intelligent and well informed, highly literate. Enlisted personnel were capable and well trained. All four were supervisory personnel; expressed desire for further exchange visits between their personnel and ours.

h. F-94Cs in the hangar. Unclassified discussion of speed and climb of subject aircraft.

SVEN L. NORDIN  
2nd Lt., USAF  
Intelligence Officer

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C O P Y

Hq, 27th FIS, FIS27-INTELL, Subject: Visits of Foreign Nationals

ODN INT 1-8 (31 Mar 55) 1st Ind

HEADQUARTERS, 32D AIR DIVISION (DEFENSE), Syracuse Air Force Station,  
Syracuse 6, New York

TO: Commander, Eastern Air Defense Force, Stewart Air Force Base,  
Newburgh, New York

Forwarded in accordance with paragraph 66, AFR 205-1, dated 15  
December 1953.

FOR THE COMMANDER:

NATHANIEL HUGGINS  
2nd Lt., USAF  
Assistant Adjutant

SECRET

C O P Y

HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EAOOT-OS

2 May 55

SUBJECT: (Unclassified) Operational Subsector Boundaries

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Syracuse 6, New York

1. This letter supersedes EADF letter, EAOOT-TS, subject as above, 6 May 1954.

2. The RCAF ADC has published subsector boundaries in RCAF ADC Aircraft Control and Warning Instruction 2-1, Appendix C, 15 April 1954, in conformance with the minutes of the conference between Air Defense Commands of RCAF and USAF, 2 December 1952. Although no formal agreement has been finalized at this time, an informal agreement has been accomplished.

3. The below listed ACW squadrons will be responsible for surveillance and identification, except for identification (recognition) utilizing interceptors, for all or that portion of their subsector located over Canada. Interception and rules of engagement will be consistent with existing approved procedures.

4. The boundaries will be for operational purposes only and no change will be made to EADF General Order #63, 15 November 1954, or ADC General Order #12, 13 April 1955.

5. The subsectors and portions of subsectors in Canada for EADF ACW squadrons are as follows:

a. The subsectors of responsibility for the radar stations within 30th Air Division (Defense) are extended into Canada as follows:

- (1) P-20 - From a point at 43°38'N US-Canada boundary south and east along the boundary to 81°40'W to 43°38' N US-Canada boundary.

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C O P Y

EAOOT-OS Subject: (Unclassified) Operational Subsector Boundaries  
(Cont'd)

- (2) P-66 - From a point at  $86^{\circ}\text{W}$  US-Canada boundary southeast along the US-Canada boundary to  $45^{\circ}20'\text{N}$  to  $48^{\circ}20'\text{N } 83^{\circ}20'\text{W}$  to  $48^{\circ}15'\text{N } 85^{\circ}30'\text{W}$  to US-Canada boundary  $86^{\circ}\text{W}$ .
- (3) P-16 - From a point at  $90^{\circ}\text{W}$  US-Canada boundary east along the boundary to  $86^{\circ}\text{W}$  to  $48^{\circ}15'\text{N } 85^{\circ}30'\text{W}$  to  $48^{\circ}45'\text{N } 87^{\circ}\text{W}$  to  $48^{\circ}45'\text{N } 90^{\circ}\text{W}$  to US-Canada boundary  $90^{\circ}\text{W}$ .

b. The subsectors of responsibility for the radar stations of 30th Air Division (Defense) entirely within Canada are as follows:

- (1) C-14 - From  $53^{\circ}\text{N } 82^{\circ}\text{W}$  to  $53^{\circ}\text{N } 87^{\circ}\text{W}$  to  $48^{\circ}45'\text{N } 87^{\circ}\text{W}$  to  $48^{\circ}15'\text{N } 85^{\circ}30'\text{W}$  to  $48^{\circ}20'\text{N } 83^{\circ}20'\text{W}$  to  $50^{\circ}\text{N } 82^{\circ}\text{W}$  to  $53^{\circ}\text{N } 82^{\circ}\text{W}$ .
- (2) C-15 - From  $53^{\circ}\text{N } 87^{\circ}\text{W}$  to  $53^{\circ}\text{N } 90^{\circ}\text{W}$  to  $48^{\circ}45'\text{N } 90^{\circ}\text{W}$  to  $48^{\circ}45'\text{N } 87^{\circ}\text{W}$  to  $53^{\circ}\text{N } 87^{\circ}\text{W}$ .

c. The subsectors of responsibility for the radar stations within 32d Air Division (Defense) are extended into Canada as follows:

- (1) P-80 - From a point at  $69^{\circ}10'\text{W}$  US-Canada boundary east and south along the boundary to  $46^{\circ}\text{N}$  to  $46^{\circ}\text{N } 67^{\circ}\text{W}$  to  $48^{\circ}\text{N } 67^{\circ}\text{W}$  to  $47^{\circ}30'\text{N } 69^{\circ}\text{W}$  to US-Canada boundary  $69^{\circ}10'\text{W}$ .
- (2) P-65 - From a point at  $46^{\circ}\text{N}$  US-Canada boundary southeast along the boundary to  $67^{\circ}\text{W}$  to  $46^{\circ}\text{N } 67^{\circ}\text{W}$  to  $46^{\circ}\text{N}$  US-Canada boundary.

6. This letter is classified Secret in accordance with paragraph 23c, AFR 205-1.

BY ORDER OF THE COMMANDER:

s/t/J. W. FOUNTAIN, JR.  
Major, USAF  
Asst Adjutant

55-1951

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C O P Y

Hq EADF EA00T-05 Subject: (Uncl) Operational Subsector Boundaries

OOT-A (2 May 55) 1st Ind 10 May 1955

HQ 32D AIR DIVISION (DEFENSE), Syracuse Air Force Station, Syracuse 6,  
New York

TO: Commander, 4711th Air Defense Wing, Presque Isle Air Force Base,  
Presque Isle, Maine

1. Forwarded for your information and necessary action.
2. This is indorsement is UNCLASSIFIED.

BY ORDER OF THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant

55-1951

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C O P Y

HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EAOOT-OS

26 May 55

SUBJECT: (Unclassified) Operational Subsector Boundaries

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Syracuse 6, New York

1. This letter supersedes EADF letter, EAOOT-OS, subject as above, 2 May 1955. (Correction per TWX EAOOT-OS 224048 1 Jun 55)
2. The RCAF ADC has published subsector boundaries in RCAF ADC Aircraft Control and Warning Instruction 2-1, Appendix C. 15 April 1954, in conformance with the minutes of the conference between Air Defense Commands of RCAF and USAF, 2 December 1952. Although no formal agreement has been finalized at this time, an informal agreement has been accomplished.
3. ACW Squadrons
  - a. Reference paragraphs 5a (1), (2), (3), and 5c (1) (2) below, ACW squadrons will be responsible for surveillance and identification, except for identification (recognition) utilizing interceptors, for all or that portion of their subsector located over Canada. Interception and rules of engagement will be consistent with existing approved procedures.
  - b. Reference paragraphs 5b (1) and (2) below. ACW squadrons will be responsible for surveillance only for their subsector located over Canada. Interception and rules of engagement will be consistent with existing approved procedures.
4. The boundaries will be for operational purposes only and no change will be made to EADF General Order #63, 15 November 1954, or ADC General Order #12, 13 April 1955.
5. The subsectors and portions of subsectors in Canada for EADF ACW squadrons are as follows:
  - a. The subsectors of responsibility for the radar stations within 30th Air Division (Defense) are extended into Canada as follows:

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C O P Y

EAOOT-Os Subject: (Unclassified) Operational Subsector Boundaries  
(Cont'd)

- (1) P-20 - From a point at  $43^{\circ}38'N$  US-Canada boundary south and east along the boundary to  $81^{\circ}40'W$  to  $43^{\circ}38'N$  US-Canada boundary.
- (2) P-66 - From a point at  $86^{\circ}W$  US-Canada boundary south-east along the US-Canada boundary to  $45^{\circ}20'N$  to  $48^{\circ}20'N$   $83^{\circ}20'W$  to  $48^{\circ}15'N$   $85^{\circ}30'W$  to US-Canada boundary  $86^{\circ}W$ .
- (3) P-16 - From a point at  $90^{\circ}W$  US-Canada boundary east along the boundary to  $86^{\circ}W$  to  $48^{\circ}15'N$   $85^{\circ}30'W$  to  $48^{\circ}45'N$   $87^{\circ}W$  to  $48^{\circ}45'N$   $90^{\circ}W$  to US-Canada boundary  $90^{\circ}W$ .

b. The subsectors of responsibility for the radar stations of 30th Air Division (Defense) entirely within Canada are as follows:

- (1) C-14 - From  $53^{\circ}N$   $82^{\circ}W$  to  $53^{\circ}N$   $87^{\circ}W$  to  $48^{\circ}45'N$   $87^{\circ}W$  to  $48^{\circ}15'N$   $85^{\circ}30'W$  to  $48^{\circ}20'N$   $83^{\circ}20'W$  to  $50^{\circ}N$   $82^{\circ}W$  to  $53^{\circ}N$   $82^{\circ}W$ .
- (2) C-15 - From  $53^{\circ}N$   $87^{\circ}W$  to  $53^{\circ}N$   $90^{\circ}W$  to  $48^{\circ}45'N$   $90^{\circ}W$  to  $48^{\circ}45'N$   $87^{\circ}W$  to  $53^{\circ}N$   $87^{\circ}W$ .

c. The subsectors of responsibility for the radar stations within 32d Air Division (Defense) are extended into Canada as follows:

- (1) P-80 - From a point at  $69^{\circ}10'W$  US-Canada boundary east and south along the boundary to  $46^{\circ}N$  to  $46^{\circ}N$   $67^{\circ}W$  to  $48^{\circ}N$   $67^{\circ}W$  to  $47^{\circ}30'N$   $69^{\circ}W$  to US-Canada boundary  $69^{\circ}10'W$ .
- (2) P-65 - From a point at  $46^{\circ}N$  US-Canada boundary south-east along the boundary to  $67^{\circ}W$  to  $46^{\circ}N$   $67^{\circ}W$  to  $46^{\circ}N$  US-Canada boundary.

6. This letter is classified Secret in accordance with paragraph 23c, AFR 205-1.

BY ORDER OF THE COMMANDER:

s/t/ JAMES R. WORLINE  
Captain, USAF  
Asst Adjutant

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55-2285

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C O P Y

Hq EADF EA00T-OS Subject: (Unclassified) Operational Subsector Boundaries

OOT-A (26 May 55) 1st Ind 8 June 1955

HQ 32D AIR DIVISION (DEFENSE), Syracuse Air Force Station, Syracuse 6,  
New York

TO: Commander, 4711th Air Defense Wing, Presque Isle Air Force Base,  
Presque Isle, Maine

1. Desire dissemination be made to units concerned.
2. This indorsement is unclassified.

BY ORDER OF THE COMMANDER:

ROBERT W. REINHOLD  
2D Lt., USAF  
Assistant Adjutant

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C O P Y

HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

OOT-A

1 Jun 1955

SUBJECT: Relocation of Security Identification Zone (SIZ)

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

1. Reference minutes of conference to discuss EADF-RCAF ADC operational matters, 27 January 1955, the following recommendations concerning the relocation of the Security Identification Zone (SIZ) are forwarded:

a. It is recommended that the SIZ should be moved to the 48th parallel. The reasons for this recommendation are as follows:

- (1) With the SIZ in a more northerly location, more time is available for tactical action following identification of hostiles. This is an important consideration due to the present high speed of jet bombers.
- (2) Vital target areas in both Canada and the United States would be farther from the SIZ, providing more time to initiate passive defense plans.
- (3) The SIZ would then extend from the Gulf of Saint Lawrence to Lake Superior covering major airways. This would facilitate identification by flight plan correlation by having the correlation line closer to the reporting points.
- (4) There is more population along the 48th parallel than along the 47th. This would help to bolster the Ground Observer Corps within the SIZ. In addition, current radar coverage charts indicate much better coverage along the 48° N parallel than is available along either the 46° or 47° N parallels.

FOR THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant

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HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

OOT-A

5 May 1955

SUBJECT: Air-filed Flight Plans

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

1. During the past week we have experienced numerous unknown tracks in the Mont Joli area. On April 21 alone, ten unknown tracks were detected in this area by the 766th AC&W Squadron. Twenty additional unknowns were detected in this same area during the period 22-30 April. Informal investigation has shown that these tracks were unknown for the following reasons:

a. Due to poor communications between Goose Bay and Moncton, many flight plans were not arriving at Moncton ARTC Center.

b. When position reports were made by pilots over Seven Islands or Mont Joli, they were told that Moncton ARTC Center had not received their flight plan. The pilots then gave the remainder of their flight plan to the Canadian facility concerned.

c. Moncton ARTC Center has no requirement to specify whether a flight plan is ground-filed or air-filed when it is passed to Boston ARTC Center. Therefore Moncton passes these flight plans to Boston without comment and Boston assumes that these are valid ground-filed flight plans and so passes the flight plan to the 766th AC&W Squadron as valid.

d. Moncton apparently does specify whether a track is air-filed or ground-filed when they pass it to Canadian direction centers. Canadian direction centers must have this information since their AC&W Instructions are compatible with our regulations concerning air-filed flight plans.

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C O P Y

Hq 32D (AD)(D) OOT-A Subject: Air-filed Flight Plans (Cont'd)

e. If the flight plan is passed to the 766th AC&W Squadron by Canadian radar stations as unknown or if the information that the flight plan was air-filed reaches Boston ARTC Center, the track will be declared unknown and intercept action will be taken. This is what happened in the case of the ten unknowns on 21 April.

2. It can easily be seen that a large number of unknowns within a short period of time in the Mont Joli area would tend to deplete our Interceptor force in the Presque Isle area. However, of more importance is the fact that this headquarters is in the unenviable position of not being sure whether flight plans received from Moncton ARTC Center via Boston ARTC Center are ground-filed or air-filed.

3. The following recommendations are made:

a. That Moncton ARTC Center be requested to specify whether a flight plan is air filed when they pass it to Boston ARTC Center.

b. That a study be made of the communication situation in the Gander-Moncton area and recommendations made for its improvement.

FOR THE COMMANDER:

EVERITT W. HOWE  
Major, USAF  
Adjutant



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C O P Y

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON 25, DC

AFOAC-S/O

29 March 1955

SUBJECT: (Unclassified) Implementation of ACP 127(B), "Communication  
Instructions Tape Relay Procedures"

TO: Commander  
Air Defense Command  
Ent AFB, Colorado

1. Confirming advance notification given in Hq USAF General  
Message AFCOMMSTA 19/55, dated 28 February 1955, the following pub-  
lication is prescribed for use as indicated:

<u>PUBLICATION</u>	<u>EFFECTIVE DATE</u>	<u>PRESCRIBED FOR</u>
ACP 127(B)	28 March 1955	United Kingdom, Canada, US Joint and Intra-Air Force use.

2. ACP 127(B) is a nonregistered publication classified CONFIDENTIAL  
Modified Handling Authorized and supersedes JANAP 127(A) which will be  
destroyed in accordance with current directives.

BY ORDER OF THE CHIEF OF STAFF:

/s/ CHARLES R GAJAN  
Lt Colonel, USAF  
Executive, Communications Sys Div  
Directorate of Communications

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C O P Y

Hq USAF AFOAC-S70 Subj: (Uncl) Implementation of ACP 127(B), "Communication Instructions Tape Relay Procedures"

ADOCE-CS (29 Mar 55) 1s t Ind 28 Apr 1955

HQ AIR DEFENSE COMMAND, Ent Air Force Base, Colorado Springs, Colorado

TO: Commander, Eastern Air Defense Force, Stewart Air Force Base,  
Newburgh, New York

1. This letter confirms previous notification of the implementation of ACP 127(B). To insure that the information is available at all units concerned, request this be given widest dissemination.

2. Information contained in this indorsement is Unclassified.

BY ORDER OF THE COMMANDER:

/s/ RECTOR C DACUS

EAOCE-CS (29 Mar 55) 2d Ind 9 May 1955

HQ EASTERN AIR DEFENSE FORCE, Stewart Air Force Base, Newburgh, New York

TO: Commanders Air Divisions (Defense)

1. Your attention is invited to paragraph 1, 1st Indorsement.

2. Information contained in this indorsement is Unclassified.

BY ORDER OF THE COMMANDER:

s/t/ JAMES R WORLINE  
Captain, USAF  
Assistant Adjutant

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Hq USAF AFOAC-S/O Subject: (Unclassified) Implementation of ACP 127(B),  
"Communication Instructions Tape Relay Procedures"

OCE (29 Mar 55) 3d Ind 18 May 1955

HQ 32D AIR DIVISION (DEFENSE), Syracuse Air Force Station, Syracuse 6, NY

TO: Commanders, Air Defense Wings

1. Your attention is invited to paragraph 1, 1st Indorsement.
2. Information contained in this indorsement is Unclassified.

BY ORDER OF THE COMMANDER:

EVERITT W HOWE  
Major, USAF  
Adjutant

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C O P Y

HEADQUARTERS  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

OCO

29 Mar 1955

SUBJECT: Letter of Appreciation

THRU: Commander Naval Forces  
Eastern Continental Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

TO: Commander Escort Squadron 16  
Goat Island  
Newport, Rhode Island

1. It is a pleasure to recognize the excellent contribution your picket vessels on Stations 1 and 2 are making toward defense of the sector assigned to the 32d Air Division.
2. It is evident from observation of picket vessel tracks appearing on the surveillance display at the Air Defense Control Center that picket vessel radar reports are becoming more timely and increasingly accurate. Informal reports from our Air Defense Direction Centers associated with picket vessels reveal splendid cooperative effort by Navy personnel on board these ships.
3. Picket vessel reports are extremely important to the success of our air defense mission and the value of these reports is ever increasing. Please accept my appreciation to all Navy personnel who are making our combined defense effort a success.

Copy to: Navy Deputy, 32d AD(O)  
OCC

s/ Robert S. Israel, Jr.  
t/ ROBERT S. ISRAEL, JR.  
Colonel, USAF  
Commander

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CONFIDENTIAL  
NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

1 March 1944

MEMORANDUM

From: Navy Deputy, 32d Joint Air Defense Division  
TO: Commander Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of activities for period ending 28 February 1955

1. During this period another visit was made to the Naval Training Station at Liverpool, New York to obtain information which had been requested concerning the radar setup in Naval Training Stations in the division area. The Commanding Officer had requested of ComThree information concerning the total number of sets available in that district. There are forty-one NST's in the Third Naval District and all of them have radar sets available, however not all of them have qualified operators or maintenance personnel on board. In addition to having air search radars these stations are currently receiving Radio/Telephone Simulator equipment for CIC Team Training, which is being installed by Com Three Naval shipyard engineers. With these R/T simulators the local NTS is capable of contacting at least five adjacent NTS's in the upstate New York area. It is felt that with the need for low altitude radar coverage inat some consideration should be given to integration of these radars into the Air Defense Radar net. With the R/T simulator net curcuit, track information could be passed to a central NTS for relay into the Air Defense system. The Commanding Officer of the Liverpool NTS is not aware of any present plans for the use of training station radars, but he feels that if there were some way of keeping his radar equipment in calibration, in an emergency he could have on board in a matter of hours, qualified operators from the Reservists in this area. He further stated that with adequate planning, some arrangement could be made for him to receive track information from other stations in this area, which he could pass to the ADCC here in Syracuse.

Recommendation: It is recommended that investigation be made by higher headquarters concerning the feasibility of integrating these radars into the air defense system for emergency use. Because of the number of stations involved and the necessity of dealing with the Commandants of the Naval Districts to obtain information on the availability of radar sets and personnel for manning, it is felt that this matter is beyond the scope of this office.

2. Since the first of the year the manning of picket vessel stations in the 32d Air Division area has been greatly increased. The picket vessels have been consistently doing an outstanding job and their maxium range pickup of tracks has been averaging 200 miles and frequently extends as far as 240 miles. The personnel here at headquarters are becoming increasingly impressed with the amount of early warnigg information that the picket

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Nav Dep Subj: Summary of activities for period ending 28 February 1955

vessels have been furnishing. As a matter of fact this early warning information has pointed out the need for consideration being given to a possible revision of our time distance tolerances at the outer limits of the corridor identification areas. On occasion when the picket vessels have picked up targets 200-240 miles out, flight plan correlation information in some instances has not yet been passed or is not available. Consequently, with no possibility of correlating the track and the restriction of only carrying the tracks as unknown a maximum of five minutes without tactical action, this early warning has been forcing us into scrambling aircraft for interception far out over the water. Furthermore, the aircraft which are being tracked are usually overseas civilian aircraft which are still too far out to get positive navigation fixes and are therefore quite frequently outside of the corridor limitations. Consideration is being given to the possibility of having to increase the tolerances for aircraft if they continue to be picked up at these extreme ranges.

During a conversation with the operations people at the picket vessel headquarters it became apparent that the picket vessels do not have adequate and up to date performance data for the USAF aircraft that they are required to control. Information concerning rates of climb, endurance, afterburner performance, glide ratios and performances with and without tip tanks has been requested of the Operations and Training section here at headquarters and when available will be forwarded to the picket vessel headquarters for dissemination to the DER's.

Regarding the early warning problem that was discussed above, the picket vessel people are desirous of being given an identification capability while on station. At the present time they are only acting as a relay for the master station in requesting code words and maneuver turns. On a previous visit to the PV headquarters we had discussed this matter, and as a result the AC&W officer at this headquarters had requested EADF to investigate the practicability of giving the PV's the master code lists. To date no final action has been taken on this matter and the PV's are not capable of performing the ID function on their own. It is felt that if the PV's were given the ID capability they could solve some of the problem discussed above.

3. At present the 32d Air Division has a regulation which sets up the employment of single engine AEW aircraft which could be requested from Quonset Point. In the event of an emergency, it is felt that the 32d Air Division might possibly receive control of the Navy AEW aircraft at Patuxent River, Maryland. To date there are no procedures in the Division for controlling these aircraft nor are there patrol routes or altitudes defined. I have pointed out this deficiency to the Operations people here at headquarters and they plan to take this matter up in conjunction with the proposed AEW&C planning conference which is scheduled in the near future.

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Nav Dep Subj: Summary of activities for period ending 28 February 1955

4. During this period a visit was made to the Naval Air Station at South Weymouth. The station now has 12 F9F-6 aircraft on board and 18 Corsairs, however, to date only three pilots have been checked out in the Cougars. The station expects to eventually have 33 F9F-6 aircraft and 12 Corsairs on board. I requested Odr. Duffy to cross check his Air Defense directives against the new EADF Regulation 5-5- and to request through channels those directives which he is lacking. While at South Weymouth I also talked to the Operations officer of the Marine Reserve unit there. They are having a problem in getting training for their Reserve CIC controller people since the CIC in Boston has closed down. I told them that if they would provide me with the number of people who need training and the approximate workload each weekend I would try to work out an arrangement for their people to go over to P-10 for their training if they could arrange transportation. The Navy people also have this problem and will be included in this arrangement. I also offered to arrange a visit to and a briefing on the ACEW site at North Truro at some future date for the station officers. They were unable to commit themselves to any certain date but I told them I would arrange it upon request.

5. An Air Defense briefing for personnel of the AAA and Navy commands in the Niagara Falls area is scheduled at this headquarters during the month of March. Following this briefing, personnel of the AAA and Navy commands in the Boston area will be invited to a similar briefing.

B. Sevilla

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COPY

NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

1 April 1955

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of activities for the period ending 31 March 1955

1. During the period of this report the Naval Reserve unit at Niagara Falls, New York participated in Operation Hoptoad, a GOC exercise. The Naval unit provided a four plane Corsair flight on combat air patrol in the area of the expected attack. The targets were two low flying F86D aircraft flying at constant speeds. Scramble and check-in with the GCI were normal and the Corsairs succeeded in tallyhoing the targets but were unable to intercept. Both Niagara and South Weymouth Reserve units were requested to participate in Exercise Skytrain II but both refused due to other commitments.
2. A flight was made to N.A.S. Brunswick, Maine and a conference was held with Captain Price, the commanding officer, Cdr Robinson, the operations officer, Major Goldberg, the commanding officer of the 654th AC&W Squadron, and the representatives from the Fleet Air Detachment. The purpose of the conference was to promote better understanding and compliance with the Bangor and Atlantic ADIZ procedures. P2V's operating offshore out of Brunswick have occasionally caused scrambles and intercepts. Source of the trouble is believed to be the lack of refresher training in the ADIZ procedures for the P2V squadrons returnign from overseas tours. An agreement was reached whereby the air station would notify the AC&W squadron whenever a new squadron was on board or when one of the overseas squadrons returned and the AC&W squadron will provide briefing beams for refresher training. In addition, Captain Price requested briefings whenever Reserve squadrons were based at Brunswick on their annual cruises. It is believed that this arrangement will materially decrease the number of Navy violations in that area.
3. On 30 March 1955, officers from the Naval Air Station, Niagara Falls, New York and Army personnel from the AAA units in that area attended a day long orientation held at this headquarters. Briefing included all phases of the Air Defense system and operations. This was the first Air Defense briefing for most of these officers and the briefing was well received. Members of the AAA and Navy units in the Boston and South Weymouth area have been invited to the headquarters for a similar briefing on 21 April 1955.
4. Miscellaneous: Performance charts for USAF aircraft have been made up and sent to the Picket Vessel headquarters for distribution to the picket vessels and the YAGR's.

15/2

C O P Y

Navy Deputy, 32d Air Div (Def) Subject: Summary of activities for the period ending 31 March 1955, 1 April 1955

During this period the new administration building was completed and there has been a general shifting around of the offices. The Navy Deputy has been moved into a separate office in the combat operations building and new furniture has been requested. The Navy Deputy has recently been provided with a tactical phone and can be reached on extension #77.

Arrangements have been made with the 654th AC&W Squadron to allow Reserve CIC controllers from N.A.S. South Weymouth to use the AC&W equipment for training. The first group of reserve controllers arrived at the AC&W Squadron on 31 March for their training.

Lcdr Bartlette from the Fleet Air Quonset staff called concerning the hot-line that was requested from North Truro to Quonset. He had just been informed that the request had been turned down and they were quite disappointed. They believe that such a line would eliminate a great deal of the trouble we have been having in keeping track of the fleet aircraft operating out of Quonset. When the Director of C&E here at the headquarters returns from TDY I plan to investigate the possibility of re-requesting this line.

Plans have been made to attend the Picket Vessel Conference in Newport, R.I. on 6 April. After the conference, liaison visits to South Weymouth, Fort Banks and ComOne in Boston are scheduled.

s/ B. Sevilla  
t/ B. SEVILLA

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NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

1 May 1955

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of Activities for period ending 30 April 1955

1. Events:

- a. 19 April - On one hour alert for CPX "Low Blow"
- b. 21 April - Air Defense briefing for Boston AAA and NAS South Weymouth officers
- c. 24-24 April - CFI "Low Blow"
- d. 26 April - CPX "Low Blow" critique
- e. 28 April - Thinkfast #14
- f. 28-29 April - Conference of all Commanding Officers in 32d Air Division

2. Scheduled events for 1-15 May:

- a. 1 May - Sky Train III; NAS Niagara Falls was requested to participate but did not have a fighter squadron scheduled to be on board for training that weekend.
- b. 2-4 May - Visit to Eastern Sea Frontier, 26th Air Division, ComNavEast and EADF.
- c. 11 May - Visit to AEMAC Wing headquarters at Otis AFB and Naval Air Development Unit (Project Lincoln) at South Weymouth to confer on AEW employment plans and emergency use of Navy AEW aircraft attached to project Lincoln.
- d. 15 May - Air Defense Briefing for Naval Reserve Material Col 3-3.

3. Comments:

- a. At 1300 on 19 April the Battle Staff was put on one hour standby which remained in effect until 0300, 25 April when "Coiled Pistol" was

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Navy Deputy, 32d Joint Air Def Div. Subj: Summary of Activities for period ending 30 Apr 55, 1 May 55 (Cont'd)

declared. Air Force members of the Battle Staff have alternates designated which gives them a certain amount of freedom to move around conducting normal business. Since the Navy Deputy and the AAA representative have no alternates, we were required to cancel all scheduled visits and activities. One person standing one hour alert for five to six days is considered very confining and extremely wearing. It is possible that such a standby could go on for even longer periods.

b. CPX "Low Blow" again raised a problem which is considered to be urgent. During the exercise P2V's were simulated offshore engaged in ASW operations. These aircraft were declared unknown and fighter-interceptors had to be scrambled to identify. This is considered to be a brief glimpse of the problem that will arise in an actual emergency. During such an emergency there will be a concurrent requirement for extensive ASW operations. There are no procedures for positively identifying these aircraft when they are inbound and it is anticipated we will be needlessly scrambling aircraft to identify them when the fighters are needed elsewhere. It is felt that the present system of handling offshore flights will be inadequate during a period of actual Air Defense when the A&W squadrons will be operating under saturated and overloaded conditions.

c. A statement of policy is needed concerning whether the alternate ComNavEast command post will shift to the Navy office at the 32d Joint Air Defense Division. Present plans provide for the Division Commander and the AAA representative to assume the functions of their higher headquarters under certain circumstances. If a decision is made to shift control of ComNavEast, ALCOP engineered lines will have to be requested to key Navy commands.

d. An Air Defense briefing was arranged for Boston AAA and NAS South Weymouth, NAS South Weymouth accepted the invitation but representatives from that command failed to attend the briefing for some reason. The invitation will be extended again at some future date.

s/ B. Sevilla  
t/ B. SEVILLA

Copy to: Navy Deputy, 26th ADiv  
Navy Deputy, 30th ADiv  
Comdr Naval Forces, ConAD, Int AFB

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NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

16 March 1955

MEMORANDUM

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of activities for period ending 15 March 1955

1. During this period a visit was made to the Naval Air Station at Niagara Falls, New York and to the 763d AG&W Squadron at Lockport, New York. While at Niagara Falls I talked with the executive officer and Cdr Davis, the training officer. Niagara is programmed to receive approximately seventeen F2H-2 aircraft and already have on board six Banshees. They still have on board thirteen Corsairs but estimate that all of these aircraft will be transferred by 1 July 1955. The same situation that exists in South Weymouth applies at Niagara. It will be a considerable time before we can realize any Air Defense potential from Niagara in the jets. ADCR 55-2, which requires a minimum of forty hours in type for any Air Defense participation except Active Air Defense, will preclude any Navy participation in exercises by either of these two stations. Captain Browning, the station C.O., and members of his staff are planning to attend the Air Defense orientation which is scheduled here at this headquarters on 30 March.

2. N.A.S. South Weymouth was asked to participate in a GOC operation called "Skytrain" which was conducted on 12 March 1955. The South Weymouth people agreed to put up a four plane CAP in an attempt to intercept the one low flying aircraft which was passing through the Boston area. The mission was unsuccessful due to the fact that the Navy Reserve unit was unable to make their expected scramble time and arrived on station after the track had passed through. The liaison between stations and the scramble and check-in procedures all worked satisfactorily. The primary value of the exercise, as far as our people are concerned, is that it pointed out the need for more exercises of this nature in order to accurately estimate the time needed to get their CAP's off of the ground and on station.

3. N.A.S. Niagara Falls has been asked and has agreed to provide a four plane Corsair CAP for a similar exercise on the 19th of March. This exercise will involve low flying jet aircraft on another GOC exercise and it is intended to put the planes on low altitude CAP in the area of expected penetration.

No Naval Air Reserve Forces were requested to participate in the "Seed Apple" exercise which is now taking place. Since there was no definite information about when and where each mission would take place the

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Nav Dep 32d Joint Air Def Div Subj: Summary of activities for period ending 15 March 1955

Navy Reserve people were unwilling to give up any training time for "if and when" participation. It is believed that the first "Seed Apple" mission passed very close to picket vessel station #2, which was manned at the time. However, the PV on station had a minimum of information concerning the mission and did not pick up the track. The PV primary station at North Truro feels very strongly that since the PV's are acting as and capable of performing as an AC&W squadron, every effort should be made to give them complete mission information on an equal basis with the USAF AC&W sites. During this particular mission a Navy P2V AEW plane from the Lincoln project was on station in the area and was asked to participate and was most cooperative with P-10 and spent an extra hour offshore searching for the mission aircraft.

4. The hot-line which was requested from North Truro into N.A.S. Quonset Operations was turned down by ADC. The line was mistakenly requested as a scramble line rather than a liaison line. On one day during this period the 32d scrambled four times on Navy jet aircraft which were working on a daylong special exercise with one of the cruisers off of the Boston area. The matter was finally cleared up by long distance phone call to ComFair, Quonset, but it was an incident which could have been cleared up locally between Quonset and North Truro had closer liaison been possible via a hot-line connection between the two stations.

5. Naval Air Reserve Training: It is felt that the Naval Air Reserve potential in this Division is still unsatisfactory for participation in air defense. Repeated attempts have been made with both Reserve units to increase their interest and participation in air defense. In spite of the requirement imposed by CNARESTRA OpPlan 1-54 on Naval Air Reserve units to be trained in air defense, it is not felt that this requirement has been met. Reserve units are conducting their training religiously in accordance with the primary mission syllabus requirements laid down by CNARESTRA. Participation in air defense training and exercises is encouraged but is on a "not to interfere with primary training" basis. Considering the minimum training time which is available for each pilot, loss of training due to weather, aircraft availability, etc., the lack of enthusiasm by the Reserve units to participate in non-syllabus credit training is understandable. The present system envisions the Reserve pilot obtaining his syllabus GCI requirements under the direction of a USAF AC&W squadron and in so doing simultaneously fulfilling his GCI and air defense training requirements. Experience has proven that training in air defense must include what is known as "systems training". It is felt that the pilots must at least once a year be run through the entire operation. From the standby in the ready-room, alerting procedures, manning the aircraft and finally the scramble take-off and check-in with the controller, in order that the pilots will know what they will have to do and so that the controllers can get an accurate estimate of the time required to get Navy fighters in the air.

C O P Y

Nav Dep 32d Joint Air Def Div Subj: Summary of activities for period ending 15 March 1955

To date, any proposals to the Naval Reserve units that they participate in such a "system" training exercise has been rejected on the grounds that the loss of training time to the whole squadron would be unacceptable. Participation to date is limited to four plane CAP's out on syllabus training missions guarding GCI channels and available for intercept work if time and gas permit. It is also felt that there should be some firm agreement between the Navy forces and ADC as to the best method of utilizing Navy prop and jet Reserve aircraft in an actual emergency. This Division has agreed to use the Navy on CAP in training if that is the only way we can get them to conduct training, however, during an actual emergency it is anticipated that Navy aircraft will be scrambled from runway alerts similar to the USAF fighters.

Recommendations:

1. It is recommended that an effort be made to work out a realistic air defense training program for Reserves with CNARESTRA.
2. It is recommended that such a training program be included in the CNARESTRA syllabus for credit.
3. It is recommended that such a training program include "system training exercises" if Navy aircraft are to be scrambled from runways.
4. It is recommended that a decision be made as to the best methods of employing Navy aircraft and as to the best types of air defense missions; i.e., trailer aircraft, visual identification, low altitude intercepts, CAP's, etc.

s/ B. Sevilla  
t/ B. SEVILLA

NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

18 January 1955

MEMORANDUM

FROM: Navy Deputy, 32d Joint Air Defense Division

TO: Commander Naval Forces  
Eastern Continental Air Defense Force

SUBJECT: Summary of Activities for period 1 January to  
15 January 1955

1. During this period a trip was made to the Naval Reserve Training Center at Liverpool, New York for the purpose of getting acquainted and to obtain information concerning radar equipment that is on hand at some of the Reserve Training Centers. There are approximately thirty-one Reserve Training Centers in the 32d Air Division area, some of which possess radar sets that might possibly be used as gap-filled or back-up radar. The RTC that I visited possesses two sets, SL and SA, the latter having a capability of tracking, on occasion, out to 100 miles and between 25-30,000 feet. The Officer in Charge stated that as far as he knew, there were no agreements or plans which would integrate his radar potential into the air defense system in an emergency. However, up until recently, his station has been conducting radar operator training and had on board qualified radar operators and maintenance people. Recently this training has been discontinued and his radar sets have been transferred out, with no expectation of replacement. As far as is known, the radar equipment is to remain in place. The Officer in Charge stated that he felt that in an emergency, he could get on board inactive Reserve personnel in the area who are qualified in radar operation. In the meantime, his equipment will not be utilized and it is expected that the sets will be considerably off calibration from disuse. His sets have been used intermittently by the General Electric engineers in the area and are considered to be in excellent shape at present.

The 32d Air Division area takes in part of ComThree and all of ComOne. The Liverpool center is in ComThree. The Officer in Charge believed that two other ComThree RTC's are equipped with radar in the division area; one in Buffalo, New York and one in Rochester, New York. The Officer in Charge volunteered to request from ComThree

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Navy Deputy, 32d Joint Air Def Div Subj: Summary of Activities for  
period 1 January to 15 January 1955(Cont.)

headquarters information concerning the equipment available, capabilities and personnel situation of the other two RTC's and also will request information concerning radars available in ComOne. It is believed that approximately six of the ComOne RTC's may have radar sets on board.

2. During the week 10-15 January, I drove to the Boston-Newport area for liaison visits and for the purpose of holding a conference with the picket vessel people at CortRon 16 headquarters. The following is a report of the visits made:

a. CortRon 16, Goat Island, Newport, Rhode Island; Prior to leaving for the PV headquarters, I had requested that P-10 at North Truro and P-13 at Brunswick, Maine send representatives down to Newport for a joint conference which was held on board the U.S.S. Joyce on 12 January. This conference was attended by the representatives from the two AC&N sites, the MCIS Officer from the 32d Air Division headquarters, members of the CortRon staff, the Commanding Officer of the Joyce, and CIC officers from the Joyce and the Harveson. The Air Force officers were given a complete rundown on PV CIC operations by the controllers from the Joyce. The Air Force people, in turn, briefed the PV people on MCIS operations and requirements in the 32d Air Division. I had requested that this be done since the bulk of the MCIS work is done in this division and there appeared to be some confusion on the part of the PV people on the difference between IMIS and MCIS operations in the 26th Air Division versus those in the 32d Air Division. As a result, the PV's, when on stations #1 or #2, will not perform any identification functions unless requested to do so by the master station and then will only act as relay for code words or maneuver turns. However, it was mutually agreed that if the master code word lists, which are made up well in advance of the effective periods, could be made available to the picket vessels, they could make friendly identification and cut down considerably on the time required for this function. The 32d MCIS officer planned to take this up with EADF. The PV people and the USAF officers re-extended mutual invitations to visit each other for mutual cross-training. Station #1 has not had the opportunity to control any USAF aircraft recently because most of the fighter-interceptor squadrons based in that area would have to be staged through another base in order to work with them. An effort will be made to get National Guard fighters out over Station #1 the next time it is manned.

b. CIC training Center, Fleet Training Center, Newport, Rhode Island: I dropped in to talk to Lt. L. D. Campbell, the Officer in Charge of the CIC school and discussed the proposal to tie the CIC

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Navy Deputy, 32d Joint Air Def Div Subj: Summary of Activities for period 1 January to 15 January 1955 (Cont'd)

center into Fort Banks AACC via a FFT line. He stated that if the line was installed, they would like to have two terminals on the Newport end, one in the duty officer room, and one in the CIC building itself. I did not have the opportunity to get to Melville to talk to Commander Savage on the DesLant staff, but I told Lt. Campbell that I would talk to the Fort Banks AACC personnel and find out how they felt about the installation of such a line and whether they would be able to handle, personnel-wise, the manning of their end of the line and to be able to assure the flow of track information. It is still not clear in my mind who is handling this proposed tie-in.

c. Com Fair Quonset Naval Air Station, Quonset Point, Rhode Island: I visited Lt. Commander Bartlette on the staff and again requested that the Fleet Air Detachment make more use of the ACEW squadron at North Truro to gain mutual confidence in case Fleet Air aircraft are passed to the control of the 32d Air Division. Bartlette intends to promulgate a ComFair instruction or memorandum recommending greater utilization, especially since most of the gunnery and bombing ranges are in the Cape Cod vicinity. It is felt that the 32d Air Division has a requirement for a hot-line tie-in direct into Quonset Naval Air Station. It is not inconceivable that the Quonset aircraft might be passed to the 32d for control, and under the present situation scramble would have to be accomplished through "Powder" at Montauk or through "Beavertail" by relay orders. A hot-line from "Man" into Naval Air Station operations would eliminate this relay problem. Further, there is a considerable requirement in the 32d to contact Quonset for correlation of flight plans and Navy aircraft activity off the division area. After some digging around, we found that there is already a phone installed in the ComFair Quonset office which was believed to be only connected to Naval Air Station operations. Further checking revealed that this line formerly was a hot-line to North Truro, Air Force circuit 162, which had been de-activated in April 1952. It is believed that the lines are still installed and a request will be made to the 32d C&E section to investigate re-activating this line.

d. Fleet Air Wing Three, Naval Air Station, Quonset Point, Rhode Island: I took this opportunity to visit FAW-3 and meet the operations people with whom I had been dealing on the phone reference P2V ADIZ violations. Commander Daly has been relieved by Commander Hop as Operations Officer and I also met Commander L. D. Tamny, the new chief of Staff. After some discussion with various people on the Operations staff, concerning ADIZ penetration violations, it was concluded that better briefing of pilots was needed on the Atlantic



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Navy Deputy, 32d Joint Air Def Div Subj: Summary of Activities for period 1 January to 15 January 1958 (Cont'd)

ADIZ procedures. Most of the violations are caused by the pilots exiting the ADIZ on the track indicated on the flight plan, remaining outside the ADIZ for five to six hours, working their way north and then returning on a different track in an area where the Air Force is not expecting them. Even when they do file for a different return track, their navigation is frequently off enough to throw them five minutes or 20 miles off course and they are declared unknown. Commander Jullien, the Assistant Operations Officer, requested that I submit to them exactly what the Air Force wanted and he would work it up into a PAN-3 order for issue to the squadrons. I also pointed out to them that the AC&W squadrons would be more than happy to assist in the navigation problem by giving the Navy aircraft accurate bearings and distances if requested. There has been some difficulty reported in transmitting information on the HF frequencies, but the PAN people believe this to be the fault of the squadron pilots and plan to try to remedy this.

The Fleet Air Wing people brought up two subjects that were rather surprising. First, they seem to be rather in the dark about the SCATER plan and what it involves and what will happen to them. I told them that they were under the Eastern Sea Frontier SCATER plan and that they certainly should contact them and get briefed. Second, they expect, during any emergency (air defense), that there will be a requirement to conduct ASW operations off the coast to hold down submarines with a missile potential. They are completely in the dark as to any plans that might be in existence regarding the conduct of concurrent ASW and air defense operations, and they felt that they should be given some information as to the conduct of such operations. I certainly had to agree with them, but pointed out that they should be making some effort to resolve this problem through RSP who has primary responsibility for ASW in this area.

e. Naval Reserve Air Station, South Weymouth, Massachusetts: There was a twofold purpose to this visit. One, to try and straighten out the COI/CEI mess and second, to request again more utilization of the AC&W squadron at North Truro. I gave to the Communications Officer a list of the still effective COI's that they should have and a list of the new CEI's that he would need for air defense operations. They are still receiving Air Force instructions from a variety of sources and I recommended that they return all those directives that they had in duplicate or did not need for air defense participation.

I had a brief talk with Commander Duffy, the Training Officer, who usually seems to be rushed for time. They have on board 12 F9F-6's



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Navy Deputy, 32d Joint Air Def Div Subj: Summary of Activities for period 1 January to 15 January 1955 (Cont'd)

and a couple of TV-2's, but have only recently managed to get any of the Cougars airborne. They are supposed to eventually have 42 Cougars but it will be some time before these aircraft will represent any potential in air defense since the transition period for their pilots flying one weekend a month will be a slow process. All of their FG-1D's have been transferred out and they have only 12 F4U-4's on board. I mentioned that our records show absolutely no Navy participation in GCI exercises with North Truro in recent months; and mentioned that in view of the fact that the CIC center in Boston was now inactive, the ACEW squadron was an ideal place for them to obtain the CIC portion of their syllabus. He was under the impression that the squadrons had been using the radar facility and promised to check into it further. However, he stated positively that he and other station pilots had used the GCI site occasionally for training purposes and wondered why their utilization did not show up on the monthly report of Naval participation. It is quite possible that P-10 has not been accurately recording such utilization by the Navy and he gave me some specific dates and flights to check up on with the ACEW squadron. I also laid the ground work for a future meeting between South Weymouth and P-10 personnel for working out a written agreement or SOP for employment of South Weymouth aircraft.

f. First Naval District Headquarters, Fargo Building, Boston, Massachusetts: As of 15 January 1955, the CIC Team Training Center in the Fargo Building was disestablished and the personnel transferred out. Commander Naval Bases, Boston has the responsibility for control of Naval AA fire in the Boston area and he had delegated this responsibility to the CIC center. Upon de-activation of the center, this function was re-delegated to SOPA (Admin) who is Commandant First Naval District. Commander Gray, the Operations Officer, has this responsibility and showed me the new set-up. They have installed the hot-line from Fort Banks AACC in the operations office at the duty officer's desk. In the same room is a transmitter and receiver set up on the harbor net, on which they can contact all ships present and pass air raid alerts, track information, and gun conditions. Commander Gray stated that they were extremely new at the business and also were very short-handed; and that he anticipated some difficulty in training personnel in R/T procedures and in converting GeoRef track information into bearings and distances for the ships. He mentioned that they would be too busy to set up and organize any CPX exercises themselves, but that they would be more than happy to participate in any scheduled by other activities. There will have to be some modification of the SOPA instructions under this new set-up and he promised to cut me in on any new procedures. I told him I would go to Fort Banks to see if we could work out something to ease his training and personnel situation.

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Navy Deputy, 32d Joint Air Def Div Subj: Summary of Activities for  
period 1 January to 15 January 1955 (Cont'd)

G. Fort Banks AACC and Fort Dawes, Winthrop, Massachusetts:  
At the AACC I met Colonel Stiness, the Commander of the 15th AA group  
and Captain Young, the Assistant 3-3. We discussed the possibility  
of a hot-line out of Fort Banks direct to the CIC in Newport. Colonel  
Stiness remarked that he would like to see such a line installed and  
that if a request were to come through his headquarters for coordination,  
he would certainly approve it. He feels that their early warning  
potential from the south is somewhat deficient and that any possible  
radar information that they could receive from that area would certainly  
be a help. Eventually, of course, it is expected that the new defenses  
of Providence, Rhode Island will be under the control of the Boston  
AACC. However, the Newport area is physically located in the 26th Air  
Division area; yet, through the hot-line, would be tied into the 32d  
Air Division. It is quite possible that the alert or gun conditions  
in the 32d would be of a different or more advanced condition of  
readiness than those in the 26th. It may be that if such a line is  
installed, Newport should be put in the 32d Air Division for AA control  
purposes.

During further discussion, it turned out the Third Naval District  
operations people were unaware of the existence of an order directing  
the Harbor Defense Unit at Fort Dawes to man the Fort Banks end of the  
hot-line to the Fargo Building. This has been done in all past exer-  
cises and the Naval personnel from Dawes are fully qualified and have a  
post in the AACC building that they man and a plotting board of their  
own from which they pass track information. These Naval personnel are  
already converting the Georef plots into bearings and distances and can  
pass the information direct to district operations, which eliminates  
some of Commander Gray's problem. At the same time, this information  
can also be passed to Newport in the event that the proposed line is  
installed. The AACC also has a transmitter and receiver set up on the  
harbor net for monitoring purposes. The AA people feel that, considering  
that they will be lucky to have 30 seconds firing time, any relaying  
of information will cut down on that engagement time. They would like  
to see the Navy people in the AACC broadcasting direct to the ships  
rather than relaying it through district operations. I discussed this  
with Commander Gray and he is in agreement with this reasoning. The  
AA people plan to get together with the district Navy people and work  
out some agreements and procedures.

During the visit to Fort Dawes, it turned out that the Navy has  
control of four 90mm AA guns located at Fort Dawes and sited for ship  
inspection purposes. These guns are manned by Army personnel but  
under the control of the Harbor Defense Unit. It is generally understood

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Navy Deputy, 32 Joint Air Def Div. Subj: Summary of Activities for  
period 1 January to 15 January 1955 (Cont'd)

that these guns would certainly be used in AA defense in the event  
of an emergency, but there are no written instructions concerning  
employment since they are awaiting a JANOP which covers such  
understandings.

BERNARD DEVILLA  
Lt Commander  
Navy Deputy

C O P Y

NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

16 May 1955

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of Activities for period ending 15 May 1955

1. Events:

- a. 2 May - Visit to Eastern Sea Frontier
- b. 3 May - Visit to 26th Air Division
- c. 4 May - Visit to ComNavEastDonAD
- d. 11 May - Visit to AEW&C Wing headquarters, Otis AFB, and Naval Air Development Unit (Project Lincoln), N.A.S. South Weymouth, Mass.

2. Scheduled events for 16-31 May:

- a. 16 May - Briefing for Naval Reserve Unit from Liverpool, N.Y.
- b. 20 May - Attend christening of Texas Tower #1, Quincy, Mass.
- c. 26 May - Conference at this headquarters for Commanding Officers, Operations Officers, Air Advisors and Instructors of USAF Reserve, Air National Guard and Naval Augmentation Forces
- d. 27-26 May - 24 Hour AAA exercise

3. Comments:

a. The visits to Eastern Sea Frontier, 26th Air Division and ComNav East were made in an attempt to obtain information concerning ASW operations which would be conducted during an emergency and to discuss possible solutions to the problem of ASW aircraft identification during Air Defense emergency conditions. The question of transfer of the ComNavEastDonAD function to this headquarters under Alternate Command Post plans was also discussed.

b. The visit to the AEW&C wing headquarters was made in conjunction with USAF personnel from this headquarters, to determine the capability of that wing to scramble AEW aircraft as emergency airborne GCI stations for back-up of the AC&W system. The visit to the NADU at N.A.S. South Weymouth was made with the same purpose in mind. The Naval Air Development Unit represents a very limited potential in this respect due to personnel qualifications, varying configurations of their aircraft and the high priority nature of their projects. It was of interest however, to find

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Nav Deputy 32d JADD Subj: Summary of Activities for period ending  
15 May 1955, 16 May 55 (Continued)

out that a GCI installation is programmed for NADU stop of their hangar and that they are due to receive two AEW blimps in the near future.

c. While at South Weymouth a brief discussion was held with Cdr Duffy, Training Officer for the Reserve units, regarding major Air Defense exercises which might take place this summer. He was rather pessimistic about the amount of participation which they could commit themselves to. Transition into the Cougars is proceeding very slowly and during the month of July there are no fighter units scheduled to be aboard for annual cruises. This will restrict Air Defense participation to station keeping personnel only.

d. The Commandant, First Naval District has been invited to participate in the 24 hour AAA tracking exercise for May. ComOne has not participated in any Air Defense exercise since the disestablishment of the CIC in their headquarters. Boston AADC personnel have been directed to brief District personnel on the exercise and to render assistance so that the effectiveness of the present Naval AA control system in Boston may be tested.

e. This headquarters has called a conference on 26 May 1955 of Commanders and Operations Officers of all Air Augmentation forces in this division to discuss training policies and problems. The invitation was extended to all Naval Reserve units, however, there has been no response to date from the Navy so that the degree of attendance by Navy personnel is unknown.

s/ B. Sevilla  
t/ B. SEVILLA

Copy to: Navy Deputy, 26th ADiv  
Navy Deputy, 30th ADiv  
ComNavForces, ConAD, Ent AFB

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NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

18 April 1955

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of Activities for the period ending 15 April 1955

1. During the period of this report the picket vessel conference was attended in Newport, Rhode Island, on 6 and 7 April. The conference was believed to have been beneficial but it is felt that more would have been accomplished had the Air Force personnel involved mutually conferred and agreed on what they wanted prior to the meeting. The conference served to re-emphasize the RF communication problem at NAS Brunswick and to bring attention to the overlap and interference of Navy operations versus USAF AC&W operations at that station. It is anticipated that interference will become increasingly aggravated and steps should be taken now at a higher level to resolve this problem.
2. After the picket vessel conference, liaison visits were made to ComFair Quonset, NAS South Weymouth and ComOne in Boston, Mass. While at ComFair Quonset, the problem of ASW operations during an Air Defense alert was discussed with Lcdr Bartlette of that staff. During an actual Air Defense alert it is believed that there will be a concurrent requirement for ASW operations to keep down any possible submarine missile threat. While the SCATER plan will not affect Navy aircraft engaged in tactical missions, it is felt that Air Defense Divisions and their associated AC&W squadrons should have some prior information as to the amount of Navy offshore activity to expect in their respective areas and a means to positively identify these ASW aircraft during an alert. This matter is considered to be an important problem area and discussions with Division personnel, ComFair Quonset and Fleet Air Wing Three have not revealed any plans concerning this problem. Since these operations will affect more than one division area it is recommended that steps be taken by Headquarters EADF to investigate this problem in conjunction with Eastern Sea Frontier who has primary ASW responsibility.
3. NAS South Weymouth now has 20 F9F-6 aircraft and 16 F40-B aircraft on board. Jet transition is proceeding very slowly but with the advent of better weather this situation will improve. Present plans for two week active duty cruises this summer are to have the South Weymouth squadrons remain at home base to accomplish jet ~~transition~~ transition. The potential of jet aircraft for Air Defense is limited due to the fact

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Navy Deputy, 32dJADD, Subj: Summary of Activities for the period ending 15 April 1955

that all but a few key station personnel are restricted from flying the jet aircraft. If all station personnel could become qualified in these aircraft it would increase the chances of getting pilots for Air Defense scrambles on short notice.

4. Comdr Grey, the Operations Officer for ComOne stated that he felt that they were ready to participate in some sort of an exercise that involved actual tracks and the passing of target information to the ships present in the harbor and available for AA fire purposes. Arrangements have been made through Fort Banks AADC to include the Navy AAA units in the next 24 hour AAA exercise in Mid-May.

On a previous visit I had asked Cdr Grey about the advisability of an emergency sortie plan for ships to take a pre-fixed station outside of the harbor area where their AA fire would most effectively contribute to the AA ring of fire in that area. He informed me on this visit that ComBat-CruDiv has taken up this problem and directed ComCruDivFour to formulate a sortie plan. CruDivFour is home based in Boston and when available represents a considerable AA potential. I asked that I be informed when this plan was worked out and recommended that it be closely coordinated with the Fort Banks AADC who has AAA responsibility in that area.

5. We discussed the YAGR picture and some of the problems they have been having. He feels that the proposed tour of six weeks on station is unrealistic. With the YAGR's ComOne is being drawn more and more into the Air Defense picture and Cdr Grey mentioned that he feels that they need an officer with an aviation background assigned as Air Defense Officer and YAGR Liaison Officer.

Tentative Schedule for U.S.S. Guardian YAGR-1;

11 Apr-6May	4 week yard availability Norfolk, Va.
9 May	enroute Newport, R. I.
10 May	arrived Newport, R. I.
10-13 May	loading, refueling
14 May	RFS
18 May	on a station

s/ B. Sevilla  
t/ B. SEVILLA

Copy to: Navy Deputy, 26th AB  
Navy Deputy, 30th AD

806-55

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C O P Y

NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

15 June 1955

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander, Naval Forces  
Eastern Continental Air Defense Force

Subj: Summary of Activities for period ending 15 June 1955

1. Events:

- a. 7 June - Visited Escort Squadron 16 at Goat Island, Newport, Rhode Island.
- b. 8 June - Visited ComFair Quonset, Fleet Air Wing Three and Commander Naval Air Bases at Quonset Point, Rhode Island.
- c. 9 June - Visited Naval Air Development Unit (Project Linclon) and NARTU at N.A.S., South Weymouth, Massachusetts.
- d. 10 June - Visited the Operations Section at First Naval District and Fort Banks AAOC in Boston, Massachusetts.

2. Scheduled events for 16-30 June:

- a. 21 June - Conference at this headquarters for Major General Frederic H. Smith, Jr., Vice Commander, of Air Defense Command.
- b. 29 June - Visit to NARTU - N.A.S., Niagara Falls, New York.

3. Comments:

a. During the visit to Newport, I discussed the YAGR picture with Commander Wadleigh and asked for comments on any problems his ships might be having while on station off of the 32d Air Division area. PV performance from the division standpoint was excellent during the month of May. No PV's will be on Stations 1 and 2 during June. Communications between ship and shore stations on Station 1 continue to be erratic.

b. While at Quonset, I discussed SCATER and ASW operations with ComFair and FAW-3. I find that the Naval Air Stations themselves are

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Navy Deputy, 32d ADD Subject: Summary of Activities for period ending  
15 June 1955

all aware of SCATER and what it involves, but I find that the Fleet units based at stations are somewhat hazy about how it will effect them. For instance, FAW-3 is currently writing their D-Day Operations Plan to implement ASW coverage of the North Air Zone which is off of our area. I pointed out to them that it was a possibility that navigation aids would be off just at the time they were operating under this ASW plan. I requested that they also delineate in their plan exact patrol routes as far as possible and coordinate this plan with the Air Defense Command so that these ASW operations could come under the SCATER provisions for pre-planned tactical flights.

b. The problem of how to handle ASW hunter/killer flights, that will have to be scrambled upon receipt of contact reports, still remains. This type of flight cannot be pre-scheduled or planned, and will require authorization from the division commander under emergency conditions. This situation may prove impractical. The problem of positively identifying offshore ASW flights during an emergency also remains, and FAW-3 is concerned about this problem. I asked ComFair and FAW-3 to give this problem some thought and see if they could come up with any recommendations.

I also visited VC-12 to discuss their AEW barrier plan with the commanding officer, but he was on leave.

c. NADU at South Weymouth has two AEW blimps on board and have been running some barrier patrols offshore, trying to evaluate them. The blimps have been very successful in picking up over-water tracks and the blimp track information overlays are correlated with information from P-10. It appears that the blimps have been detecting some targets that the AC&W squadrons were not "painting". We are still investigating the possible employment of these blimps as back-up airborne AC&W units in an emergency.

The Reserve at South Weymouth are still in the process of transition into jets and have been hampered considerably by poor maintenance.

d. While in Boston, Massachusetts, I visited the AAOC to determine the results of the Navy AA participation in the recent AAA 24-hour exercise. Prior to the de-commissioning of the CIC school in the First Naval District headquarters building, the Naval AA coordination setup for Boston Harbor was considered efficient and adequate. Now, however, this coordination function is held by the operations officer for the district, and the actual passing of track information, alerts and firing orders emanates from a position in his office. He has available a

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CONFIDENTIAL

Navy Deputy, 32d ADD Subject: Summary of Activities for period ending  
15 June 1955

hot-line from the AAOC to receive this information and the harbor circuits to relay this information to the ships. Yet, there was considerable difficulty during the exercise. Personnel to man the Naval AA post must be drawn from personnel available in the headquarters. These personnel consist of yeomen, storekeepers, seamen, etc. There are not enough personnel qualified in CIC and R/T procedures, and apparently no personnel capable of maintaining a track board of who are familiar with handling GeoRef track information.

The Operations Section is presently working under a maximum load of problems, which are normal problems of the district. Training personnel is a problem and in any condition, it is not believed that the number of personnel who could be made available would be able to man the position for any length of time. In view of this personnel difficulty and the results of the exercises, I asked the operations officer to give some thought to the following recommendation. I suggested that he review each week the list of ships present and from those ships which would not be able to get under way during an attack, request an emergency pool of personnel who are familiar with CIC plotting, track conversion, R/T procedures, etc. While this pool might vary in quantity and quality from week to week, it is felt that it would at least be a nucleus of trained personnel who could direct the work of the untrained personnel from the headquarters itself.

In the AAOC at Fort Banks, there is a Navy Position which has to be manned by Naval Personnel to transmit the track information to the district AA coordinator. Because of the anticipated difficulty in getting through Boston traffic in an emergency, personnel to man this post are drawn from the harbor defense unit which is adjacent to the AAOC. In the past, these personnel have performed very satisfactorily. However, there has apparently been a personnel turnover in that unit and the new personnel are also in need of a great deal of training.

All of the foregoing recommendations were made to the district in the light of their AA responsibility, assigned to them under Eastern Sea Frontier Operations Plan 4-53, and the responsibility I have to the division commander to ensure that the Naval AA setup in Boston is adequate and workable.

Copy to: Navy Deputy, 26th AD      B. Sevilla  
Navy Deputy, 30th AD

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C O P Y

NAVY DEPUTY  
32D JOINT AIR DEFENSE DIVISION  
Syracuse Air Force Station  
Syracuse 6, New York

5 July 1955

From: Navy Deputy, 32d Joint Air Defense Division  
To: Commander Naval Forces  
Eastern Continental Air Defense Force  
Subj: Summary of Activities for period ending 30 June 1955

1. Events:

- a. 4 June - N.A.S. South Weymouth participated in Skytrain IV.
- b. 20 June - Visited ComNav East ConAD, Newburgh, N.Y.
- c. 21 June - Attended briefing for Maj. Gen E.H. Smith, Vice Comdr, ADC
- d. 22 June - Visited Naval Reserve at N.A.S., Niagara Falls, N.Y.

2. Scheduled events for 1-15 July 1955.

- a. 7 July - Air Defense orientation for officers from fleet Air Wing 3 and Composite Squadron 12.

3. Comments:

a. On 21 June Maj. Gen. F. H. Smith, and eleven members of his staff visited this headquarters for a conference and briefing. During the conference Colonel Israel took up the matter of ASW operations and identification under SCATER and during an emergency. The discussion included those problem areas that have been mentioned in previous activity reports.

b. N.A.S. Niagara Falls still does not have its full complement of F2H aircraft on board. Some of those that have been delivered are already due for overhaul. However with an average of four available aircraft they have transitioned over forty Reserve pilots. The new Ass't Training officer is a former fleet jet pilot who is aware of the benefits to be obtained from the AC&W system. The relations between Niagara and the 763rd AC&W squadron are excellent and the new training officer has scheduled a great deal of cross-training. All GCI intercept training will be accomplished through use of the AC&W squadron. We have arranged for the AC&W squadron to set up on the Niagara tactical frequency on drill weekends to facilitate this training.

s/ B. Sevilla  
t/ B. SEVILLA

18/6

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C O P Y

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

AFOAC-P/F

25 March 1955

SUBJECT: (U) Frequency Assignments

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

1. Frequency 3231 kc/s, 0.1A1, 6A3 emission, 400 watts power is hereby assigned all locations within the 26th and 32d Air Divisions for communication with picket vessels.
2. This assignment replaces 2082 kc/s which is no longer available for USAF use.
3. USAF Radio Frequency Authorizations AF-65 and 154 have been changed accordingly and are inclosed.

BY ORDER OF THE CHIEF OF STAFF:

2 Incls  
1. USAF Rad Freq Auth  
No. AF-65 (in trip)  
2. USAF Rad Freq Auth  
No. AF-154 (in trip)

/s/ HOWARD E. McCORMICK  
Lt. Colonel, USAF  
Executive, Plans & Policies Div.  
Director of Communications

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C O P Y

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Hq USAF AFOAC-P/F Subj: (U) Frequency Assignments

ADOCE-CR (25 Mar 55) 1st Ind 8 Apr 1955

HQ AIR DEFENSE COMMAND, Ent Air Force Base, Colorado Springs, Colorado

TO: Commander, Eastern Air Defense Force, Stewart AFB, Newburgh, N. Y.

2 Incl

1. w/d 1 cy
2. w/d 1 cy

/s/ C. F. H.

EAOCE-CR (25 Mar 55) 2d Ind 14 Apr 1955

HQ EASTERN AIR DEFENSE FORCE, Stewart Air Force Base, Newburgh, N. Y.

TO: Commander, 32d Air Division (Defense), Syracuse Air Force Station,  
Syracuse 6, New York

1 Incl

w/d Incl 1

BDM

OCE (25 Mar 55) 3d Ind 20 Apr 1955

HQ 32D AIR DIVISION (DEFENSE), Syracuse Air Force Station, Syracuse 6, NY

TO: Commander, 4707th Air Defense Wing, Otis Air Force Base, Falmouth,  
Massachusetts  
Commander, 4711th Air Defense Wing, Presque Isle AFB, Presque Isle,  
Maine

This indorsement contains no classified information.

BY ORDER OF THE COMMANDER:

1 Incl

1. USAF Rad Freq Auth  
No. AF-154

NATHANIEL HUGGINS  
2nd Lt., USAF  
Assistant Adjutant

793-55

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C O P Y

HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EAOFR

22 July 1955

SUBJECT: Texas Tower Status

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Syracuse 6, New York

1. Due to the number of agencies taking action on various phases of the Texas Tower program, many of the problems are not fully resolved. A firm operational plan with appropriate logistic and other supporting annexes on Texas Towers will be sent to you by 1 September 1955.
2. The purpose of this letter is to notify you that Texas Tower #2 will be a part of your command and provide you with the current status of this tower. Information copies of this letter are given wide distribution in order to facilitate the coordination of effort of all contributing organizations and agencies.
3. It is desired that the attached information be utilized for planning and guidance until more complete information and instructions are furnished you.

BY ORDER OF THE COMMANDER:

1 Encl  
Texas Tower Data

s/ J. W. Fountain, Jr.  
t/ J. W. FOUNTAIN, JR.  
Major, USAF  
Assistant Adjutant

Info Copies to:

All Stf Agencies, EADF  
All Stf Agencies, ADC  
USAFIRO, New England Div  
OIC, Texas Towers, Boston, Mass.  
AMC, Middletown, Pa.  
3108 Comm Gp, Rome, NY  
Col Clifford, Rome AFB, N.Y.  
26th ADiv (Def), Roslyn AF Sta  
Lincoln Lab, MIT, Lexington, Mass.  
Cambridge Research Center CRRAC  
ADES Project Office  
USAF, AFOMD

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DISTRICT PUBLIC WORKS OFFICE  
FIRST NAVAL DISTRICT  
NAVY BLDG  
495 SUMMIT ST. BOSTON 10, MASS

Address reply to  
Dist Public Works Off  
First Naval Dist  
and Refer to:  
p-110  
RWR:nh  
NY-86107

13 Dec 1954

From: District Public Works Officer, FIRST Naval District  
To: Lt. Col. L. B. Reppert, USAF TRN MED OIC Installations, U.S.  
Army Engineers, N.E. Division, 257 Commonwealth Avenue, Boston, Mass.

Subj: Supply Ship for "Texas Towers"

1. The Feasibility Report for Texas Towers recommends a special type vessel for servicing the towers due to difficulties encountered in transferring supplies and personnel at sea. Primary requirements are fuel and water tanks, transfer pumps, cargo storage, and an unobstructed forward deck.
2. It is currently proposed that the supply ship lay from an mooring bridle fastened to two legs in lieu of the method shown in the feasibility report. By maintaining reverse engines or using a stern anchor, the vessel will be able to hold its position during transfer operations.
3. It is considered that the importance and magnitude of the logistic supply of Texas Towers is sufficient to warrant a specially equipped vessel. If the Air Force concurs and considers that the procurement of such a vessel can be financed and arranged, this office will prepare design criteria and consulting service upon request.

J. J. ALBERS  
By Direction

Copy to:  
BuDecks, Code C-270

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R/L, DND, Navy Bldg., Boston, Mass. W-6107, Subj: Supply Ship for Texas Towers

NRAT/LBR/jw (13Dec54) 1st Ind

USAF Installations Reprs. Office, NEH, Boston, Mass., 15 December 1954

TO: Public Works Officer, First Naval District, 495 Summer Street, Boston 10, Massachusetts

1. Previous planning envisioned the use of available vessels, modified to meet specific needs, to service the "Texas Towers" structures. In any event the procurement of a suitable vessel is not within the scope of current authorization of this office.

2. It is requested that we be furnished a resume of the most recent and valid design data having bearing on this problem together with your criteria recommendations. Evaluation of this information will be made by Air Force agencies prior to initiating a procurement program.

LEONARD B. RUPPERT  
Lt Colonel, USAF  
IC Installations Reprs. Office  
New England Region

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CONFIDENTIAL

DEPARTMENT OF THE AIR FORCE  
Headquarters United States Air Force  
Washington 25, D.C.

AFMTP-PD

Jan 10 1955

SUBJECT: Supply Ships for Texas Towers

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

1. Reference First Naval District letter D-110 dated 13 December 1954, and WRAF 1st Indorsement thereto, copies inclosed.

2. We are interested in knowing your proposed method of providing transportation between the shore and the Texas Towers. Your proposal should include such things as the planned method for securing the surface vessel close aboard the Tower; the proposed method of transferring personnel; and the proposed method of transferring the dry and liquid cargoes to be handled. In addition we are interested in any existing or planned agreements with any other service regarding the operation of a surface vessel for the support of the Texas Towers since this normally is a responsibility of the Military Sea Transportation Service.

3. The above cited references indicate that a specifically designed and constructed vessel is being considered for the purpose of resupplying the Texas Tower. This may prove difficult due to the planned beneficial occupancy dates for the towers.

4. In the event your plan calls for the servicing of the Texas Towers by the Military Sea Transportation Service will you provide the following data.

- a. Monthly dry and refrigerated cargo requirements for each station in cubic feet and pounds.
- b. Monthly petroleum requirements for each station by type and amount.
- c. Monthly water requirements for each station.
- d. The frequency of rotation planned for tower personnel and the number of personnel involved at each station.
- e. Your desires regarding the U.S. port to be used to support the Towers.
- f. Your desires regarding the number of vessels needed to support the Towers.

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Ltr to COMBAC, Subj: Supply Ships for Texas Towers

5. The date requested in paragraph 4 is required so that early action may be taken with APTS headquarters to provide your desired service by the time that the towers become operational.

BY ORDER OF THE CHIEF OF STAFF:

1 Incl

Ltr fr DPM Officer, 1st ED,  
dated 13 Dec 54, same subj,  
w/1st Ind fr USAF Install  
Officer, NER, dtd 15 Dec 54

DAVID E. DANIEL  
Colonel, USAF  
Chief, Programs Div, D/Transportation  
Officer, Deputy Chief of Staff/Materiel

cc: FADF  
AFCH-C/SR  
NURAF  
B-DECKS Code C-270  
DPM Officer, 1st ED

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Hq USAF, AFMTP-PL, Subj: Supply Ships for Texas Towers

8 Feb 1955

ADMV-2A (10 Jan 55)

1st Ind

HQ AIR DEFENSE COMMAND, Ent Air Force Base, Colorado Springs, Colorado

TO: Director of Transportation, Headquarters United States Air Force,  
Washington 25, D.C.

1. In compliance with basic letter, the following information regarding the proposed method of providing transportation to and from Texas Towers is furnished for planning purposes.

2. Deputy Chief of Staff, Materiel personnel, Headquarters Air Defense Command, have not contacted any other service in regard to supporting the Texas Towers. Inasmuch as sea surface transport is a prime function of the Department of the Navy, it was assumed for planning purposes by this Headquarters that Headquarters USAF would negotiate the appropriate agreements with other services.

3. According to present plans a maximum of 55 USAF personnel and 25 U. S. Navy Personnel will be stationed on each Texas Tower. The rotation of personnel by helicopter is desired if in the following problem areas it appears feasible:

- a. Availability of helicopters
- b. Adequate helicopter support
- c. Operational and weather factors

It is planned to rotate personnel each 30 days, dependent upon weather and operational factors.

4. A method for securing support vessels close aboard the Texas Towers is described in "Feasibility Report on Texas Towers", Part 2, Department of the Navy, Bureau of Yards and Docks, pages 70 through 81. Other mooring procedures might be recommended by the Construction Contractor, Bureau of Yards and Docks, U.S. Navy, and/or the support vessel operators, and should be given careful study and consideration prior to implementation.

5. The following is the transport requirement for each Texas Tower:

- a. Dry Subsistence:  
Initial 45 day level - 26,395 lbs. - 707.148 cu. ft.  
15 day resupply - 2,700 lbs. - 92.136 cu. ft.

The above initial supply includes a 45 day level of emergency "M" ration.

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Hq USAF, A-11P-ED, Subj: Supply Ships for Texas Towers, 1st Ind Con't

- b. Refrigerated Subsistence:  
 Initial 45 day level - 12,353 lbs. - 626.63 cu. ft.  
 15 day resupply - 4,570 lbs. - 208.89 cu. ft.
- c. USAF Exchange Supplies:  
 Initial 45 day level - 18,300 lbs. - 590 cu. ft. ?  
 15 day resupply - 6,100 lbs. - 173.33 cu. ft.
- d. Housekeeping Expendables:  
 Initial 45 day level - 2,000 lbs. - 60 cu. ft.  
 15 day resupply - 500 lbs. - 15 cu. ft.
- e. UAL Property:  
 Initial 45 day level - 57,463 lbs. - 8,029 cu. ft.  
 Resupply - negligible
- f. Technical Supplies:  
 Initial supply of technical equipment, including electronic gear, tools, test equipment and auxiliary items are to be put aboard by the Middlebeam Air Material Area.  
 15 day resupply - 12.5 measurement tons.
- g. Diesel Fuel:  
 Initial 45 day level - 48,000 gallons  
 15 day resupply - 16,102 gallons
- h. Engine Lubrication Oil:  
 Initial 45 day level - 90 gallons  
 15 day resupply - 330 gallons
- i. Aviation Gasoline:  
 Initial 45 day level - 3,000 gallons  
 15 day resupply - 1,100 gallons, dependent upon consumption
- j. Water:  
 Initial 45 day level - 174,000 gallons  
 15 day resupply - 96,000 gallons

6. When the first Texas Tower becomes operative, only one (1) vessel will be required and the Port of Boston is believed to be most advantageous. When all planned Texas Towers become operative, it is believed a minimum of two (2) vessels will be required; one (1) vessel to operate from the Port of Boston and one (1) from Newport, Rhode Island.

FOR THE COMMANDER

WALTER M. ROBINSON  
 Colonel, USAF  
 Command Adjutant

1 Incl  
 n/c

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E/L fr Hq USAF, AFMTP-PD, Subj: Supply Ships for Texas Towers, dtd  
10 Jan 55, 2nd Ind (cont)

4. At the conclusion of the Boston conference it was decided that the procedures for mooring the tanker would be subject to further study by the First Naval District Public Works Officer, the USAFIR, NED, and the Marine Manager of the Esso Standard Oil Company of Boston. Although some minor changes may be expected we do not believe the basic procedure will change. In any event the USAFIR, NED will monitor this aspect of the problem.

5. If you accept the concept of helicopter resupply of the towers as recommended in Hq USAF letter AFMTP-PL-US dated 25 March 1955 then certain affirmative actions must be taken by the ADC in order that adequate arrangements may be made regarding petroleum resupply of the tower. The location of the liquid cargo intake valves aboard the tower must be changed; mooring springs must be provided on each leg of the tower; floating hoses of the proper size and number must be provided; and the arrangements must be completed for providing docking pilots to each vessel arriving at the tower.

BY ORDER OF THE CHIEF OF STAFF:

1 Incl  
n/c

DAVID E. DANIEL  
Colonel, USAF  
Chief, Programs Div, D/Transportation  
Office, Deputy Chief of Staff/Materiel

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Hq USAF, AFMTR-PD, Subj: Supply Ships for Texas Towers

ADENT-3 (10 Jan 55) 3rd Ind

HQ AIR DEFENSE COMMAND, Mt Air Force Base, Colorado Springs,  
Colorado

TO: Director of Transportation, Headquarters United States Air Force,  
Washington 25, D.C.

1. Reference is made to Hq USAF letter AFMTR-PL-US dated 25 March 55 and 1st Ind thereto. The concept of resupply by helicopter has been accepted by ATC; therefore the requirement for a special vessel, reference attached correspondence, is no longer valid.

2. Your proposals imply that helicopter service will meet all personnel and dry cargo transportation requirements, with recognition of a possible one week delay due to weather. This command foresees other situations that would induce a transport problem and reduce the Texas Tower operational capability unless back-up surface transportation is immediately available. For example:

- a. Helicopter goes "out of commission" after landing on the tower. Sufficient landing space would not be available to land a second helicopter, thus the landing area would be closed with a resultant lack of support until the helicopter was returned to service and the landing areas cleared.
- b. Curtailment of flight schedule due to TEC and other "out of commission" factors would result in inadequate resupply of replacement spare parts, rations and supplies. Shortages in these areas of supply and personnel fatigue generated by extended periods of duty would seriously impair the operational capability of the tower.
- c. Some replacement units or parts for major repairs may exceed the weight or dimension factors of the helicopter.

3. Considering these factors, this command considers it mandatory that a procedure be in being for back-up surface transport at all times. All interested agencies must be informed of the procedure and that the Commander, 762nd AC&M Sq, North Truro, is authorized to implement this plan as required. It is recommended that a cross-servicing agreement between the USAF and the U.S. Navy, MSCG, or the U.S. Coast Guard be accomplished to provide such back-up surface transportation. Request advisement on this point.

- h. This headquarters is coordinating the required tower changes with

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Hq USAF, AFMTP-2D, Subj: Supply Ships for Texas Towers (Cont)

AFMTP-2D and the revised logistics annex to the Texas towers operational plan is being prepared and will be published o/a 1 May 55, copies of which will be forwarded your headquarters.

5. The Area Petroleum Control Office, Olmstead AFB, had been informed of the fuel requirements and the requirement for a docking pilot.

FOR THE COMMANDER:

1 Incl  
n/c

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HEADQUARTERS  
AIR DEFENSE COMMAND  
F. T. A. R. BERRY BASE  
COLORADO SPRINGS, COLORADO

AD/EM-3

15 JUN 1955

SUBJECT: Logistic Support for Texas Towers

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

1. Enclosed are copies of correspondence between this headquarters and Headquarters USAF which establishes the support concept for Texas Towers.

2. Reference is made to paragraph e, 2nd Ind., to Headquarters USAF letter, Subject: (G) Logistic Support for Texas Towers, dated 25 Mar 55 (Incl #1). The agreement for emergency surface resupply will be forwarded following their receipt at this headquarters.

BY ORDER OF THE COMMANDER:

2 Incls.  
1 - B/L fr Hq USAF, Subj:  
Logistic Support for Texas  
Towers dtd 25 Mar w/Incl &  
2 Incls.  
2 - B/L fr Hq USAF, Subj:  
Supply Ship for Texas Towers  
dtd 10 Jan w/Incl & 3 Incls.

s/t/ Rector C. Dacus  
Captain, USAF  
Asst Command Adj

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AFMLP

MAR 25 1955

SUBJECT: (Unclassified) Logistic Support for Texas Towers

TO: Commander  
Air Defense Command  
Fort APB  
Colorado Springs, Colorado

1. References:

- a. ADC letters AUCM, "Cross-Servicing Agreement for Texas Towers", 3 Jan 1955 and 16 Feb 1955, to Director of Supply and Services, Hq USAF.
- b. TX AFMLP-Pt, 58233, 28 Feb 1 55, from Asst for Logistics Plans, Hq USAF, to DCS/H, AUC, subj: "Logistic Support for Texas Towers."
- c. ADC 1st indorsement, subj: "Supply Ships for Texas Towers," dated 8 Feb 1955.

2. a. The references in par 1a contained your concept of rather extensive cross-servicing support of Texas Towers by the Navy.

b. Reference b indicated our tentative position regarding this concept, and requested an ADC-USAF conference to resolve Texas Tower logistic support problems.

c. Reference c stated your personnel and cargo transportation requirements for a Texas Tower of 30 personnel (55 Air Force and 25 Navy) with 45-day supply levels, 15-day resupply and 30-day rotation of personnel.

3. The ADC-USAF conference was held in the Pentagon, 3-4 March 1955, and considered primarily the support for the first Tower (POD 1 Sep 1955), with general consideration to the ultimate requirements in support of five Towers. Incl 1 contains a discussion of this conference.

4. As indicated in incl 1, this headquarters recommends the use of H21B helicopters for transportation of personnel and of cargo other than diesel fuel and water to the first Tower. Water will be distilled on site, and diesel fuel storage will be increased by approximately 110,000 gallons, permitting occasional resupply by standard tankers.

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Ltr to ADC, subj: Logistic Support for Texas Towers (cont)

5. You will be advised of the results of further investigation by this headquarters into the method of discharging cargo from standard vessels.

6. Two H21B's with adequate support can be made available for the first Tower. We anticipate manning requirements of 3 pilots and 3 ground crew personnel per helicopter, assuming you would base them at Otis AFB.

7. If you agree with this concept, the date the helicopters are required and your helicopter personnel requirements should be submitted as soon as possible. A revised logistic plan should also be prepared.

BY ORDER OF THE CHIEF OF STAFF:

1 Incl  
Logistic Support for  
Texas Towers

EDWARD W. MOORE  
Colonel, USAF  
Deputy Ass't for Log. Plans  
Office, DCS/Materiel.

for JAMES P. MEMBERRY  
Brigadier General, USAF  
Deputy for Logistics Plans  
Office, Deputy Chief of Staff,  
Materiel

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LOGISTIC SUPPORT FOR TEXAS TOWERS

1. This inclosure contains the results of discussions in an ADC-USAP conference, 3-4 March 55 on Texas Tower logistic support. Some information obtained after the conference is also included.

a. Naval Detachment: Latest information available from the Navy indicates that provision of their detachments aboard the Towers depends on the development of technical equipment. The Navy estimates no naval personnel aboard before CY 1958.

b. AF Strength: Present programming calls for augmenting the parent radar site by 16 men -- the anticipated strength of the Tower detachment. It was understood ADC planned rotating the men for 30-day tours on the Tower from similar jobs at the parent site.

c. Surface Movement of Personnel: ADC's "Plan for Logistic Support of Texas Towers", July 1954, calls for normal movement of personnel and supplies by surface transportation, and emergency transportation by helicopter. Investigation into this revealed a requirement for trips to each tower at least once a week to avoid the turnover of too many personnel at one time. This would mean the full-time commitment of more (specially equipped) ships than would be required for resupply only. Otherwise, if we used only one ship (of adequate size for resupply operations), the in-transit loss in manhours would require more manpower to sustain operations at the parent site and the tower. In addition, surface transportation costs of moving personnel from their home sites to and from the port would be incurred.

d. Air Movement of Personnel: Because of the disadvantages of surface personnel movement, the conferees agreed that personnel should normally move by helicopter between the parent sites and the Towers. Weather factors were discussed and, since the rotation schedule can be varied somewhat, the ~~XXXXXXXX~~ expected delays awaiting suitable weather appear acceptable. The representative of Hq Air Weather Service felt sure that the longest period during which visibilities and winds might prevent routine H21B operations to a Tower would be one week. The H21B is considered the best aircraft available for this purpose because of:

- (1) Capacity -- Carry approximately 10 men or 2000 cargo without refueling at Tower, and with adequate survival gear on board.
- (2) Ease of handling in cross-wind landings.

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Logistic Support for Texas Towers, <sup>CONFIDENTIAL</sup> (cont)

- (3) Flexibility -- because of the capacity, bad weather delays can be rapidly overcome.
- (4) Fewer personnel required for the H21B operation than for a larger number of smaller helicopters.

Based on a planning figure of 75 men rotating monthly from five towers, or considered 6 H21B's, probably based at Otis AFB, Suffolk County Apt and Brunswick NAS and/or Halifax N. S., to be adequate for personnel movement. To assure the availability of one helicopter in commission for emergencies, and to provide additional life while the initial operation is being tested, 2 H21B's will be authorized for the first tower, if acceptable to ADC. This will also provide additional training and cadre personnel for expansion next year.

e. Cargo Ship for Resupply: The conferees were advised that a suitable ship which could supply the Towers with the various cargoes required does not exist -- either in the Naval or Commercial fleets. To obtain one would require modification and contracting for it on a full-time basis (through MSTG). The smallest size considered appropriate would be large enough to supply all five Towers every 15-30 days. Therefore, it could be utilized only 20% of the time during the first year for the first Tower. The cost has been estimated at \$1000-1200/day for such a ship.

f. Helicopters for Resupply: To avoid obtaining a special ship for the first Tower, airlift of cargo was considered with following results:

- (1) The 2 H21B's at 50 hrs/mo each and 3 hrs/round trip should provide about 33 sorties per month, carrying 10 passengers or 2000# cargo. Using ADC's latest strength figure of 55, 5.5 sorties would transport the personnel on rotation. This leaves 27.5 sorties available -- a potential 55,000# of aircraft (less emergency runs of less than full load).
- (2) We scaled down ADC's tonnages listed in reference 1c basic letter (80 men) to those for 55 men, excluding water and Diesel fuel. These dry cargo requirements were approximately 31,000#/ month -- or 15.5 H21B sorties. A margin of 12 sorties remained for unscheduled flights.
- (3) A decision a) to move the personnel by air; b) to use the vehicle now considered best for this -- the H21B; and c) to authorize q of these for the reasons

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Logistic Support for Tower Towers (cont)

stated above, results in enough capacity to airlift dry cargo without an increase in helicopters or helicopter personnel -- to the first Tower.

- (h) After five Towers are operating, helicopter utilization for personnel movement could be improved, and the five Towers supported with 6 H21B's as indicated above. Prior to that time, the cost of operating 4 more helicopters to continue air resupply at all five sites should be compared with surface transportation costs. AEC should have about six months experience with the first Tower before a decision on a ship for the second year sites is required.

g. Water: Latest information from the AF Installations representative in Boston indicates that apparatus for normal distillation of water will be installed in the first tower.

h. Diesel Fuel: Diesel oil storage can be increased by 100-120,000 gallons to 140-160,000 gallons, or about 5 months supply. Installation of a constant tension towing engine on the Tower to assist in receiving cargo from standard ships is being considered. With only 2-3 trips a year, it is felt that diesel resupply can be scheduled in favorable weather, using standard vessels with little modification (high-pumping capacity to lift fuel to the Tower), and using Harbor pilots previously briefed on a SOP.

2. Further conversations during the second day of the conference reaffirmed the desirability of using a maximum of airlift for the first Tower, provided that fuel oil and water can be provided without obtaining a full-time ship. These items were further investigated by H. W. M. As indicated above, water supply can be obtained by distillation and a constant tension towing device can be installed on the Tower, if necessary, limiting surface resupply to diesel fuel from standard tankers, if AEC decides to use the H21B's as suggested above (and assuming they prove to be as suitable as expected). Representatives of this headquarters will visit Boston soon to discuss the method of discharging fuel (and other cargo if required -- e/g. heavy equipment) to the first Tower.

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Hq USAF, Subj: Logistic Support for Texas Towers

ADMEL-3 (25 Mar 55) Lt Ind

HQ AIR DEFENSE COMMAND, Ent Air Force Base, Colorado Springs,  
Colorado

TO: Director of Air Force Materiel for Logistic Plans, United  
States Air Force, Attn: AFMLP-PL-US, Washington 25, D.C.

1. Air Defense Command concurs in general with the proposed logistic support plan for Texas Towers.
2. Reference is made to inclosure No. 1, Logistic Support for Texas Towers:

a. Paragraph 1a, Naval Detachment: Noted.

b. Paragraph 1b, AF Strength: This paragraph indicates that parent radar stations will be augmented by "46 men--the anticipated strength of the tower detachment". The ADC plan is to augment all parent radar stations by 92 men, the anticipated strength of the "on tower" detachment plus the strength of the "off tower" detachment.

c. Paragraph 1c, Surface movement of Personnel: Concur.

d. Paragraph 1d, Air Movement of Personnel: Concur in the requirement for two helicopters to rotate the personnel of Texas Tower No. 2 by airlift. However, it is recommended that decisions regarding the 4 additional Texas Towers be held in abeyance until "in commission rates" of the H-21 are determined. Prior to Beneficial Occupancy of the four additional towers, sufficient data should be available for a determination of feasibility and the number of helicopters required for the support of five towers.

e. Paragraph 1e, Cargo Ship for Resupply: Concur in that the cost for a suitable ship to support the first tower would be excessive. However, when the five towers are in operation and with a constant tension towing device mounted on the Texas Tower many types of ships could be handled at the tower for on and off-loading operations. This possibility was discussed at the conference.

f. Paragraph 1f, Helicopter for Resupply: Concur, however, in commission rates will need be considered also.

g. Paragraph 1g, Water: In addition to the normal distillation of sea water it is possible that the fuel tanker will be able to pump water aboard while delivering fuel. The quantity delivered would be governed by the "fresh water bunker capacity" aboard the tower and the tanker

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Ltr to USAF, Subj: Logistic Support for Texas Towers (cont)

capability. This augmentation would reduce the fuel required to distill water.

h. Paragraph 1h, Diesel fuel: Concur.

3. Request the following action be taken to insure ample time for organization and training of the helicopter support element:

a. Two each H-21B helicopters, with flotation gear modification be furnished Air Defense Command and assigned to the 564th Air Defense Group, Otis AFB, Mass. on or about 1 July 55.

b. Concurrent with the assignment of 2 H-21B helicopters to Otis Air Force Base, it is requested that out Non-T/O authorizations be increased by 6 officers and 6 airmen o/a 1 July 55 as indicated below:

<u>Job Title</u>	<u>Rank</u>	<u>AFSC</u>	<u>Total Required</u>
Pilot	Capt	1024	2
Pilot	Lt	1024	4
Crew Chief	T/Sgt	43170	2
Helicopter Mech	A/IC	43150	2
A/C RecpEng Mech	S/Sgt	43251	2
			Total 6 officers
			6 airmen

c. In view of the AOC and TXC conditions being encountered with H-21 type aircraft, a supply precedence of II within a mission category of 2 will be required. It is recommended that USAF instruct AMC to render all possible supply assistance to support this project. This headquarters is prepared to provide liaison with the prime AMC Depot for the preparation or adjustment to table II or the institution of AFSD action. It is desired to have spares and equipment in place 30 days prior to delivery of aircraft.

4. Back-Up Surface Transportation: Your proposal implies that helicopter service will meet all personnel and dry supply transportation requirements, with a recognition of a possible week's delay due to weather. This command foresees other situations that would induce a transport problem and reduce the Texas Tower operational capability unless back-up surface transportation is immediately available. For example:

a. Helicopter goes "out of commission" after landing on the Tower. Sufficient space would not be available to land a second helicopter, thus the landing area would be closed with a resultant lack of support until the helicopter was returned to service and the landing area cleared.

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Ltr to USAF, Subj: Logistic Support for Texas Towers (cont)

b. Curtailment of flight schedule due to TOC and other "out of commission" factors would result in inadequate resupply of replacement spare parts, rations and supplies. Shortages in these areas of supply, and personnel fatigue generated by extended periods of duty would seriously impair the operational capacity of the tower.

5. Considering these factors, this command considers it mandatory that a procedure be in being for back-up surface transport at all times. All interested agencies must be informed of the procedure and that the commander, 762nd ACGW Sq, North Truro, is authorized to implement this plan as required. It is recommended that a cross-servicing agreement between the USAF and the U.S. Navy, MSTC, or the U.S. Coast Guard be accomplished to provide such back-up surface transportation. Request advisement on this point.

6. A revised logistics annex to the Texas towers operational plan is being prepared and will be published o/a 1 May 55, copies of which will be forwarded your headquarters.

FOR THE COMMANDER:

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n/c

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No  
Maj H. W. De'old/Capt D. W. Hodges/pbc/AD4-L-3  
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22 Apr 55  
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M/L to ADC, Subj: (U) Logistic Support for Texas Towers, dtd  
25 May 1955

AFMLP

2nd Ind

May 19, 1955

Dept of the Air Force, Hq USAF, Washington 25, D.C.

TO: Commander, Air Defense Command, Ent AFB, Colorado Springs, Colorado

1. Reference is made to preceding 1st Ind:

a. Par 2b: The augmentation for Texas Towers will be discussed in our comments to "COMAD Operational Plan for Texas Towers 15 April 1955", which will be forwarded soon.

b. Par 3a: Our message AFDP-DC-S 46504, 28 April 55, citing Project ADC-54-649 covers assignment of the H21B's.

c. Par 3b: Our message AFDP-DC-S 30058, 10 May 55, advised that authorization for the helicopter personnel would be included in NAV Hq. 55-12, June 1955, and gave instructions for their training.

d. Par 3c: Under existing policy, the H21B's will initially have the same precedence (XI) as the support organization to which assigned, the 56th Air Defense Group. This precedence is the appropriate one, and it is considered adequate to support and anticipated flying hours. It is noted that most other units programmed for these aircraft will have a lower precedence. Request you advise this headquarters of and unacceptable in-commission rates experienced with these air craft which require corrective action by this headquarters.

e. Par 4 & 5: A conference to discuss emergency surface resupply of the Texas Towers was held with HSTC on 16 May 55. You will be advised as soon as arrangements have been completed.

BY ORDER OF THE CHIEF OF STAFF:

1 Incl  
N/c

EDWARD W. MOORE  
Colonel, USAF  
Deputy Ass't for Log. Plans  
Office, DCS/Materiel

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Logistical Support Plan for Texas Tower #2

PURPOSE:

The purpose of this plan is to provide logistical support for Texas Tower #2, Georges Shoal.

SCOPE:

Items included are: supply, maintenance, transportation, evacuation, medical, and personnel services.

GENERAL:

The requirement for this plan is generated by the establishment of an Air Defense radar station on a modified, off shore, marine drilling platform on Georges Shoal. Texas Tower #2 will support radar, communications equipment, living quarters and storage space as required. The station will be manned and operated 24 hours per day.

1. Texas Tower #2 will be operated as a detachment of the 762d ACWRON, North Truro, Mass.

2. Hq EADF will provide a team to observe the operation of this plan for a period of 90 days. At the end of this period all logistical matters will be evaluated and the plan changed as required.

A. SUPPLY.

1. a. Rations will be requisitioned by the Commander, 762d ACWRON from Otis AFB. Based on average strength, normal levels will be as follows:

- (1) Perishables -- 15 days
- (2) Dry -- 30 days
- (3) Emergency -- 45 days.

b. Rations will be assembled and delivered to a place mutually agreed upon by the 762d ACWRON, Otis AFB, and the agency delivering them to the tower.

2. P.O.L.

a. Requirements

- (1) Fuel, oil, diesel MIL-F-16884B (Ships)

Initial supply 152,000 gallons

30 day estimated consumption - 37,300 gallons

- (2) Av gas

Initial Supply 3000 gallons

30 day estimated consumption - 600 gallons

- (3) SAE #20 high detergent lube oil MIL-L-9000 A

Type navy 9170

Initial supply - 1650 gallons

30 day estimated consumption - 660 gallons

b. Method of supply

POL products will be delivered by commercial tanker as required.

The commercial contract will be the responsibility of the Area Petroleum Office, Olmsted AFB, Middletown, Pa. To protect the U.S. Government and the vendor, the contract should include the services of a harbor pilot for docking operations at the tower. Fuel, oil, diesel will be delivered in bulk. Av gas and high detergent lube oil SAE #20 will be delivered in 55 gallon drums.

c. Procedures

Not less than 30 days fuel, based on consumption, will be maintained on the tower. The Commander, Otis AFB, will be responsible



for effecting delivery of POL products in sufficient amounts to fill the tower bunkers. The vendor will deliver as soon after receipt of request as is practical considering the weather and sea conditions. Due to the many variable factors a definite delivery schedule cannot be maintained. It will be the responsibility of the Commander, Otis AFB, to maintain sufficient fuel to prevent POL shortages.

3. Fresh Water.

a. Initial supply - sufficient for 45 days.

b. Resupply

(1) Ionic demineralization equipment will be used for fresh water make-up.

(2) The commercial contract for delivery of POL products to the tower will include a clause requiring delivery of fresh water aboard the tower during refueling operations commensurate with the tankers capability and the capacity of fresh water bunkers aboard the tower.

4. Other.

a. Office and housekeeping supplies, UAL equipment, electronic supply thru the designated electronic support base, and R & O supplies will be the responsibility of Otis.

b. All supplies will be obtained thru normal supply channels and will be consolidated as a single function. Minimum stock levels will be maintained as follows:

- (1) Office and housekeeping supplies - 45 days
- (2) Unit - As required by U I.
- (3) Electronic - 45 days level of spare parts augmented by an appropriate level of replaceable assemblies and sub-assemblies of electronic components.
- (4) R & O - 45 days level to include power generating equipment spares.

c. The Otis UAL will be augmented to include such equipment authorized and required for Texas Tower #2.

d. Exchange support will be the responsibility of Otis AFB.

B. MAINTENANCE

1. Electronic - to be performed by the Texas Tower detachment, the 762d ACWRON, contractor support, and AMC, in accordance with current directives.
2. Installations - preventative maintenance and minor repairs by the Texas Tower detachment. Major repair will be the responsibility of Otis AFB.
3. Life boats - organizational maintenance and minor repair by the Texas Tower detachment. Major repair and overhaul will be the responsibility of Otis AFB.
4. Exterior painting of all portions of the tower below the main deck including the caissons will be thru a commercial contract negotiated by Otis AFB.

C. TRANSPORTATION

1. a. POL products and fresh water will be delivered by standard commercial tanker under contract (para A2b and A3b(2)).

b. A cross service agreement will be negotiated with the Coast Guard for such emergency service as is required to or from the tower.

2. a. Air transportation will be by helicopter based and maintained at Otis AFB. Operational control will be under the jurisdiction of Otis AFB. All agencies will coordinate their requests for air transportation to Texas Tower #2 thru the Operations Section, Otis AFB.

b. Air transportation will augment surface transportation and will be utilized primarily for transportation of mail, perishables, high priority supplies and personnel, and emergency service as required.

3. Vehicles. The vehicles assigned to the 762d ACWRON will be augmented as required from the resources under Hq EADF control.

D. EVACUATION

1. Appropriate life boats as recommended in Feasibility Report on Texas Tower #2 and in sufficient quantities consistent with personnel assigned will be provided for emergency evacuation. They will be equipped with Mae West life preservers and other seagoing survival gear as required.

2. Additional life preservers and life rafts to be provided on the tower proper as required.

3. Emergency medical evacuation will be performed by the assigned helicopter and augmented by appropriate agencies trained and equipped for such missions. Negotiations with such agencies for the performance of this service will be conducted by \_\_\_\_\_.

4. Mortuary assistance will be the responsibility of Otis AFB.

E. MEDICAL

1. The 762d ACWRON will be responsible for appropriate medical supplies and equipment.

2. The assigned Medical Service Supervisor will operate the medical facility aboard the Texas Tower.

F. PERSONNEL SERVICES

1. Recreational equipment and facilities will be the responsibility of Otis AFB. The Commander, Otis AFB, will submit a request thru channels for an ADC Welfare grant for such equipment as is deemed necessary.

2. The library will be the responsibility of Otis AFB.

HEADQUARTERS, EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, New York

LOGISTICS PLAN  
TEXAS TOWER #2

22 July 1955

TASK ORGANIZATION

Headquarters Eastern Air Defense Force  
32d Air Division (Defense)  
4707th Air Defense Wing  
564th Air Defense Group  
762 ACW Squadron  
TEXAS TOWER #2 Detachment of 762 ACW Squadron

1. MISSION.

To provide complete logistics support for Texas Tower #2, located on George's Shoal. This plan outlines logistic policies for the guidance of affected units.

2. GENERAL SITUATION.

The establishment of an air defense radar station on a modified marine drilling platform located on George's Shoal has generated the requirement for the development of logistic arrangements for the support thereof. Due to the remote location of this station, normal support arrangements necessarily require modification. Texas Tower #2 will operate 24 hours per day and will support radar, communications equipment, living quarters and storage space as required.

3. LOGISTICS ORGANIZATION.

Texas Tower #2 will be operated as a detachment of the 762 ACWRON, North Truro, Massachusetts. Command jurisdiction for logistics support is assigned to Headquarters 4707th Air Defense Wing, Otis Air Force Base, in accordance

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All AF Forms 1120, Unit Property Record, and allied documents will be maintained at the parent unit.

- (b) General Supplies and Equipment. Required office, housekeeping supplies and UAL equipment will be provided by the parent unit. The parent unit will obtain tower detachment requirements by normal requisition actions to the support base.
- (c) Communications and Electronics. The communication and electronics support base designated to support the 762d ACWRON will provide C&E support for the Texas Tower detachment. The General Electric Company and the Bendix Radio Corporation will provide contractor support in accordance with TO 31P-1-19 and TO 31P-1-20 respectively.
- (d) Aircraft supply support of the Texas Tower mission support aircraft (Helicopters) will be provided by the support base. Supplies and equipment required will be obtained by the base through normal supply channels in accordance with current directives. The supply precedence of the support base (XI) will apply.
- (e) Installations Supply. Supply support for installations requirements will be provided by the support base upon request of the parent unit. Maintenance of authorized levels will be the responsibility of the parent unit.
- (f) Medical. Medical supplies and equipment will be provided by the parent unit. Required items will be obtained from the support base hospital in accordance with current directives.



with EADFM 23-1. The support base for the 762d ACWRON, the 564th ADG, Otis Air Force Base is designated the support base of all supplies, equipment and services, except communications and electronics. In accordance with the provisions of ADCR 67-13, the 4700th Air Defense Group, Stewart Air Force Base, is designated the electronic support base for Texas Tower #2. The depot support system, as presently constituted will be utilized in accordance with current directives.

4. LOGISTIC POLICIES.

Logistic support requirements for Texas Tower #2 will normally be submitted by the 762d ACWRON to the support base or in the case of electronics items, to the 4700th Air Defense Group, Stewart Air Force Base. The support base will obtain required support items or services through normal channels in accordance with current directives. Headquarters, 4707th Air Defense Wing will maintain such surveillance and control as will insure complete and adequate logistic support for the tower operation. Continuing evaluation of logistic requirements, support system and operational procedures will be accomplished by the 4707th ADW. At the request of this headquarters, the wing will be prepared to submit comprehensive evaluation of support operation and make recommendations applicable to the support of additional Texas Tower as presently contemplated.

5. MATERIEL ACTIVITIES.

a. Supply.

(1) Policies.

- (a) Unit Supply Records. All unit supply records will be maintained in accordance with provisions of Volume 4, AFM 67-1.

All AF Forms 1120, Unit Property Record, and allied documents will be maintained at the parent unit.

- (b) General Supplies and Equipment. Required office, housekeeping supplies and UAL equipment will be provided by the parent unit. The parent unit will obtain tower detachment requirements by normal requisition actions to the support base.
- (c) Communications and Electronics. The communication and electronics support base designated to support the 762d ACWRON will provide C&E support for the Texas Tower detachment. The General Electric Company and the Bendix Radio Corporation will provide contractor support in accordance with TO 31P-1-19 and TO 31P-1-20 respectively.
- (d) Aircraft supply support of the Texas Tower mission support aircraft (Helicopters) will be provided by the support base. Supplies and equipment required will be obtained by the base through normal supply channels in accordance with current directives. The supply precedence of the support base (XI) will apply.
- (e) Installations Supply. Supply support for installations requirements will be provided by the support base upon request of the parent unit. Maintenance of authorized levels will be the responsibility of the parent unit.
- (f) Medical. Medical supplies and equipment will be provided by the parent unit. Required items will be obtained from the support base hospital in accordance with current directives.

- (g) Rations. Rations required to support the food service function will be provided by the parent unit. Rations will be obtained from the support base in accordance with current directives.
- (h) Fuels, Lubricants, and Water. Procurement of diesel fuel will be by "open end" contract, and will be the responsibility of AMC Field Petroleum Supply Officer at Middletown AMA. Procurement of 100/130 avgas will be in accordance with AFM 67-4 from the aviation stock fund by Middletown AMA. Procurement of SAE #20 lub oil will be by normal requisitioning action. Initial requirement of 166,000 gallons of fresh water will be supplied by construction contractor, replenishment as required will be provided for in the Middletown AMA's fuels contract.

(2) Requirements.

- (a) General Supplies and Equipment. 45-day level of office and housekeeping supplies will be maintained. 15-day resupply cycle is applicable. Unit equipment levels as required by UAL.
- (b) Communications and Electronics. 45-day level of C&E spares and supplies augmented by authorized assemblies and sub-assemblies of electronic components will be maintained.
- (c) Aircraft. Aircraft support levels at the support base will be established in accordance with AFM 67-1 and other directives applicable to the mission support aircraft. No levels of aircraft support items will be maintained at the Tower location.
- (d) R&U Supplies. 45-day level of R&U supplies to include spares for installed equipment will be maintained.

- (e) Medical. 120-day level of medical supplies will be maintained. Resupply will be as required.
- (f) Rations. 30-day level of operational "B" type rations and a 15 day level of field rations will be maintained. Resupply of field rations will be made every 15-days. Rotation of operational rations will be accomplished in accordance with current directives.
- (g) Fuels, Lubricants, and Water. Not less than 30-day level of fuels, lubricants, and water, based on consumption experience will be maintained. Resupply will be accomplished as required.

Initial Requirements:

Fuel Oil, Diesel. MIL-F-16888B-180,000 gallons.

Grade 100/130 Avgas - 3000 gallons.

SAE #2, high detergent lube oil, MIL-L-9000A, Type Navy, 9170 - 1650 gallons.

Fresh Water - 166,000 gallons.

Estimated Month. Requirements:

Fuel Oil, Diesel - 37,300 gallons.

Lube Oil - 660 gallons.

Avgas - 600 gallons.

Water - See para 5a(3) (g) below.

(3) Operations.

- (a) General Supplies and Equipment. All requirements for office and housekeeping supplies will be submitted by the detachment to the parent unit in accordance with current directives.

- (b) Communications and Electronics. All requirements for C&E supplies will be submitted by the detachment to the parent unit who, in turn, will submit routine requests to the designated electronics support base. Emergency requests will normally be processed through channels outlined above; however, when item is not available at the C&E support base, the parent unit will submit requests direct to appropriate contractor. The parent unit will be responsible for arranging airlift of priority items direct to the Texas Tower detachment. The parent unit will provide electronic support base with requirements information in sufficient detail to permit adjustment of levels.
- (c) Aircraft. The support base will adjust levels of peculiar and common spare parts and supplies in accordance with the provisions of AFM 67-1. By requisitioning action, establish and maintain authorized levels required for support of mission support aircraft (helicopters). Procure and maintain the special equipment and tools required and authorized. Initiate action in accordance with AFR 67-83, as appropriate.
- (d) Installations Supply. The support base will, in accordance with the provisions of letter, Headquarters United States Air Force, AFCIE-CO, 9 Nov 54, subj: Spare parts for Installed Equipment at Remote ZI and Overseas Installations, initiate procurement action which will assure the establishment and maintenance of a 45-day level of spare parts at the tower

location. Spare parts lists may be obtained from USAFIR, New England Region. Recurring supply requirements necessary to maintain levels will be submitted by the tower detachment to the parent unit for further submission to the support base.

- (e) Medical. The assigned medical service supervisor will determine, periodically, those supplies and equipment required to maintain authorized levels. Requirements will be submitted to the parent unit, who, in turn, will submit consolidated unit requirements in accordance with current directives.
- (f) Rations. The parent unit is responsible for requesting authority to stock operational rations in accordance with the provisions of AFR 145-26. Subsistent requirements for the detachment will be submitted to the support base by the parent unit.
- (g) Fuels, Lubricants, and Water. Fiscal year requirements and requests for allocation of funds for diesel fuel will be the responsibility of the parent unit, through the support base. Submission of monthly requirements for 100/130 avgas will be the responsibility of the support base in accordance with Chapter 8, AFM 67-4. Submission of requirements for SAE #20 lube oil will be the responsibility of the support base through normal supply channels. It is estimated that installed equipment available at the tower



location is capable of preparing sufficient quantities of fresh water to provide necessary replenishment requirements.

b. Maintenance.

(1) Policies.

- (a) Unit Equipment. Organizational maintenance of UAL equipment will be provided by detachment personnel to the extent of capabilities; detachment capabilities will be augmented by the parent unit when required. Field maintenance will be provided in accordance with current directives.
- (b) Communications and Electronics. Maintenance of communications and electronics equipment by detachment personnel will normally be limited to organizational and field maintenance, consistent with the nature of the repair; availability of spare parts, tools, and test equipment; and the capabilities of personnel. Performance of depot level maintenance is authorized as required by operational necessity.
- (c) Aircraft. No aircraft maintenance will be performed by detachment personnel. When aircraft maintenance is required at the tower location, the support base will be notified.
- (d) Installations. Preventive maintenance and minor repairs will be accomplished by the detachment within its capabilities. Detachment capabilities will be augmented by the parent unit and the support base, as required. Requirements for major repairs will be made known to the support base through the parent unit. The parent unit will arrange for airlift of the required spare parts, supplies, and personnel.

c. Transportation.

(1) Policies. The prime mode of transportation for personnel and dry cargo will be by mission support aircraft (Helicopters) based, operated, and maintained by the support base. The Commander, 762d ACWRON, will be responsible for establishing priorities and requirements for the utilization of these aircraft. Liquid cargo will be transported by surface vessel, military, or commercial, as determined by ASPPA, Fuels Transportation Division, Washington, D.C. Back-up surface transportation arrangements, as determined by joint ADC-USAF-Navy agreement, will be established to satisfy emergency requirements.

(2) Requirements. (Estimated)(a) Air.

Initial 30 days supply of operational rations	13,680 lbs
Subsistence each 15 days	9,120
PX Supplies each 15 days	8,000
Electronics supplies each 30 days	800
Housekeeping supplies each 15 days	1,000
R&U supplies each 30 days	1,000
Rotation of personnel each 30 days	19,000

(b) Surface.

Initial supply of diesel fuel	180,000 gal
Initial supply of avgas	3,000
Initial supply of lube oil	1,650
Resupply of diesel fuel each 90 days	111,900
Resupply of avgas each 90 days	18,000
Resupply of lube oil each 90 days	1,980

(c) Emergency. Upon determination by joint action of ADC-USAF-Navy as to the source and mode of emergency back-up surface transportation, the development of a standard operating procedure will be required.

(3) Operations. Transportation of diesel fuel by surface vessel,

civilian or military will be the responsibility of ASPPA Fuels Transportation Division, Washington, D.C. Transportation of 100/130 avgas, in drum lots, by surface transportation, will be the responsibility of ASPPA, Fuels Transportation Division, Washington, D.C. Transportation of SAE #20 lube oil, in drum lots, by surface vessel will be the responsibility of ASPPA, Fuels Transportation Division, Washington, D.C. Additional vehicle transportation required will be provided the parent unit by the support base. Additional vehicles required will be obtained by the support base initiating appropriate action in accordance with the provisions of AFE 67-83. Upon notification of source and mode of emergency back-up surface transportation, standard operating procedures will be developed and disseminated by the parent unit to all interested agencies.

d. Installations Engineering.

- (1) Policies. Texas Tower #2 will be considered an auxiliary station at North Truro Air Force Station, and the Commander, 762d ACWRON (parent unit) considered the Commander of the tower. Custody of the tower will be assigned to the commander of the parent unit. The accountability will be assigned to the support base, i.e., as if the tower were another building at North Truro Air Force Station. Installation support will be the responsibility of the support base.
- (2) Requirements. The maintenance of installations functions, such as water preparation, electricity, heating, refrigeration, real property, etc.

(3) Operations. Installations functions will be performed in accordance with the provisions of paragraph 4, AFR 85-5 and pertinent regulations specified therein. Real property maintenance of installations projects will be prepared classified and processed for approval by the support base in accordance with AFR 93-3.

e. Evacuation and Hospitalization.

(1) Policies. The assigned medical service supervisor will provide medical treatment, sanitary inspections, supervision of medical evacuation, and medical administration at the tower location.

(2) Requirements. Medical treatment of assigned personnel, sanitary inspections, and medical administration, as required. Maintenance of authorized levels of medical supplies and equipment.

(3) Operations. The medical service supervisor will administer medical treatment to the extent of his capabilities; conduct inspections as required by AFR 91-10, 160-91, and AFM 160-4; provide information for medical reporting as required by AFR 160-78, 160-80, 160-106, and AFM 160-20; maintain authorized supply levels obtaining requirements through the parent unit; determine advisability of patient evacuation and supervise such evacuation to the support base hospital by the most expeditious transportation facility available.

f. Miscellaneous Services.

(1) Food Services. Field ration type subsistence including bread and pastries will be provided for the detachment by assigned food service personnel under the supervision of the commander

of the parent unit or his designated representative, in accordance with applicable directives governing field ration dining hall operations.

- (2) Laundry. Laundry services will be provided by the individual utilizing equipment located at the tower for that purpose.
- (3) Mortuary. Mortuary services will be provided by the support base upon request of the parent unit.
- (4) Exchange. Exchange services will be provided by A & AFES through the support base in accordance with current directives.

6. PERSONNEL ACTIVITIES. (See Appendix 1 - to be furnished later).

7. MISCELLANEOUS.

a. Comptroller. Personnel will be paid on the regular payroll of the parent unit. Reports of survey will be prepared and processed by the parent unit. The support base will be responsible for the application of budget and accounting policies in accordance with current directives. Funding requirements will be included in the appropriation request of the support base. All required RCS reports will be prepared and controlled by the parent unit in accordance with current directives.

b. Information Services. All matters pertaining to OIS will be controlled by the support base in accordance with current directives. All legal queries (public information) will be processed through normal PI channels for final action by OSAF/OIS. There will be a requirement for a detachment newspaper, commander's call, and related internal information of activities, in addition to public information activities. In accordance with the policies and procedures established by the OIS at the support base, detachment commander will submit requirements and activities through the parent unit to the support

base, utilizing voice communications where PI is involved.

c. Security. Matters pertaining to Provost Marshal activities will be controlled by commander of the parent unit in accordance with existing directives. There will be a requirement for visitor control and internal security. Visitor control, internal security, and other Provost Marshal activities will be carried out in accordance with specific instructions contained in directives of the 125 and 205 series.

d. Legal Services. Legal support in the fields of military justice, civil law and legal assistance will be provided by the Commander, 4707th ADW. Jurisdiction under the Uniform Code of Military Justice over personnel of the detachment will be exercised by the Commander, 4707th ADW in accordance with Attachment No. 1, EADFR 111-3. Administration of civil law for detachment personnel will be provided by the Commander, 4707th ADW. Administration of legal assistance will be provided by the Commander, 4707th ADW. Administration of claims under the 112 series of Air Force Regulations will be provided by the commander of the support base.

DONALD B. SMITH  
Brigadier General, USAF  
Commander

OFFICIAL:

*Glenn C. Thompson*  
GLENN C. THOMPSON  
Colonel, USAF  
Deputy for Materiel

Appendixes: Personnel Activities (To be furnished later)  
Distribution: See Distribution List



DISTRIBUTION LIST

TO: Commander	
Continental Air Defense Command - 20	EAMAC -- 3
Ent Air Force Base	EAMLP -- 1
Colorado Springs, Colorado	EAPPL -- 1
	EACBA -- 1
Air Force Installation Representative - 2	EAOMO -- 1
New England Region	EAOCCE -- 1
857 Commonwealth Ave.	EAOPR -- 1
Boston 15, Mass.	EATIG -- 1
	EADVC -- 1
	EAODO -- 1
Officer In Charge, Construction - 2	Stewart Air Force Base
Texas Tower	Newburgh, N.Y.
NOy Contracts	
Navy Bldg.	Commander
495 Summer St.	Rome Air Force Depot - 10
Boston 10, Mass	Griffiss Air Force Base
	Rome, N.Y.
Area Petroleum Office - 2	Commander
Olmstead Air Force Base	Middletown Air Materiel Area - 10
Middletown, Pa.	Olmstead Air Force Base
	Middletown, Pa.
Commander	Commander
4707th Air Defense Wing - 5	Air Materiel Command
Otis Air Force Base	Attn: Dir, Special Projects - 5
Massachusetts	Col. F. Shannon
	Wright Patterson Air Force Base
Commander	Dayton, Ohio
56th Air Defense Group - 5	
Otis Air Force Base	
Massachusetts	
Commander	
762d AC&W Squadron - 5	
North Truro, Mass.	
Commander	
32d Air Division - 5	
Syracuse Air Force Station	
Syracuse, New York	
Commander	
Eastern Air Defense Force - 20	
Attn: EAMDM -- 1	
EA'EI -- 3	
EAMSS -- 3	
EA'IS -- 1	

C O P Y

HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EAODO

7 Feb 1955

SUBJECT: (Unclassified) Texas Tower Program

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

1. References:

- a. ADC Operational Plan for Texas Towers, dated 20 July 1954.
- b. Draft of ADC Operational Plan for Texas Towers, dated 5 November 1954.
- c. Headquarters ADC letter, ADOCE-A, Subject: Texas Tower Program, dated 15 November 1954.
- d. Headquarters ADC message ADOPR 3028, dated 8 December 1954.
- e. Headquarters ADC message ADOCE-AL 3167, dated 27 December 1954.

2. Information available to me indicates that my command will have beneficial occupancy of one Texas Tower in September of this year and four towers in September 1956 (reference 1e above). Your letter (reference 1c above) delineates my responsibilities which I have attempted to fulfill. A brief summary of the actions taken to date is as follows:

- a. My Installations people have maintained close liaison with the AFIR, New England Region and other appropriate agencies and are current on the construction phasing.
- b. My Communications people recently attended a conference held at USAF and have kept me advised of the communications and electronics problems involved and the progress being made to overcome these problems.
- c. I have scheduled a conference on 10-11 February and invited appropriate agencies to send representation to discuss phasing of construction of the Texas Towers and installation of equipment thereon.

55-1797

30/1

C O P Y

EAODO Subject: (Unclassified) Texas Tower Program (Cont'd)

d. My Plans people have prepared the attached draft plan to indicate my over-all concept of operation to include a recommendation on the type of organization that I think is required to operate the equipments on the towers and effectively integrate their capabilities into the AC&W system of this region. Considerations which I feel justify my recommendation for activation of a group and two squadrons to operate the tower equipments are included in the Preface to the attached draft plan.

3. Obviously, there are a number of questions concerning the detailed operations which to date cannot be answered. As stated in your message (reference 1d), it is essential that I be provided with an ADC operations plan and a cross servicing agreement as a basis for actions necessary to fulfill my responsibilities as set forth in your letter (reference 1c). However, in order that I be able to fulfill my over-all obligations, there are certain basic actions which must be taken immediately, particularly in regard to space allocations, personnel procurement and training, onshore facilities, and procurement of unit equipments. Therefore, I request approval in principle of the type of organization recommended in the attached draft plan and information as to the status of the ADC operational plan and the cross servicing agreement.

4. This letter is classified Secret in accordance with paragraph 23b, AFR 205-1.

1 Encl  
Draft Plan, Ext to  
 seaward of Contiguous  
 Radar Coverage and Control

s/ M. R. Nelson.  
t/ M. R. NELSON  
Major General, USAF  
Commander

C O P Y

EADF Operations Plan 7-55, "Extension to Seaward of Contiguous Radar Coverage and Control (Texas Towers)"

Specific comments and recommendations regarding subject plan are as follows:

1. Reference Basic Plan, paragraph 3x(2). To increase the operational effectiveness of the Texas Towers and provide for compatibility with the SAGE System, the general locations of the five (5) towers and the associated shore direction center will be as follows:

Tower No. and Name	Location	Shore Direction Center
TT-1 Cashes Ledge	42° 54'N 68° 57'W	P-10 North Truro, Mass.
TT-2 Georges Shoal	41° 44'N 67° 45'W	P-10 North Truro, Mass.
TT-3 Nantucket Shoal	40° 45'N 69° 19'W	P-45 Montauk, N.Y.
TT-4 Unnamed Shoal	39° 48'N 72° 40'W	P-9 Highlands, N.J.
TT-5 Brown's Bank	42° 47'N 65° 37'W	P-13 Brunswick NAS, Me.

2. Reference Annex A, app 1. The recommended manning table for one (1) Texas Tower.

AFSC	TITLE	TOTAL	GRADE
1644	Commander	1	Capt
1644	Controller	3	Lt
3044	Ground Electronics Officer	1	Capt
56000	Utilities Superintendent	1	WO
27330	Apprentice AC&W Operator	4	A/2C
27350	AC&W Operator	2	A/1C
27350	AC&W Operator	2	S Sgt
27370	AC&W Supervisor	1	M Sgt
29150	Comm Center Specialist	2	A/1C
29270	Crypto Oper Supervisor	1	T Sgt
30352	AC&W Radar Repairman	3	A/1C
30352	AC&W Radar Repairman	2	S Sgt
30372	AC&W Radar Maint Tech	2	T Sgt
30372	AC&W Radar Maint Tech	1	M Sgt
30450	Ground Radio Repairman	1	S Sgt
30470	Ground Radio Maint Tech	1	M Sgt
36251	Carrier Repeater Mech	1	A/1C
36271	Wire Maint Tech (Inside Plant)	1	T Sgt
55151	Construction Equip Opr	1	S Sgt
56170	Electrical Supervisor	1	T Sgt
56450	Plumber	1	A/1C
56450	Plumber	1	S Sgt
56750	Elect Power Production Operator	1	A/1C

55-1797

COPY

<u>AFSC</u>	<u>TITLE</u>	<u>TOTAL</u>	<u>GRADE</u>
56750	Elect Power Production Operator	1	S Sgt
56770	Elect Power Production Tech	1	T Sgt
56770	Elect Power Production Tech	1	M Sgt
62250	Cook	3	A/IC
62250	Cook	1	S Sgt
64173	Organizational Supply Supv	1	M Sgt
90270	Medical Service Supv	1	M Sgt
59150	Seaman	1	S Sgt
59151	Marine Engineman	1	A/IC
TOTAL		46	6 Officers and 40 Airmen

3. Reference Annex B, app 1, para 12a(5): A 75-line switch board is too large for the limited requirements for telephones on the towers. A requirement for a 40-line unattended board has been included in ADC PC revisions.

4. Reference para 12a(6): A public address system is being installed by the contractor. Its tie-in to the telephone system is unknown.

5. Reference para 12a(8): Operational communications cannot be decided in detail until a firm organization is established to support the towers.

6. Reference para 12b(1)(b): No multi-channel UHF equipment is programmed. ADC has programmed the single channel equipment AN/GRT-3 and AN/GRR-7 for Texas Tower use.

7. Reference para 12b(2)(d): The frequency band to be used and the assignment of frequencies in this band cannot be decided until equipment type is known. It is possible that frequencies in the 900 MC range may be used in addition to those listed in the EADF plan.

8. Reference para 12c(2): The initial installation provides for only two (2) UPA-35's, the balance will be the scopes provided with the prime equipment. All UPA-35 scopes used in the Texas Tower program must come from those now allocated to the ADC.

9. Reference para 12f(2): There is no approved USAF plan for Navy or Coast Guard equipment and personnel for the Texas Towers. Approximately 500 square feet of floor space has been set aside for this purpose if and when the requirement is established.

10. Reference para 9f, page 5: The Texas Towers with their associated parent directions center are outlined in para 1.

COPY

HEADQUARTERS  
EASTERN AIR DEFENSE FORCE  
Stewart Air Force Base, Newburgh, N.Y.

EAOPR

21 Apr 1955

SUBJECT: (Unclassified) Texas Tower Program

TO: Commander  
32d Air Division (Defense)  
Syracuse Air Force Station  
Syracuse 6, New York

1. The attached correspondence pertaining to the Texas Tower Program is forwarded for your information and necessary planning action.
2. The referenced correspondence in the basic letter and the draft plan submitted to Air Defense Command are not reproduced at this time due to the numerous changes encountered.
3. A new complete operational plan will be forwarded as soon as the outstanding problem areas are resolved.
4. Upon removal of enclosure this correspondence will be downgraded to Unclassified in accordance with paragraph 25g, AFR 205-1.

BY ORDER OF THE COMMANDER:

1 Encl  
1st Ind, ADC, 7 Mar 55  
on B/L EADF, subj as above,  
7 Feb 55/w/1 Encl

s/ James R. Worline  
t/ JAMES R. WORLINE  
Captain, USAF  
Assg Adjutant

Info Copies to:  
Comdr, 26th ADiv (Def)  
Comdr, 4707th ADef Wg  
Comdr, 564th ADef Gp  
Comdr, 762d AC&W Sq

55-1797

30/2

0 4 4 5



C O P Y

Hq EADF EAODO Subject: (Unclassified) Texas Tower Program

ADOFR (7 Feb 55)

1st Ind

7 Mar 1955

HQ AIR DEFENSE COMMAND, Ent Air Force Base, Colorado Springs, Colorado

TO: Commander, Eastern Air Defense Force, Stewart Air Force Base,  
Newburgh, New York

1. This headquarters concurs in general with the over-all concept of operation outlined in your plan for Texas Towers. Inclosure No. 1 contains comments regarding specifics of the plan with which this headquarters is not in complete agreement.

2. This headquarters is exerting every effort to expedite a Headquarters USAF decision regarding the logistic support for the Towers. We have suggested three (3) possibilities, i.e., cross-servicing agreements with the Navy or Coast Guard, support to be provided by Military Transport Service, or by contract with commercial concerns. A decision regarding this is expected shortly and you will be advised immediately thereafter.

3. The lack of a decision regarding logistic support for the Towers is one of the major reasons for delaying publication of the revised ADC operational plan. However, in any case it is hoped this plan will be published no later than 15 March to assist you in your responsibilities regarding this unique operation.

4. Your recommendations regarding a Group with two (2) Squadrons to support Texas Tower operation appears to be a sound approach to the problem and may prove to be the most feasible means to accomplish this responsibility. However, in considering this problem certain factors lend support to a more decentralized type of organization. This headquarters feels that fifteen (15) to thirty (30) days is a more reasonable period of time for an individual to spend aboard a tower. This length of time should be used as a planning factor for the initial tower and can be modified after operational experience is gained. It is also felt that personnel returning from a fifteen (15) or thirty (30) day tour on a tower should be retained at a shore installation for at least an equal period of time. Based on these recommendations your proposed manning factor should be increased from 1.6 to 2.0. Further, it will be very difficult to justify to headquarters USAF a complete ACSW installation costing in excess of one million dollars to be used exclusively as a training facility. With the proposed group organization it would also be difficult to properly utilize all on-shore Texas Tower personnel (approximately 250 at all times) at any one facility.

C O P Y

Hq EADF EAODO Subject: (Unclassified) Texas Tower Program

5. In view of the foregoing it is recommended that:
- a. The 762nd Ac&W Squadron at North Truro be augmented to provide the operating personnel for the first tower. Beneficial occupancy for this tower is programmed for September 1955.
  - b. This unit be used as a test case to determine the type of organization most desirable for the remaining towers which are programmed for beneficial occupancy in September 1956. The proposed augmentation for the AC&W squadrons to which the Texas Towers will report during manual operation has been included in the latest ADC program. Requests for PWP funds to support the increased personnel at the parent direction centers have also been included in the ADC program.
  - c. The manning determined by this headquarters be used for the first tower to go into operation (Inclosure No. 1). After observing the tower's operation, appropriate changes in manning will undoubtedly be required.
6. These recommendations will be included in the revised ADC operational plan. This headquarters will continue its efforts to expedite a Headquarters USAF decision regarding support for the towers and you will be advised as soon as possible.

2 Incl  
1. n/c  
Added 1 Incl  
2. Comments re  
Texas Tower Plan  
23 Feb 55 (1 cy)

s/ Frederic H. Smith, Jr.  
t/ FREDERIC H. SMITH, JR.  
Major General, USAF  
Vice Commander

COPY

DISPOSITION FORM

SUBJECT: Texas Tower Program

TO: ODO  
CGG  
O&T  
CGD  
MDM  
PDP  
CIC

FROM: OPR/RANDLL/92 26 Apr 55

1. Inclosed letter with indorsements concerning Texas Towers forwarded for your information and planning purposes.
2. This office is not in possession of the plans mentioned in basic; however you will be notified upon receipt of any additional information concerning this matter.
3. Upon removal of inclosure this disposition form will be downgraded to Unclassified in accordance with par #25g, AFR 205-1.

1 Incl  
B/L EAOPR dtd 23 Apr 55, Subj:  
Texas Tower Prog w/Incls

s/ W.W.B.  
INGENHUTT/142

30/3

C O P Y

HEADQUARTERS  
4707TH AIR DEFENSE WING  
Otis Air Force Base, Massachusetts

DWPKP

SUBJECT: Project Texas Tower

25 MAY 1955

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
ATTN: Deputy for Personnel  
Newburgh, New York

1. There are a number of items in connection with Project Texas Tower on which we will need additional information or clarification.

2. a. According to latest manning information, the authorization at the present time indicates 6 officers and 40 airmen, and since this represents only one of the two crews necessary for the operation, we are interested to know when the additional authorization for 6 officers and 40 airmen can be expected.

b. Information is requested as to manning responsibility. At the present time this headquarters has assigned one Captain, one Warrant Officer and four airmen as an initial cadre for this project. Additional manning, based on available dates, will have to begin on or about July 1955.

c. No definite information has been received by this headquarters as to work periods to be authorized for Texas Tower personnel other than a possible 30 days offshore and 30 days onshore policy. It is recommended that a period of 45 days on and 15 days off be considered. It is anticipated that such a 15 day onshore period would be utilized by occupying personnel in site activities with perhaps a more liberal three day pass than would normally be used.

d. No information has been received on allowing such personnel overseas credits on the time spent on offshore duty.

e. Information is requested as to the advisability of survival training for all personnel and if plans have been made for such training.

f. It is requested that information regarding grants and other details for recreational activities be forwarded to this headquarters.

31/1

C O P Y

Hq 4707th Air Def Wg, DWMP, Subject: Project Texas Tower

g. In view of the fact that an effective training program would be very valuable to a group of personnel engaged in offshore activities, it is requested the 762d AC&W Squadron be authorized one additional officer, AFSC 7524, in the grade of Lieutenant, plus one education specialist, AFSC 75270, grade of Technical Sergeant in order to handle the additional workload which will be imposed by the 92 additional personnel.

h. 762d AC&W Squadron has advised us that barracks and BOQ space will be available for all personnel for this project, but that off base family housing probably will be somewhat inadequate. A survey will be made in order to determine availability. Recent information from your headquarters indicates that 9 family housing units have been authorized for construction during this year.

FOR THE COMMANDER:

Info cy to:  
Comdr, 762d AC&W Sq

s/ George N. Leitner  
t/ GEORGE N. LEITNER  
Capt USAF  
Adjutant

C O P Y

Hq 4707th Air Def Wg, DWPMP, Subject: Project Texas Tower

EAOPR (25 May 1955)

1st Ind

9 Jun 55

HQ EASTERN AIR DEFENSE FORCE, Stewart Air Force Base, Newburgh, New York  
TO: Commander, 4707th Air Defense Wing, Otis Air Force Base, Massachusetts

1. Reference paragraph 1a, the ADC approved manning requirements for one detachment are five (5) officers, one (1) warrant officer, and forty (40) airmen. A ratio of 2:1 will be applied to these requirements to allow crew rotation. These requirements are shown in the 25 March 1955 ADC Program book in the Manpower and Base Utilization section on page 49 under Georges Shoal for the ontower personnel and on page 112 under 762d AC&W Squadron at North Truro, Massachusetts for the onshore personnel. The UMD for the 762d AC&W Squadron will be amended to include these authorizations in the near future.
2. Reference paragraph 1b, personnel will be assigned to your wing, specifically designated for Texas Tower duty. The scheduled manning by months is attached.
3. Reference paragraph 1c, your suggested 45-day ontower duty, 15-day oftower duty conforms to this headquarters concept which was recommended to ADC; however, ADC has stated personnel would be utilized for an equal period ontower and oftower not to exceed 30 days, and further, a definite policy will be established after observing the effects of the first three months Texas Tower operations.
4. Reference paragraph 1d, ADC has requested USAF approval for overseas credits for all personnel serving on towers. The length of tour is to be determined as indicated in paragraph 3 above.
5. Reference paragraph 1e, this headquarters concurs in the need for survival training and will assist the commander in making arrangements for this type training.
6. Reference paragraph 1f, ADC has stated that requests will be submitted through normal requisition channels for recreational equipment. Requests for nonappropriated funds should be submitted through normal channels.
7. Reference paragraph 1g, Headquarters ADC has advised that additional personnel, if any, required at the parent direction center

31/2



C O P Y

Hq 4707th Air Def Wg, DWPMF, Subject: Project Texas Tower

because of the increased workload generated by the tower, will be determined from operational practice. After observing the initial tower operation, appropriate changes in manning will be made.

8. Reference paragraph 1h, the 9 family housing units have been approved and authorized for construction and the actual construction contract will be let this month.

BY ORDER OF THE COMMANDER:

1 Encl  
Schedd Manning List

Info cy to:  
Comdr, 762d AC&W Sq  
Comdr, 32d ADiv (w/cy  
of B/Ltr attached)

s/ John E. Warren  
t/ JOHN L. WARREN  
Colonel, USAF  
Adjutant

COPY

TEXAS TOWER PERSONNEL REQUIREMENT

762ND AC&W SQ, North Truro

	<u>15 Apr</u>	<u>1 Jul</u>	<u>15 Sep</u>	<u>1 Oct</u>	<u>15 Oct</u>	<u>1 Nov</u>	<u>1 Jan</u>	<u>1 Feb</u>	<u>TOTAL</u>
1644							4	4	8
3044				1		1			2
56000	1	1							2
27330							4	4	8
27350							4	4	8
27370							2	1	2
29150				2		2			4
29270				1		1			2
30352				5		5			10
30372				2		3			6
30450				1		1			2
30470				1		1			2
36251				1		1			2
36271				1		1			2
55151			1		1				2
56170	1	1							2
56450			2		2				4
56750			2		2				4
56770			2		2				4
59150			1		1				2
59151			1		1				2
62250			1	3	1	3			8
64173			1		1				2
90270			1		1				2

C O P Y

HEADQUARTERS  
32D AIR DIVISON (DEF)  
Office of Deputy for Operations

MEMO TO: CCG

- 1 - Your info
- 2 - Re the Gulf Oil Towers  
I think 30 days on the Station  
will be a little "rough"
- 3 - Certainly wish we  
were not left out on all  
of this planning! ! !

W.W. I.

Noted: RSI

31/3

0 4 5 4

COPY

SECRET  
HEADQUARTERS  
32D AIR DIVISION (DEFENSE)  
Syracuse Air Force Station  
Syracuse 6, New York

DOWNGRAD

M DM

27 May 1955

SUBJECT: Report of Technical Field Visit on Texas Tower #2

TO: Commander  
4707th Air Defense Wing  
Otis Air Force Base  
Falmouth, Massachusetts

Report of Technical Field Visit, relating to Power Facilities of Texas Tower #2, is inclosed for your information and appropriate action. This visit was conducted by Mr. Gerald C. Early, Diesel Operator Technician, Madigan Corporation, Deputy for Materiel's Office, this headquarters.

BY ORDER OF THE COMMANDER:

1 Incl  
Rept of Tech Fld  
Visit to Texas Tower  
#2 (4 cys)

EVERITT W. HOWE  
Major, USAF  
Adjutant

Info cy to  
Comdr EADF

DOWNGRAD  
31/4

SECRET

COPY

TECHNICAL FIELD VISIT - TEXAS TOWER NUMBER 2

20 May 1955

1. A Technical Field Visit was conducted on 11-13 May 1955 to Texas Tower Number 2 located at the time of the visit, at the Quincy Shipyard of the Bethlehem Steel Company, Quincy, Massachusetts. The visit was made by Mr. Gerald C. Early, Diesel Operator Technician, Madigan Corporation, assigned to the Deputy for Materiel's Office, this headquarters.

2. The purpose of this visit was for familiarization with the diesel power plant layout and to provide technical assistance.

3. Problems solved during visit:

a. The Texas Tower is under construction in the Quincy Shipyard of the Bethlehem Steel Company. Operating procedures relating to the steam and diesel power plants were discussed with WOJG Hardy Jr., Utilities Officer; and S/Sgt Torrence, Electric Power Production Supervisor.

b. Electrical power for the tower will be provided by eight (8) 100 KW LGA Cummins Diesel Generators. These engines are equipped with the new Cummins P.T. fuel system and large flywheels. They are arranged in two banks. The engine serial numbers in order of their position is as follows: Port Side: 137806S, 137805S, 137807S, 137803S and Starboard Side: 137802S, 137804S, 137800S, 137799S.

A 40 KW Cummins model HRCIP emergency diesel generator is located on the lower deck at a point furthest removed from the main diesel plant. The serial number of this engine is 13805.

c. The two boilers are 150 HP "F" type fired by diesel oil. Steam will be provided for heat, hot water and evaporator service. Three air compressors discharging into two air receivers will provide engine starting air. Two air compressors supply tower working air for miscellaneous services.

4. Problems requiring further action:

a. The tools and parts provided for the maintenance of the Cummins Generators are inadequate. Tools were provided by Cummins Diesel of New England. The parts included only one spare fuel injector and a few gaskets, four (4) each carbon generator and excitor brushes. The tools provided to maintain the engines are valued at \$27.33. They are useful only in cleaning and adjusting fuel injectors.

b. It is recommended that the generator parts as described in Eastern Air Defense Force letter, EAMIS O-14, Subject: Recommended initial Stocklevel for Maintenance Parts 100 KW Cummins Diesel Generator model LGA 6-1-100, Air Force Stock number 8210-310600, dated 23 March 1955, be ordered with the following exceptions: Injector group, fuel pump group, injector supply and drain tubing group. The items listed above are not suitable for

COPY

SECRET  
TECHNICAL FIELD VISIT-TEXAS TOWER NUMBER 2 (CONT'D)

The P.T. fuel system used with these engines. It is recommended that twelve (12) spare P.T. fuel injectors Cummins part number BM 30664 be acquired for spares. It is recommended that the list of tools authorized in Chapter V, ADCM 66-1 dated November 1954, should be acquired for maintenance of the generators. It is recommended that a torque wrench and adapter be acquired for use in adjusting fuel injectors. The items are as follows: Handle torque, stock number 7000-428400 as listed in EOL 20-47-1 and Adapter socket wrench square drive, stock number 7900-000604.

5. General Remarks:

a. Texas towers are stations which will be isolated for weeks at a time far from any outside support. Sea and weather conditions will control the movement of supplies and personnel between the Tower and its land support base. The operation and existence of this site rests upon a complex mechanical/electrical base. There are in addition to generators and boilers, many pumps, two evaporators and much refrigeration machinery.

b. Preliminary manning requirements indicate that all personnel handling this machinery will be military. It is obvious that an experienced marine engineer should be assigned to this tower. This marine engineers' qualifications should not be less than equal to a Licensed Second Assistant Diesel Engineer and a Licensed Third Assistant Steam Engineer. Past experience in this division with airmen operating diesel and steam plants have not produced the best of results due to a lack of job stability, knowledge and interest on the part of the operators. The performance of airmen plant operators can be improved by closer supervision of highly skilled personnel. This installation is vastly more complex from a power and utilities standpoint than any shore side AC&W site. If this tower is to operate efficiently, the best qualified personnel should be used.

6. Persons contacted: Major R. A. Kallman, Commander, 762nd AC&W Squadron; W6JG C.P. Hardy Jr., Site Utilities Officer; S/Sgt B.G. Torrence, Site Electrical Supervisor; Commander, R.V. Bloomer, USNR; Lt (g) P.R. Brown, USN Bureau of Ships; 1st Naval District Assistant Naval Project; and Ensign C. H. Courtney, USN.

SECRET  
BERNARD C. EARLY  
Diesel Operator Technician  
Madigan Corporation

APPROVED:

CARL E. CHIDO  
Lt. Colonel, USAF  
Deputy for Material



Hq 320 AIR DIV (DEF), RMA, Subj: Rept of Technical Fld Visit on  
Tgas Tower #2

DA (27 May 55)

1st Ind

*7 Jun 55*

HEADQUARTERS, 4707 AIR DEFENSE WING, Otis Air Force Base, Mass

TO Commander, 762d Aircraft Control and Warning Squadron, North Truro,  
Massachusetts

1. Forwarded for necessary action.
2. Reference paragraph 5b, attached inclosure. This headquarters concurs with Mr Early's suggestion and is initiating necessary correspondence requesting the assignment of two (2) each Generator-Distribution equipment Technicians.

BY ORDER OF THE COMMANDER:

1 Incl  
w/d 2 cys

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EASTERN AIR FORCE BASE  
COLORADO SPRINGS, COLORADO

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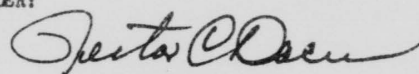
22 APR 1955

SUBJECT: (U) Operational Plan for Texas Towers (DRAFT)

TO: Commander  
Eastern Air Defense Force  
Stewart Air Force Base  
Newburgh, New York

1. The attached plan was forwarded to Headquarters USAF for approval 31 March 1955. It is estimated the USAF comments to this plan will be available to this headquarters by 15 May 1955.
2. This draft plan should be used for interim guidance only until a USAF approved version can be published.

BY ORDER OF THE COMMANDER:



HECTOR C. DAVIS  
Captain, USAF  
Asst Command Adj

1 Incl  
Opnl Plan for  
Tex Towers (2 cys)

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This document contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U. S. C., Sections 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

This document supersedes ADC "Operational Plan for Texas Towers", published in July 1954, which will be destroyed in accordance with paragraph 9c, AFR 205-1, dated 15 Dec 53. Certificate of destruction need not be furnished this headquarters.

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INTRODUCTION

OPERATIONAL PLAN FOR TEXAS TOWERS

Air Force Regulation 5-47, 20 December 1954 establishes the authority for publication of this plan.

Texas Towers are required to extend to seaward the contiguous radar coverage and weapon directing capabilities of the Air Defense Combat Zone. They will operate in conjunction with Picket Vessels, Airborne Early Warning and Control Aircraft and certain on-shore Air Defense Direction Centers.

This plan in no way negates the requirement for airborne early warning aircraft and picket ship barrier extension of the warning line to provide early warning of an air attack.

Data appearing in current USAF Program Documents will supercede conflicting data contained herein.

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TABLE OF CONTENTS

- I. GENERAL
- II. MISSION
- III. EMPLOYMENT
- IV. UNIT ORGANIZATION
- V & VI. TRAINING REQUIREMENTS & TRAINING DATES
- VII. OPERATIONAL READY DATES
- VIII. CHANNELS OF CONTROL
- ANNEX I - COMMUNICATION
- ANNEX II - LOGISTICS

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OPERATIONAL PLAN FOR TEXAS TOWERS

I. GENERAL.

A Texas Tower is a fixed platform constructed in shoal waters to accommodate an air defense radar installation to extend the contiguous radar coverage and weapon directing capability seaward.

A Texas Tower will support radar equipments, communication facilities, living quarters and operating and maintenance personnel.

Five (5) Texas Towers are programmed to be constructed in certain areas off the east coast of the United States. The first of these is scheduled to become operational in 1956, the remainder in 1957.

II. MISSION.

Primary - To extend seaward the contiguous radar coverage and weapon directing capability of the Air Defense Combat Zone.

Secondary - As determined by CNO, U. S. Navy, but not to compromise or delay operations in support of the primary mission.

III. EMPLOYMENT.

A. CONCEPT: Texas Towers will be deployed to extend seaward the contiguous radar coverage and weapon directing capability of the Air Defense Combat Zone. The towers and the equipment aboard will be manned and operated 24 hours a day as an integral part of the Air Defense System. Radar coverage realized by the Texas Towers in conjunction with the coverage provided by the Picket Vessels and AEW&C aircraft will extend the contiguous radar coverage and control capability seaward.

B. METHOD OF OPERATION: Texas Tower operation will be conducted in three phases. These phases of operation denotes transition from manual operation to SAGE operation. The requirement for or duration of Phase I and Phase II operation will be dependent upon the operational

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suitability of equipments proposed for the SAGE System. Phase I will be manual operation as a limited GCI station similar to a shore based radar station performing these functions. Phase II will remote manual operation to the shore-based direction center. Phase III will be operation in conjunction with the SAGE System.

1. During Phase I the towers will operate as limited GCI stations in much the same manner as shore based radar stations performing these functions. During this period of operation, radar surveillance and height data will be forwarded to associated direction centers where identification functions will be performed and tactical action taken as appropriate. Scramble action will be taken by the parent direction center and intercept aircraft directed to Texas Tower areas where control will be passed to the tower director for completion of the intercept.

2. During Phase 2 operation the search radar video and A/G communications will be remoted from the tower to the parent direction center where the data will be displayed, the identification function performed and appropriate tactical action taken. Height data will be obtained manually at the tower and voice told to the parent direction center. Intercept control will be accomplished by the parent direction center by relaying instructions to the intercept aircraft through the remote control of air/ground communications equipment installed on the towers.

3. Ultimately the Texas Towers will be integrated into the SAGE System. Generally speaking, the towers will function in that system in a manner similar to any other radar station. The search

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radar video will be routed directly to the SAGE direction center where it will be acted upon by the AN/FSQ-7 computer. Height information will be forwarded semi-automatically to the SAGE direction center. Instructions for the control of weapons will be generated in the SAGE direction center and remoted to transmitters on the tower. (Further details are contained in the "Operational Plan Semiautomatic Ground Environment System for Air Defense" to be published the latter part of April)

**IV. UNIT ORGANIZATION.****A. Location.**

1. The exact locations for the Texas Towers have not been determined to date. The approximate locations, and the parent shore direction center to which they will report during manual operation are as follows:

Tower No.	Name	Location	Shore Direction Center
TT-1	Cashes Ledge	42°54'N 68°57'W	P-10 North Truro, Mass.
TT-2	Georges Shoal	41°44'N 67°45'W	P-10 North Truro, Mass.
TT-3	Nantucket Shoal	40°45'N 69°19'W	P-45 Montauk, N.Y.
TT-4	Unnamed Shoal	39°48'N 72°40'W	P-9 Highlands, N.J.
TT-5	Brown's Bank	42°47'N 65°37'W	P-13 Brunswick NAS, Me.

**B. Organization.**

1. The first Texas Tower is programmed for Beneficial Occupancy in September 1955. Support for this tower will be provided by the 762nd AC&W Squadron at North Truro AFS, Mass. Initially, the 762nd AC&W Squadron will be augmented with personnel to operate the first Texas Tower at Georges Shoal. This organization will be used as a test unit to determine the type of organization most desirable to operate the Texas Towers. The remaining towers are programmed for beneficial occupancy in September 1956.

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2. Authorization of personnel for augmentation of certain parent AC&W squadrons (listed above as shore direction centers) in order to support the Texas Tower operation are reflected in the 25 March 1955 Air Defense Command troop program as follows:

Tower	Support Base
Cashes Ledge	F-13 Brunswick NAS, Me.
Georges Shoal	F-10 North Truro AFS, Mass.
Nantucket Shoal	F-45 Montauk AFS, N.Y.
Unmanned Shoal	F-9 Highlands AFS, N.J.
Brown's Bank	F-13 Brunswick NAS, Me.

The next edition of the Air Defense Command Program will reflect the augmentation of shore based AC&W squadrons consistent with paragraph IV, A, 1 above.

C. Personnel.

1. Two detachments will be required to man each Texas Tower station. The crew ratio of 2:1 may, in the case of those individuals not common to the parent AC&W squadron, be too low. Observation of the operation of the first tower will permit a revaluation of this crew ratio as regards these personnel. Personnel assigned to Texas Tower duty should be in an overseas status. A recommendation for length of overseas <sup>or K</sup> tower for these people will be made by Air Defense Command after observing the effect of the first three months of Texas Tower duty. The recommended manning for one detachment is as follows:

<u>AFSC</u>	<u>TITLE</u>	<u>TOTAL</u>	<u>GRADE</u>
1644	Commander	1	Capt
1644	Controller	3	Lt
3044	Ground Electronic Officer	1	Capt
56000	Utilities Superintendent	1	WO

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<u>AFSC</u>	<u>TITLE</u>	<u>TOTAL</u>	<u>GRADE</u>
27330	Apprentice AC&W Operator	4	A/2G
27350	AC&W Operator	2	A/1G
27350	AC&W Operatc	2	S Sgt
27370	AC&W Operator	1	M Sgt
29150	Comm Center Specialist	2	A/1G
29250	Crypto Operator	1	S Sgt
30352	AC&W Radar Repairman	3	A/1G
30352	AC&W Radar Repairman	2	S Sgt
30372	AC&W Radar Maint Tech	2	T Sgt
30372	AC&W Radar Maint Tech	1	M Sgt
30450	Ground Radio Repairman	1	S Sgt
30470	Ground Radio Maint Tech	1	M Sgt
36251	Carrier Repeater Mech	1	A/1G
36271	Wire Maint Tech (Inside Plant)	1	T Sgt
55151	Construction Equip Opr	1	S Sgt
56170	Electrical Supervisor	1	T Sgt
56450	Plumber	1	A/1G
56450	Plumber	1	S Sgt
56750	Elect Power Production Operator	1	A/1G
56750	Elect Power Production Operator	1	S Sgt
56770	Elect Power Production Tech	1	T Sgt
56770	Elect Power Production Tech	1	M Sgt
62250	Cook	3	A/1G
62250	Cook	1	S Sgt
64173	Organizational Supply Supv	1	M Sgt
90270	Medical Service Supv	1	M Sgt

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<u>AFSC</u>	<u>TITLE</u>	<u>TOTAL</u>	<u>GRADE</u>
59150	Seaman	1	S Sgt
59151	Marine Engineer	1	A-1C
TOTAL		46	- 6 Officers & 40 airmen

2. Additional personnel, if any, required at the parent direction center because of the increased work load generated by the tower will be determined from operational practice. After observing the initial tower operation, appropriate changes in manning will be made.

**V & VI. TRAINING REQUIREMENTS & TRAINING DATES**

Training standards now in effect for the Air Defense Command personnel will be applicable. No skills will be required that are not already covered by an established USAF AFSC. Headquarters ADC, through coordination with Air Training Command, will take action to provide necessary formal schooling to insure availability of qualified personnel in phase with the operational dates of the Texas Towers.

**VII. OPERATIONAL READY DATES.**

The Texas Towers are programmed to be phased into the Air Defense System as follows:

<u>Tower No. &amp; Name</u>	<u>In Place</u>	<u>B. O. Date</u>	<u>Operational</u>
TT-2 Georges Shoal	Aug 55	Sep 55	Jun 56
TT-1 Cashes Ledge	Aug 56	Sep 56	Jun 57
TT-3 Nantucket Shoal	Aug 56	Sep 56	Jun 57
TT-4 Unnamed Shoal	Aug 56	Sep 56	Jun 57
TT-5 Brown's Bank	Aug 56	Sep 56	Jun 57

The above operational dates indicate the time the towers are expected to be capable of 24 hour per day operation as an integral part of the Air Defense System.

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VIII. CHANNELS OF CONTROL.

A. During manual operation, the operational control of the Texas Towers will be vested in the Commander of the parent direction center to which the tower reports.

B. Upon integration of the SAGE System into the Air Defense Command, the operational control of the Texas Towers will be vested in the commander of the sub-sector to which the tower reports.

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## ANNEX I

COMMUNICATIONS ANNEXI. General

A. This annex includes the communications to support operation of the Texas Towers. For initial operation, communications will be provided to support operation with the controllers on the Tower. There is an urgent requirement for the capability to remote radar data from the towers to the parent direction centers permitting the control function to be accomplished on shore. This method of operation will reduce the number of personnel aboard the tower which is very desirable.

B. The means of communication between the towers and the shore will be provided by submarine cable and tropospheric scatter radio. Initial communications, in phase with the Beneficial Occupancy date for the towers, must be provided by the best means available. It has been recommended to Headquarters USAF that "on the shelf" tropospheric scatter equipment with twenty-four (24) channel capacity be purchased and installed to provide initial communications for the first Texas Tower. When final facilities are installed, suitable equipment must be provided to allow instantaneous switch-over from cable to radio to provide for an emergency capability.

I'. Texas Tower-to-shore Communications

## A. Manual Operation. Controllers on Tower:

<u>Function</u>	<u>Type Circuit</u>	<u>No. of Circuits</u>
Chief Controller	Voice	1
Air Surveillance	Voice	2
Command and Administration	Voice	3
Command and Administration	Teletype	2

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<u>Function</u>	<u>Type Circuit</u>	<u>No. of Circuits</u>
Pay Station (toll station outlet)	Voice	1
A/G AEW&C to shore-auto relay	Voice	2
Spare	Voice	<u>6</u>
15 Voice      2 Teletype	TOTAL	17

## B. Manual Operation - control function performed at Parent

Direction Center.

<u>Function</u>	<u>Type Circuit</u>	<u>No. of Circuits</u>
Command and Administration	Voice	2
Command and Administration	Teletype	1
Pay Station (toll circuit outlet)	Voice	1
A/G AEW&C to shore, automatic UHF relay thru tower	Voice	2
Order Wire	Voice	1
Height Finding Data	Voice	2
G/A radio remote	Voice	6
G/A keying circuits	Keying	6
Remote Video (FGD or equivalent)	Proper Bandwidth	1
Data Link	10 KC Bandwidth	1
Spare	Voice	6
Spare	Teletype	<u>1</u>
20 Voice, 2 Teletype, 6 Keying, 1 Data Link, and 1 Video	TOTAL	30

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**CONFIDENTIAL**C. SAGE Operation

1. The SAGE communication requirement for Texas Towers has been established as sixty (60) voice equivalent channels. These will be utilized as follows

<u>Function</u>	<u>Type Circuit</u>	<u>No. of Channels</u>
Pay Station	Voice	2
Telling	Data	3
Height Servo	Data	1
Teletype Opns	Sx	1
Operations	Voice	1
Toll Term	Voice	1
Telling Liaison	Voice	1
Air Surveillance	Voice	1
G. E. Data Link	Data	2
G. E.	Voice	1
G/A Radio	Voice	22
Control (G/A Radio)	Keying	26
AEW	Data	3
AEW Command Control	Teletype	1
AEW Radio G/A	Voice	4
Navy Circuits		8

2. In summary: 41 voice, 9 Data, 26 Control and 2 Teletype or a total of 78 channels. The above total channels represents 52 voice equivalent channels (assuming 26 control and 2 teletype channels can be derived from 2 voice equivalent channels) leaving 8 voice equivalent channels as spares for future growth.

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III. Radio

A. Equipments for all UHF ground/air channels will be single channel AN/GRT-3 and AN/GRR-7.

B. All radio facilities shall be capable of being operated simultaneously on a non-interference basis.

C. Manual operation.

1. UHF Air/Ground Voice

Tactical Channels . . . . .	4
(To be expanded to 22 for SAGE)	
AICG . . . . .	1
Emergency . . . . .	1
AEW&C to Shore (thru tower). . . . .	2
Spare Equipments . . . . .	<u>2</u>
TOTAL	10

2. Provisions must be made so that each controller will have access to any of the tactical channels.

3. UHF frequency assignments have not been made for the Towers. Line-of-sight coverage through 360° will be required.

D. Emergency HF, Tower-to-Shore.

1. Each Texas Tower will require one H.F. circuit for use to the parent direction center in the event of failure of the primary communications. It is proposed to use one (1) Wilcox 99A transmitter and one (1) SP-600 receiver complete with one (1) operating position. Whip antennas should be used if possible due to space limitations for antennas on the tower.

IV. Administrative Switchboard Requirements

A. Number of lines are approximate. Firm requirements will be determined from operational experience with the first Texas Tower.

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Operators assistance will be provided by the operator at the shore terminal station.

Switchboard - 40 line - Unattended dial . . . . .	1
Number of stations . . . . .	30
Number of trunks (minimum) . . . . .	5
Shore Terminal Switchboard . . . . .	1

V. Public Address System

A public address system will be required to provide alerting facilities and for use while handling helicopters and supply ships. The number of control positions, speakers and the locations to be determined by the engineering agency.

VI. 1 KW Amplifier

A. It is proposed to install 2 each 1 KW amplifier with directional antennas AN-450-GR to provide more reliable communications at extreme ranges and to assist in overcoming the effects of enemy jamming. Antennas and amplifiers must be capable of being switched upon request of the controller to any of the UHF channels (including the data link channel when installed). Instructions for patching will be handled on an "order wire" circuit between the controller and transmitter attendant.

VII. Radar

A. The search radar to be installed aboard the Texas Towers will be the AN/FPS-3. Two AN/FPS-6 height finder radars capable of simultaneous operation will be required to provide 360° coverage.

B. Two (2) HRI and six (6) PPI scopes on each tower will be used during the manual operation period when the control function is performed on the tower. Four (4) of the PPI's will be used for surveillance and/or control or maintenance and two (2) in conjunction with the HRI scopes.

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C. GTA type of equipment will be required for internal communication for the operations room.

D. AN/GPA-16 IFF equipment is required and will be installed with initial installation of the search radar equipment.

VIII. Major components of electronic equipments for initial installation aboard the towers is as follows:

<u>Nomenclature</u>	<u>Purpose</u>	<u>Number</u>
AN/FPS-3	Search Radar	1
AN/FPS-6	Height Radar	2
OA/175	PPI Scopes	4
AN/UPA-35	PPI Scopes	2
OA-270	HRI Scopes	2
Plotting Board	(Vertical) 6x8	1
AN/ORT-3	UHF Transmitter	10
AN/ORR-7	UHF Receiver	10
AN/GTA-6A	Internal comm	1
AN/GPA-16	IFF	1
AN/450-GR	Directional Antennas	2
Wilcox 99A	Transmitter	1
SP-600-JX	Receiver	1
Switchboard	Automatic Dial-Unattended	1
Public Address System		1
AN/FGC-20	Teletype	1
AN/FGC-25	Teletype	1
100 KW Diesel Generators		8

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ANNEX II

*INSTRUCTIONS . READ BETWEEN LINES .*

LOGISTIC SUPPORT PLAN

To Be Provided At A Later Date

ANNEX II

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HEADQUARTERS  
AIR DEFENSE COMMAND  
EAST AIR FORCE BASE  
COLORADO SPRINGS, COLORADO

ADHSL-3

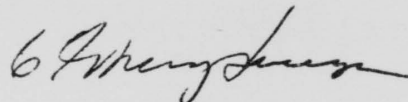
25 MAY 1955

SUBJECT: (Uncl) Logistic Support Plan for Texas Tower #2

TO: See Distribution

1. The attached General Plan for Logistic support of Texas Tower #2 is provided for guidance in the preparation of a detailed support plan by Eastern Air Defense Force.
2. All agencies will coordinate actions deemed necessary with Commander, Eastern Air Defense Force for inclusion in the detailed plan.
3. Upon preparation of a detailed logistic support plan for Texas Tower #2, Eastern Air Defense Force will coordinate subject plan with Headquarters, Air Defense Command, prior to implementation.

BY ORDER OF THE COMMANDER:



C. F. NUMPHEYS  
Major, USAF  
Asst Command Adf

1 Incl  
a/s

See attached  
Distribution Sheet

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 Boston 15, Mass.

Officer In Charge, Construction -- 2  
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Commander -- 5  
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 North Truro, Mass.

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 Eastern Air Defense Force  
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       EAMEL -- 3  
       EAMSV -- 3  
       EAMIS -- 1  
       EAMAC -- 3  
       EAMLO -- 1  
       EAPMP -- 1  
       EACBA -- 1  
       EACMO -- 1  
       EACCE -- 1  
       EACPR -- 1  
       EAIIG -- 1  
       EAHVP -- 1  
       EAODO -- 1  
 Stewart Air Force Base  
 Newburgh, N.Y.

Commander  
 Rome Air Force Depot  
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       Dir, Programs - 2  
       Dir, Procurement - 2  
 Griffiss Air Force Base  
 Rome, N.Y.

Commander  
 Middletown Air Materiel Area  
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 Olmstead Air Force Base  
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       Col F. Shannon  
 Wright Patterson Air Force Base  
 Dayton, Ohio

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LOGISTIC SUPPORT PLAN FOR TEXAS TOWER #2

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PURPOSE:

The purpose of this plan is to provide guidance and direction for the preparation of the detailed logistical plan for the support of Texas Tower No. 2, Georges Shoal. The detailed logistics plan will be the responsibility of the Commander JEADF.

SCOPE:

This document contains the basic planning factors required for the formulation of a detailed logistical annex to the operational plan for Texas Tower No. 2. Items included are: supply, maintenance, transportation, evacuation, medical, and personnel services.

GENERAL:

The requirement for this plan is generated by the proposal to establish an Air Defense radar station on a modified, off shore, marine drilling platform on Georges Shoal. Texas Tower #2 will support radar, communications equipment, living quarters and storage space as required. The station will be manned and operated 24 hours per day. Construction is the responsibility of the Bureau of Yards and Docks, U. S. Navy. Normal transportation of Personnel and dry cargo will be by helicopter. Liquid cargo is to be delivered by a standard tanker. Emergency supply will be by air or sea, dependent upon the transport vehicle capability and the nature of the emergency. Emergency evacuation of sick and injured shall be primarily by the assigned helicopters and augmented by appropriate rescue agencies, trained and equipped for such missions. Texas Tower #2 will be operated as a detachment of the 762nd ACMH Sq, North Truro, Mass.

A. Supply.

1. Rations will be the responsibility of the Commander, 762nd ACMH Squadron through this plan. Normal levels will be: 15 days of perished rations,

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Logistic Support Section, 762nd ACGM

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30 days day, and 15 days emergency rations, based on a crew strength of 60 men. Periodic turnover of emergency rations will be required in accordance with current directives.

2. POL

(c) Requirements:

- (1) Fuel, oil, diesel MIL-F-1688(B) (511P3)  
Initial Supply - 152,000 gal.  
30 day estimated consumption - 37,300 gal.
- (2) Av-Gas  
Initial supply - 3,000 gal.  
30 day estimated consumption - 600 gal.
- (3) SAE #20 High Performance Lube oil MIL-L-9000A Type  
MIL-9170  
Initial supply - 3,000 gal.  
30 day estimated consumption - 600 gal.

(b) Method of Supply:

- (1) POL will be delivered by special tanker as required.

The commercial contract is the responsibility of the Area Petroleum Control Office, Alameda AFB, Middletown, Pa.

To protect the U.S. Government and the vendor, the contract should include a harbor pilot for docking operations at the tower.

- (c) Procedure: Not less than 30 days of fuel, based on consumption, will be maintained on the tower. The Commander, 762nd ACGM Sq through this AEE will be responsible for effecting delivery of fuel in sufficient amounts to fill the tower tankers. The vendor will deliver as soon after receipt of orders as is practical, considering the weather and sea conditions.

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- (a) Schedule: Due to the many variable factors, a definite delivery schedule cannot be maintained. The Commander, 762nd ACGW Sq, the Commander, Otis AFB, and the vendor, are thus required to maintain sufficient liaison to insure that POL shortages do not develop.
3. The 762nd ACGW Sq will be responsible for office and housekeeping supplies.
  4. The 762nd ACGW Sq will be responsible for maintaining the UAL equipment. The 762nd ACGW Sq UAL will be augmented to include equipment authorized for Texas Tower No. 2.
  5. The appropriate AEC agency is responsible for furnishing and installing the radar and communications equipment.
  6. Electronic supply support will be the responsibility of the 762nd ACGW Sq through the designated electronic support base.
  7. Unit, electronic, and R&U supply activities will be consolidated as a single function and minimum stock levels are as follows:
    - (a) Unit: As required by UAL
    - (b) Electronics: 45 day level of spare parts augmented by an appropriate level of replaceable assemblies and sub-assemblies of electronics components.
    - (c) R&U: 45 day level of R&U supplies, to include power generating equipment spares.
  8. Exchange support will be the responsibility of Otis AFB, Mass.
- B. Maintenance:
1. Electronics - to be performed by the Texas Tower detachment, 762nd ACGW Sq, contractor support, and AEC in accordance with current directives.

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Logistic Support Plan for Texas Tower #2 (Cont)

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2. Installations - preventive maintenance and minor repairs by the Texas Tower detachment. Major repairs will be the responsibility of Otis AFB.

3. Lifeboats -- Organizational maintenance and minor repairs to be performed by the 762nd ACMW Sq. Major repairs and overhaul by the appropriate agency, Otis AFB.

C. Transportation:

1. Air: The prime mode of transportation for personnel and dry cargo will be by helicopter based at and maintained by the appropriate agency, Otis AFB, Mass.

2. Surface:

(a) Normal: Liquid cargo will be delivered by standard commercial tanker under contract.

(b) Emergency: It is mandatory that a procedure be in being for back-up surface transportation at all times. All interested agencies must be informed of the procedure and that the Commander, 762nd ACMW Sq, North Truro, is authorized to implement this plan as required. It has been recommended to Hq, USAF that a cross-service agreement with U.S. Navy be made to fulfill this requirement. Upon receipt of firm information from Hq, USAF this paragraph will be amended accordingly.

(c) Vehicles: The vehicles assigned to 762nd ACMW Sq will be augmented as required.

3. Air Lift Control: The helicopters will be under the operational control of the Commander, 762nd ACMW Sq. All agencies will coordinate the delivery of supplies for Texas Tower #2 with the Commander, 762nd ACMW Sq.

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Logistic Support Plan for Texas Tower

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h. Air Lift Personnel: The Non-T/O authorizations are to be increased as follows:

<u>Job Title</u>	<u>Rank</u>	<u>AFSC</u>	<u>Total Required</u>
Pilot	Capt	102h	2
Pilot	Lt	102h	4
Crew Chief	T/Sgt	43170	2
Helicopter Mech	A/1c	43150	2
A/c Recp Eng Mech	S/Sgt	43251	2
Totals			6 Officers 6 Airmen

D. Evacuation:

1. Appropriate lifeboats as recommended in Feasibility Report on Texas Towers, Part 2, and in sufficient quantities consistent with personnel assigned will be provided for emergency evacuation. They will be equipped with Mae Wests and other seagoing survival gear, as required.

2. Additional life preservers and life rafts to be provided on the tower proper, as required.

3. Emergency medical evacuation will be performed by the assigned helicopters and augmented by appropriate agencies trained and equipped for such missions. Negotiations with such agencies for the performance of this service will be conducted by the Commander, 762nd AC&W Sq.

4. Mortuary assistance will be provided by Otis AFB, Mass.

E. Medical:

1. The 762nd AC&W Sq will be responsible for appropriate medical supplies and equipment.

2. The assigned Medical Service Supervisor will operate the medical facility aboard the Texas Tower.

F. Power Requirements:

Power will be generated on station to fulfill the total requirements.

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Logistic Support Plan for Xmas Tower (Cont)

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Loads to be determined and sufficient power generating equipment to be installed by the appropriate agency. Static type electronic voltage regulators (Sorenson or equivalent) to meet qualitative power requirements are to be provided by AIE and installed by contractor.

G. Other:

1. Refrigeration and heating systems will be installed as part of the construction contract.
2. Air conditioning equipment for the electronics equipment and mechanical cooling for the balance of the facility will be contractor installed.
3. Hot water heaters and hot water storage will be contractor installed.
4. Clothes washer and drier will be contractor furnished and installed.
5. Fire fighting equipment consisting of pumps, stand pipes and hoses, will be contractor furnished and installed, where required.
6. Galley equipment will be shipboard type equipment and contractor installed.

7. Fresh Water:

(a) Initial Supply: Sufficient for 45 days.

(b) Resupply:

- (1) Ionic demineralization equipment will be used for fresh water make-up.
- (2) The fuel tanker may be requested to pump fresh water aboard the tower during re-fueling operations, commensurate with the tanker capability and the capacity of fresh water bunkers aboard the tower.

H. Personnel Services:

Recreational equipment and facilities will be the responsibility of the  
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C O P Y

HEADQUARTERS  
AIR DEFENSE COMMAND  
Ent Air Force Base  
Colorado Springs, Colorado

GENERAL ORDERS)  
NUMBER 16)

4 May 1955

CONSTITUTION AND ACTIVATION OF TABLE OF ORGANIZATION UNITS...I  
ASSIGNMENT OF UNITS:.....II

I. CONSTITUTION AND ACTIVATION OF TABLE OF ORGANIZATION UNITS.

1. The following units having been constituted, assigned to this command, are further assigned to the 8th Air Division (Airborne Early Warning and Control) and are activated effective 8 July 1955 as indicated.

Headquarters, 552nd Airborne Early Warning and Control Wing  
Table of Organization Composition 1-2121, 1 June 1955, 1 x part II  
Authorized strength - Officers 27 - Warrant Officers 1 - Airmen 123  
Station of Activation - McClellan Air Force Base, Sacramento, California

962nd Airborne Early Warning and Control Squadron  
Table of Organization Composition 1-2122, 1 June 1955, 1 x part II  
Authorized Strength - Officers 158 - Airmen 268  
Station of Activation - Otis Air Force Base, Falmouth, Massachusetts

2. Personnel will be furnished from sources under control of the Commander, 8th Air Division (Airborne Early Warning and Control). Military personnel requirements which cannot be filled from within your resources will be requisitioned in accordance with normal cycle. A flow of personnel cannot be made available until six months subsequent to authorizations being reflected on the 5-AF-P2 report. Personnel manning will be phased in accordance with the units capability to utilize the personnel effectively;

3. The above are category D units and are authorized Unit Essential equipment as listed in the master equipment authorization list. The unit mission equipment column of the unit allowance list will be prepared to indicate authorizations based on column 3a of the master equipment authorization list and above table of organization composition. These units are authorized additional equipment in the unit support equipment column of the unit allowance list in conformance with Air Force Regulations 67-83 and 150-8.

4. Action directed herein will be reported in accordance with Air Force Regulation 20-49 and Air Defense Command Regulation 20-1.

5. The 962nd Airborne Early Warning and Control Squadron will be furnished administrative and logistic support from sources under the control of the Commander, Eastern Air Defense Force.

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GO 16, Hq ADC, Ent AFB, Colorado Springs, Colo., 4 May 55, cont.

6. Authority: Department of the Air Force letter AFOMO 6 10 J, subject "Constitution and Activation of the Headquarters, 552nd Airborne Early Warning and Control Wing and 962nd Airborne Early Warning and Control Squadron" 30 March 1955.

II. ASSIGNMENT OF UNITS.--1. Effective 8 July 1955 the following units are further assigned as indicated.

<u>UNIT</u>	<u>ASSIGNMENT</u>
552nd Electronics Maintenance Squadron	552nd Airborne Early Warning and Control Wing
552nd Periodic Maintenance Squadron	552nd Airborne Early Warning and Control Wing
963rd Airborne Early Warning and Control Squadron	552nd Airborne Early Warning and Control Wing
964th Airborne Early Warning and Control Squadron	552nd Airborne Early Warning and Control Wing
962nd Airborne Early Warning and Control Squadron	551st Airborne Early Warning and Control Wing

2. Authority: Department of the Air Force letter AFOMO 6 10 J, subject "Constitution and Activation of the Headquarters, 552nd Airborne Early Warning and Control Wing and 962nd Airborne Early Warning and Control Squadron" 30 March 1955.

BY ORDER OF THE COMMANDER:

OFFICIAL:

GEORGE F. SMITH  
Major General, USAF  
Chief of Staff

s/ W. J. Birmele  
t/ W. J. BIRMELE  
Lt Col, USAF  
Asst Comd Adj

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HEADQUARTERS  
AIR DEFENSE COMMAND  
Ent Air Force Base  
Colorado Springs, Colorado

GENERAL ORDERS)  
NUMBER 10)

4 April 1955

REASSIGNMENT OF THE HEADQUARTERS, 8TH AIR DIVISION (AIRBORNE EARLY WARNING AND CONTROL) AND CERTAIN OTHER UNITS.--1. Effective 1 May 1955 the following units at locations indicated are relieved from assignment to Western Air Defense Force and are assigned to the Air Defense Command without change in strength or station.

Headquarters, 8th Air Division (Airborne Early Warning and Control), McClellan Air Force Base, California  
963rd Airborne Early Warning and Control Squadron, McClellan Air Force Base, California  
964th Airborne Early Warning and Control Squadron, McClellan Air Force Base, California  
552nd Periodic Maintenance Squadron, McClellan Air Force Base, California  
552nd Electronics Maintenance Squadron, McClellan Air Force Base, California  
Headquarters, 551st Airborne Early Warning and Control Wing, Otis Air Force Base, Massachusetts  
960th Airborne Early Warning and Control Squadron, Otis Air Force Base, Massachusetts  
961st Airborne Early Warning and Control Squadron, Otis Air Force Base, Massachusetts  
551st Electronics Maintenance Squadron, Otis Air Force Base, Massachusetts  
551st Periodic Maintenance Squadron, Otis Air Force Base, Massachusetts

Subassignment of component units of the 8th Air Division will remain as follows:

Headquarters, 551st Airborne Early Warning and Control Wing assigned 8th Air Division (Airborne Early Warning and Control)  
963rd Airborne Early Warning and Control Squadron assigned 8th Air Division (Airborne Early Warning and Control)  
964th Airborne Early Warning and Control Squadron assigned 8th Air Division (Airborne Early Warning and Control)  
552nd Electronics Maintenance Squadron, assigned 8th Air Division (Airborne Early Warning and Control)  
552nd Periodic Maintenance Squadron assigned 8th Air Division (Airborne Early Warning and Control)  
960th Airborne Early Warning and Control Squadron assigned 551st Airborne Early Warning and Control Wing  
961st Airborne Early Warning and Control Squadron assigned 551st Airborne Early Warning and Control Wing

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GO 10, Hq ADC, Ent AFB, Colorado Springs, Colo, 4 Apr 55,  
PARA 1, cont.

551st Electronic Maintenance Squadron assigned 551st Airborne  
Early Warning and Control Wing  
551st Periodic Maintenance Squadron assigned 551st Airborne  
Early Warning and Control Wing

2. No change in court martial jurisdiction over units re-assigned by this order.
3. Action directed herein will be reported in accordance with Air Force Regulation 20-49.
4. Authority: Air Force Regulation 20-27.

BY ORDER OF THE COMMANDER:

OFFICIAL:

s/ W. J. Birmele  
t/ W. J. BIRMELE  
Lt, Col, USAF  
Asst Comd Adj

GEORGE F. SMITH  
Major General, USAF  
Chief of Staff

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5 - Units concerned

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