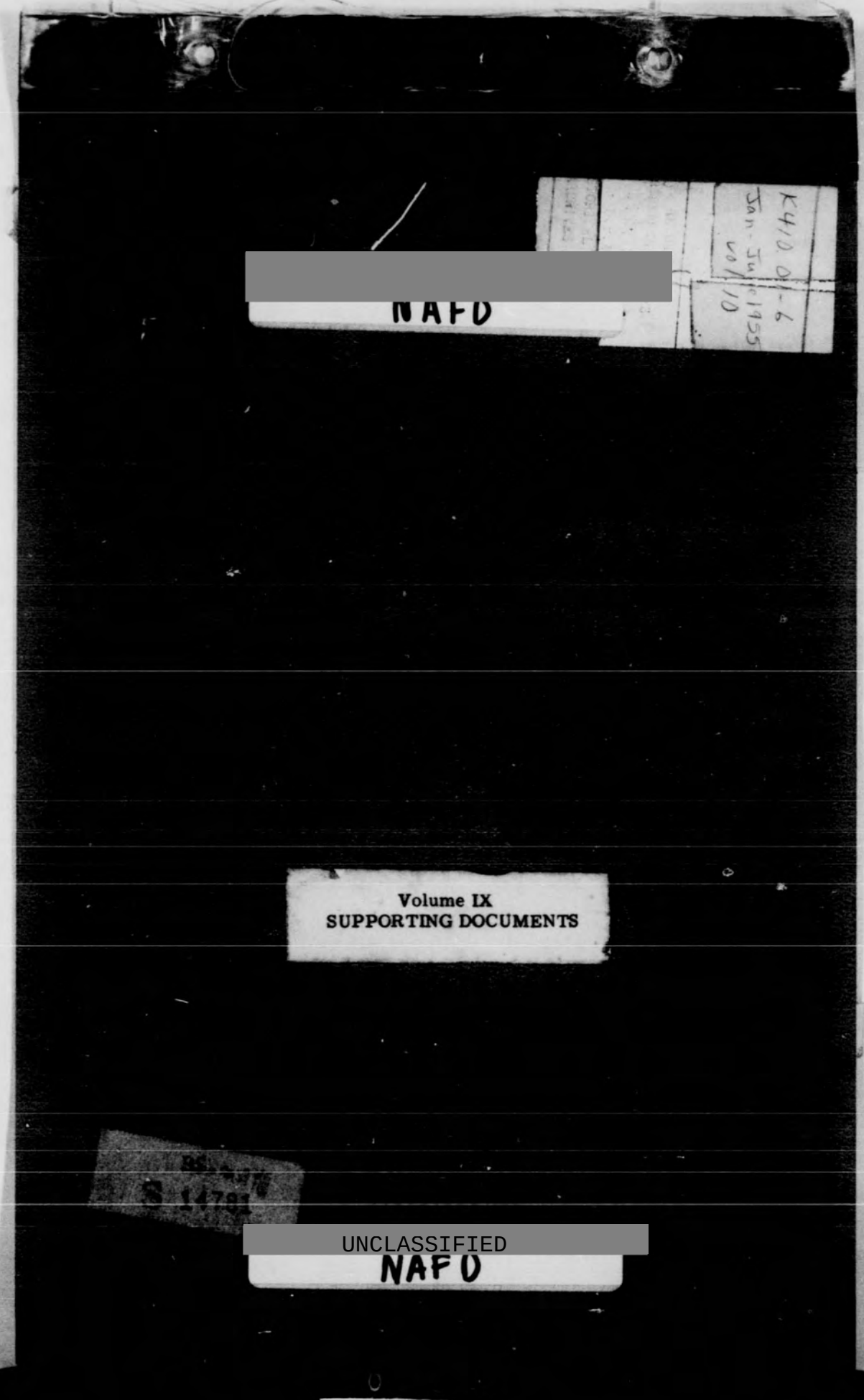

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AIR DEFENSE COMMAND
ACSW OPERATIONAL STATUS REPORT
RCS: AF-Z20
as of 2400, 10 Jun 55

FILED A197 [illegible] 3-3526-10 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20
1.	9 AD 172	HqSec	Geiger AFB, Wash.	CC	-	-	-	-	F	100	-	-	-	-	20	100	100	F/F/F	-	-
2.	(6)	638	Curlew, Wash.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	0	-	0	77	100	100	F/F/F	8	6
3.	(11)	680	Yaak, Mont.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	0	-	0	65	100	100	F/F/F	7	5
4.	11A	680	Porthill, Idaho	SS	FPS-14	-	-	-	X-1-2-3	0	0	-	-	-	-	0	0	X/X/X	-	-
5.	11B	680	Eureka, Mont.	SS	FPS-14	-	-	-	X-1-2-3	0	0	-	-	-	-	0	0	X/X/X	-	-
6.	11C	680	Moyie Springs, Idaho	SS	FPS-14	-	-	-	X-1-2-3	0	0	-	-	-	-	0	0	X/X/X	-	-
7.	(32)	636	Condon, Ore.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	0	-	0	77	100	100	F/F/F	8	6
8.	(40)	637	Othello, Wash.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	20	-	0	82	100	100	F/F/F	11	8
9.	(60)	760	Colville, Wash.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	20	-	0	54	70	100	F/F/F	11	6
10.	60A	760	Ione, Wash.	SS	FPS-14	-	-	-	X-1-2-3	0	0	-	-	-	-	0	0	X/X/X	-	-
11.	118	634	Burns, Ore.	DC	MPS-7	FPS-6	-	FPS-6	X-1-3	95	20	20	-	20	20	20	20	X/X/L	8	0
11a.	118A	634	Burns Junction, Ore.	GF	FPS-14	FPS-6A	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
12.	149	821	Baker, Ore.	DC	MPS-7	FPS-6	-	MPS-14	X-1-3	1	0	0	-	0	0	0	0	X/X/X	8	0
13.	150	822	Cottonwood, Idaho	DC	FPS-8	FPS-6	-	FPS-6	X-1-3	10	0	0	-	0	0	0	0	X/X/X	8	0
14.	151	823	Geiger AFB, Wash.	DC	MPS-7	FPS-6	-	MPS-14	X-1-3	5	0	0	-	0	0	0	0	X/X/X	11	0

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RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(	(17)	(18)	(19)	(2
15. 9 AD	153	825	Kamloops BC, Can.	DC	FPS-3A	FPS-6	-	FPS-4	X-1-3	0	0	0	-	0	0	0	0	X/X/X	9	0

REMARKS:

Line 2. Col 10: Percentage of construction reduced to 75% in view of programmed construction and site expansion.
Col 6: Interim FPS-5 installed and operating.
Col 15: Interim emergency radio equipment installed: 1 ea T-4/FRC and 2 ea AN/TRC-1 radio sets.

Line 3. Col 10: Percentage of construction reduced to 75% in view of programmed construction.
Col 7: Interim standby search FPS-8 20% completed.
Col 13: Same as column 7.
Col 12: FPS-4 interim height finder operational. Interim emergency radio equipment installed: 3 ea T-4/FRC, 1 ea SP-600JX, 1 ea SCR-399, 1 ea BC-342.

Line 7. Col 10: Percentage of construction reduced to 75% in view of future construction.
Col 6: Interim FPS-4 operational. Interim emergency radio equipment installed: 4 ea T-4/FRC, 3 ea 600JX, 2 ea AN/TRC-1 and 1 ea SCR-399.
Col 12: Same as Column 6.

Line 8. Col 10: Percentage of construction reduced to 75% in view of future construction.
Col 6: Interim FPS-5 operational. Interim emergency radio equipment installed: 6 ea T-4/FRC, 4 ea SP-600JX, 8 ea TRC-1 and 1 ea SCR-399.
Col 15: Decline in percentage from previous report due to new programmed equipment.
Col 16: GTA-3 replaced with GTA-6A.

Line 9. Col 10: Percentage reduced to 75% in view of new construction programmed.
Col 12: Interim Primary height FPS-5 100%.
Col 13: Interim standby search FPS-8 programmed.
Col 16: Decline in percentage due to conversion to AN/GTA-6.

Line 15. Col 8: Interim primary height MPS-8 will be installed initially pending receipt of FPS-6.

RCS: AF-Z20, as of 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
16. 25 AD	(4)	HqSec	McChord AFB, Wash.	CC	-	-	-	-	F	75	-	-	-	-	80	100	100	F/F/F	-	-
17.	(1)	635	McChord AFB, Wash.	DC	CPS-6B	FPS-6	-	FPS-6	F	75	100	0	-	0	82	100	100	F/F/F	11	8
18.	(12)	761	North Bend AFS, Ore.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	100	20	20	20	65	100	100	F/F/F	8	6
19.	12A	761	Port Orford, Ore.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
20.	(44)	758	Neah Bay AFS, Wash.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	100	20	20	0	85	90	90	F/F/F	9	7
21.	(46)	757	Blaine AFS, Wash.	DC	FPS-3	FPS-6	-	FPS-6	F	75	0	0	-	0	80	100	100	F/F/F	11	8
22.	(57)	759	Naselle AFS, Wash.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	100	20	20	0	80	100	100	F/F/F	11	8
23.	100	689	Mt Hebo, Ore.	DC	MPS-11	FPS-6	MPS-11	FPS-6	X-1-3	75	25	25	25	20	20	30	30	X/X/L	8	0

REMARKS:

Line 16 - Col 10: All P-sites in 25th ADiv (Defense) reduced to 75% in view of future construction programmed, such as annex to operations building and radar improvement program.

Line 17 - Interim emergency radio equipment installed: 1 ea T-4/FRC, 3 ea T-158/FRT, 10 ea AN/TRC-1 and 2 ea AN/TRA-12.

Line 18 - Col 8: FPS-4 interim primary height 100% complete and operational. Interim emergency radio equipment installed: 2 ea SP-600JX and 2 ea SCR-399.

Line 20 - Col 8: Interim FPS-4 100% installed and operating.

Line 21 - Col 5: FPS-10 interim primary search installed and operational. Interim emergency radio equipment installed: 5 ea AN/TRC-1 and 1 ea SCR-499.

Line 22 - Col 8: Interim AN/FPS-5 installed and operatings. Interim Emergency radio equipment installed: 4 ea T-4/FRC, 1 ea SP-600JX 3 ea BC-342 and 1 ea AN/TRC-1.

Col 14: Same as Col 8.

Line 23 - Col 6: AN/FPS-4 will be installed initially as interim primary height. Actual construction is estimated at 90%; however, Col 10 was reduced to 75% in view of future construction programmed. Lashup site L-6 fully operational at Portland, Oregon, with CPS-5D and TPS-10D. TPS-10D on loan from ANG.

RCS: AF-Z20 as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	( )	(17)	(18)	(19)	(20
24.	26 AD	(3)	HqSec Roslyn, N. Y.	CC	-	-	-	-	F	100	-	-	-	-	-	100	100	F/F/F	-	-
25.		(9)	646 Highlands AFS, N.J.	DC	CPS-6B	FPS-6	FPS-8	FPS-6	F	100	100	20	20	20	86	100	100	F/F/F	12	10
26.		9A	646 Gibbsboro, N. J.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	S/S/S	-	-
27.		(30)	648 Benton AFS, Pa.	DC	CPS-6B	FPS-6	-	FPS-6	F	100	100	0	-	0	64	100	100	F/F/F	9	7
28.		30A	648 Duttonville, N. J.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
29.		30B	648 Topton, Pa.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
30.		30C	648 East Meredith, N. Y.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
31.		(45)	773 Montauk AFS, N. Y.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	100	100	62	20	20	54	80	100	S2/S2/S2	12	10
32.		45A	773 Manorville, N. Y.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
33.		45B	773 Chilmark, Mass.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
34.		45C	773 Middletown, Conn.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
35.		(54)	770 Palermo AFS, N. J.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	67	100	20	20	20	57	100	100	F/F/F	11	8
36.		54A	770 Bethany Beach, Del.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
37.		(55)	647 Quantico Marine Base, Va.	DC	FPS-3	FPS-6	-	FPS-6	F	50	100	20	-	20	95	95	100	F/F/F	9	9
38.		55A	647 Chestertown, Md.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
39.		55B	647 Hermanville, Md.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
40.		55C	647 Hallsboro, Va.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-

RCS: AF-Z20 as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
41. 26 AD	55D	647	Hanover, Pa.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
42.	(56)	771	Cape Charles AFS, Va.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	100	100	20	20	0	63	20	100	F/F/F	9	9
43.	56A	771	Temperanceville, Va.	DC	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
44.	(63)	772	Claysburg AFS, Pa.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	20	62	90	95	F/F/F	8	6
45.	63A	772	Ft Loudon, Pa.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
46.	121	649	Bedford, Va.	DC	MPS-11	FPS-6	-	FPS-6	X-2-3	100	65	0	-	0	20	90	90	X3/X2/X2	7	0
47.	TT-3	773	Nantucket Shoal, Mass.	DC	FPS-3	FPS-6	-	FPS-6	X	0	0	-	-	-	-	0	0	X/X/X	8	0
48.	TT-4	646	Shoal (Unnamed)	DC	FPS-3	FPS-6	-	FPS-6	X-1	0	0	0	-	0	0	0	0	X/X/X	8	0

REMARKS:

Line 24 - AN/TPS-1C utilized as Mobile Emergency Radar in Air Division.
Line 31 - AN/FPS-5 Interim Height Finder being utilized. Col 18: Lack of trained radar and radar maintenance personnel.
Line 27 - FPS-3M programmed to replace CPS-6B as primary search.
Line 35 - AN/FPS-5 Interim Height Finder being utilized. 3 BC-610 Interim Point-to-Point being utilized.
Line 37 - AN/CPS-4 Height Finder being utilized. AN/FPS-4 Interim HF programmed.
Line 42 - AN/CPS-4 Height Finder being utilized; AN/FPS-4 Height Finder programmed as Interim. Col 16: Interim AN/GTA-3 being utilized.
Line 44 - AN/FPS-4 Interim Height Finder being utilized.
Line 46 - FPS-4 programmed as interim height. Col 12: AN/MPS-8 interim height finder installed but not accepted.

RCS: AF-Z20 as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
49. 27AD	(84)	Hq Sec	Norton AFB, Calif.	CC	-	-	-	-	F	100	-	-	-	-	80	100	100	F/F/F	-	-
50.	(2)	775	Cambria AFS, Calif.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	65	100	100	85	20	70	100	100	F/F/F	8	6
51.	(15)	669	Santa Rosa AFS, Calif.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	0	20	20	0	56	100	100	F/F/F	11	7
52.	(39)	670	San Clemente Island AFS, Calif.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	100	20	28	0	80	100	100	F/F/F	9	8
53.	(59)	750	Boron AFS, Calif.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	0	-	0	80	100	100	F/F/F	9	8
54.	59A	668	Shafter, Calif.	SS	FPS-14	-	-	-	X-1-2	0	0	-	-	-	-	0	0	X/X/X	0	0
55.	(76)	751	Mt Laguna AFS, Calif.	DC	FPS-3	FPS-6	FPS-8	FPS-6	X-1-2-3	73	100	100	20	20	77	100	100	F/F/F	11	8
56.	76A	751	Tecate, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
57.	76B	751	San Ysidro, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
58.	76C	751	Hipass, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
59.	76D	751	Coyote Wells, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
60.	128	659	Kingman, Ariz.	DC	MPS-7	FPS-6	-	MPS-14	X-1-3	70	35	0	-	35	20	60	100	X/X/L	7	0
61.	128A	659	Vidal Junction, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
62.	128B	659	Searchlight, Ariz.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
63.	128C	659	Topock, Ariz.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
64.	128D	659	Poston, Ariz.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
65.	162	864	Yuma AFB, Ariz.	DC	MPS-7	FPS-6	MPS-11	MPS-14	X-1-3	20	0	0	0	0	0	0	0	X/X/X	7	0

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RCS: AF-Z20 as of 2400, 10 Jun 55

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
66. 27 AD	162A	864 Tacna, Ariz.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
67.	162B	864 Horn, Ariz.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
68.	162C	864 Stone Cabin, Ariz.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
69.	162D	864 Palo Verde, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
70.	163	865 Las Vegas, Nev.	DC	FPS-3	FPS-6	-	MPS-14	X-1-3	20	0	0	-	0	0	0	0	X/X/X	7	0
71.	163A	865 Boulder City, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-

REMARKS:

Line 49 - Interim emergency radio equipment installed: 3 ea SP-600JX,2 ea BC-342, 1 ea BC-610, 3 ea 99-A and 5 ea AN/TRC-1.

Line 50 - Col 8: AN/FPS-4 operational as interim primary height finder.
Col 10: Percentage of construction "P" sites reduced to 75% in view of automatic and manual annex construction and other site expansion. Interim radio equipment installed: 2 ea AN/TRC-1, 2 ea T-1/FRC and 3 ea SP-600JX.

Line 51 - Col 5: FPS-10 fully operational as interim primary search.
Col 10: Same as Col 5.
Col 6: FPS-4 interim primary height. Interim emergency radio equipment installed: 2 ea AN/TRC-1, 3 ea SP-600JX, 1 ea SCR-399.

Line 52 - Col 8: FPS-4 interim primary height finder. Percent installation, column 14, FPS-4 100%.
Col 10: Reduced to 75% due to future construction of annex and site expansion. Interim radio equipment installed: 2 ea AN/TRC-1.

Line 53 - Col 5: FPS-10 interim primary search and height fully operational. Percent interim installation cols 11 and 12 100%.
Col 10: Reduced to 75% because of programmed construction. Interim emergency radio installed: 4 ea AN/TRC-1.

Line 55 - Interim emergency radio equipment installed: 1 ea AN/TRC-1.

Line 65 - Col 8: MPS-8 will be employed as interim standby height, pending installation of MPS-14.

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RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
72.	28 AD	(48) HqSec	Hamilton AFB, Calif.	CC	CPS-5D	-	-	-	F	100	-	-	-	-	85	100	100	F/F/F	-	-
73.		(33)	777 Klamath AFS, Calif.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	100	20	39	0	72	100	100	F/F/F	7	5
74.		33A	777 Capetown, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
75.		(37)	776 Pt Arena AFS, Calif.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	20	20	20	0	78	100	100	F/F/F	9	7
76.		(38)	666 Mill Valley AFS, Calif.	DC	CPS-6B	FPS-6	FPS-8	FPS-6	F	75	100	0	35	0	73	100	100	F/F/F	11	8
77.		(58)	668 Mather AFD, Calif.	DC	FPS-3	FPS-6	-	FPS-6	F	100	0	0	-	0	73	100	100	F/F/F	11	8
78.		58A	668 Modesto, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
79.		58B	668 Oroville, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
80.		(74)	774 Madera AFS, Calif.	DC	FPS-3	FPS-6	-	FPS-6	F	75	100	0	-	0	69	100	100	F/F/F	8	6
81.		74A	774 Lemoore, Calif.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
82.		96	682 Almaden, Calif.	DC	MPS-7	FPS-6	-	MPS-14	X-1-3	10	20	20	-	20	20	20	0	X/X/X	10	0
83.		127	658 Winnemucca, Nev.	DC	FPS-3A	FPS-6	-	FPS-6	X-1-3	65	20	0	-	0	20	20	0	X/X/X	7	0
84.		127A	658 Quinn River Crossing, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
85.		127B	658 Unionville, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
86.		156	858 Fallon, Nev.	DC	MPS-7	FPS-6	-	MPS-14	X-1-3	10	20	0	-	20	20	20	0	X/X/X	7	0
87.		156A	858 Gabbs, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
88.		156B	858 Desert Peak, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
89.	28 AD 156C	858	Lovelock, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
90.	157	859	Red Bluff, Calif.	DC	MPS-11	FPS-6	-	FPS-8	X-1-3	15	20	0	-	20	20	20	0	X/X/X	7	0
91.	164	866	Tonopah, Nev.	DC	MPS-7	FPS-6	-	FPS-8	X-1-3	20	20	0	-	0	20	20	0	X/X/X	7	0
92.	164A	866	Goldfield, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
93.	164B	866	Coaldale, Nev.	SS	FPS-14	-	-	-	X-1-3	0	0	-	-	-	-	0	0	X/X/X	-	-
94.	180	827	Klamath Falls, Ore.	DC	FPS-3	FPS-6	-	FPS-8	X-1-3	0	20	20	-	20	0	0	0	X/X/X	8	0

REMARKS:

Line 73 - Col 6: Interim FPS-4 installed. Col 12: 100%. Col 14: Interim FPS-4 standby height finder 50%; interim radio equipment installed: 1 ea SCR-399.

Line 75 - Col 11: Decreased due to start of installation of arctic tower. Mobile CPS-5D installed as interim search radar. Interim height finder FPS-4 is currently operational (100%) but will be relocated during June-July 1955 to provide space for FPS-3A erection. Interim radio equipment installed: 2 ea T-4/FRC and 4 ea SP-600JX.

Line 76 - Col 14: Interim standby height finder AN/FPS-4 is 50% complete. Short cabling between tower and operations building. Interim emergency radio equipment installed: 3 ea T-4/FRC, 6 ea SP-600JX and 3 ea BC-610.

Line 77 - Col 11: Interim primary search set AN/CPS-6B 100% complete and operational. Interim radio equipment installed: 2 ea T-4/FRC 3 ea SP-600JX and 2 ea BC-342.

Line 80 - Col 16: Decline in percentage due to conversion to AN/GTA-6A. Interim radio equipment: 2 ea T-4/FRC, 3 ea SP-600JX and 1 ea BC-342.

Line 82 - FPS-8 deleted from program by classified message ADOCE-AL 1114 12/2127/Z. Col 14: Interim height finder MPS-8 is 20% complete. Lashup site L-4 fully operational at For Ord, Calif., with CPS-5D. Operated by Det 1, 666th AC&W Sq.

Line 90 - Col 14: MPS-8 interim standby height finder will be initially installed pending installation of FPS-6.

RCS: AF-Z20, as of 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
95.	29 AD	(83)	HqSec Great Falls AFB, Mont.	CC	-	-	-	-	F	100	-	-	-	-	50	100	100	S/S/S	-	-
96.		(24)	681 Cutbank AFS, Mont.	DC	FPS-3	FPS-6	FPS-8	FPS-4	S-3	85	100	0	20	20	52	100	85	S/S/S	7	4
97.		24A	681 Browning, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
98.		24C	681 Sweetgrass, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
99.		(25)	778 Havre AFS, Mont.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	100	100	20	20	0	54	100	100	F/F/F	7	5
100.		25A	778 Galata, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
101.		25B	778 Hogeland, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
102.		(26)	779 Opheim AFS, Mont.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	100	100	20	20	0	50	100	100	F/F/F	7	4
103.		26A	779 Whitewater, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
104.		(27)	780 Fortuna AFS, N. D.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	75	100	0	20	0	90	100	100	F/F/F	7	4
105.		27A	780 Whitetail, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
106.		(28)	786 Minot AFS, N. D.	DC	FPS-3	FPS-6	FPS-8	FPS-4	F	96	100	0	20	20	67	100	100	F/F/F	7	4
107.		28A	786 Niobe, N. D.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
108.		(29)	785 Finley AFS, N. D.	DC	FPS-3	FPS-6	FPS-8	FPS-6	F	100	100	0	0	0	45	100	90	F/F/F	7	5
109.		29A	785 Sheyenne, N. D.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
110.		29B	785 Grafton, N. D.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
111.		97	740 Ellsworth AFB, S. D.	DC	MPS-7	MPS-14	-	-	S-2	100	95	35	-	-	36	20	20	L/L/L	8	4
112.		98	902 Miles City, Mont.	DC	MPS-7	MPS-14	-	-	X-3	98	25	0	-	-	0	20	100	X/L/L	7	0

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
113.	29 AD 99	903	Gettysburg, S. D.	DC	MPS-7	FPS-6	-	MPS-14	X	7	0	0	-	0	0	0	0	X/X/X	7	0
114.	133	625	Hastings NAD, Nebr.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0
115.	133A	625	Mankato, Kans.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	-	-	X/X/X	-	-
116.	134	695	Lake Andes, S. D.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0
117.	147	801	Great Falls AFB, Mont.	DC	MPS-7	FPS-6	-	TPS-10D	X	4	0	0	-	0	0	0	0	X/X/X	8	0
118.	177	706	Dickinson, N. D.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	8	0
119.	178	694	Lewiston, Mont.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	8	0
120.	179	716	Kalispell, Mont.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	8	0
121.	179A	716	Columbia Falls, Mont.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
122.	201	731	Sundance, Wyo.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	8	0

REMARKS:

Line 95 - A. Point-to-point emergency radio equipment will become fully operational upon receipt and installation of 2 ea AN/TRC-11 and 1 ea AN/TRA-19 remote units for remote operation of Wilcox 99(A) transmitters not received.
B. Short one each Wilcox 99(A) for RTTY circuit to CADF.

Line 96 - Three additional buildings programmed for installation which lowers previous report to 85%; FPS-8(A) programmed as interim emergency search; FPS-4(A) programmed as interim height; FPS-4(T) installed and operational as interim height.

Line 99 - FPS-8(A) programmed as interim emergency search; FPS-4 operational as interim height.

Line 102 - SCR-399 and SCR-188 operational as interim HF; FPS-3(A) installed and operational as interim primary search. FPS-8(A) programmed as interim primary search; FPS-4(A) programmed as interim height; FPS-4(T) installed and operational as interim height.

Line 104 - Contract let 24 May 55 for construction of PX recreation building; contract to be let in Jun 55 for construction of 9 family housing units; FPS-4 operational as interim height.

RCS: AF-Z20, as of 2400, 10 Jun 55

[redacted]

29th Air Division (Contd)

REMARKS:

Line 106 - FPS-4 operational as interim height; FPS-6(A) programmed as emergency height.

Line 108 - FPS-4 operational as interim height.

Line 111 - MPS-7M(A) programmed as primary search; FPS-6(A) and MPS-14(A) programmed as primary and emergency height respectively. Lashup site L-5 fully operational at Ellsworth AFB with CPS-5D and CPS-4.

Line 112 - MPS-7M(A) programmed as primary search; FPS-6(A) and MPS-14(A) programmed as primary and emergency height respectively.

Line 114 - FPS-6(A) programmed as emergency height.

Line 116 - FPS-6(A) programmed as emergency height.

Line 117 - MPS-8(A) programmed as interim height. Lashup site L-7 fully operational at Great Falls AFB with TPS-1D and MPS-8. L-7 due to phase out first quarter FY56.

Line 118 - FPS-6(A) programmed as emergency height.

Line 119 - FPS-6(A) programmed as emergency height.

Line 120 - FPS-6(A) programmed as emergency search.

[redacted]

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
123.	30 AD	(23)	HqSec Willow Run, Mich.	CC	-	-	-	-	F	100	-	-	-	-	100	100	100	F/F/F	-	-
124.		(16)	665 Calumet AFS, Mich.	DC	FPS-3	FPS-6	-	FPS-6	F	80	100	25	-	20	54	0	100	F/F/F	8	7
125.		(19)	676 Antigo AFS, Wis.	DC	FPS-3	FPS-6	-	FPS-6	F	80	100	0	-	0	56	95	95	F/F/F	8	7
126.		(20)	661 Selfridge AFB, Mich.	DC	CPS-6B	FPS-6	-	FPS-6	F	100	100	0	-	0	58	100	100	F/F/F	12	10
127.		20A	661 Burnside, Mich.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
128.		(31)	755 Williams Bay AFS, Wis.	DC	CPS-6B	FPS-6	-	FPS-6	F	100	100	20	-	20	46	100	100	F/F/F	12	8
129.		(34)	752 Empire AFS, Mich.	DC	CPS-6B	FPS-6	-	FPS-6	F	70	100	20	-	0	50	100	100	F/F/F	9	8
130.		34A	752 Petoskey, Mich.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
130½.		34B	752 Grayling, Mich.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
131.		(43)	783 Guthrie AFS, W. Va.	DC	FPS-3	FPS-6	-	FPS-6	F	93	100	0	-	0	43	100	100	F/F/F	8	6
132.		(53)	782 Rockville AFS, Ind.	DC	FPS-10	FPS-6	-	FPS-6	F	88	100	20	-	20	50	100	100	F/F/F	8	6
133.		(61)	754 Port Austin AFS, Mich.	DC	FPS-3	FPS-6	-	FPS-6	F	86	100	20	-	0	73	95	80	F/F/F	9	8
134.		(62)	662 Brookfield AFS, Ohio	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	20	100	100	100	F/F/F	9	8
135.		(66)	753 Sault Ste Marie AFS, Mich.	DC	FPS-3	FPS-6	-	FPS-6	F	85	95	35	-	20	60	50	100	F/F/F	9	8
136.		(67)	781 Ft Custer, Mich.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	20	70	95	100	F/F/F	8	7
137.		67A	781 Midland, Mich.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
138.		(73)	664 Bellefontaine AFS, Ohio	DC	FPS-3	FPS-6	-	FPS-6	F	37	100	20	-	20	50	100	100	F/F/F	9	7
139.		(82)	784 Ft Knox, Ky.	DC	FPS-3	FPS-6	-	FPS-4	F	100	100	20	-	0	85	100	100	F/F/F	8	6

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
140.	30 AD 105	677	Alpena, Mich.	SS	TPS-1D	-	-	-	X-2-3	100	35	-	-	-	20	20	20	X/X/X	0	-
141.		106	700	Two Rivers, Wis.	SS	TPS-1D	-	-	-	X-3	100	35	-	-	-	20	40	20	X/X/X	-	-
142.		109	906	Grand Marais, Mich.	SS	TPS-1D	-	-	-	X-3	100	35	-	-	-	20	20	20	X/X/X	-	-
143.		131	809	Owingsville AFS, Ky.	SS	TPS-1D	-	-	-	X-3	100	95	-	-	-	20	20	20	X/X/X	0	-
144.		137	704	Carmi, Ill.	SS	TPS-1D	-	-	-	X-1	36	35	-	-	-	20	20	20	X/X/X	0	-

REMARKS:

Line 123 - AN/TPS-1D utilized as Mobile Emergency Radar in Air Division.
Line 124 - Col 14: AN/FPS-5 utilized as Interim Height Finder. Col 16: new inside plant programmed, inside plans for AN/FPS-3 being utilized as interim. Two T-4/PRC are being used as interim.
Line 125 - AN/FPS-4 being utilized as Interim Height Finder. Col 15: Figure is based on [redacted] pieces of A/C eqp programmed. Col 16: Figure based on 6 ea TA-277 units programmed and not installed. Col 17: Figure based on telephone line to Antigo approved but not instld. 3 SP-600 receivers and 1 BC-199 utilized as Interim Point-to-Point.
Line 126 - FPS-3 programmed to replace CPS-6B as Primary Search Radar.
Line 128 - FPS-3 programmed to replace CPS-6B as Primary Search.
Line 129 - Col 10: Figure reduced due to programming of addition to Operations Building and 2 AN/FPS-6 towers. Col 16: AN/GTA-6 eqp programmed.
Line 131 - Col 8: AN/FPS-4 Height Finder being utilized. Col 15: BC-640, BC-639 used as interim. Col 10: PX building approximately 50% complete Col 16: 10 line units TA-277 programmed but not installed.
Line 132 - Col 10: 2 buildings and walkways under construction.
Line 133 - AN/CPS-4 Interim HF utilized. AN/FPS-4 Inter Height Finder programmed.
Line 134 - AN/FPS-5 Height Finder being utilized.
Line 135 - Col 16: Utilizing GTA-3 programmed for GTA-6 equipment. AN/FPS-5 Height Finder being utilized.
Line 136 - AN/FPS-4 Interim Height Finder programmed.
Line 138 - AN/FPS-4 programmed as Interim Height Finder. Col 10: Construction of Receiver Building 44% complete. Col 15: SCR-188 being utilized as Interim Equipment.
Line 139 - Col 14: AN/FPS-4 Height Finder being utilized. Interim SCR-188 being utilized.

[redacted]

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
145. 31 AD	(36)	HqSec	Snelling AFS, Minn.	CC	-	-	-	-	F	100	-	-	-	-	20	100	100	F/F/F	-	-
146.	(17)	739	Wadena AFS, Minn.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	75	-	0	40	100	100	F/F/F	8	4
147.	(18)	787	Chandler AFS, Minn.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	0	68	100	100	F/F/F	9	9
148.	(35)	674	Osceola AFS, Wis.	DC	CPS-6B	FPS-6	-	FPS-6	F	100	100	0	-	0	63	100	100	F/F/F	9	7
149.	(69)	756	Finland AFS, Minn.	DC	FPS-3	FPS-6	-	FPS-6	F	80	100	90	-	0	82	95	85	F/F/F	9	6
150.	(71)	789	Omaha AFS, Nebr.	DC	FPS-3	FPS-6	-	FPS-6	S-3	95	100	95	-	0	67	95	95	S3/S3/S3	8	5
151.	(81)	788	Waverly AFS, Iowa	DC	FPS-10	FPS-6	-	FPS-6	S-2	90	100	0	-	0	62	90	100	S2/S2/S2	3	3
152.	(85)	791	Hanna City AFS, Ill.	DC	FPS-3	FPS-6	-	FPS-6	F	53	100	0	-	0	45	95	90	F/F/F	8	4
153.	101	808	Rochester, Minn.	SS	TPS-1D	-	-	-	X-1	88	35	-	-	-	20	20	20	X/X/1	-	-
154.	122	650	Dallas Center, Iowa	SS	TPS-1D	-	-	-	X-1	79	0	-	-	-	0	0	0	X/1/1	-	-
155.	132	692	Baudette, Minn.	DC	FPS-3	FPS-6	-	FPS-6	X	0	0	0	-	0	0	0	0	X/X/X	8	0
156.	138	707	Grand Rapids, Minn.	DC	FPS-3	FPS-6	-	FPS-6	X	10	0	0	-	0	0	0	0	X/X/X	8	0
157.	139	721	Willmar, Minn.	DC	FPS-8	FPS-6	-	FPS-6	X	10	0	0	-	0	0	0	0	X/X/X	7	0

REMARKS:

Line 146 - FPS-4 operational as interim height.
Line 147 - SCR-188 installed and operational as interim point-to-point radio equipment; FPS-4 operational as interim height.
Line 148 - CPS-6B installed and operational as interim primary search.
Line 149 - FPS-5 installed and operation as interim height; FPS-6 primary height acceptance date 25 Jun 55; CPS-5D operational as lashup search.
Line 150 - Interim radio equipment operational: 1 ea BC-191; 2 ea SP-600JX; 1 ea BC-342. FPS-4 operational as interim height.
Line 151 - Interim use of BC-191-N in HF net in place of programmed Wilcox 99A's; FPS-3M(A) programmed as primary search; FPS-10 operational as interim primary search. Col 10 - Addl housing and recreation building programmed for construction. Recreation building presently under construction, with 9 housing units programmed for completion by Dec 55.

RCS: AF-Z20, as of 2400, 10 Jun 55

31st Air Division (Contd)

REMARKS: (Contd)

Line 152 - SCR-188 installed and operational as interim HF; FPS-4 operational as interim height.
Line 157 - FPS-4(A) programmed as interim height.

Line 145 - One each BC-610 and 2 ea BC-191 operational as Interim HF.

RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
158. 32 AD	(5) HqSec	Syracuse, N. Y.	CC	-	-	-	-	F	100	-	-	-	-	100	100	100	F/F/F	-	-
159.	(10)	762 North Truro AFS, Mass.	DC	CPS-6B	FPS-6	FPS-8	FPS-6	F	80	100	20	20	20	60	100	100	F/F/F	12	10
160.	10A	762 Westboro, Mass.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
161.	TT-1	762 Cashes Ledge	DC	FPS-3	FPS-6	-	FPS-6	X	0	0	0	-	0	0	0	0	X/X/X	10	0
162.	TT-2	762 Georges Shoal	DC	FPS-3A	FPS-6	-	FPS-6	X	0	0	0	-	0	0	0	0	X/X/X	10	0
163.	(13)	654 Brunswick NAS, Me.	DC	CPS-6B	FPS-6	FPS-8	FPS-6	F	92	100	20	20	20	80	100	100	F/F/F	9	7
164.	13A	654 Sedgwick, Me.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
165.	TT-5	654 Brown's Bank	DC	FPS-3	FPS-6	-	FPS-6	X	0	0	0	-	0	0	0	0	X/X/X	8	0
166.	(14)	764 St Albans AFS, Vt.	DC	CPS-6B	FPS-6	-	FPS-6	F	90	100	20	-	0	65	90	80	F/F/F	12	8
167.	(21)	763 Lockport AFS, N. Y.	DC	CPS-6B	FPS-6	-	FPS-6	F	100	100	20	-	20	93	100	100	F/F/F	9	8
168.	21A	763 Brockton, Mass.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
169.	(49)	655 Watertown AFS, N. Y.	DC	FPS-3	FPS-6	-	FPS-6	F	90	100	20	-	20	54	20	100	F/F/F	9	8
170.	(50)	656 Saratoga Springs AFS, N. Y.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	20	65	100	100	F/F/F	12	10
171.	50A	656 New Preston, Conn.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
172.	50B	656 Saugerties, N. Y.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
173.	50D	656 Stoddard, N. H.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
174.	50E	656 New Salem, Mass.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20
175. 32 AD	(65)	765	Charleston AFS, Me.	DC	FPS-3	FPS-6	-	FPS-	F	96	100	20	-	0	57	100	100	F/F/F	9	8
176.		(80)	766	Caswell AFS, Me.	DC	FPS-10	FPS-6	FPS-8	FPS-6	F	100	100	20	20	20	77	100	100	F/F/F	8	7
177.		103	911	North Concord, Vt.	DC	MPS-11	FPS-6	-	MPS-14	X-1	20	20	0	-	20	20	20	20	X/X/X	8	0
178.		104	644	Portsmouth, N. H.	SS	TPS-1D	--	TPS-1D	-	X-1	100	20	-	20	-	20	20	20	X/S/S	-	-
179.		110	907	Bucks Harbor, Me.	DC	MPS-11	FPS-6	FPS-8	FPS-6	X-3	100	20	0	0	0	20	20	20	X/X/X	3	0

REMARKS:

Line 158 - AN/TPS-1C utilized as Mobile Emergency Radar in Air Division.
Line 163 - 2 T-4/FRC Transmitters, 2 BC-610 Transmitters, 3 BC-779 Receivers and 2 BC-342 Receivers being utilized as Interim Equipment.
Line 166 - Col 18: This station will have only 4 radar mechanics and 2 radar contact technicians as of 25 Jul 55. T-4/FRC Transmitter and BC-779 Receivers are installed as Interim Equipment.
Line 167 - Col 15: This figure includes 5 installed VHF, PC 57-I-I indicates 12 VHF. 9 VHF were originally installed, 4 were removed under Project "Dragnet".
Line 169 - AN/FPS-5 Interim Height Finder being utilized. Col 10: Figure reduced due to programmed addition to operations building. Col 16: AN/GTA-6A programmed to replace AN/GTA-3. 3 BC-799, 1 SCR-188, 3 BC-610 being utilized as Interim Equipment.
Line 170 - AN/FPS-5 Interim Height Finder being utilized. BC-610 utilized as Interim Equipment.
Line 175 - AN/FPS-5 Interim Height Finder being utilized. 1 BC-610, 2 BC-191 and 2 SP-600 utilized as interim.
Line 176 - 2 ea BC-610 used as Interim Equipment on HF Point-to-point.
Line 179 - AN/CPS-5D programmed as Interim Search.

Line 163 - FPS-3 programmed to replace CPS-6B as primary search radar.

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
180. 33AD	(86)	HqSec	Tinker AFB, Okla.	CC	-	-	-	-	F	100	-	-	-	-	-	100	100	F/F/F	-	-
181.	(47)	793	Hutchinson NAS, Kans.	DC	FPS-10	FPS-6	-	FPS-6	F	100	95	0	-	0	57	95	95	F/F/F	7	6
182.	47A	793	Ellsworth, Kans.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	-	-	X/X/X	-	-
183.	47C	793	Winfield, Kans.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	-	-	X/X/X	-	-
184.	(52)	746	Tinker AFB, Okla.	DC	FPS-10	FPS-6	-	FPS-6	F	100	95	0	-	0	55	95	95	F/F/F	7	6
185.	(64)	790	Kirksville AFS, Mo.	DC	FPS-10	FPS-6	-	FPS-6	F	100	100	0	-	0	40	100	100	F/F/F	8	6
186.	(68)	797	Fordland AFS, Mo.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	0	-	0	65	100	100	F/F/F	8	6
187.	(70)	798	Belleville AFS, Ill.	DC	FPS-3	FPS-6	-	FPS-6	(S-3)	91	100	20	-	0	45	100	100	S3/S3/S3	3	7
188.	(72)	738	Olathe NAS, Kans.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	0	-	0	65	91	100	F/F/F	9	8
189.	(75)	741	Lackland AFB, Tex.	DC	FPS-3	FPS-6	-	FPS-6	(S-3)	100	100	0	-	0	50	100	100	S/S/S	7	5
190.	(77)	796	Bartlesville AFS, Okla.	DC	FPS-10	FPS-6	-	FPS-6	F	100	100	0	-	0	55	100	95	L/F/F	7	6
191.	77A	796	Ottawa, Okla.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	-	-	X/X/X	-	-
192.	(78)	745	Duncanville AFS, Tex.	DC	FPS-10	FPS-6	-	FPS-6	F	100	100	0	-	0	60	100	100	F/F/F	9	9
193.	(79)	747	Ellington AFB, Tex.	DC	FPS-10	FPS-6	FPS-8	FPS-6	F	100	100	0	0	0	50	100	100	F/S/S	8	8
194.	79A	747	Fannett, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
195.	79B	747	Van Vleck, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
196.	88	688	Amarillo AFB, Tex.	SS	MPS-7	FPS-6	-	TPS-10-D	L-3	100	100	0	-	100	20	40	20	L/L/S	3	0

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
197. 33 AD	89	683	Sweetwater, Tex.	SS	MPS-11	FPS-6	-	TPS-10D	X	90	20	0	-	20	0	20	20	X/X/X	3	0
198.	91	703	Texarkana, Ark.	DC	MPS-7	MPS-14	-	-	L-3	100	80	80	-	-	20	20	20	L/L/F	7	0
[illegible]	125	653	England AFB, La.	DC	MPS-7	MPS-14	-	-	X-2-3	100	35	35	-	-	0	0	100	X/L/L	8	0
200.	143	725	Walnut Ridge, Ark.	DC	MPS-11	FPS-6	-	MPS-8	X	15	0	0	-	0	0	0	0	X/X/X	8	0
201.	187	732	Ozona, Tex.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0
202.	187A	732	McCamey, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
203.	187B	732	Comstock, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
204.	188	733	Eagle Pass, Tex.	DC	FPS-3	FPS-6	-	MPS-8	X	0	0	0	-	0	0	0	0	X/X/X	7	0
205.	188A	733	Carrizo Springs, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
206.	189	742	Zapata, Tex.	DC	FPS-3	FPS-6	TPS-1D	MPS-8	X	0	0	0	0	0	0	0	0	X/X/X	7	0
207.	189A	742	Delmita, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
208.	189B	742	Laredo, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
209.	190	811	Port Isabel, Tex.	DC	FPS-3	FPS-6	TPS-1D	MPS-8	X	0	0	0	0	0	0	0	0	X/X/X	8	0
210.	191	813	Rockport, Tex.	DC	FPS-3	FPS-6	-	MPS-8	X	0	0	0	-	0	0	0	0	X/X/X	8	0
211.	191A	813	Riviera, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
[illegible]	191B	813	Palacios, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
213.	152	814	Gray AFB, Tex.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0
214.	193	815	Lufkin, Tex.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0

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RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(2
215. 33 AD	194	812	Lake Charles AFB, La.	DC	FPS-3	FPS-6	TPS-1D	MPS-8	X	0	0	0	0	0	0	0	0	X/X/X	8	0
216.	194A	812	Weeks Island, La.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-

REMARKS:

Line 181 - FPS-3M(A) programmed as primary search; FPS-10 installed and operational as interim primary search.
Line 185 - OA-347 operational 21 March 1955; FPS-3M(A) and FPS-10 programmed as primary and interim primary search respectively.
Line 186 - Installation of interim height FPS-4 being converted to arctic.
Line 187 - Arctic tower AB-199/A for FPS-3 under construction. CPS-4, interim height, dismantled. AB-343/FPS-4 in process of installation. FPS-6(A) and FPS-4(A) programmed as emergency and interim height respectively.
Line 188 - Installation of AN/GTA-6A completed 27 May 55 with exception of 13 ea TA-277A/GTA-6 10-line units which are unavailable through supply channels; estimated date of installation of additional TA-277's is 1 Sep 55. FPS-4 installed and operational as interim height.
Line 189 - FPS-4 installed and operational as interim height.
Line 190 - FPS-10 scheduled for G.E. overhaul 11 Jul 55. FPS-3M(A) programmed as primary search. FPS-10 operational as interim primary search.
Line 192 - FPS-3M programmed as primary search. FPS-10 operational as interim primary search.
Line 193 - Tower extension to be installed on FPS-10 during first quarter FY56. FPS-3M and FPS-8 programmed as primary and interim emergency search respectively.
Line 196 - FPS-6 programmed as emergency height. TPS-10D operational as interim height.
Line 197 - MPS-7M and MPS-11 programmed as primary and interim primary search respectively.
Line 198 - FPS-6 and MPS-14 programmed as primary and emergency height respectively.
Line 199 - FPS-6 and MPS-14 programmed as primary and emergency height respectively.

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RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
217.	34 AD	(41)	HqSec Kirtland AFB, N. M.	CC	-	-	-	-	F	100	-	-	-	-	35	100	100	F/F/F	-	-
218.		(7)	769 Continental Divide AFS, N. M.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	0	100	100	100	F/F/F	8	6
219.		(8)	767 Tierra Amarilla AFS, N. M.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	0	-	0	100	100	100	F/F/F	8	6
220.		(51)	768 Moriarity AFS, N. M.	DC	FPS-3	FPS-6	-	FPS-6	(S-2)	100	100	10	-	10	90	100	100	S2/S2/F	8	5
221.		90	686 Walker AFB, N. M.	DC	MPS-7	MPS-14	-	-	X-3	100	35	35	-	-	20	50	20	X/L/L	8	2
222.		90A	686 Orla, Texas	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
223.		90B	686 Sierra Blanca, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
224.		92	684 Tucson, Ariz.	DC	MPS-7	MPS-14	-	TPS-10D	X	30	0	0	-	0	0	0	0	X/X/X	9	0
225.		92A	684 Sells, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
226.		92B	684 Covered Wells, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
227.		92C	684 Benson, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
228.		93	904 Winslow, Ariz.	SS	MPS-11	FPS-6	-	-	X-1	95	0	0	-	-	-	0	0	X1/L/L	-	-
229.		94	687 West Mesa, N. M.	DC	MPS-7	MPS-14	-	TPS-10D	X-1	11	0	0	-	0	0	0	0	X/X/X	9	0
230.		95	685 Las Cruces, N. M.	DC	MPS-7	FPS-6	TPS-10	MPS-14	X-2-3	100	94	0	35	35	35	50	40	X/X/L	8	4
1.		95A	685 El Paso, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
232.		95B	685 Columbus, N. M.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
233.		181	612 Ajo, Ariz.	DC	FPS-3A	FPS-6	FPS-8	FPS-4	X	0	0	0	0	0	0	0	0	X/X/X	8	0

RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
217. 34 AD	(41) HqSec	Kirtland AFB, N. M.	CC	-	-	-	-	F	100	-	-	-	-	35	100	100	F/F/F	-	-
218.	(7) 769	Continental Divide AFS, N. M.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	20	-	0	100	100	100	F/F/F	8	6
219.	(8) 767	Tierra Amarilla AFS, N. M.	DC	FPS-3	FPS-6	-	FPS-6	F	100	100	0	-	0	100	100	100	F/F/F	8	6
220.	(51) 768	Moriarity AFS, N. M.	DC	FPS-3	FPS-6	-	FPS-6	S-2	100	100	10	-	10	90	100	100	S2/S2/F	8	5
221.	90 686	Walker AFB, N. M.	DC	MPS-7	MPS-14	-	-	X-3	100	35	35	-	-	20	50	20	X/L/L	8	2
222.	90A 686	Orla, Texas	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
223.	90B 686	Sierra Blanca, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
224.	92 684	Tucson, Ariz.	DC	MPS-7	MPS-14	-	TPS-10D	X	30	0	0	-	0	0	0	0	X/X/X	9	0
225.	92A 684	Sells, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
226.	92B 684	Covered Wells, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
227.	92C 684	Benson, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
228.	93 904	Winslow, Ariz.	SS	MPS-11	FPS-6	-	-	X-1	95	0	0	-	-	-	0	0	X1/L/L	-	-
229.	94 687	West Mesa, N. M.	DC	MPS-7	MPS-14	-	TPS-10D	X-1	11	0	0	-	0	0	0	0	X/X/X	9	0
230.	95 685	Las Cruces, N. M.	DC	MPS-7	FPS-6	TPS-1D	MPS-14	X-2-3	100	94	0	35	35	35	50	40	X/X/L	8	4
231.	95A 685	El Paso, Tex.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
232.	95B 685	Columbus, N. M.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
233.	181 612	Ajo, Ariz.	DC	FPS-3A	FPS-6	FPS-8	FPS-4	X	0	0	0	0	0	0	0	0	X/X/X	8	0

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RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
234. 34 AD 182	816	Nogales, Ariz.	DC	FPS-3	FPS-6	FPS-8	FPS-4	X	0	0	0	0	0	0	0	0	X/X/X	8	0
235. 182A	816	Elfrida, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
236. 183	826	Hachita, Ariz.	DC	FPS-3	FPS-6	FPS-8	FPS-4	X	0	0	0	0	0	0	0	0	X/X/X	8	0
237. 183A	826	Animas, N. M.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
238. 183B	826	Apache, Ariz.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	7	0
239. 184	675	Valentine, Tex.	DC	FPS-3	FPS-6	-	FPS-4	X	0	0	0	-	0	0	0	0	X/X/X	7	0
240. 186	697	Pyote, Tex.	DC	FPS-3	FPS-6	TPS-1D	FPS-4	X	0	0	0	0	0	0	0	0	X/X/X	7	0

REMARKS:

Line 217 - Lashup site L-3 fully operational at Kirtland with CPS-5D, CPS-4 and TPS-1D.
Line 218 - FPS-5 installed and operational as interim height.
Line 219 - FPS-5 operational as interim height.
Line 220 - Col 9: Shortage of ground radio repairmen, ground radio operators and communication center specialist.
Col 18: The ground radio supervisor forecast to arrive in May has not arrived and is expected in Jun 55. Two ground radio operators are forecast to arrive in Jul 55 and 3 communication center specialists are expected to transfer in July. Another communication center specialist is to be discharged in August.
FPS-5 installed and operational as interim height.
Line 221 - FPS-6 and MPS-14 programmed as primary and emergency height respectively. Lashup site L-1 to begin phaseout Aug 55.
Line 224 - MPS-7M(A) programmed as primary search; MPS-14(A) and TPS-10D programmed as emergency and interim height respectively; FPS-6 programmed as primary height. Lashup site L-2 fully operational at Davis-Monthan AFB with TPS-1D and CPS-4.
Line 228 - FPS-6(A) programmed as emergency height.
Line 229 - FPS-6, MPS-14 and TPS-10D programmed as primary, emergency and interim height respectively.
Line 230 - 2 ea AN/TRC-32 sets operational as interim UHF equipment; FPS-6, MPS-14 and MPS-8 programmed as primary, emergency and interim height respectively.
Line 233 - FPS-6 and FPS-4 programmed as emergency and interim height respectively.
Line 234 - FPS-7(A), FPS-3(A) and MPS-11(A) programmed as primary, interim primary and interim emergency search respectively. FPS-6(A and FPS-4(A) programmed as emergency and interim height respectively.

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FCS: AF-Z20, as of 2400, 10 Jun 55

34th Air Division

REMARKS: (Contd)

Line 236 - FPS-6(A) and FPS-4(A) programmed as emergency and interim height respectively.
Line 239 - FPS-6(A) and FPS-4(A) programmed as emergency and interim height respectively.
Line 240 - FPS-7(A), FPS-3 and TPS-1D programmed as primary, interim primary and interim emergency search respectively. FPS-6 and FPS-4 programmed as emergency and interim height respectively.

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RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
241. 35 AD	87	HqSec Dobbins AFB, Ga.	CC	-	-	-	-	F	100	-	-	-	-	50	100	100	F/F/F	-	-
242.	42	663 Lake City AFS, Tenn.	DC	FPS-10	FPS-6	-	FPS-6	F	100	100	0	-	0	75	100	100	F/F/F	8	8
[illegible]	111	908 Dobbins AFB, Ga.	DC	MPS-11	FPS-6	-	MPS-8	X	1	0	0	-	0	0	0	0	X/X/X	8	0
244.	111A	908 Jeffersonville, Ga.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
245.	111B	908 Barnesville, Ga.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
246.	112	702 Hunter AFB, Ga.	DC	MPS-7	MPS-14	FPS-8	TPS-10D	X-3	100	35	35	35	35	0	0	0	X/X/L	8	0
247.	112A	702 Paris Island MS, S. C.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
248.	112B	702 St Simon Island, Ga.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
249.	113	792 No. Charleston, S. C.	DC	MPS-7	MPS-14	FPS-8	MPS-8	X-3	99	65	21	20	50	20	36	20	X/X/X	8	0
250.	113A	792 Myrtle Beach, S. C.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
251.	113B	792 Georgetown, S. C.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
252.	114	679 Jacksonville NAS, Fla.	DC	FPS-8 (Navy)	MPS-14	FPS-8	TPS-10D	X	4	0	0	0	0	0	0	0	X/X/X	8	0
253.	114A	679 Bunnell, Fla.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
254.	115	701 Ft Fisher, N. C.	DC	MPS-7	MPS-14	MPS-11	MPS-8	X	35	0	0	0	0	0	0	0	X/X/X	8	0
[illegible]	116	614 Cherry Point MCAS, N. C.	DC	FPS-8 (Marine)	FPS-6	-	FPS-6	X	0	0	0	-	0	0	0	0	X/X/X	8	0
256.	116A	614 Elizabeth City, N. C.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
257.	116B	614 Englehard, N. C.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
258.	116C	614 Hollyridge, N. C.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-

RCS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20
259.	35 AD	117	632	Roanoke Rapids, N. C.	DC	MPS-11	FPS-6	-	FPS-6	X-1	50	20	0	-	0	0	0	0	X/X/X	8	0
260.		126	657	Houma NAS, La.	DC	MPS-7	MPS-14	TPS-1D	TPS-10D	X-2-3	94	35	35	35	35	20	20	20	X/X/X	8	0
[illegible]		126A	657	New Orleans, La.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
262.		129	660	MacDill AFB, Fla.	DC	MPS-7	MPS-14	-	-	S	98	94	25	-	-	20	90	95	S3/S3/F	8	0
263.		129A	660	Wintergarden, Fla.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
264.		129B	660	Inverness, Fla.	SS	FPS-14	-	-	-	X-1	0	0	-	-	-	-	0	0	X/X/X	-	-
265.		130	810	Winston Salem, N. C.	DC	MPS-11	FPS-6	-	MPS-8	X	2	0	0	-	0	0	0	0	X/X/X	8	0
266.		144	730	Union City, Tenn.	DC	FPS-8	FPS-6	-	FPS-6	X-1	1	0	0	-	0	0	0	0	X/X/X	3	0
267.		145	799	Joelton, Tenn.	DC	MPS-11	FPS-6	-	TPS-10D	X	2	0	0	-	0	0	0	0	X/X/X	7	0
268.		159	861	Aiken, S. C.	DC	FPS-3	MPS-14	-	TPS-10D	X	5	0	0	-	0	0	0	0	X/X/X	9	0
269.		165	867	Chattanooga, Tenn.	DC	MPS-11	FPS-6	-	TPS-10D	X	0	0	0	-	20	0	0	0	X/X/X	8	0
270.		195	627	Crystal Springs, Miss.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0
271.		196	693	Foley, Ala.	DC	FPS-3	FPS-6	TPS-1D	MPS-8	X	0	0	0	0	0	0	0	0	X/X/X	8	0
272.		196A	693	Eglin AFB, Fla.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
273.		196B	693	Gulfport, Miss.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
4.		197	698	Thomasville, Ala.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	8	0
275.		198	678	Tyndall AFB, Fla.	DC	FPS-3 (ATRC)	FPS-6 (ATRC)	-	-	X-1-2	0	100	100	-	-	0	0	0	X/X/X	8	0

RCS: AF-Z20, as of 2400, 10 Jun 55

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
276. 35 AD	198A	678 Carrabelle, Fla.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
277.	199	609 Eufaula, Ala.	DC	FPS-3	FPS-6	-	-	X	0	0	0	-	-	0	0	0	X/X/X	7	0
[illegible]	200	691 Cross City, Fla.	DC	FPS-3	FPS-6	-	MPS-8	X	0	0	0	-	0	0	0	0	X/X/X	8	0
279.	200A	691 Perry, Fla.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-
280.	200B	691 Lake City, Fla.	SS	FPS-14	-	-	-	X	0	0	-	-	-	-	0	0	X/X/X	-	-

REMARKS:

Line 243 - FPS-6 programmed as emergency height.
Line 246 - FPS-6 programmed as primary height.
Line 249 - FPS-6 programmed as primary height. Col 12: MPS-14 installation delayed, tower improperly designed for MPS-14 and has to be modified. Col 15 - No programmed A/G equipment on hand.
Line 252 - FPS-6 programmed as primary height.
Line 254 - FPS-6 programmed as primary height
Line 260 - FPS-6 programmed as primary height. No programmed point-to-point equipment on hand.
Line 262 - FPS-6 programmed as primary height. Col 19: 4 interim UHF channels, GRC-27, are installed. Interim SCR-499 operational on loan from 35th Air Division.

ROS: AF-Z20, as of 2400, 10 Jun 55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
289.	4750 AD Wg	4750	Yuma, Ariz.	EW-GCI	CPS-5D	CPS-4	CPS-5D	-	F-CF	100	100	100	100	-	83	20	100	F/F/F	10	8

REMARKS:
Col 9: EW operational presently fully operational under control of 27th Air Division - change report submitted by 27th ADiv. As GCI, site is capable of full operations but presently utilized by the WEC for controller training. Col 16: AN/GTA-6 programmed; AN/TTQ-1 presently in used is considered lashup equipment.

NOTE: Report has not been received from Det #1, Ottawa, Canada, and will be forwarded as a separate report when received.

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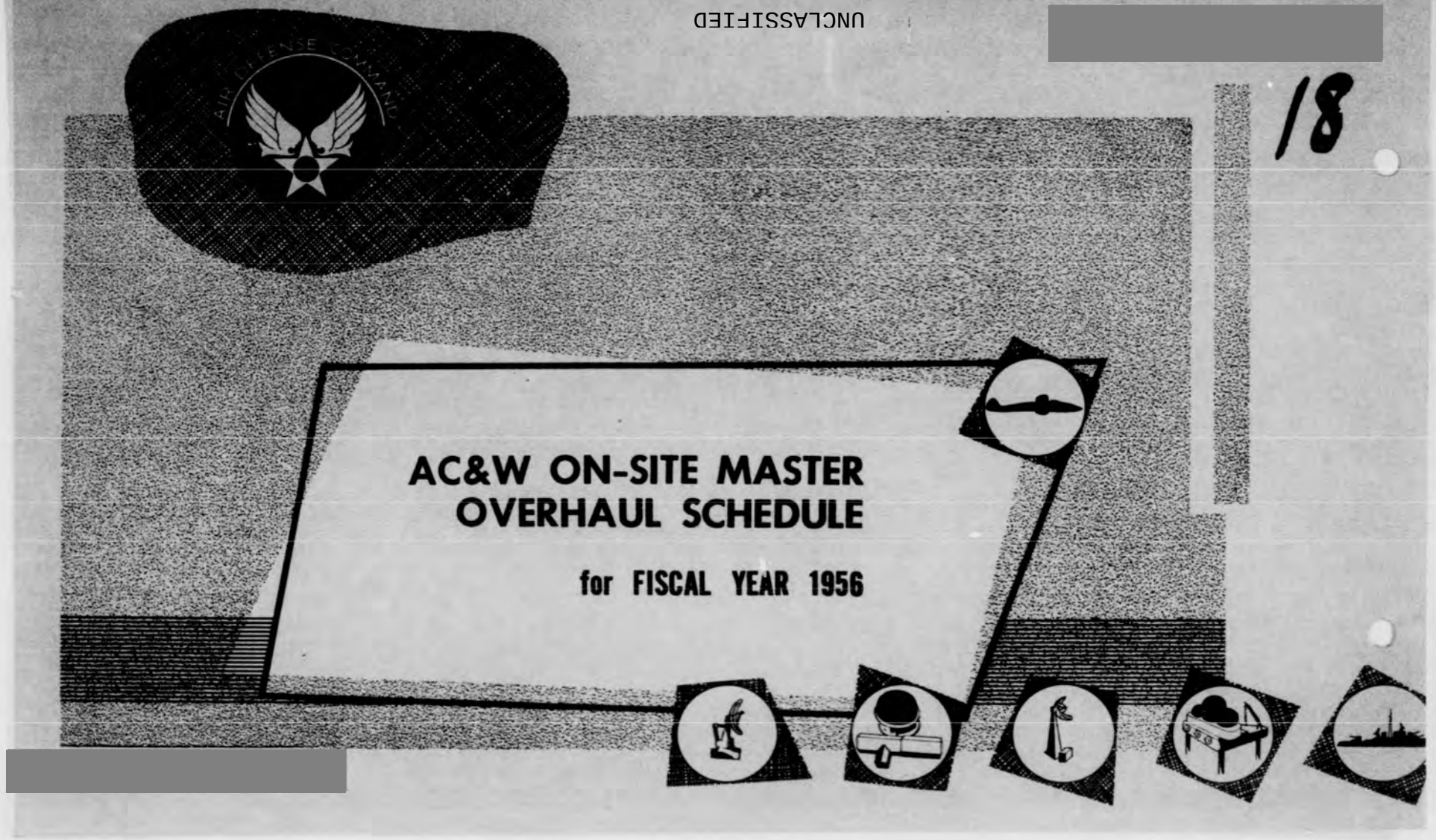


AC&W ON-SITE MASTER OVERHAUL SCHEDULE

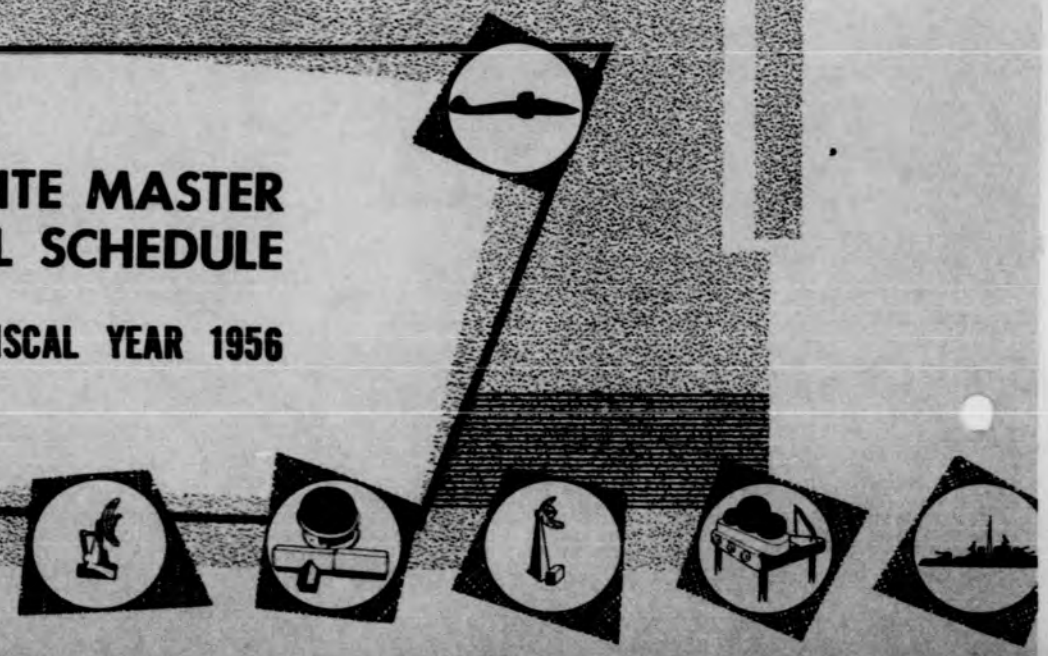
for FISCAL YEAR 1956

[redacted]

18

AC&W ON-SITE MASTER OVERHAUL SCHEDULE

for FISCAL YEAR 1956



FORWARD

The purpose of this document is twofold:

1. To provide a management "tool" so that scheduled depot maintenance, modification and radome painting will interfere with the AC&W's Squadrons' mission as little as possible.

2. To consolidate, into one document, depot work requirements gathered from a number of sources.

The Master On-Site Depot Overhaul Schedule will be produced yearly (for each fiscal year) based on the following criteria:

1. Adjacent radar stations must not be off the air at the same time for scheduled maintenance, overhaul or radome painting.

2. Communication and radar equipment at AC&W stations requires overhaul every eighteen months.

3. Radomes require overhaul and/or painting as follows:

   a. Radomes that have previously been overhauled will require repair/painting every eighteen months.

   b. Newly installed radomes will require repair/painting sometime during the first year.

Notice that some equipments and squadrons are not scheduled for FY-56 overhaul. There are many and varied reasons for eliminating these sites from this year's schedule; however, it is definitely planned to schedule them for overhaul during the first six months of FY-57.

Symbols used in the Master Schedule are:

OH	- Overhaul
RA	- Radome painting and/or overhaul.
Misc	- Used for scheduling major modifications which require the radar to be shut down. As modifications become necessary, we shall schedule them and advise all concerned.
Date	- Shown under appropriate column is the STARTING date. A maximum of fourteen elapsed days may be used for overhauls; five days for radome painting and overhaul; and as will be indicated in our message for modificat' ns.
N/S	- Not scheduled this fiscal year.
Depot Agency	- The AMA or contractor doing the on-site work.

One word of caution. It took almost a year to prepare and coordinate this schedule. Basically, this was due to the fact that adjacent radars cannot be off the air at the same time for scheduled depot maintenance; consequently it took a great deal of planning to work out the dates shown in the schedule. To change one date generally starts a chain reaction causing many other dates to change. This, in turn, upsets the plans of the depots and contractors, with the result that many man days are lost and the cost of doing the job is increased Therefore, it is absolutely necessary for dates to remain as shown herein.

This Headquarters alone reserves the right to change dates.

DISTRIBUTION

Headquarters, Western Air Defense Force - 6
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Headquarters, Eastern Air Defense Force - 6
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Headquarters, 35th Air Division - 3
Headquarters, 4706th Defense Wing - 3
Headquarters, 4707th Defense Wing - 3
Headquarters, 4708th Defense Wing - 3
Headquarters, 4709th Defense Wing - 3
Headquarters, 4710th Defense Wing - 3
Headquarters, 4711th Defense Wing - 3

Headquarters, Air Materiel Command -2
Headquarters, Rome Air Force Depot -20
Headquarters, Air Defense Command, Detachment 21 -6
Air Officer Commanding, Air Defence Command, RCAF Station St. Hubert, P. Q., Canada -1

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9th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-6	15 Sep 55 Bendix	1 Oct 55 Bendix														7 May 56 SMAMA				7 May 5 SMAMA	
P-11	N/S Bendix	8 Sep 55 Bendix					N/S G.E.			19 Mar 56 SMAMA										19 Mar 56 SMAMA	
P-32	20 Oct 55 Bendix									7 Nov 55 SMAMA										7 Nov 55 SMAMA	
P-40	3 Oct 55 Bendix	22 Sep 55 Bendix											N/S G.E.			N/S SMAMA				N/S SMAMA	
P-60	29 Aug 55 Bendix	15 Sep 55 Bendix					N/S G.E.						N/S G.E.			16 Apr 56 SMAMA				16 Apr 56 SMAMA	

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25th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-1				N/S G.E.	21 May 56 G.E.															N/S SMAMA	
P-12	8 Jul 55 Bendix	1 Nov 55 Bendix					N/S G.E.			5 Mar 56 SMAMA			N/S G.E.							5 Mar 56 SMAMA	
P-44	10 Aug 55 Bendix	11 Oct 55 Bendix					N/S G.E.			N/S SMAMA			N/S G.E.							N/S SMAMA	
P-46				N/S G.E.	N/S G.E.															4 Jun 56 SMAMA	
P-57	25 Jul 55 Bendix	20 Oct 55 Bendix					N/S G.E.						N/S G.E.							N/S SMAMA	
M-100							N/S G.E.			12 Sep 55 SMAMA			N/S G.E.							12 Sep 55 SMAMA	

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26th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/FPS-1 B-C-D		COMM & DIESEL EQU	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	Mi
P-9		N/S Bendix		11 Jul 55 G.E.	7 May 56 G.E.		N/S G.E.						N/S G.E.							N/S MAAMA	
P-30		N/S Bendix		N/S G.E.	18 Jun 56 G.E.								N/S G.E.							7 May 56 MAAMA	
P-45	21 Jun 56 Bendix	N/S Bendix					N/S G.E.						N/S G.E.							3 Oct 55 MAAMA	
P-54	2 Jun 56 Bendix	N/S Bendix					N/S G.E.						N/S G.E.							N/S MAAMA	
P-55	5 Apr 56 Bendix	N/S Bendix											N/S G.E.							7 Nov 55 WRAMA	
P-56	17 Mar 56 Bendix	N/S Bendix					N/S G.E.						N/S G.E.							1 Aug 55 WRAMA	
P-63	N/S Bendix	N/S Bendix											N/S G.E.							N/S MAAMA	
P-121		N/S Bendix					23 Apr 56 G.E.						N/S G.E.							2 Apr 56 WRAMA	

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27th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1D B-C-D		COMM & DIESEL EQU	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-2	N/S Bendix	N/S Bendix					N/S G.E.			2 Oct 55 SMAMA			N/S G.E.							2 Oct 55 SMAMA	
P-15		N/S Bendix		14 May 56 G.E.	N/S G.E.		N/S G.E.			9 Jan 56 SMAMA										9 Jan 56 SMAMA	
P-39	N/S Bendix	N/S Bendix					N/S G.E.			2 Apr 56 SMAMA			N/S G.E.							2 Apr 56 SMAMA	
P-59		N/S Bendix		11 Jul 55 G.E.	N/S G.E.															8 Aug 55 SMAMA	
P-76	N/S Bendix	N/S Bendix					N/S G.E.			N/S SMAMA			3 Nov 55 G.E.							N/S SMAMA	
M-128	16 May 56 Bendix																				

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28th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQU	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-33	N/S Bendix	15 Nov 55 Bendix					N/S G.E.			23 Jan 56 SMAMA										23 Jan 56 SMAMA	
P-37	N/S Bendix	1 Dec 55 Bendix					N/S G.E.			11 Jul 55 SMAMA			N/S G.E.							11 Jul 55 SMAMA	
P-38				12 Sep 55 G.E.	N/S G.E.		N/S G.E.			N/S SMAMA										N/S SMAMA	
P-58				26 Mar 56 G.E.	N/S G.E.															21 May 56 SMAMA	
P-74	N/S Bendix									N/S SMAMA										N/S SMAMA	

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29th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	
P-24	N/S Bendix	1 Sep 55 Bendix					N/S G.E.			9 Jan 56 OOAMA										9 [illegible] 56 OOAMA	
P-25	N/S Bendix	22 Aug 55 Bendix					N/S G.E.			1 Aug 55 OOAMA										1 Aug 55 OOAMA	
P-26	11 Jul 55 Bendix	15 Aug 55 Bendix					N/S G.E.			12 Sep 55 OOAMA										12 Sep 55 OOAMA	
P-27	28 Jul 55 Bendix	8 Aug 55 Bendix					N/S G.E.			3 Oct 55 OOAMA										3 Oct 55 OOAMA	
P-28	16 Aug 55 Bendix	1 Aug 55 Bendix					N/S G.E.			7 Nov 55 OOAMA										7 Nov 55 OOAMA	
P-29	3 Sep 55 Bendix	22 Jul 55 Bendix					N/S G.E.			5 Dec 55 OOAMA										5 Dec 55 OOAMA	
M-97	30 May 56 Bendix												N/S G.E.							11 Jul 55 OOAMA	
M-99	18 Jun 56 Bendix												N/S G.E.							6 Feb 56 OOAMA	

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SOUTH AIR DIVISION (Defense [redacted]

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-16	10 May 56 Bendix												N/S G.E.			1 Aug 55 OCAMA				1 Aug 55 OCAMA	
P-19	10 Mar 56 Bendix									5 Dec 55 OCAMA						-				5 I 55 OCAMA	
P-20				5 Mar 56 G.E.	N/S G.E.					N/S MOAMA										N/S MOAMA	
P-31				23 Jan 56 G.E.	N/S G.E.															6 Feb 56 OCAMA	
P-34				19 Mar 56 G.E.	N/S G.E.															4 Jun 56 MOAMA	
P-43	24 Apr 56 Bendix	1 Jan 56 Bendix																		3 Oct 55 MOAMA	
P-53				9 Jan 56 G.E.	N/S G.E.															6 Feb 56 MOAMA	
P-61	29 Aug 55 Bendix												N/S G.E.							N/S MOAMA	
P-62	10 Aug 55 Bendix									N/S MOAMA						N/S MOAMA				N/S MOAMA	
P-66	3 Oct 55 Bendix												N/S G.E.			11 Jul 55 OCAMA				11 Jul 55 OC	
P-67	16 Sep 55 Bendix									2 Apr 56 MOAMA										2 Apr 56 MOAMA	
P-73	14 May 56 Bendix									5 Dec 55 MOAMA										5 Dec 55 MOAMA	
P-82	N/S Bendix									1 Aug 55 MOAMA										1 Aug 55 MOAMA	

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31st Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL-EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-17	30 Mar 56 Bendix	8 Jul 55 Bendix								3 Oct 55 OCAMA			N/S G.E.							3 Oct 55 OCAMA	
P-18	20 Feb 56 Bendix	1 Jul 55 Bendix								7 Nov 55 OCAMA			N/S G.E.							7 Nov 55 OCAMA	
P-35				9 Jan 56 G.E.																9 Jan 56 OCAMA	
P-69	20 Apr 56 Bendix	15 Jul 55 Bendix											23 Apr 56 G.E.			5 Mar 56 OCAMA				5 Mar 56 OCAMA	
P-71	1 Feb 56 Bendix									2 Apr 56 OCAMA			19 Mar 56 G.E.							2 Apr 56 OCAMA	
P-81				31 Oct 55 G.E.																12 Sep 55 OCAMA	
P-85	N/S Bendix									4 Jun 56 OCAMA										4 Jun 56 OCAMA	

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32nd Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10 AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQU	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	CH	Mi
P-10		N/S Bendix		12 Sep 55 G.E.	8 Aug 55 G.E.		N/S G.E.						N/S G.E.							7 Nov 5 MAAMA	
P-13		N/S Bendix		5 Dec 55 G.E.	3 Jul 55 G.E.		N/S G.E.						N/S G.E.							5 Mar 56 MAAMA	
P-14		N/S Bendix		24 Oct 55 G.E.	N/S G.E.								N/S G.E.							9 Jan 56 MAAMA	
P-21		N/S Bendix		N/S G.E.	N/S G.E.								N/S G.E.							2 Apr 56 MAAMA	
P-49	25 Jul 55 Bendix	N/S Bendix											N/S G.E.							10 Sep 55 MAAMA	
P-50	5 Jul 55 Bendix	N/S Bendix											N/S G.E.							6 Feb 56 MAAMA	
P-65	N/S Bendix	N/S Bendix											N/S G.E.							6 Aug 55 MAAMA	
P-80		N/S Bendix		10 Oct 55 G.E.	N/S G.E.		N/S G.E.						N/S G.E.							11 Jul 55 MAAMA	

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33rd Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-47			-	N/S G.E.	16 Apr 56 G.E.															N/S OCAMA	
P-52				N/S G.E.	N/S G.E.															N/S OCAMA	
P-64				15 Aug 55 G.E.	N/S G.E.															1 May 56 OCAMA	
P-68	N/S Bendix	15 Dec 55 Bendix								N/S OCAMA										N/S OCAMA	
P-70	N/S Bendix									N/S OCAMA										N/S OCAMA	
P-72	N/S Bendix									N/S OCAMA										N/S OCAMA	
P-75	2 Jan 56 Bendix									6 Sep 55 SAAMA										6 Sep 55 SAAMA	
P-77				11 Jul 55 G.E.	N/S G.E.															N/S OCAMA	
P-78				N/S G.E.	N/S G.E.															5 Dec 55 SA	
P-79				N/S G.E.	7 Nov 55 G.E.		N/S G.E.													11 Jul 55 SAAMA	

[redacted]

[redacted]

33rd Air Division (Defense) Cont'd

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	Mi
M-91	7 Dec 55 Bendix																				
M-88	23 Jan 56 Bendix																				
M-125	18 Nov 55 Bendix																				
M-126	1 Nov 55 Bendix																				

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34th Air Division (Defense)

Site Number	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	Mi
P-7	26 Apr 56 Bendix	N/S Bendix														N/S SAAMA				N/S SAAMA	
P-8	19 Mar 56 Bendix	N/S Bendix											N/S G.E.			N/S SAAMA				N/S SAAMA	
P-51	7 Apr 56 Bendix	N/S Bendix														4 Jun 56 SAAMA				4 Jun 56 SAAMA	
M-90	10 Feb 56 Bendix	N/S Bendix											N/S Bendix							5 Mar 56 SAAMA	
M-95	29 Feb 56 Bendix																				

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[redacted]

35th Air Division (Defense)

	AN/FPS-3 AN/MPS-7			AN/CPS-6B AN/FPS-10			AN/FPS-8 AN/MPS-11			AN/TPS-10D AN/FPS-4			AN/FPS-6 AN/MPS-14			AN/FPS-5		AN/TPS-1 B-C-D		COMM & DIESEL EQ	
	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	RA	Misc	OH	Misc	OH	Misc	OH	M
P-42				27 Feb 56 G.E.	N/S G.E.															11 Jul 55 MOOAMA	
M-129	2 Jan 56 Bendix																				
M-112	21 Jan 56 Bendix																				
M-113	9 Feb 56 Bendix																				
M-115	28 Feb 56 Bendix																				

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SCHEDULE FOR CANADIAN SITES FOR FY-56

Depot overhaul dates are for all equipment at these sites. This will be accomplished by Canadian Aviation Electronics, LTD.

SITE	RADOME PAINTING	DEPOT OVERHAUL
C-10	N/S	N/S
C-14	28 Sep 55	N/S
C-15	18 Jul 55	N/S
C-16	12 Sep 55	N/S
C-17	N/S	25 Jul 55
C-19	1 Aug 55	7 Nov 55
C-20	22 Aug 55	10 Oct 55
C-21	N/S	12 Sep 55

[redacted]

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DOC 19 ADOCE-AL

HEADQUARTERS
AIR DEFENSE COMMAND
ENT AIR FORCE BASE
COLORADO SPRINGS, COLORADO

19

ADOCE-AL

29 June 1955

SUBJECT: (Unclassified) ADC AC&W Status Report

207.8

TO: See Distribution

1. This report supersedes the report dated 25 May 1955, subject as above, and the report dated 15 June 1955, subject: ADC AC&W Status Change Report, which may be destroyed. Report of destruction is not required by this headquarters.

2. Summary

	1st Phase Mobile	2nd Phase Mobile	3d Phase Mobile	1st Phase Gap-Filler	2nd Phase Gap-Filler
Number of Sites	*39	21	24	125	100
Surveys received	*38	20	*23	*125	3
Surveys approved by ADC	*38	20	*23	*122	0
Surveys approved by USAF	*38	20	*22	-	-
Construction contracts awarded	32	*9	0	0	0
Construction Accepted	*19	0	0	0	0
Electronic Installation Started	*11	0	0	0	0
Sites Operational	*4	0	0	0	0

3. 1st Phase Semi-Mobile Radar Program

a. There are 39 radar sites authorized for the 1st Phase Program exclusive of M-87. Implementation status is as follows:

(1) This headquarters has approved the site survey reports for 38 1st Phase sites. Design directives have been issued for 38 sites. Construction directives have been issued for 35 sites. Construction contracts have been awarded for 32 sites. Four sites are operational.

(2) Site M-120, Marathon, Ontario, Canada, has been deleted from the 1st Phase Program. Low level coverage in this area will be provided by gap filler type radars. Site M-119 is being relocated to provide better coverage along the perimeter of the combat zone. A new site survey report will be processed.

(3) "USAF Program Guidance" (PG-57-2) requires 7 radars sites by end FY55, 38 by end FY56, and 39 by end FY57. Present estimated operational dates indicate 5 sites operational by end FY55, 37 by end FY56 and 39 by end FY57.

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FANFOLD NO F-19189-A

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Hq ADC, ADOCE-AL, Subj: (Uncl) ADC AC&W Status Report

4. 2nd Phase Semi-Mobile Radar Program

a. There are 21 radar sites authorized for the 2nd Phase Program. Implementation status is as follows:

(1) This headquarters has approved the site survey reports for 20 2nd Phase sites. Design directives have been issued for 20 sites. Construction directives have been issued for 11 sites. Construction contracts have been awarded for 9 sites. No sites are operational.

(2) "USAF Program Guidance" (PG-57-2) requires 16 radar sites by end FY56 and 21 by end FY57. Present estimated operational dates indicate 13 sites operational by end FY56 and 21 by end FY57.

5. 3d Phase Semi-Mobile Radar Program

a. There are 24 radar sites authorized for the 3d Phase Program. Implementation status is as follows:

(1) This headquarters has approved the site survey reports for 23 3rd Phase sites. Design directives have been issued for 22 sites. One construction directive has been issued No construction contracts have been awarded.

(2) It has become necessary to relocate Site TM-201, Sundance, Wyoming. Since uranium has been found in the immediate area of the selected site, acquisition of required real estate is not practical. A new site survey report will be processed.

(3) "USAF Program Guidance" (PG-57-2) requires 2 radar sites by end FY56 and 24 by end FY57. Present estimated operational dates indicate 1 site operational by end FY56 and 24 by end FY57.

6. Gap-Filler Radar Program

a. There are 423 unattended gap-filler radars authorized for the gap-filler program. These radars are programmed in four increments as follows:

(1) 1st increment of 125 to be operational by end FY56.

(2) 2nd increment of 100 to be operational by end FY57.

(3) 3d increment of 98 to be operational by end FY58.

(4) 4th increment of 100 to be operational by end FY59.

b. First increment implementation status is as follows:

(1) One hundred twenty-five site surveys have been received and 122 have been approved by this headquarters.

(2) Design authorization has been issued for 75 sites. Construction directives have been issued on 15 sites.

c. Second increment implementation status is as follows:

(1) Three site surveys have been received and none have been approved by this headquarters.

d. Operational dates for gap-filler radar sites have been adjusted to coincide with availability of AN/FST-1 (SDV) equipment and the operational date of the parent radar site.

[redacted]

[redacted]

e. PC revisions for the Gap-filler Radar Program will be submitted by this headquarters to Headquarters USAF on a monthly basis. These revisions will be published monthly by USAF.

7. Texas Towers

a. Five Texas Towers are programmed. Site surveys were accomplished by civilian contractors under Navy supervision during the summer of 1954. The feasibility report, dated October 1954, from the Bureau of Yards and Docks, U. S. Navy, is considered the site survey report. The Bureau of Yards and Docks, in conjunction with the Air Force Installations Representative, New England Region, has the responsibility for construction of the towers. Design contract has been let for all towers. Construction contract has been awarded for one tower. Beneficial occupancy date for the first tower is October 1955, and operational date June 1956. Beneficial occupancy for the remaining four is September 1956, and operational date June 1957.

b. The first Texas Tower was launched 20 May 1955, and is to be towed to the site by 1 July 1955. It is expected to be in place by 10 August 1955.

c. The term "beneficial occupancy" indicates that the tower is in place and installation of equipment can begin.

8. ADCC Construction Program. Four control centers for new air divisions are programmed. Construction contracts have been awarded for all of these. These locations are:

SM-168, Truax Field, Wis.	(37th ADiv)
SM-169, Grandview AFB, Mo.	(20th ADiv)
SM-170, Wright-Patterson AFB, Ohio	(58th ADiv)
SM-171, Andrews AFB, Md.	(85th ADiv)

9. Publication Date. A complete report is published as of the last Wednesday of each month. One change report will be published about two weeks after the complete report. Distribution of this change report will be made only to those agencies which request the report. Requests for the change should be sent to this headquarters, ATTN: ADOCE-AL.

10. Beneficial Occupancy and Operational Dates. Corrected beneficial occupancy dates and percentage of construction completion were obtained 27 June 1955 from the ADC-AIO office. Operational dates are computed from beneficial occupancy dates and available installation data. It is ADC's requirement to have all sites operational at the earliest possible date.

11. Correction Submission. PC action has been or will be taken by this headquarters for all new equipment shown in this report.

12. Next Edition Due Date. The next edition of the ADC AC&W Status Report will be published as of 27 July 1955. A change report will be published 13 July 1955. It is requested that this headquarters, ATTN: ADOCE-AL, be advised by 8 July 1955 of any changes to this report.

13. Security Classification. To permit increased use of this Status Report, each page is classified individually according to the highest security classification of the sites listed. When pages 1, 2 and 3 of letter, and pages 3, 9, 15, 21 and 22 of Attachment 1 are withdrawn, document can be downgraded to UNCLASSIFIED in accordance with paragraph 25g, AFR 205-1.

BY ORDER OF THE COMMANDER:

Haskell E. Neal

HASKELL E. NEAL
Colonel, USAF
Director of Communications & Electronics

1 Incl
Attach 1

DISTRIBUTION:
(See next page)

[redacted]

0034

Hq ADC, ADOCE-AL, Subj: (Uncl) ADC AC&W Status Report

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AFOOA	1
AFOOP-OC-F	1
AFOOP-OP-D	1
CINCAL-J5	1
COMNAVFORCONAD/N3	1
Hq AMC (MCZCF)	5
Hq APGC (AFOTC)	1
Hq ATRC	1
Hq CTAF	1
Hq TTAF	1
Gentile AFD	
MDSCEE-2	2
Rome AFD	
MRF	1
MRM-2	3
MRMCC	1
MRSRD3A	1

Hq SAC (DINC)	2
Hq MAAMA (Maint & Engrg)	1
Hq MOAMA " "	1
Hq OCAMA " "	1
Hq OOAMA " "	1
Hq SAAMA " "	1
Hq SBAMA " "	1
Hq SMAMA " "	1
Hq WRAMA " "	1
Resident Auditor	1
Bell Tel Lab (Mr Halligan)	2
AT&T (Mr. Montgomery)	2
ADES Proj Office (USAF) to include Western Elect)	7
ADES Proj Office (USAF) Attn: Lt Col Dell	1
Lincoln Laboratory	
Comdr ADC Experimental Wg	1
Mr. Rader	1
1002nd IG Gp	1
Rand Corp (Capt Frank Winter)	1
Hq ARDC (RDTDRR)	1
Hq AFCRC (CRRA)	1

ADC ACCW STATUS REPORT

This report is compiled from the AF-220 Report and other information sources by the Plans & Projects Division, Directorate of Communications and Electronics, Headquarters ADC, Ent Air Force Base, Colorado Springs, Colorado.

LEGEND FOR RADAR TABULATION

A (prefix) --Arctic Tower/Radome
( )- -------Radars belonging to comds other than ADC
1C----------AN/TPS-1C (Portable, Search)
1D----------AN/TPS-1D (Portable, Search)
3-----------AN/FPS-3 (Fixed, Search)
3M----------AN/FPS-3 w/GPA-27 (Fixed, Search)
4-----AN/FPS-4 (Fixed, Height)
4C----AN/CPS-4 (Fixed, Height)
5-----AN/FPS-5 (Fixed, Height)
5D----AN/CPS-5D (Fixed, Search)
6-----AN/FPS-6 (Fixed, Height)
6B----AN/CPS-6B (Fixed, Search & Height)
7-----AN/MPS-7 (Mobile, Search)
8-----AN/FPS-8 (Fixed, Search)
8M----AN/MPS-8 (Mobile, Height)
10----AN/FPS-10 (Fixed, Search & Height)
10D---AN/TPS-10D (Portable, Height)
11----AN/MPS-11 (Mobile, Search)
14----AN/MPS-14 (Mobile, Height)
14F---AN/FPS-14 (Fixed, Search)

OPERATIONAL STATUS LEGEND

Blank — No site survey has been approved by ADC for this site number or location.

$ — Site Survey approved but no beneficial occupancy date established

X — Inoperative. Cannot be placed in operation in less than ten days.

L — Limited Operational. Due to shortage of personnel and/or equipment cannot be operated continuously. Can operate for a minimum of 24 hours on an emergency basis.

S — Sustained Operational. Minimum personnel and equipment are on hand to allow continuous operation.

F — Fully Operational. Complete coverage of radar is known; sufficient equipment and trained personnel are on hand to operate and maintain equipment in accordance with the assigned mission. (This does not mean that all emergency equipment is installed.)

MISCELLANEOUS LEGEND

* Change from previous report
0 0% as indicated on all incoming reports.
\- Not required.
\# Required but not programmed.

Beneficial occupancy dates are based on latest information from AFIR. When these dates are underlined, AC&W squadron personnel have moved to the site.

Date of contract award indicates that a construction contract has been awarded. When a date is underlined, this indicates that construction has been accepted from the contractor.

Operational date underlined indicates that technical equipment installation is in progress

Attach #1

ADC AC&W Status Report
1st Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-87	Dobbins AFB, Ga.	-	-	-	-	-	100	-	-	-	-	50	96	96	1951	- - -	Nov 52	F	35th ADiv (D)
M-88	Amarillo AFB,Tex	688	7	6	-	*6	100	100	0	-	*0	20	20	*40	40	31Mar54	Nov 54	*May 55	*L	*TPS-10D instld as interim height (*100%)
M-89	Sweetwater, Tex.	683	11	6	-	*6	90	20	0	-	0	20	0	20	20	31Dec54	Aug 55	*Sep 55	X	*BOD for Ops Area Jul 55. TPS-10D to be installed as interim height (20%).
M-90	Walker AFB, N.M.	686	7	6	-	*14	100	35	*0	-	*35	20	*0	*50	20	16Apr54	Feb 55	*Jul 55	X	*Delay in ops date due to delay in instl of radar by AMA.
M-91	Texarkana, Ark.	703	7	*6	-	*14	100	*80	*0	--	*80	20	20	20	20	25Jun54	*Apr 55	*Jun 55	*L	
M-92	Tucson, Ariz.	684	A 7	*A6	-	*14	30	0	0	-	0	0	0	0	0	31 Mar55	Sep 55	Nov 55	X	*TPS-10D to be installed as interim height (0%)
M-93	Winslow, Ariz.	904	A 11	A 6	-	*A 6	*100	0	0	-	*0	-	0	0	0	*24Sep54	*Jun 55	*Oct 55	X	*Delay in ops date due to delay in [illegible] duction of twr [illegible] 313 for MPS-11.
M-94	West Mesa, N. M.	687	7	*6	-	*14	*15	0	0	-	0	0	0	0	0	31Mar55	Feb 56	Apr 56	X	*TPS-10D to be installed as interim height (0%).

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AC&W Status Report
1st Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-95	Las Cruces, N.M.	685	7	*6	1D	*14	100	*94	*0	35	35	0	0	*20	40	19May54	Feb 55	*Jul 55	*X	*MPS-8 to be instld as interim height (35%).
M-96	Almaden, Calif.	682	7	*6	--	*14	10	20	*20	--	20	*20	*20	*20	0		Jul 56	Sep 56	X	*Acquisition of real estate delaying contract award. MPS-8 to be instld as interim height (20%).
M-97	Ellsworth AFB,SD	740	7	*A6	--	*14	*100	*95	*0	--	*35	*75	10	95	90	*29Jun54	*Apr 55	Jun 55	*L	
M-98	Miles City, Mont.	902	7	*A6	--	*14	*98	35	*0	--	*35	0	0	*20	*100	30Mar54	*Jun 55	Aug 55	X	
M-99	Gettysburg, S.D.	903	7	A 6	--	14	*26	0	0	--	0	0	0	0	0	30Nov54	Oct 55	Dec 55	X	
M-100	Mt Hebo, Ore.	689	A 11	A 6	A 11	*A 6	80	*25	*25	*25	*20	*20	*20	*30	*30	28May54	*Jul 55	*Oct 55	X	*Delay in ops date due to delay in production of twr AB-313 for MPS-11's.
M-101	Rochester, Minn.	808	1D	--	--	--	*95	*35	--	--	--	--	*20	20	20	24Jun54	*Jul 55	Aug 55	X	
M-102	Barrington, N.S., Can.	672	A 3	A 6	-	A 4	0	0	0	--	0	0	0	0	0		Apr 56	Jun 56	X	
M-103	No. Concord, Vt.	911	A 11	A 6	--	A 14	20	*20	0	--	*20	0	*20	*20	*20	*29Apr55	Nov 55	Jan 56	X	

ADC AC&W Status Report As of 29 Jun 55
1st Phase

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	C&E INSTALLATION: % Site Construction	% Primary Search	% Primary Height	% Standby Search	% Standby Height	% G/A Radio	% P/P Radio	% T/T Inside Plnt	% T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-104	Rye, N. H.	644	1D	-	1D	--	100	*20	--	*20	--	--	*20	*20	*20	24Sep54	Mar 55	*Jul 55	X	*Delay in ops date due to nonavilability of technical equipment.
M-105	Alpena, Mich.	677	1D	--	--	--	100	*35	--	--	--	--	*20	*20	*20	16Jun54	Jan 55	*Aug 55	X	*Delay in ops date due to nonavilability of technical equipment.
M-106	Two Rivers, Wis.	700	1D	-	--	--	100	*35	--	--	--	--	*20	*40	40	28Apr54	Jan 55	Jul 55	X	*Delay in ops date due to nonavilability of technical equipment.
M-107	(Nr not asgnd)																			
M-108	(Nr not asgnd)																			
M-109	Grand Marais, Mich.	906	1D	-	-	-	100	*35	-	-	--	--	*20	*20	*20	29Apr54	Jan 55	Jul 55	X	*Delay in ops date due to nonavilability of technical equipment.
M-110	Bucks Harbor, Me.	907	A 11	A 6	*A 8	A 6	100	*20	0	*0	0	0	*20	*20	*20	24Sep54	Mar 55	Jul 55	X	Delay in ops dt due to delay in production of twr AB-313 for MPS-11.

ADC AC&W Status Report
1st Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-111	Dobbins AFB, Ga.	908	11	6	-	*6	*7	0	0	--	0	0	--	0	0		Dec 55	Feb 56	X	*MPS-8 to be instld as interim height (0%).
M-112	Hunter AFB, Ga.	702	7	*6	8	*14	100	*35	0	*35	*35	0	0	0	0	7Oct54	*May 55	Jul 55	X	*TPS-10D to be instld as interim height (*35%).
M-113	N. Charleston, S. C.	792	7	*6	8	*14	*100	*65	*0	*20	*21	*20	0	*36	*20	25Jul54	*May 55	*Jul 55	X	*Ops & power bldg BOD 14 May 55. MPS-8 to be instld as interim height (50%).
M-114	Jacksonville NAS, Fla.	679	8 (Navy)	*6	8	*14	4	0	0	0	0	0	0	0	0		May 56	*Jul 56	X	*TPS-10D to be instld as interim height (0%).
M-115	Ft Fisher, N.C.	701	7	*6	11	*14	*71	0	0	0	0	0	0	0	0	30Dec54	Jul 55	Sep 55	X	*MPS-8 to be instld as interim height (0%).
M-116	Cherry Pt MCAS, N. C.	614	8 (MC)	6	*8	6	0	0	0	0	0	0	0	0	0		*Apr 56	*Jun 56	X	*TPS-10D to be instld as interim height (0%).
M-117	Roanoke Rapids, N. C.	632	11	6	-	6	*49	*20	0	-	0	0	0	0	0	0	120ct54	*Jul 55	*Sep 55	X	*TPS-10D to be instld as interim height (0%).

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ADC AC&W Status Report
1st Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-118	Burns, Ore.	634	A 7	A 6	-	A 6	95	20	*20	-	*20	20	20	20	20	31Mar54	*Jun 55	<Oct 55	X	*Delay in ops date due to construction of arctic twr for MPS-7.
M-119		639	A 7	A 14	*-	A 4	0	0	0	*-	0	0	0	0	0		Apr 56	Jun 56	X	*Site being relocated.
M-120																				*Site deleted.
M-121	Bedford, Va.	649	11	6	-	6	100	*90	0	-	0	*20	*20	*90	*90	22Mar54	Jan 55	*Jun 55	X	*MPS-8 to be instld as interim height (90%).
M-122	Dallas Center, Iowa	650	1D	-	-	-	*80	0	-	-	-	0	0	0	0	Jul 54	Jun 55	Aug 55	X	
M-123	(Nr not asgnd)																			
M-124	(Nr not asgnd)																			
M-125	England AFB, La.	653	7	*6	-	*14	*100	35	0	-	35	0	0	0	*100	*29Jun54	May 55	Aug 55	X	*BOD for ops area Apr 55
M-126	Houma NAS, La.	657	7	*6	1D	*14	*98	35	0	35	35	*20	*20	*20	*20	*3Aug54	Jul 55	Sep 55	X	*TPS-10D to be instld as interim height (35%).

AIC AC&W Status Report
1st Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-127	Winnemucca, Nev.	658	A3	A 6	-	A6	60	20	0	-	0	*20	*20	*20	0	29Oct54	Sep 55	Nov 55	X	
M-128	Kingman, Ariz.	659	7	*6	-	*14	*100	*35	0	-	*35	*20	0	*60	*100	*9Sep54	*Jun 55	Nov 55	X	*BOD for ops area Apr 55. Delay in ops date due to delay in instl of outside tp eqp.
M-129	MacDill AFB, Fla.	660	7	*6	*11	*14	100	*95	0	0	*35	*20	*20	*90	95	20Jan54	Oct 54	Feb 55	S	*Oprg as surveillance station.
M-130	Winston Salem, NC	810	11	6	-	8M	10	0	0	-	0	0	0	0	0		Mar 56	May 56	X	*Acquisition of real estate delaying contract award. MPS-8 to be instld as int nt (0%).
M-131	Owingsville AFS, Ky.	809	1D	-	-	-	100	*95	-	-	-	*-	*20	20	20	18Jan54	Nov 54	Jul 55	X	*Delay in ops date due to nonavailability of technical eqp.

ADC AC&W Status Report
2nd Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
SM-132	Baudette, Minn.	692	A 3	A 6	-	A 6	*7	0	0	-	0	0	0	0	0		Dec 56	Feb 57	X	
SM-133	Hastings NAD,Nebr	625	A 3	A 6	-	*A 6	*10	0	0	-	*0	0	0	0	0		Dec 56	Feb 57	X	
SM-134	Lake Andes, S.D.	695	A 3	A 6	-	*A 6	*10	0	0	-	*0	0	0	0	0		Dec 56	Feb 57	X	
SM-135	(Nr not asgnd)																			
SM-136	(Nr not asgnd)																			
SM-137	Carmi, Ill.	704	1D	--	-	-	*99	*35	-	-	-	-	*20	*20	*20	29Sep54	Jun 55	Aug 55	X	
SM-138	Grand Rapids, Minn.	707	A 3	A 6	-	A 6	10	0	0	-	0	0	0	0	0	*17Jun55	Jun 56	Aug 56	X	*Acquisition of real estate delaying contract award.
SM-139	Willmar, Minn.	721	A 8	A 6	-	A 6	10	0	0	-	0	0	0	0	0	* 9 Jun 55	Jun 56	Aug 56	X	*FPS-4 to be instld as interim height (0%). Acquisition of real estate delaying contract awd.
SM-140	(Nr not asgnd)																			
SM-141	(Nr not asgnd)																			
SM-142	(Nr not asgnd)																			

[redacted] DC AC&W Status Report
2nd Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
SM-143	Walnut Ridge, Ark	725	11	6	-	*6	15	0	0	-	0	0	0	0	0	11Mar55	Oct 55	Dec 55	X	*MPS-8 to be instld as interim ht (0%).
SM-144	Union City, Tenn.	730	8	6	-	6	0	0	0	-	0	0	0	0	0		*Mar 57	*May 57		*New sitesurv rept being prepared changing site to a DC
SM-145	Joelton, Tenn.	799	11	6	-	6	15	0	0	-	0	0	0	0	0	*8 Jun 55	Jul 56	Sep 56	X	*TPS-10D to be instld as int ht (0%).
SM-146	(Nr not asgnd)																			
SM-147	Great Falls AFB, Mont.	801	A 7	A 6	-	*A 6	4	0	0	-	0	0	0	0	0		Feb 56	Apr 56	X	*MPS-8 to be instld as int ht (0%).
SM-148	(Nr not asgnd)																			
SM-149	Baker, Ore.	821	A 7	*A 6	-	*A 14	0	0	0	-	*0	0	0	0	0		Sep 56	Nov 56	X	
SM-150	Cottonwood, Ida.	822	A 8	A 6	-	A 6	10	0	0	-	*0	0	0	0	0		Apr 56	Jun 56	X	
SM-151	Geiger Field, Spokane, Wash.	823	A 7	*A 6	-	*A 14	5	0	0	-	0	0	0	0	0		Jan 56	Mar 56	X	*MPS-8 to be instld as int ht (0%).
SM-152	(Nr not asgnd)																			
SM-153	Kamloops, BC, Can.	825	A 3	A 6	*-	A 4	0	0	0	*-	0	0	0	0	0		Apr 56	Jun 56	X	

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ADC AC&W Status Report
2nd Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
SM-154	(Nr not asgnd)																			
SM-155	(Nr not asgnd)																			
SM-156	Fallon, Nev.	858	7	*6	-	*14	10	20	*0	-	*20	*20	*20	*20	0		Dec 55	Feb 56	X	*Acquisition of real estate delaying contract award.
SM-157	Red Bluff, Calif.	859	11	6	-	*6	*15	20	0	-	*20	*20	*20	*20	0	31Mar55	Nov 55	Jan 56	X	*MPS-8 to be instld as int ht (20%).
SM-158	(Nr not asgnd)																			
SM-159	Aiken, S. C.	861	3	*6	-	*14	*57	0	0	-	0	0	0	0	0	29Dec54	Aug 55	Oct 55	X	*TPS-10D to be instld as int ht (0%).
SM-160	(Nr not asgnd)																			
SM-161	(Nr not asgnd)																			
SM-162	Yuma AFB, Ariz.	864	7	*6	11	*14	*20	0	0	0	0	0	0	0	0	31Mar55	*Apr 56	*Apr 56	X	*MPS-8 to be instld as int ht (0%). BOD for Ops Area Dec
SM-163	Las Vegas, Nev.	865	A 3	*6	-	*14	*20	0	0	-	*0	0	0	0	0	30Mar55	Jan 56	Mar 56	X	
SM-164	Tonopah, Nev.	866	7	6	-	6	*20	20	0	-	0	*20	*20	*20	0	30Mar55	Dec 55	Feb 56	X	

ADC AC&W Status Report
2nd Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
SM-165	Chattanooga, Tenn	867	11	6		*6	10	0	0	--	0	0	0	0	0		Feb 56	Apr 56	X	*TPS-10D to be instld as int ht (20%).
SM-168	Truax Fld, Wis.	--	--	--	--	--	*15	--	--	--	--	--	0	0	0	Feb 55	Nov 55	Mar 56	X	37th ADiv (D)
SM-169	Grandview AFB, Mo	--	--	--	--	--	*25	--	--	--	--	--	0	0	0	Jan 55	*Nov 55	Mar 56	X	20th ADiv (D)
SM-170	Wright-Patterson AFB, Ohio	--	-	--	--	--	*37	--	-	--	--	--	0	0	0	Jan 55	*Sep 55	Mar 56	X	58th ADiv (D)
SM-171	Andrews AFB, Md.	--	--	--	--	--	*40	-	--	--	--	--	0	0	0	Jan 55	*Sep 55	Mar 56	X	85th ADiv (D)
SM-172	Geiger Field, Spokane, Wash.	--	--	--	--	--	100	--	--	--	--	--	0	100	100	Jul 54	Nov 54	Dec 54	F	9th ADiv (D)

ADC AC&W Status Report
3d Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
TM-177	Dickinson, N.D.	706	A 3	A 6	-	*A 6	0	0	0	-	*0	0	0	0	0		Feb 57	Apr 57	X	
TM-178	Lewistown, Mont.	694	A 3	A 6	-	*A 6	0	0	0	-	*0	0	0	0	0		Nov 56	Jan 57	X	
TM-179	Kalispell, Mont.	716	A 3	A 6	-	*A 6	0	0	0	-	*0	0	0	0	0		Nov 56	Jan 57	X	
TM-180	Klamath Falls, Ore.	827	A 3	A 6	-	*A 6	0	*20	*20	-	*20	0	*20	0	0		Nov 56	Jan 57	X	
TM-181	Ajo, Ariz.	612	3	6	*-	*6	0	0	0	*-	0	0	0	0	0		Dec 56	Feb 57	X	*FPS-4 to be instld as int ht (0%).
TM-182	Nogales, Ariz.	816	A 3	A 6	*A 11	*A 6	0	0	0	0	0	0	0	0	0		Dec 56	Feb 57	X	*FPS-4 to be instld as int ht (0%).
TM-183	Hachita, N. M.	826	A 3	A 6	*-	*A 6	0	0	0	*-	0	0	0	0	0		Sep 56	Nov 56	X	*FPS-4 to be instld as int ht (0%).
TM-184	Valentine, Tex.	675	A 3	A 6	-	*A 6	0	0	0	-	0	0	0	0	0		Jun 56	Aug 56	X	*FPS-4 to be instld as int ht (0%).
TM-185	(Nr not asgnd)																			
TM-186	Pyote, Tex.	697	3	6	1D	6	0	0	0	0	0	0	0	0	0		Jun 56	Aug 56	X	*FPS-4 to be instld as int ht (0%).
TM-187	Ozona, Tex.	732	3	6	-	*6	0	0	0	-	*0	0	0	0	0		Aug 56	Oct 56	X	

ADC **AC&W Status Report**
3d Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
TM-188	Eagle Pass, Tex.	733	3	6	-	*6	0	0	0	-	0	0	0	0	0		Jun 56	Aug 56	X	*MPS-8 to be instld as int ht (0%).
TM-189	Zapata, Tex.	742	3	6	1D	*6	0	0	0	0	0	0	0	0	0		Jun 56	Aug 56	X	*MPS-8 to be instld as int ht (0%).
TM-190	Port Isabel, Tex.	811	3	6	*-	*6	0	0	0	*-	0	0	0	0	0		Jun 56	*Oct 56	X	*MPS-8 to be instld as int ht (0%).
TM-191	Rockport, Tex.	813	3	6	-	*6	0	0	0	-	0	0	0	0	0		Jun 56	Aug 56	X	*MPS-8 to be instld as int ht (0%)
TM-192	Gray AFB, Tex.	814	3	6	-	*6	0	0	0	-	0	0	0	0	0		Jul 56	Sep 56	X	
TM-193	Lufkin, Tex.	815	3	6	-	*6	0	0	0	-	*0	0	0	0	0		Aug 56	Oct 56	X	
TM-194	Lake Charles AFB, La.	812	3	6	1D	*6	0	0	0	0	0	0	0	0	0		Jun 56	Aug 56	X	*MPS-8 to be instld as int ht (0%).
TM-195	Crystal Springs, Miss.	627	3	6	-	*6	0	0	0	-	*0	0	0	0	0		Dec 56	*Dec 56	X	*BOD for Ops Area Oct 56.
TM-196	Foley, Ala.	693	3	6	1D	*6	0	0	0	0	0	0	0	0	0		Dec 56	*Dec 56	X	*MPS-8 to be ins' as int ht (0%). BOD for Ops Area Oct 56.
TM-197	Thomasville, Ala	698	3	6	-	*6	0	0	0	-	*0	0	0	0	0		Dec 56	*Dec 56	X	*BOD for Ops Area Oct 56.

vvvvvv

ADC AC&W Status Report
3d Phase

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
TM-198	Tyndall AFB, Fla.	678	3 (ATC)	6 (ATC)	-	*6	0	0	0	-	*0	0	0	0	0		Mar 56	May 56	X	
TM-199	Eufaula, Ala.	609	3	6	-	*6	0	0	0	-	*0	0	0	0	0		Dec 56	*Dec 56	X	*BOD for Ops Area Oct 56.
TM-200	Cross City, Fla.	691	3	6	-	*6	0	0	0	-	0	0	0	0	0		Sep 56	*Sep 56	X	*MPS-8 to be instld as int ht (0%). BOD for Ops Area Jun 56.
TM-201	*																			*Site being relocated.

[redacted] OC AC&W Status Report
exas Towers & Lashup Sites

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
TT-1	Cashes Ledge	762	A 3	A 6	--	A 6	0	0	0	--	0	0	0	0	0		Sep 56	Jun 57	X	To report to P-10
TT-2	Georges Shoal	762	A 3	A 6	--	A 6	0	0	0	--	0	0	0	0	0	29Dec55	Oct 55	Jun 56	X	To report to P-10. Launched 20 May 55.
TT-3	Nantucket Shoal	773	A 3	A 6	--	A 6	0	0	0	--	0	0	0	0	0		Sep 56	Jun 57	X	To report to P-45.
TT-4	Shoal (Unnamed)	646	A 3	A 6	--	A 6	0	0	0	--	0	0	0	0	0		Sep 56	Jun 57	X	To report to P-9.
TT-5	Brown's Bank	654	A 3	A 6	--	A 6	0	0	0	--	0	0	0	0	0		Sep 56	Jun 57	X	To report to P-13.
L-1	Walker AFB, N.M.	686	5D	--	*--	--	100	100	--	*--	--	100	100	100	100				F	
L-2	Davis-Monthan AFB, Ariz.	684	1D	--	--	--	100	100	--	--	--	100	100	100	100				F	
L-3	Kirtland AFB, NM	687	5D	4C	1D	--	100	100	100	100	--	100	*50	100	100				F	
L-4	Fort Ord, Calif.	Det 1 666	5D	--	--	--	100	100	--	--	--	--	*--	100	100				F	
L-5	Ellsworth AFB, SD	740	5D	4C	--	--	100	100	100	--	--	100	100	100	100				F	
L-6	Portland, Ore.	689	5D	*10D	--	--	100	100	100	--	--	[redacted]							F	
L-7	Great Falls AFB, Mont.	903	1D	8M	--	--	100	100	100	--	--	20	20	100	100				*S	

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UNCLASSIFIED

ADC AC&W Status Report
Gap--Fillers

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
*P-2A	Hunter-Liggett MR, Calif.	775	14F	--	--	--	0	0	--	--	--	--	--	0	0		May 56	Jun 56	X	PSSR approved by ADC 28 Jun 55
P-9A	Gibbsboro, N. J.	646	14F	--	--	--	0	0	--	--	--	--	--	0	0		Dec 55	*Feb 56	X	
*P-9B	Duttonville, N.J.	646	14F	--	--	--	0	0	--	--	--	--	--	0	0		Dec 55	Feb 56	X	*Redesignated from P-30A
P-10A	Westboro, Mass.	762	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Nov 55	Jan 56	X	*Construction directive issued 17 Jun 55.
P-11A	Porthill, Ida.	680	14F	--	--	--	0	0	--	--	--	--	--	0	0		Jan 56	Aug 56	X	*Delay in ops date due to delay in instl of phone lines.
P-11B	Eureka, Mont.	680	14F	--	--	--	0	0	--	--	--	--	--	0	0		Jan 56	Aug 56	X	*Delay in ops date due to delay in instl of phone lines.
P-11C	Moyie Springs, Idaho	680	14F	--	--	--	0	0	--	--	--	--	--	0	0		Jan 56	Aug 56	X	*Delay in ops date due to delay in instl of phone lines.
P-12A	Port Orford, Ore.	761	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jan 56	Mar 56	X	*Construction directive issued 3 Jun 55.
P-13A	Sedgwick, Me.	654	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Dec 55	*Jan 56	X	*Construction directive issued 17 Jun 55.

ADC AC&W Status Report
Gap-Fillers

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
P-20A	Burnside, Mich.	661	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Mar 56	*Apr 56	X	
P-21A	Brockport, N. Y.	763	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Mar 56	*Apr 56	X	
P-24A	Browning, Mont.	681	14F	--	--	--	0	0	--	--	--	--	--	0	0		Feb 56	Mar 56	X	
P-24C	Sweetgrass, Mont.	681	14F	--	--	--	0	0	--	--	--	--	--	0	0		Nov 55	Mar 56	X	
P-25A	Galata, Mont.	778	14F	--	--	--	0	0	--	--	--	--	--	0	0		Nov 55	Feb 56	X	
P-25B	Hogeland, Mont.	778	14F	--	--	--	0	0	--	--	--	--	--	0	0		Nov 55	Feb 56	X	
P-26A	Whitewater, Mont.	779	14F	--	--	--	0	0	--	--	--	--	--	0	0		Nov 55	Feb 56	X	
P-27A	Whitetail, Mont.	780	14F	--	--	--	0	0	--	--	--	--	--	0	0		Nov 55	Feb 56	X	
P-28A	Niobe, N. D.	786	14F	--	--	--	0	0	--	--	--	--	--	0	0		Jul 56	Aug 56	X	
P-29A	Sheyenne, N. D.	785	14F	--	--	--	0	0	--	--	--	--	--	0	0		Jul 56	*Sep 56	X	
P-29B	Grafton, N. D.	785	14F	--	--	--	0	0	--	--	--	--	--	0	0		Aug 56	Sep 56		
P-30A																				*Redesignated to P-9B
P-30B	Topton, Pa.	648	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Mar 56	*Apr 56	X	
P-30C	East Meredith, N. Y.	648	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Mar 56	Apr 56	X	

ADC AC&W Status Report
Gap-Fillers

As of 29 Jun 55

Site	Location	AC&W Squadron	Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
P-33A	Capetown, Calif.	777	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	
P-34A	Petoskey, Mich.	752	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	Apr 56	X	
P-34B	Grayling, Mich.	752	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	Apr 56	X	
*P-34C	Manistee, Mich.	752	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	PSSR approved by ADC 28 Jun 55.
*P-34D	(Name not asgnd)																			PSSR received.
P-37A																				*Site deleted.
*P-39A	Malibu Beach, Calif.	670	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	*PSSR approved by ADC 28 Jun 55
P-45A	Manorville, N.Y.	773	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Nov 55	Feb 56	X	
P-45B	Chilmark, Mass.	773	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Dec 55	Feb 56	X	*Construction directive issued 17 Jun 55.
P-45C	Middletown, Conn.	773	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jan 56	*Feb 56	X	
P-47A	Ellsworth, Kans.	793	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jul 56	Aug 56	X	
P-47C	Winfield, Kans.	793	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jul 56	Aug 56	X	

ADC AC&W Status Report
Gap-Fillers

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % F/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
P-50A	New Preston, Conn.	656	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Nov 55	*Mar 56	X	*Construction directive issued 17 Jun 55.
P-50B	Saugerties, N.Y.	656	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Apr 56	*May 56	X	
P-50D	Stoddard, N. H.	656	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jan 56	*Mar 56	X	
P-50E	New Salem, Mass.	656	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jan 56	*Mar 56	X	
P-54A																				*Redesignated to P-56B.
P-55A	Chestertown,Md.	647	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	Apr 56	X	
P-55B	Hermanville, Md.	647	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	Apr 56	X	
P-55C	Hallsboro, Va.	647	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	Apr 56	X	
P-55D	Hanover, Pa.	647	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	Apr 56	X	
P-56A	Temperanceville, Va.	771	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Oct 55	Jan 56	X	
*P-56B	Bethany Beach, Del.	771	14F	-	-	-	0	0	-	-	-	-	-	0	0		Oct 55	Jan 56	X	*Redesignated from P-54A.
*P-56C	Elizabeth City, N. C.	771	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Apr 56	X	*Redesignated from M-116A

ADC AC&W Status Report
Gap-fillers

As of 29 Jun 55

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
P-58A	Modesto, Calif.	668	14F	-	-	-	0	0	-	-	-	-	-	0	0		Feb 56	Apr 56	X	
P-58B	Oroville, Calif.	668	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Apr 56	X	
P-59A	Shafter, Calif.	750	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jun 56	*Jul 56	X	
P-60A	Ione, Wash.	760	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	*Mar 56	X	
P-63A	Ft Loudon, Pa.	772	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	Apr 56	X	
*P-63B	Phillipsburg, Pa.	772	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	*PSSR approved by ADC 28 Jun 55
P-67A	Midland, Mich.	781	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	Apr 56	X	
*P-67B	(Name not asgnd)																			PSSR received.
P-74A	Lemoore, Calif.	774	14F	-	-	-	0	0	-	-	-	-	-	0	0		Apr 56	May 56	X	
P-76A	Tecate, Calif.	751	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	Mar 56	X	
P-76B	San Ysidro, Calif.	751	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	Mar 56	X	
P-76C	Hipass, Calif.	751	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	*Mar 56	X	
P-76D	Coyote Wells, Calif.	751	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	*Mar 56	X	

[redacted] C AC&W Status Report As of 29 Jun 55

Gap-Fillers

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
*P-76E	Moreno, Calif.	751	14F	-	--	--	0	0	--	--	--	--	--	0	0		May 56	Jun 56	X	PSSR approved by ADC 28 Jun 55.
P-77A	Ottawa, Okla.	796	14F	--	--	--	0	0	-	--	--	--	-	0	0		*Aug 56	*Sep 56	X	
P-79A	Fannett, Tex.	747	14F	--	--	-	0	0	-	--	--	-	-	0	0		Jan 56	Mar 56	X	
P-79B	Van Vleck, Tex.	747	14F	-	--	--	0	0	-	--	-	-	-	0	0		Jan 56	Mar 56	X	
M-90A	Orla, Tex.	686	14F	--	--	-	0	0	-	--	-	--	--	0	0		Mar 56	Apr 56	X	
M-90B	Sierra Blanca, Texas	686	14F	-	-	-	0	0	-	--	-	-	-	0	0		*Mar 56	*Apr 56	X	
*M-90C	Carlsbad, N. M.	686	14F	--	-	--	0	0	-	--	-	-	-	0	0		Jun 56	Jul 56	X	PSSR approved by ADC 28 Jun 55.
*M-90D	El Paso Gap, NM	686	14F	--	-	--	0	0	-	--	-	-	-	0	0		Jun 56	Jul 56	X	PSSR approved by ADC 28 Jun 55.
M-92A	Sells, Ariz.	684	14F	--	-	--	0	0	--	-	--	--	--	0	0		*May 56	*Jun 56	X	
M-92B	Covered Wells, Ariz.	684	14F	-	-	-	0	0	-	-	-	-	-	0	0		*May 56	*Jun 56	X	
M-92C	Benson, Ariz.	684	14F	-	-	-	0	0	-	--	-	-	--	0	0		*May 56	*Jun 56	X	
M-94A	Carrizozo, N.M.																			

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[redacted] C AC&W Status Report As of 29 Jun 55
Gap-Fillers

Site	Location	AC&W Squadron	Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-94B	San Antonio, N.M.																			
M-94C	Datil, N. M.																			
M-95A	El Paso, Tex.	685	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Apr 56	X	
M-95B	Columbus, N. M.	685	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Apr 56	X	
*M-95C	Alamogordo, N.M.	685	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	*PSSR approved by ADC 28 Jun 55.
*M-95D	Engle, N. M.	685	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	*PSSR approved by ADC 28 Jun 55.
*M-95E	Truth or Consequences, N.M.	685	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jun 56	Jul 56	X	*PSSR approved by ADC 28 Jun 55
M-111A	Jeffersonville, Ga.	908	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Apr 56	*May 56	X	
M-111B	Barnesville, Ga.	908	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Apr 56	*May 56	X	
M-112A	Paris Island MS, S. C.	702	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Apr 56	*May 56	X	
M-112B																				*Site deleted.
M-112C																				*Returned for re-survey

[redacted] UNCLASSIFIED

ADC **AC&W Status Report** As of 29 Jun 55
Gap-Fillers

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-112D																				*Returned for re-survey.
*M-113A																				*Redesignated to M-115A.
M-113B	Georgetown,S.C.	792	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	*Mar 56	X	
M-114A	Bunnell, Fla.	679	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jul 56	X	
*M-115A	Myrtle Beach,S.C.	792	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Feb 56	*Mar 56	X	*Redesignated from M-113A.
*M-116A																				*Redesignated to P-56C
M-116B	Engelhard, N.C.	614	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	Jun 56	X	
M-116C	Hollyridge, N.C.	614	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	Jun 56	X	
M-118A	Burns Junction, Ore.	634	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Aug 56	*Sep 56	X	
M-126A	New Orleans, La.	657	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	Mar 56	X	
M-127A	Quinn River Crossing, Nev.	658	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jul 56	*Aug 56	X	
M-127B	Unionville, Nev.	658	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jul 56	*Aug 56	X	

ADC Radar Status Report — As of 27 Jun 56

Gap-Fillers

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
M-128A	Vidal Junction, Calif.	659	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jun 56	*Jul 56	X	
M-128B	Searchlight, Nev.	659	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jun 56	*Jul 56	X	
M-128C	Topock, Ariz.	659	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jun 56	*Jul 56	X	
M-128D	Poston, Ariz.	659	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jun 56	*Jul 56	X	
*M-128E	Cadiz Summit, Calif.	659	14F	--	--	--	0	0	--	--	--	--	--	0	0		May 56	Jun 56	X	
M-129A	Wintergarden, Fla.	660	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Feb 56	*Mar 56	X	
M-129B	Inverness, Fla.	660	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Feb 56	*Mar 56	X	
SM-133A	Mankato, Kans.	625	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jul 56	Feb 57	X	
SM-156A	Gabbs, Nev.	858	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Aug 56	*Sep 56	X	
SM-156B	Desert Peak, Nev.	858	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Oct 56	*Nov 56	X	
SM-156C	Lovelock, Nev.	858	14F	--	--	--	0	0	--	--	--	--	--	0	0		*Jul 56	*Sep 56	X	
SM-162A	Tacna, Ariz.	864	14F	--	--	--	0	0	--	--	--	--	--	0	0		Jan 56	*Mar 56	X	
SM-162B																				*Redesignated to TM-181A.

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ADC AC&W Status Report As of 29 Jun 55

Gap-Fillers

Site	Location	AC&W Squadron	Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
SM-162C	Stone Cabin, Ariz.	864	14F	--	-	-	0	0	-	-	-	-	-	0	0		*Jun 56	*Jul 56	X	
SM-162D	Palo Verde, Calif.	864	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jun 56	*Jul 56	X	
*SM-162E	Cactus City, Calif.	864	14F	-	-	-	0	0	-	-	-	-	-	0	0		*May 56	*Jun 56	X	*PSSR approved by ADC 28 Jun 55.
SM-163A	Boulder City, Nev.	865	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Jun 56	*Jul 56	X	
SM-164A	(Name not asgnd)																			
SM-164B	Coaldale, Nev.	866	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Aug 56	*Sep 56	X	
*SM-164D	Bishop, Calif.	866	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Jun 56	X	PSSR approved by ADC 28 Jun 55.
TM-179A	Columbia Falls, Mont.	716	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jun 56	*Jan 57	X	
*TM-181A	Horn, Ariz.	612	14F	-	-	-	0	0	-	-	-	-	-	0	0		Jan 56	Feb 57	X	*Redesignated from SM-162B
*TM-182A	Elfrida, Ariz.	816	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	Feb 57	X	
TM-183A	Animas, N. Mex.	826	14F	-	-	-	0	0	-	-	-	-	-	0	0		Sep 56	*Nov 56	X	

ADC AC&W Status Report
Gap-Fillers

As of 29 Jun 55

Site	Location	AC&W Squadron	Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
TM-183B	Apache, Ariz.	826	14F	-	-	-	0	0	-	-	-	-	-	0	0		May 56	*Nov 56	X	
TM-187A	McCamey, Tex.	732	14F	-	-	-	0	0	-	-	-	-	-	0	0		Aug 56	Oct 56	X	
TM-187B	Comstock, Tex.	732	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Oct 56	X	
TM-188A	Carrizo Springs, Tex.	733	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Aug 56	X	
TM-189A	Dalmita, Tex.	742	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	Aug 56	X	
TM-189B	Laredo, Tex.	742	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Aug 56	X	
TM-191A	Riviera, Tex.	813	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Aug 56	X	
TM-191B	Palacios, Tex.	813	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Aug 56	X	
TM-194A	Weeks Island, La.	812	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	Aug 56	X	
TM-196A																				*Redesignated to TM-198B
TM-196B	Gulfport, Miss.	693	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	*Dec 56	X	
TM-198A	Carrabelle, Fla.	678	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	*May 56	X	
*TM-198B	Eglin AFB, Fla.	678	14F	-	-	-	0	0	-	-	-	-	-	0	0		Mar 56	May 56	X	*Redesignated from TM-196A

Gap-Fillers

Site	Location	AC&W Squadron	RADAR: Primary Search	RADAR: Primary Height	RADAR: Standby Search	RADAR: Standby Height	RADAR: % Site Construction	C&E INSTALLATION: % Primary Search	C&E INSTALLATION: % Primary Height	C&E INSTALLATION: % Standby Search	C&E INSTALLATION: % Standby Height	C&E INSTALLATION: % G/A Radio	C&E INSTALLATION: % P/P Radio	C&E INSTALLATION: % T/T Inside Plnt	C&E INSTALLATION: % T/T Outside Plnt	Construction Contract Awarded	Beneficial Occupancy	Operational Date	Operational Status	Remarks
TM-200A	Perry, Fla.	691	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	*Sep 56	X	
TM-200B	Lake City, Fla.	691	14F	-	-	-	0	0	-	-	-	-	-	0	0		*Mar 56	*Sep 56	X	

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HEADQUARTERS
CONTINENTAL AIR DEFENSE COMMAND
Ent Air Force Base
Colorado Springs, Colorado

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COMLO

7 June 1955

SUBJECT: (U) Logistics Concept for the DEW System, Land Based Segment

TO: See Distribution

Forwarded herewith for your information and action is the Logistics Concept for the Land Based Segment of the Distant Early Warning System.

BY ORDER OF THE COMMANDER IN CHIEF:

Walter W. Robinson

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Colonel, USAF
Command Adjutant

1 Incl
Log Concept

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LOGISTICS CONCEPT

LAND BASED SEGMENT, DISTANT EARLY WARNING SYSTEM

I References:

a. AFR 5-47.

b. Hq USAF letter, Subject: (Uncl) Implementation of the DEW Line, dated 21 January 1955, and inclosures thereto.

c. Hq USAF message AFOOP-OP-D (NOFORN) 58600, dated 7 May 55.

d. Outline plan for Distant Early Warning System, dated 22 November 1954 (prepared by the Western Electric Company, Inc).

e. Interim project report, Subject: Implementation of the Distant Early Warning System, dated 24 March 1955 (prepared by the Western Electric Company, Inc).

II Purpose:

a. To establish guidance for the development of detailed logistic plans for the support of the land based segment of the Distant Early Warning System.

b. To recommend command areas of responsibility for support of the DEW Line subsequent to the operational date and contribute information with which agreements can be consumated between the Governments of Canada and the United States.

III Scope:

The provisions of this document are applicable to all USAF commands involved in the operation and support of the DEW Line.

IV Assumptions:

a. That the location of the land based segment of the DEW Line will extend eastward from Cape Dyer, Baffin Island to Holsteinborg, Greenland, and terminate at Cape Farewell, Greenland.

b. That the contract with the Western Electric Company will be extended to include construction of the line from Cape Dyer, Baffin Island, Northwest Territory, Canada, to Cape Farewell, Greenland.

V General:

a. The purpose of the Distant Early Warning System is to provide for early warning of an air attack against the North American continent.

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b. The land based segment of the Distant Early Warning Line, consisting of approximately 80 stations extending from Kodiak Island, Alaska, via the coastal perimeter of Alaska, across the Canadian archipelago (along the 69th parallel) to Cape Dyer, Baffin Island, thence to Cape Farewell, Greenland, is being constructed by the Western Electric Company (Ref Incl 1).

c. For the most part, all stations are located in isolated regions of the arctic wastelands where surface communications channels (water) are closed except for very short periods (2 weeks to 3 months) during the summer months. In addition, operation of aircraft will be restricted during the winter months because of long hours of darkness, extreme cold, unpredictable high winds, and the limitations imposed on aircraft operating into and out of "bush" type gravel airstrips.

d. 24-Hour operations is mandatory in order to fulfill the mission of providing air surveillance for early warning of an air attack against the North American continent.

e. All classes of supply must be provided from either the United States or Canada.

VI Command Responsibility

a. The assignment of logistic responsibility for portions of the DEW Line will be for the same portion of the line assigned for operational purposes.

b. The recommendations outlined herein are based upon the following factors.

1. The desires of the several operating commands.
2. The natural lines of communications to the Canadian archipelago, for logistical purposes.
3. Extension of present logistic programs such as Project Mona Lisa in Alaska and Project SUNEC in the Northeast Air Command.

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4. The most probable position of the governments of Canada and the United States regarding the operation and support of that portion of the DEW System located on Canadian territory.

c. In view of the foregoing, command responsibility for logistic support for portions of the DEW Line will be assigned as follows:

1. Commander, Alaskan Air Command -- Kodiak Island, Alaska, via the coastal perimeter of Alaska to station BAR 3 (Tuk Tuk, Northwest Territory, Canada), inclusive.
2. Commander, USAF Air Defense Command -- Station BAR D (Eskimo Lakes, Northwest Territory, Canada) to station CAM 3 (Shepherd Bay, Northwest Territory, Canada), inclusive.
3. Royal Canadian Air Force -- Station CAM D (Simpson Lake, Northwest Territory, Canada) to station FOX C (Ekalugad, Northwest Territory, Canada), inclusive.
4. Commander, Northeast Air Command -- Station HEN Henry Kater, Northwest Territory, Canada) to Cape Farewell, Greenland, inclusive.

VII Organization:

a. In order to restrict the number of personnel stationed at the individual DEW stations, support bases will be established or designated to provide adminstrative and logistic support to the DEW stations within a specified segment of the Line. (See Incl 2 for proposed locations.)

b. These support bases will be responsible for the accountability of materiels, procurement and distribution of emergency supplies, and for processing supply requirements to the appropriate U.S. or Canadian military or manufacturer's depots.

VIII Procurement:

a. The Western Electric Company has been granted authority to purchase equipment, materiels and services to complete the land based

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portion of the DEW System, subject to approval by the Joint DEW Project Office. To avoid a delay in constructing the system, equipment is being procured from several sources - USAF government furnished equipment, U.S. commercial sources and Canadian sources. Consistent with the deadline for the completion of the construction and installation phase, standardization of all types of equipment (communications and electronics, utilities, housekeeping, etc) is mandatory.

b. Since the technical equipment to be used in the DEW System in most cases will be non-standard Air Force equipment and is being shipped direct from the manufacturer to the DEW stations, sufficient spare parts, special tools and test equipment will be procured for concurrent delivery with the technical equipment to enable one year's operations, subsequent to the operation date.

c. Regardless of the source of procurement (Canada or the United States) of supplies and equipment for support of the DEW stations, it is essential that procurement programs be designed or adjusted to assure that spares, special tools, test equipment, and replacement components are available to fully support continuous operations and an annual resupply for both peculiar and common items of equipment, concurrently with the expected operational date of 1 July 1957.

d. A sufficient level of spares to permit one year's operations subsequent to the operational date must be procured and delivered by 1 July 1957 for all utilities and housekeeping items of equipment.

e. Because of the remoteness of the DEW stations from the source of supplies, special procedures will be devised by the command having logistic responsibility to effect procurement of those items which fall in the local purchase category.

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IX Supply.

a. Consistent with the logistic handicaps outlined in paragraph V, above, supply support of the DEW System will be accomplished by the most advanced methods possible in accordance with USAF long-range logistics objectives.

b. Levels of supply.

1. Because of the very short shipping season for surface transportation and the restriction which can be expected on operating aircraft along the DEW Line during the winter months, the normal resupply of DEW stations for items capable of withstanding long-term storage will normally be on an annual basis, except for those stations where aerial resupply is more economical or is the only means of support.

2. Resupply of critical spare parts and components will be on an as-required basis. Once an item is determined to be critical, every action possible will be taken to relieve the critical nature of the item since periods of 30 to 60 days may occur where the operation of aircraft into the DEW stations will not be possible.

c. Provisioning

1. It is essential that AMC activities maintain close liaison with the Western Electric Company during the construction and initial procurement phase, so as to insure the development of stock lists, technical orders, maintenance manuals, etc.

2. Manufacturers will develop recommended spares tables, list of special tools and test equipment for the equipment (technical, utilities and housekeeping) which they produce or furnish. These spares tables will be developed so as to reflect quantities

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required to support a 60, 90, 120, 180 and 360 day stock level, based on the increments of equipment at each type station.

3. Provisioning programs will allow sufficient lead time to insure delivery of spares, special tools and test equipment concurrently with the equipment for which procured.

4. Hq AMC will determine the cost category of each item at the earliest practicable date and establish appropriate management controls consistent with the establishment of levels of supply to support arctic operations.

d. Distribution:

1. Because of the lack of experience in operating the equipment peculiar to the DEW stations, and regardless of the effort expended to accomplish a successful annual resupply, a large demand will be placed on either AMC depots or the manufacturer's production lines for items to insure continuous operation, particularly during the first two years of operation.

2. Until such time as consumption data and operational experience insures the establishment of realistic stock levels, procurement procedures will permit acquisition and distribution of critical spares not available in AF depots direct from the manufacturer's production lines to the appropriate support base.

3. Hq AMC will establish procedures to control and distribute high-dollar value and short supply items, consistent with the establishment of levels of supply designed to overcome transportation difficulties.

e. Storage:

1. Since the DEW stations will be required to be almost entirely self-sufficient, adequate storage capability

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must be provided at each station to enable the storage and maintenance of supplies and equipment to satisfy their requirements, whether supplied by airlift or on an annual basis.

2. In addition, the USAF depot system will be required to provide storage for those items not supplied on an annual basis as well as for the storage and safekeeping of those items becoming available from production lines and awaiting removal for shipment.

3. Since peacetime and wartime consumption will be principally the same, no increase in consumption is envisioned during wartime. No reserve stocks are contemplated under Project AF-GEN.

f. Evacuation.

1. Evacuation of reparable assets to overhaul facilities will be based on the critical nature and cost of the item.

X Transportation:

a. In consonance with USAF long-range logistic objectives, airlift resupply will be used to the maximum extent possible consistent with weather conditions, the operation of aircraft into and out of "Bush" type airstrips, the short shipping season for surface transportation, and economy. The fastest and most suitable transportation (military or commercial, air or surface) consistent with the above factors and overall economy will be provided for the logistic support of this system.

b. Airstrip requirements.

1. Because of the different operational and logistic requirements at the different types of stations on the DEW Line and in the interest of economy, airstrip requirements will vary depending on the type of station and the accessibility of the station by surface transportation.

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2. In general, airstrip requirements for those stations accessible by surface transportation are as follows:

   (a) Main Station . . . . . 5,000 ft

   (b) Auxiliary Station . . . . . 3,500 ft

   (c) Intermediate Station . . . . . 1,000 ft

   (d) It is expected that several stations on the eastern side of Baffin Island and the western side of Greenland will be located where the terrain will not permit the construction of airstrips. Helicopter pads will be constructed at these stations to permit accessability by helicopters.

3. Since there are approximately ten (10) DEW stations (main, auxiliary and intermediate) in the Foxe Basin area that are not accessible by surface transportation and will be entirely dependent upon airlift for support, it will be necessary to construct runways with sufficient capacity to handle aircraft capable of moving the cargo and tonnage requirements of the stations. In general, airstrip requirements for these stations will be as follows:

   (a) Main Station . . . . . 5,000 ft

   (b) Auxiliary Station . . . . . 5,000 ft

   (c) Intermediate Station . . . . . 3,500 ft

c. Aircraft requirements:

1. In order to support 24-hour operations, aircraft will be stationed at the support bases to provide airlift into and out of the main stations. In addition, aircraft or helicopters will be stationed at the main stations to provide lateral support to the auxiliary and intermediate stations.

   (a) Airlift requirements from support bases to the main stations in Alaska and NEAC will be accomplished

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by USAF aircraft or by such commercial companies as the Commanders AAC and NEAC select. Canadian commercial carriers will be utilized to the maximum extent possible, consistent with their capability, supplemented by USAF aircraft as required, to fulfill airlift requirements from the support bases to the main stations on Canadian territory. While the number of aircraft required at each support base has not been determined, the following types will be required.

(1) Canadian North Stars, or

(2) C-124's, or

(3) C-119's, or

(4) C-54's.

(b) The aircraft located at each main station to provide lateral support to the auxiliary and intermediate stations will, for the most part, be military-owned and operated. In cases where reliable commercial "bush" aircraft operators are available, their services will be used. The following types of aircraft and approximate number of each type will be located at each main station.

	Type	No.
(1)	C-47 or C-123	2
(2)	L-20	3

(3) H-21B Helicopters will be required to support those sites on Baffin Island and Greenland that are not accessible by aircraft. The number of helicopters required are not known at this time.

d. Air transportation.

1. Consistent with the foregoing, airlift will be used for the movement of:

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(a) Critical spare parts, and components from manufacturing facility or prime depot to the using activity.

(b) Priority requisitioned items.

(c) Critical reparable assets to overhaul activities.

(d) Resupply of those items not provided during the annual resupply.

(e) Replenishment of stocks on items not provided in sufficient quantity during annual resupply to support the site.

(f) Movement of all personnel to and from the line.

(g) Evacuation of patients to medical facilities capable of administering the illness involved.

(h) Mail, perishable food items and sensitive Base Exchange items.

e. Surface transportation.

1. Four (4) types of surface transportation are required for the DEW System. These are:

(a) Deep water vessels which will be provided on an annual basis by the Military Sea Transport Service or commercial firms for the movement of:

(1) Materials provided on the annual resupply.

(2) Those items which are not air transportable and those items which are not critical and/or may be uneconomical to airlift.

(b) Lighter vessels such as LCU's and LCM's to be provided by the US Army for the purpose of off-loading deep water vessels and transporting supplies to the beach high water mark.

(c) Shallow draft river vessels operating on the Mackenzie River can be used to resupply those DEW stations located along the Mackenzie delta and

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eastward to the Boothia Peninsula. In the event the commercial companies now operating on the Mackenzie River do not have the capability to support this operation, negotiations will be effected with the companies involved to insure a buildup to provide the capability not later than the summer of 1957. These vessels can be used for the movement of:

(1) Materiels provided on the annual resupply.

(2) Those items which are not air transportable and those items which are not critical and/or may be uneconomical to airlift.

(d) Overland vehicles will be used for the movement of:

(1) Materiels from the beach to storage facilities.

(2) Those items which are not air transportable and those items which are not critical and/or may be uneconomical to airlift.

(3) Materiels provided on the annual resupply.

a. A large quantity of track type vehicles and sleds will be required to resupply certain stations during the winter months by "cat train" from "cache's" of materiels prepositioned during the summer months or airlifted to the main stations.

f. Stevedoring:

1. In addition to providing the lighter vessels referenced in par X e 1 (b), above, the US Army will be responsible for providing personnel and equipment required for stevedoring the materiels and delivery to the storage point.

XI Maintenance

a. Because of the remoteness of the DEW stations, and since the prime equipment associated with the DEW System is of the fixed type

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and with the restrictions on transportation, all echelons of maintenance will be accomplished at the DEW stations. Only those AF directives and maintenance philosophy applicable to arctic operations will apply to the maintenance support of the DEW System.

b. Organizational maintenance.

1. Organizational maintenance will be performed by the individual DEW stations, on site. To reduce station outages, defective components will be replaced with serviceable components.

c. Field maintenance:

1. Field maintenance will be accomplished insofar as possible by roving maintenance teams operating from the main stations to the auxiliary and intermediate stations as required.

2. In cases where the maintenance required exceeds the capability of the roving maintenance teams, assistance will be rendered from the support base, depot maintenance facilities or from contractor facilities.

3. A field maintenance facility for support of the DEW System will not be interposed between the DEW stations and depot maintenance facilities. However, in the event the commands responsible for segments of the DEW System have field maintenance facilities established, full advantage will be taken of such facilities.

d. Depot maintenance.

1. With the exception of the removal and return of components and assemblies, the return of the equipment used on the DEW System to depot maintenance facilities is impractical. Plans will be made to carry depot maintenance facilities to the equipment.

2. In cases where depot level maintenance cannot be performed at the DEW stations and the item is not air

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transportable, arrangements will be made to replace the item during the shipping season and the reparable item returned via surface means.

3. Maximum use of contractor facilities and capabilities will be used for the performance of depot maintenance, for both common and peculiar items of equipment and components, at the DEW stations, at the support bases, and in contractor repair facilities.

e. Maintenance of heavy equipment.

1. A relatively large amount of heavy equipment such as caterpillars, road graders, earth-moving equipment, wannigans, etc., will be required both during the construction phase and the operational phase. Since this equipment is not easily airlifted, and since it will be used mostly during the winter months, plans will be made to effect maintenance during the summer months commensurate with the requirement.

f. Aircraft maintenance.

1. Maintenance of all types for aircraft used in the support of the DEW System will be performed at the support bases or at established USAF repair facilities. Exceptions to this philosophy may be necessary in the case of L-20 or similar type aircraft where it is impractical to return the aircraft from the DEW stations to maintenance facilities because of the distance. In such cases, maintenance will be performed at the main stations.

XII Air Rescue Service:

a. With the large amount of air traffic along and into the line, plus the northern flying hazards, it is essential that air rescue services be available for operation along the line and its approaches.

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AF - ADC Colorado Springs, Colo.

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2 Incl
1. Location of the DEW Line.
2. Logistics Support Plan, DEW Line.

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ADMAC	1
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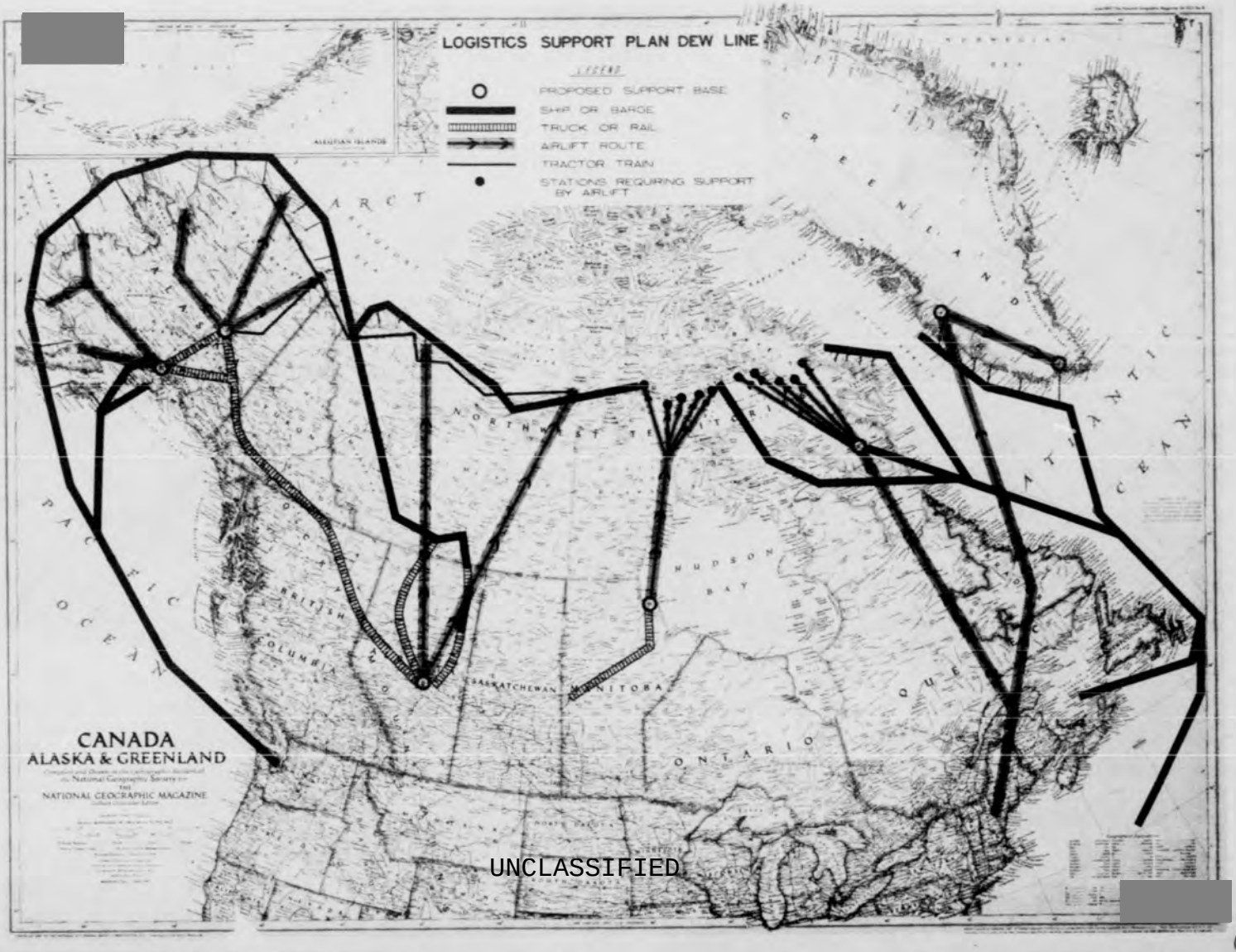
LOGISTICS SUPPORT PLAN DEW LINE
LEGEND
PROPOSED SUPPORT BASE
SHIP OR BARGE
TRUCK OR RAIL
AIRLIFT ROUTE
TRACTOR TRAIN
STATIONS REQUIRING SUPPORT BY AIRLIFT
ALEUTIAN ISLANDS
GREENLAND
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
NORTHWEST TERRITORIES
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Operations Plan for Interceptor-Missile Employment Center

ADODO
ADOPR
ADMAC-5 ✓

OSF

24 May 1955
Mr.Carvill/2727-2738/bt

Inclosed for your information and retention is a preliminary copy of the Operations Plan for the Interceptor-Missile Employment Center proposed for the Bonita Springs area in Florida. Annex A, Appendices I and II are also inclosed. Request any comments or recommendations be forwarded to this Directorate for inclusion in the plan to be submitted to USAF. Further request urgent attention be given to this plan to permit submission at the earliest possible date.

JACK W. BRAY
Lt Col, USAF
Chief, Curr Ops Div
Ext 2601-2890

for JOHN C. MEYER
Colonel, USAF
Director, OSF
Ext 2212-3

1 Incl
a/s

FROM: ADM AC-5
TO: ADAAG
Non-Record
Temp-File Dec 55
Action NAR.
Signed H.S. Stees

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AIR DEFENSE COMMAND

INTERCEPTOR MISSILES EMPLOYMENT CENTER

OPERATIONS PLAN

SERIAL NO.

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HEADQUARTERS AIR DEFENSE COMMAND
Ent Air Force Base, Colorado Springs, Colorado

OPERATIONS PLAN - BONITA SPRINGS MISSILE CENTER

SERIAL NO.

1. General Situation.

a. Introduction.

The ultimate goal of the program conducted at this facility is to insure certain and expeditious destruction of any hostile airborne attacking force through utilization of interceptor-missiles such as Talos and Bomarc. Destruction must be accomplished regardless of weather conditions, the density of the attack, or the tactics used by the hostile force.

Effective target destruction is predicated upon three basic factors:

(1) Proficient operational and maintenance personnel.

(2) Maximum exploitation of the capabilities of the weapon system.

(3) Refinement and Standardization of the latest and most effective operational and maintenance techniques and procedures.

Personnel proficiency can only be developed by exercising the weapon system in a simulated combat environment. To exploit the capabilities of the weapon, data must be accumulated upon which improvement programs can be based. To permit universal utilization of the best techniques, research and development investigations must be conducted to develop such techniques.

b. Course of action.

The above requirements can be fulfilled by establishing a facility with the personnel, equipment, range, etc., necessary to support such a threefold program.

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To develop the desired degree of proficiency, a unit proficiency training and evaluation program will be conducted. Research and development investigations will be conducted in coordination with APGC and ARDC to permit improvement of capability, operability, maintainability, and/or reliability of the weapon system. A third program will develop, refine, and standardize operational and maintenance techniques and procedures to insure effective and efficient weapon employment.

Tactical units deployed to this facility will be relieved of alert commitments and will therefore be able to focus their undivided attention on the problems pertaining to successful target destruction.

c. Analysis of Requirements.

Annex A outlines in detail the quantitative requirements of the program. Each tactical unit upon activation will be deployed to Bonita Springs for initial unit training for a period of four months. Tactical units will return for periodic training annually for a period of from three to four weeks.

Each flight of each squadron will launch six missiles during initial training periods and four missiles during re-training periods. A drone target will be required for each missile launching. Although facilities necessary to train the six programmed squadrons are quite limited, they should be capable of expansion to meet the requirements of a considerably larger program.

d. Objectives of the Bonita Springs Missile Center.

The following are the detailed objectives of the program conducted at this facility:

(1) It will implement the combat team training concept.

(2) It will provide centralized training to insure standardization of the most effective operational and maintenance techniques and procedures.

(3) It will provide a realistic training environment.

(4) It will provide for development and refinement of the most effective operational and maintenance techniques and procedures.

(5) It will provide for the specialized research and development work necessary to improve the training program and will furnish information necessary to improve the capability, operability, maintainability and/or reliability of the weapon system in coordination with APGC and ARDC.

e. Development.

By the beginning of the third quarter of FY 1958, facilities will permit training one complete Talos squadron consisting of 238 airmen and 54 officers. By the second quarter of FY 1959, facilities will permit simultaneous training of one Talos and one Bomarc squadron. A Bomarc squadron will consist of 152 airmen and 17 officers.

It is anticipated that the interceptor-missile program will be expanded considerably. The facilities must be capable of expansion to meet the requirements of the eventual program.

2. This command will be responsible for the following:

a. Supporting a training program which will provide the ADC with the highest possible level of combat capability.

b. Refinement and standardization of the most effective operational and maintenance tactics, techniques, and procedures.

c. Conducting research and development investigations within its capabilities which will improve the quality and quantity of training provided.

d. Coordination with APGC and ARDC as necessary to provide information for OST and functional testing of the weapon system.

3. Tasks for Subordinate Units.

a. The Bonita Springs Missile Center will:

(1) Furnish all base services, allied equipment, organizational and field maintenance necessary to support the unit proficiency training and evaluation program as outlined in Annex A except as hereinafter noted.

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(2) Participate in ADC exercises, maneuvers, etc., when and as directed by the Commander, ADC.

(3) Coordinate with Buckingham on quantities and scheduling of target drones necessary to support the program.

(4) Coordinate with Buckingham on air-sea rescue service required.

(5) Coordinate with Buckingham on controlled firing area clearance, surveillance and drone recovery.

b. General Instructions.

(1) ADC headquarters will furnish training period allocation dates to all Defense Forces.

(2) Each Air Defense Force is responsible for assigning interceptor-missile squadrons of their command for unit proficiency training at Bonita Springs in accordance with the applicable 'DC Standing Operations Order.

(3) Each Air Defense Force will furnish headquarters ADC and Bonita Springs a unit training forecast 90 days in advance. The numbers of officers and airmen who will accompany the squadrons will be supplied at least 45 days in advance of departure. Any deviation from the forecast schedule will be coordinated immediately with the Commander, Bonita Springs and approved by headquarters, ADC.

(4) Each Air Defense Force will request airlift assistance for their interceptor-missile squadrons deploying to Bonita Springs at least 20 days in advance or notify ADC if local arrangements can be made.

(5) Each interceptor-missile squadron will designate at least one officer with two airmen assistants, and not more than two officers and ten airmen to receipt for supplies and equipment, and assist in loading and unloading. These personnel will report five days in advance and remain

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approximately two days following the arrival and departure dates for the squadron.

4. Administrative and Logistical Matters.

See Annex B.

5. Communications and Command Matters.

a. Communications.

Current CEI's and JANAP's will be used. The interceptor-missile squadron commanders are authorized direct communication with the Commander of the Bonita Springs Missile Center prior to departure from their home stations, to coordinate matters pertinent to support and training. See Communications and Electronics Annex D.

b. Command.

Interceptor-Missile squadron commanders will be responsible to the Commander, Bonita Springs during the period of deployment or assignment.

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ANNEX A

OPERATIONS PLAN BONITA SPRINGS MISSILE CENTER

APPENDIX I

INTERCEPTOR-MISSILE UNIT TRAINING PROGRAM.

1. The Problem:

a. The integration of interceptor-missiles (such as Talos and Bomarc) into the ADC weapons inventory will pose numerous problems. Maximum combat effectiveness of a tactical unit is predicated on proficient operational and maintenance personnel. To establish high proficiency levels, these personnel must be indoctrinated in the latest and most effective tactics, techniques, and procedures and be provided with the opportunity to exercise these techniques in a combat environment.

b. In general, the combat capability of an interceptor-missile squadron will be dependent upon three basic factors:

(1) The capabilities of the weapons system.

(2) The ability of maintenance personnel to keep the system in a combat ready condition.

(3) The ability of the operational personnel to employ the weapon in the most effective manner in the given tactical situation.

2. Program Objectives.

a. The proposed training program will have the following objectives:

(1) Implement the combat team training concept.

(2) Provide centralized training to insure universal utilization of the best and latest techniques.

(3) Provide realistic unit training which will simulate combat conditions insofar as is practicable.

(4) Provide information relative to combat capability and reliability of the weapon system upon which improvement programs can be based.

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(5) Provide for research and development investigations designed to improve the effectiveness of the training program and/or improve and standardize tactics and techniques.

b. Combat Team Training.

The philosophy of combat team training is necessitated by the interdependence of the team members. All the members of the combat team must acquire comparable proficiency levels to insure maximum effectiveness. Consequently, facilities must be provided for simultaneous training of maintenance and operational personnel.

c. Centralized Training.

Centralized training will permit standardization of the most effective tactics and techniques. This will preclude the possibility of various tactical units utilizing obsolete or ineffective tactics and procedures. It will provide for the most economical utilization of highly trained specialists by pooling this critical resource.

d. Realistic Training Environment.

(1) A lack of realism in a training program could negate many of the advantages of the unit training program. Targets must fly at realistic airspeeds and altitudes for the time period involved and must simulate the radar reflectivity of anticipated targets. The training environment must duplicate as closely as possible the tactical environment.

(2) Talos will require a GCI site to pass target position and track data to the squadron being trained. The squadron will then alert a flight and assign to it a target. At the appropriate time the flight will launch a missile at the target. Midcourse tracking, illuminating and guidance information will be supplied to the missile by the launching flight. All

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the facilities necessary for following this sequence of operations will be available at the proposed installation.

(3) In the case of Bomarc, target data, fed from the Air Defense Direction Center to the IM-99 Direction Center will be processed and launch instructions sent to one or more missiles by land line. After the missile is launched, the ADDC system will interrogate the transponder in the missile for position data. This information will then be fed into computers for computing guidance information which will then be transmitted to the missile. The proposed training facility must therefore have sufficient equipment to accomplish the above operation.

3. The Need for In-Service Improvement of the Weapon System.

a. No weapon system to date has reached tactical units in its ultimate configuration. Modifications have always been necessary to improve maintainability, capability, operability, or reliability of the system. Maintenance and employment techniques developed under field conditions have in many cases proven better than those developed in laboratories. Component failure rates have indicated necessary product improvement. These factors emphasize the need for a specialized activity at field level, composed of personnel with the necessary technical background to research these fields. A group of this type provides the best source of valid information for over-all improvement of the system.

b. Because missile launch and support facilities are necessary to the training program, this information can be obtained most economically at this proposed facility. The missiles fired in the training program can be instrumented to provide this information. It does not appear economically sound to establish other facilities and launch other missiles to obtain the required data.

4. Maintenance. The most highly developed weapons system is of

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little value if it cannot be maintained by available personnel. Maintenance personnel must be intimately acquainted with the techniques and procedures necessary to keep the entire system aligned, calibrated, and in an operational condition. If a means is provided for the maintenance personnel to exercise these techniques repeatedly, their capability is further enhanced. Firing weapons at realistic targets affords a means to check their ability to maintain the entire system in a proper operational condition. If a miss can be attributed to faulty maintenance, proper corrective measures can be taken to eliminate this weak link in the system.

5. Operations. The high degree of automatization of interceptor-missile systems has not resulted in a reduction in responsibility of command operations personnel. It is necessary to monitor and make manual corrections to the flight of the missile. Tactical decisions and direction must be exercised. The degree of skill necessary to perform these functions properly can only be gained through experience accumulated in actual firing.

6. Research and Development. A specialized field requiring this type of activity is necessary to develop equipment needed to implement the training program. The development of such equipments and techniques for their optimum employment is a critical requirement of this command. A similar activity at the Yuma facility has demonstrated the necessity for and efficacy of such a function.

7. Functional Requirements of the Training Facility. Consideration of the aforementioned factors leads to the conclusion that a facility must be established to permit complete interceptor-missile squadrons to assemble, maintain, and fire weapons at realistic targets. Such a base would fulfill three basic requirements of this command.

a. It would permit the improvement and evaluation of the combat proficiency of every interceptor-missile squadron.

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b. It would permit evaluation of missile reliability factors under ADC field conditions for subsequent improvement.

c. It would permit the development and standardization of tactics, techniques, procedures, and modifications to improve system maintainability, operability, and/or capability.

8. Initial Training Period. The initial integration of a new weapon into the air defense system is a critical period. For the first twelve to eighteen months, experience will gradually be accumulated and familiarity acquired. The first units activated will be faced by numerous problems to which no solution will have been found. Therefore, training periods for these units should be extended for as long as practical within the limitations imposed by available facilities. Accumulated experience can be passed on to units activated later to permit a gradual decrease in the length of the training period. It appears that the O.S.T. of the Weapon System can be conducted during the first training period most economically and to the mutual advantage of APGC and ADC.

9. Periodic Training. To maintain, and improve the acquired unit combat proficiency, periodic training must be conducted. Our present fighter-interceptor squadrons are programmed to receive unit training annually. The advanced level of automation associated with Talos and Bomarc might appear to lend support to extending the interval between training periods for missile squadrons. However, automation leads to complexity and thus to the need for re-training if the familiarity required is to be retained. Further, this headquarters anticipates that current high personnel turnover rates will be extended to the time period in question. This personnel instability will necessitate annual unit training as with interceptor units.

10. Missile Quantities. The above considerations indicate that initial training periods must be of greater duration than re-training periods. It is felt at the present time that three to four weeks should be sufficient for re-training. The difference in the training

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period duration will also necessitate a proportional variation in the number of missiles to be launched by a unit. For an initial training period of four months, not less than six missiles should be launched per flight. During the re-training period not less than four missiles should be fired by each flight. This quantity should permit sufficient repetition of assembly, checkout, maintenance, and operational procedures to improve significantly the combat capability of a tactical unit. The expense involved in firing a greater number of missiles does not at this time appear warranted.

11. Targets. Targets utilised for missile firing must simulate the aerial threat for the associated time period. Since towed targets are not considered feasible for such a weapon, drones appear to be the only solution. The target drone must simulate the radar reflectivity of probable targets. It should be capable of flying at maximum speeds of the order of 1.5 mach at 60,000 feet altitude for a period of 15 minutes. It should be recoverable over either land or sea.

12. Unit Training. Because unit training is required, a high percentage of the operational and maintenance elements of an entire squadron should train simultaneously. This would necessitate taking the entire squadron off combat status for the training period.

13. Training Facilities.

a. The need for a realistic training environment for a missile squadron has been previously established. For desired realism four complete standard flight environments (28 launching installations per flight) would be required for each squadron in training. Only four to six missiles will be launched by each flight in training, so the expense and extent of such a construction program would not be justified. While this number of missiles could be launched from a single firing revetment, it is felt that there are obvious disadvantages, i.e., the squadron is placed in an unrealistic environment, maintenance and operational personnel are required to keep only one missile in a

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12-13

ready condition, the missile to be fired will be known at all times, etc. It becomes apparent that some sort of compromise must be made.

b. If seven missile launching revetments are available for each flight, they would be required to keep all seven missiles in a combat ready condition at all times. When a target is made available, one missile would be launched, but the maintenance crew would not know which one until actual firing took place. In this way their ability to keep missiles ready to fire can be measured and thus the environmental requirements of the O.S.T. can be met. Another advantage accrues to providing each flight with seven missile launching revetments, in that an entire squadron can be trained on a standard flight installation. The standard installation would have to be modified to include the four flight control facilities.

14. Basis for Program and Facilities.

a. The quantitative requirements of the proposed training program are based upon the six interceptor-missile squadrons presently programmed. These squadrons are programmed as follows:

FY	QTR	Talos	Bomarc	Total
58	3	1	0	1
58	4	1	0	2
59	1	0	0	2
59	2	1	1	4
59	3	1	0	5
59	4	1	0	6

b. It is felt that quantitative expansion of the above program is inevitable. Therefore, land acquisition and facility development should take into consideration this eventual expansion. Land and facilities should not be acquired and developed which are incapable of the expansion necessary to accommodate the eventual program.

15. The Training Program.

a. The first interceptor-missile squadron will be activated in the third quarter of FY 1958 and will be equipped with Talos. A site

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with 28 launching revetments designed to train a complete squadron plus all base support facilities must be in place by this date. It is planned to activate the squadron at this site and train them as a unit prior to deployment to their home station. This unit, assisted by APOC personnel, could concurrently perform system O.S.T.

b. The first Bomarc squadron is programmed for the second quarter of FY 1959. The launching and support facilities should be available prior to this date in order that unit activation and training and squadron O.S.T. can take place in an orderly manner.

c. It is intended that initial training periods will be of approximately four months duration. A relatively long initial training period will be required for twelve to eighteen months after the integration of a new weapon system into the ADC inventory. This will be a critical period of learning and accumulating experience which can be passed on to units activated later.

d. The first month of the initial training period will consist of familiarization, formal classroom training and indoctrination, and laboratory work on system components. The second month the squadron will work on the training site, assemble and maintain missiles and solve simulated problems. During the latter part of the second month, each flight will launch two missiles, singly, at targets involving the most simple of tactical situations. The third and fourth month each flight will launch two missiles per month at realistic targets involving progressively more complex tactical situations. Some of these more complex tactical situations are examined in more detail in Appendix 2.

e. The initial programming schedule calls for activation of one Talos squadron about every three months. If activation training periods are four months in duration, a one-month overlap will occur. This means that during this one month period housing, messing, etc., facilities must be available for two simultaneous Talos squadrons. Because of the one month familiarization period, launching sites for

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training only one squadron need be constructed. By the fourth quarter of FY 1959, when a Bomarc squadron is to be activated, additional facilities must be available for training and housing these personnel.

f. It is expected that a Talos squadron will contain about 238 airmen and 54 officers subdivided into four flights. Each flight will have 30 missiles and 28 launching revetments. Normally, 25 of these missiles will be in an operational condition; the rest will be undergoing routine maintenance.

g. It is expected that a typical Bomarc squadron will have about 152 airmen and 17 officers. The launching site plan will probably be very similar to that for Talos. Each squadron will be subdivided into four flights.

16. Buckingham Support.

a. The proximity of the Bonita Springs Area to the Buckingham training facility indicates that certain areas of support can be accomplished more economically at Buckingham. A hospital at Buckingham could serve both facilities; the drone squadron at Buckingham could support the target requirements of Bonita Springs; air-sea rescue established for the W-168 danger area could be expanded to serve the Bonita Springs controlled firing area; the airfield at Buckingham could also serve for air-lifting interceptor-missile squadrons to and from the Bonita Springs area.

17. Special Instruments Required.

a. Some type of FEI (Firing Error Indicator) is required to permit quantitative measurement of the effectiveness of an intercept. This equipment should be capable of measuring missile miss distance and direction. Further, it must transmit this information to a point where it can be recorded and evaluated. From an operational standpoint it is immaterial whether such an equipment is installed in the target or in the missile. From an economical viewpoint, installation in the target drone is preferred, since this will permit recovery and re-use of the equipment.

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b. Some kind of equipment is necessary to provide specific information concerning malfunctioning missiles. These data are necessary to permit continuing product improvement, and to permit development of newer and better maintenance techniques. Cameras probably will not prove to be feasible for tracking missile flight paths because of the long ranges involved. Precision radar tracking equipment may provide a more feasible solution. Information relating to the flight path of malfunctioning missiles can provide general information concerning the cause of the malfunction. Telemetering equipment installed in the missile itself may be necessary to provide more specific information. Such equipment is the only known method of obtaining detailed malfunction data. Receiving and recording equipment plus a data reduction section will be necessary if telemetering is used.

17. Conclusion:

a. It will be noted that the outlined program provides for OST and functional testing of the missile and auxiliary equipment on the training site. It is felt that such testing can be accomplished more economically at the proposed facility and by instrumenting the missiles fired in the training program than by constructing special facilities and instrumenting other missiles. The proposed program will therefore be sponsored by the ADC with close coordination with APGC and ARDC.

b. Because of the inevitable quantitative expansion of the ADC interceptor-missile program, the facility acquired should be capable of expansion to meet the training requirements of the ultimate training load. It would appear unwise and uneconomical to establish facilities at a location which is incapable of such expansion.

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ANNEX A

OPERATIONS PLAN BONITA SPRINGS MISSILE CENTER

APPENDIX II

PLAN FOR INTERCEPTOR-MISSILE FIRING RANGE.

1. The concept for utilization of the acquired range or controlled firing area is dependent upon and tied to the philosophy and requirements of the training program as outlined in Appendix 1, Annex A. This plan is based upon initial and periodic training of the six interceptor-missile squadrons currently programmed. In view of the inevitable qualitative and quantitative expansion of this program, range acquisition, as well as training facility acquisition, should be based upon this inevitable expansion. As missile range is extended, the danger area requred must be extended. Eventually, the IM-99 will have a combat range of 250 miles. A controlled firing area is necessary which can be expanded to meet this requirement.

2. The concepts for operational employment of these weapons (Talos and Bomarc) have not been firmly established to date. Consequently, this operational plan is based upon what is currently known, the present trends of thinking, and what appears to be the most logical tactical employment techniques. As such, it will be subject to revision as more knowledge is accumulated.

3. The range required for this operation must abut the established launching facility. The altitudes required will be from the terrain to 80,000 feet altitude or more. This requirement will fluctuate in accordance with the development of increased missile capabilities. It should encompass a 60^{o} arc whose apex is at or near the launching site. Initial phases of the program will require a 150 mile radius of action from the launching site. Eventually, this must be extended to 300 miles or more as missiles acquire a greater radius of action.

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Supplementary Range Support Requirements.

1. Air-Sea rescue facilities must be established to meet required safety standards.

2. The range must be cleared for firing and surveillance must be continued during the operational period to insure safety. Air surveillance can be accomplished by a ground-based radar at or near the launching site. Surface clearance and surveillance will probably have to be done by orbiting aircraft, out of the firing range, which are equipped with relatively high power search radar equipment. Constant communication with the launching site must be maintained.

3. Drone recovery facilities must be established. Drones may be recovered either by helicopter or boats. Helicopter recovery is preferable from a recovery time standpoint. Immediate recovery will minimize drone water damage, and permit maximum range utilization.

Specifics of the Proposed Bonita Springs Firing Area.

1. Figure 1 is a rough sketch of the proposed controlled firing area. This proposal provides minimum interference with W-168, which will be utilized by Buckingham. When the rocket and missile firing program at Buckingham is inaugurated, the high density operation there will require extensive range time and probably would interfere with the interceptor-missile firing program if the same range is utilized.

2. It will be noted that a flight control area (#1228) crosses the proposed area. If this cannot be eliminated, it is anticipated that close coordination of firing schedules with CAA will be required

3. It will be noted that a segment of W-174, the Key West range, is included in the proposed firing area. Since this is a Navy Range a joint utilization agreement would have to be negotiated. This would not necessarily be a missile impact area, however. Drone launch and part of the drone flight would be over this area.

Missile Firing Environment.

1. There are three general kinds of tracks to be simulated by drones over this area. They are:

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a. Inbound targets.

b. Outbound targets.

c. Crossing targets.

Three possible tracks initiated from the south boundary of the range are shown which reasonably simulate the above three conditions.

2. To test missile operation at all possible altitudes, drones will be required to fly in three general vertical areas:

a. High Altitude - above 50,000 feet.

b. Medium Altitude - from 5,000 to 50,000 feet.

c. Low Altitude - below 5,000 feet.

3. A realistic training environment further requires simulated multiple target situations. This will probably more nearly duplicate an actual tactical situation than any type of single target and single missile launch. Three general possiblities should be simulated:

a. Two or three simultaneous drones on the same track at different altitudes.

b. Two or three simultaneous drones on different tracks at the same altitude.

c. Two or three simultaneous drones on different tracks at different altitudes.

The last situation, being the most difficult of successful interception, would probably be most desirable. A tactical unit which could successfully intercept three targets on three different tracks, at three different altitudes could probably cope with the other two situations.

Missiles fired in Training Program

1. Six squadrons are programmed at the present time. Programming can be arranged to permit initial training of one unit at a time. Each squadron will consist of four flights, each of which is to fire two missiles per month. A total of eight missiles will be fired per month.

2. A realistic tactical situation would provide two drone targets and require nearly simultaneous launch of two missiles. If this duplicates

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a typical tactical situation, four such missions would be run per month, or about one per week on the average.

3. If for example it is assumed that eventually fifty tactical squadrons were activated, the above figures could be multiplied by eight to arrive at an approximate training goal. This program would require 64 missiles to be launched per month, or about 16 per week. Assuming again a typical two missile mission, about eight such missions would be required per week of training.

Range Time.

1. Range time required will be based upon reasonable estimates. Approximately three hours will be required to clear the range and prepare target drones and to establish flight coordination with CAA, if such is necessary. This period is based upon an APG estimate of time required to clear their range for firing.

2. A mission requiring the launch of two drone targets, and the subsequent launch of two missiles should not consume more than half an hour. Another mission could be run immediately if immediate drone recovery is not required.

3. If drones are to be recovered immediately after such a mission, the time required for such recovery must be added to the mission time. Air recovery could probably be accomplished in one hour by helicopters. Boat recovery might require two or three hours. Immediate air recovery increases the time required for one mission to five hours.

4. Based upon six programmed squadrons, five hours range time is required per week. Based upon 50 squadrons, 40 hours range time is required per week. These figures, it must be reiterated, are only approximate and accumulated experience will undoubtedly require revision.

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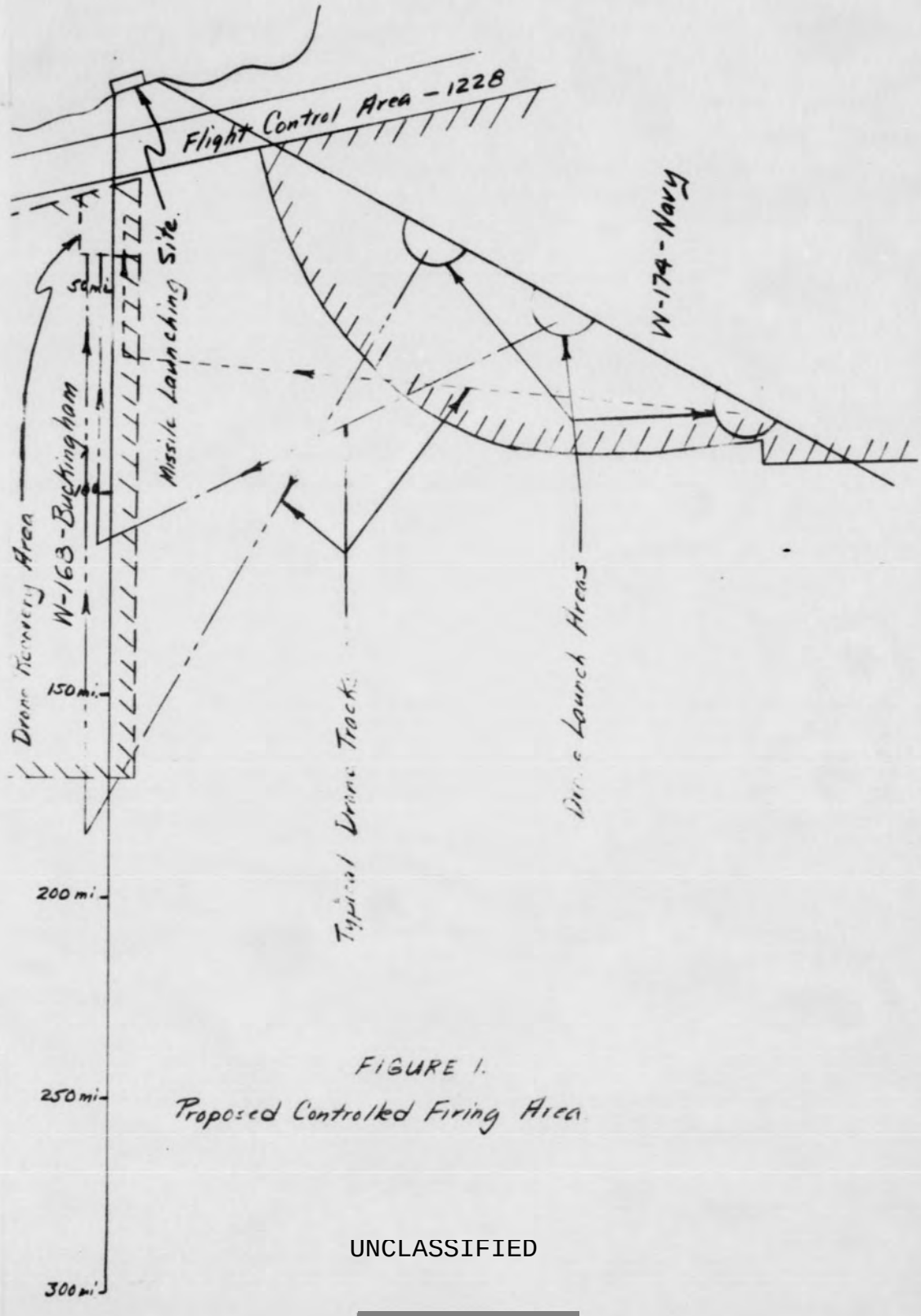

FIGURE 1.

Proposed Controlled Firing Area

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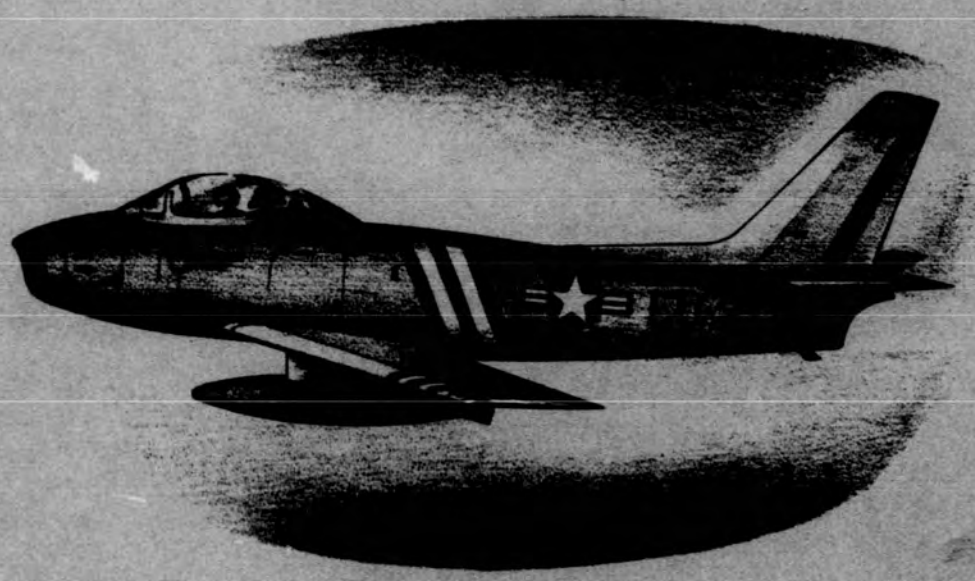
OPERATIONS PLAN

SERIAL NO. 4-55



1 APRIL 55

CONTINENTAL
AIR DEFENSE COMMAND
ENT AIR FORCE BASE
COLORADO SPRINGS, COLORADO

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CONTINENTAL AIR DEFENSE COMMAND

ENT AIR FORCE BASE, COLORADO SPRINGS, COLORADO

OPERATIONS PLAN

SERIAL NO. 4-55

1 APRIL 1955

(U) AIR DEFENSE AUGMENTATION PLAN
(USAF FORCES)

CONAD
OPR PLAN 4-55
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[redacted] CONTINENTAL AI EFENSE COMMAND
Ent Air Force Base, Colorado Springs, Colo.
1 April 1955

OPERATIONS PLAN

Serial No. 4-55

(This plan supersedes ADC Operations Plan 4-54 (Revised), 15 June 1954, which will be removed from files and destroyed in accordance with AFR 205-1, Safeguarding Military Information. A certificate of destruction will not be required by Continental Air Defense Command.) (Unclassified).

CHART AND MAP REFERENCES: As required.

TASK ORGANIZATION:

a. SAC - General C. E. LeMay

b. TAC - General O. P. Weyland

c. ATRC - Lieutenant General C. T. Myers

d. APGC - Major General P. W. Timberlake

e. ARDC - Lieutenant General T. S. Power

f. AMC - General E. D. Rawlings

g. JEADF - Major General M. R. Nelson

h. JCADF - Major General J. V. Crabb

i. JWADF - Major General W. E. Todd

j. 4750th Training Wing (Air Defense) - Colonel R. F. Worley
(Unclassified)

1. GENERAL SITUATION:

Summary of the Situation: The international political, economic and military situation is such that war between the United States and the USSR may be precipitated intentionally or unintentionally at any time with little or no warning. There is a strong probability that hostilities will be initiated by an aerial attack upon the United States. In the event of such an attack, the assigned Joint Air Defense Forces will be augmented by the USAF forces and facilities listed herein which are located in the United States and possess an air defense capability. Without this effort, the capability of the United States to retaliate and to continue the war might well be dangerously reduced during the first few days of attack. The augmentation capability listed herein includes fighter aircraft and crews, base support and radar capability that can be integrated with that of the Continental Air Defense Command. Authority for the employment of these

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forces is contained in mutual agreements between CINCONAD and the USAF commands concerned. Employment of these forces in active air defense may require rapid deployment of the aircraft to the area most needing that support, and their subsequent control by the joint air division responsible for the air defense of such area. (SECRET).

a. Enemy Forces. See Annex E.

b. Friendly Forces.

(1) CIVIL AERONAUTICS ADMINISTRATION will, in accordance with existing procedures and policies, furnish aircraft identification information and, in case of a Military Emergency, implement plans for the security control of air traffic and electromagnetic radiations as requested by the air division commander concerned. (Unclassified).

(2) CANADIAN AIR DEFENCE COMMAND FORCES will provide interceptor aircraft, antiaircraft, and AC&W facilities in accordance with current joint operating procedures. (Unclassified).

(3) THE UNITED STATES NAVY will provide such assistance for air defense as is consistent with its primary mission. (Unclassified).

(4) MILITARY AIR TRANSPORT SERVICE will provide air rescue, Military Flight Service and AACS services in accordance with normal operating procedures. (Unclassified).

2. MISSION:

a. Continental Air Defense Command will prepare plans for the emergency integration and utilization of USAF facilities and forces having an air defense capability to detect, intercept and/or destroy enemy aircraft and missiles penetrating the continental limits of the United States. (SECRET).

3. TASKS FOR PARTICIPATING AND SUBORDINATE UNITS:

a. STRATEGIC AIR COMMAND will, under any of the conditions listed in paragraph 5.b.(1):

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[redacted]

(1) Provide available fighter units to be utilized as specified in Annex A or B, as the situation may require.

(2) Provide base support, as outlined in Annex D, at SAC bases for operations specified in Annex A and B to this plan. (Secret).

b. TACTICAL AIR COMMAND will, under any of the conditions listed in paragraph 5.b.(1):

(1) Provide available fighter units to be utilized as specified in Annex A or B, as the situation may require.

(2) Provide available radar facilities to augment the air defense AC&W defense system to be utilized as specified in Annex G.

(3) Provide airlift to assist in the deployment of fighter units as listed in Annex A and B. (See Annex D for airlift requirements).

(4) Provide base support, as outlined in Annex D, at TAC bases for operations specified in Annex A and B to this plan. (Secret).

c. AIR TRAINING COMMAND will, under any of the conditions listed in paragraph 5.b.(1):

(1) Provide available fighter units to be utilized as specified in Annex A or B, as the situation may require.

(2) Provide available radar facilities to augment the air defense AC&W defense system to be utilized as specified in Annex G.

(3) Provide base support, as outlined in Annex D, at ATRC bases for operations specified in Annex A and B to this plan.

(4) Provide airlift for deployment of ATRC fighter units as outlined in Annex A and B. (See Annex D for airlift requirements). (Secret).

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d. AIR PROVING GROUND COMMAND will, under any of the conditions listed in paragraph 5.b.(1):

(1) Provide available radar facilities to augment the air defense AC&W defense system to be utilized as specified in Annex G.

(2) Take action to revert test aircraft to combat ready status as soon as possible after receiving implementation order to this plan. When these aircraft become combat ready, report them to the appropriate joint air division as available for air defense purposes.

(3) Provide available fighter aircraft and aircrews for in-place use at present stations. Details of operation will be as arranged between APGC units and the appropriate joint air division.

(4) Provide base support, as outlined in Annex D, at Eglin AFB for operations delineated in Annex A and B to this plan. (SECRET).

e. AIR RESEARCH AND DEVELOPMENT COMMAND will, under any of the conditions listed in paragraph 5.b.(1):

(1) Provide available radar facilities to augment the air defense AC&W defense system to be utilized as specified in Annex G.

(2) Take action to revert test aircraft to combat ready status as soon as possible after receiving implementation order to this plan. When these aircraft become combat ready, report them to the appropriate joint air division as available for air defense purposes.

(3) Provide available fighter aircraft and aircrews for in-place use at present stations. Details of operation will be as arranged between ARDC units and the appropriate joint air division.

(4) Provide base support, as outlined in Annex C, at ARDC bases for operations delineated in Annex A and B to this plan.(SECRET).

f. AIR MATERIEL COMMAND will, under any of the conditions listed in paragraph 5.b.(1):

(1) Provide base support, as outlined in Annex D, at AMC bases for operations delineated in Annex B to this plan. (SECRET).

g. JOINT AIR DEFENSE FORCES will:

(1) Exercise operational control over augmentation units made available as outlined in Annex A and B to this plan, in accordance with preconceived plans and directives. - (Unclassified).

(2) Upon notification that Continental Air Defense Command has implemented this plan:

(a) Alert necessary units and/or bases under its command. (Unclassified).

(b) Provide well qualified liaison officers at each base of deployment to assist deployed squadrons from other major commands. Liaison officers must be well acquainted with pertinent base facilities, such as parking area, refueling activities, messing and transportation, at the bases to which they are scheduled to provide assistance. Liaison officers will meet airlift aircraft to expedite off-loading. (Unclassified).

(3) Make available, upon arrival of deployed augmentation units, individual flight cards giving let-down details, pertinent call signs and frequencies to be used in local operations. Information should be so arranged as not to violate security measures. (Unclassified).

(4) Provide airlift to assist in the deployment of fighter units as outlined in Annex A and B. (See Annex C, Logistics, for airlift requirements). (Unclassified).

h. THE 4750TH AIR DEFENSE WING (WEAPONS) will:

(1) Provide base support as outlined in Annex D at Yuma County Airport for operations delineated in Annex A and B to this plan. (Unclassified).

(2) Comply with instructions contained in paragraphs 3.g.(2) and (3) above. (Unclassified).

(3) Place all available cargo type aircraft under the operational control of Headquarters, JWADF upon implementation of this plan. (Unclassified).

x. GENERAL INSTRUCTIONS:

(1) The participating major commands will:

(a) Be prepared to implement this plan and alert the bases under their jurisdiction that deployment may be effected under the conditions outlined in paragraph 5.b.(1). (Unclassified).

(b) Utilize available unit support airlift for priority personnel and/or equipment. If any unit or detachment airlift can be entirely assumed by unit support aircraft, the Commander, 18th Air Force will be so notified by telephone. (Unclassified).

(c) Direct all subordinate units to keep CONAD informed of aircraft and aircrew availability by means of the V-10 Report. See Appendix 3 to Annex A for reporting instructions. (Unclassified).

(2) Implementation of this plan will be accomplished by direct notification from the CINCONAD to the Commanders, Strategic Air Command, 18th Air Force, and participating fighter and AC&W units of other commands with information copies to major commands concerned. See Appendices 1 and 2 to Annex A and B. (Unclassified).

4. LOGISTICAL MATTERS:

a. See Annex D, Logistics.

5. COMMUNICATIONS AND COMMAND MATTERS:

a. COMMUNICATIONS:

(1) See Annex E, Communications.

b. COMMAND:

(1) The circumstances under which this plan may be implemented are:

(a) Presidential proclamation and/or congressional declaration that a state of war exists, or

(b) A directive issued by the Joint Chiefs of Staff, or

(c) A declaration by the CINCONAD that an Air Defense Readiness, Military Emergency, or condition of Air Defense Warning Red or Yellow exists, or

(d) An enemy attack upon the continental United States, or

(e) By mutual agreement between the major air commands concerned for training purposes. (Unclassified).

(2) The Continental Air Defense Command will assume operational control of fighter aircraft and aircrews, and AC&W facilities at such time as notification is received that this plan is to be implemented. Operational control of 18th Air Force units will remain with the 18th Air Force. Operational control comprises those functions of command involving the composition of subordinate forces, the assignment of tasks, the designation of objectives and the authoritative direction necessary to accomplish the mission. It does not include such matters as administration or individual training. Assistance in support will be provided by CONAD. Release of such forces and facilities from air defense commitments shall be at the earliest time consistent with air defense versus primary requirements. (Unclassified).

(3) ORGANIZATIONS AND COMMAND POSTS:

Continental Air Defense Command, Ent AFB, Colorado

Hq Strategic Air Command, Offutt AFB, Nebraska

Hq Tactical Air Command, Langley AFB, Virginia

Hq Air Training Command, Scott AFB, Illinois

Hq Air Proving Ground Command, Eglin AFB, Florida

Hq Air Research and Development Command, Baltimore, Md.

Hq Air Materiel Command, Wright-Patterson AFB, Ohio

Hq Joint Eastern Air Defense Force, Stewart AFB, Newburgh, New York

Hq Joint Central Air Defense Force, Grandview AFB, Grandview, Missouri

Hq Joint Western Air Defense Force, Hamilton AFB, Hamilton, California

Hq 4750th Air Defense Wing (Weapons), Yuma County Airport, Yuma Arizona. (Unclassified).

CHIDLAW
COMMANDER IN CHIEF

ANNEX: A. Minimum Warning Plan

B. Deployment Plan

C. Wartime Planning Factors

D. Logistics

E. Communications

F. Intelligence

G. AC&W

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ADOOT-B	1 cy
ADOOT-B1	1 cy
ADOOT-B3	4 cys
ADOOT-C	1 cy
ADOOT-D	4 cys
ADOOT-E	1 cy
ADMLO	2 cys
ADMSV-3C	1 cy
ADMAC-1B	1 cy
ADMIS	1 cy
Comd Adj (Files)	30 cys
SAC	5 cys
TAC	3 cys
ATRC	3 cys
APGC	4 cys
ARAACOM	2 cys
AMC	7 cys
ARDC	2 cys
NEAC	1 cy
AAC	2 cys
AU	1 cy
ConAC	2 cys
MATS	2 cys
ARS	1 cy
AACS	1 cy
AWS	1 cy
MFS	1 cy
ADC (RCAF)	3 cys
OCAFF	1 cy
JEADF	10 cys
JCADF	10 cys
JWADF	10 cys
EASTARAACOM	2 cys
CENARAACOM	1 cy
WESTARAACOM	2 cys
TTAF	1 cy
CTAF	2 cys

EASTSEAFRON	1 cy
WESTSEAFRON	1 cy
COMNAVFOR	2 cys
CINC, US Atl Fleet	1 cy
CINC, US Pac Fleet	1 cy
Comdr AF, US Atl Fleet	1 cy
CNA Res Tng	1 cy
Comdt, USMC	1 cy
1st AF	2 cys
2nd Strat AF	1 cy
4th AF	1 cy
8th Strat AF	2 cys
9th AF	3 cys
10th AF	1 cy
14th AF	2 cys
15th AF	2 cys
18th AF	3 cys
OOAMA	1 cy
SMAMA	1 cy
OCAMA	1 cy
1st Army	1 cy
2nd Army	1 cy
3rd Army	1 cy
5th Army	1 cy
6th Army	1 cy
8th ADiv	3 cys
9th ADiv	3 cys
25th ADiv	3 cys
26th ADiv	3 cys
27th ADiv	3 cys
28th ADiv	3 cys
29th ADiv	3 cys
30th ADiv	3 cys
31st ADiv	3 cys
32nd ADiv	3 cys
33rd ADiv	3 cys
34th ADiv	3 cys
35th ADiv	3 cys
4706th Def Wg	3 cys
4707th Def Wg	3 cys
4708th Def Wg	3 cys
4709th Def Wg	3 cys
4710th Def Wg	3 cys
4711th Def Wg	1 cy
4750th Air Def Wg (Weapons)	2 cys
4600th ABGp	2 cys
4602d Air Intell Sv Sq	1 cy
38th ADiv (SAC)	1 cy
40th ADiv (SAC)	2 cys
42d ADiv (SAC)	2 cys
47th ADiv (SAC)	1 cy
801st ADiv (SAC)	1 cy
802d ADiv (SAC)	1 cy
806th ADiv (SAC)	1 cy
818th ADiv (SAC)	1 cy
3902d Air Base Wg (SAC)	1 cy
12th SFW	2 cys
27th SFW	2 cys
31st SFW	2 cys
506th SFW	2 cys
508th SFW	2 cys
3510th Fly Tng Wg	1 cy
3525th Fly Tng Wg	1 cy
3550th Fly Tng Wg	2 cys
3555th Fly Tng Wg	2 cys
3595th Fly Tng Wg	2 cys
3600th Fly Tng Wg	2 cys

3625th Fly Tng Wg	2 cys
3645th Fly Tng Wg	2 cys
AFOTC	1 cy
AF Armament Center	2 cys
AF Spec Weapons Center	1 cy
Rome Air Development Center	1 cy
AF Cambridge Research Center	1 cy
AF Missile Test Center	1 cy
AF Flight Test Center	1 cy
Wright Air Development Center	1 cy
Holloman Air Development Center	1 cy
28th Strat Recon Wg	2 cys
FTAF	1 cy
500th Air Def Gp	1 cy
3310th Tech Tng Wg	1 cy
3380th Tech Tng Wg	1 cy
3415th Tech Tng Wg	1 cy
Mountain Home AFB	1 cy
Lincoln AFB	1 cy
407th SFW	2 cys
3rd Wea	2 cys
Comdr AF, US Pacific Fleet	2 cys
CG, Air FMF, Atlantic	2 cys
CG, Air FMF, Pacific	2 cys

ANNEX A

TO

OPERATIONS PLAN

SERIAL NO. 4-55

UTILIZATION OF AUGMENTATION FIGHTER FORCES

UNDER MINIMUM WARNING CONDITIONS

[redacted]

ANNEX A
TO
OPERATIONS PLAN
SERIAL NO. 4-55

UTILIZATION OF AUGMENTATION FIGHTER FORCES
UNDER MINIMUM WARNING CONDITIONS

1. SUMMARY:

a. It is possible that warning of an impending air attack against the Continental United States would not afford sufficient time to deploy augmentation aircraft. A potential effort for immediate air defense operations exists wherever aircraft are within radar control capabilities at their home bases. This annex outlines a plan whereby these forces may be used in-place. (Secret).

2. MISSION:

a. Utilization of augmentation fighter units in support of the air defense mission under minimum warning conditions. (Unclassified).

3. TASKS FOR PARTICIPATING AND SUBORDINATE UNITS:

a. STRATEGIC AIR COMMAND aircraft and aircrews that have been committed for air defense will be provided as follows: *

(1) The 42d AIR DIVISION will furnish all available F-84 aircraft and aircrews located at Bergstrom Air Force Base for control by 33d Air Division (Defense).

(2) The 40th AIR DIVISION will furnish all available F-84 aircraft and aircrews located at Turner Air Force Base for control by 35th Air Division (Defense).

(3) The 407th STRATEGIC FIGHTER WING will furnish all available F-84 aircraft and aircrews located at Great Falls Air Force Base for control by 29th Air Division (Defense).

(4) The 506th STRATEGIC FIGHTER WING will furnish all available F-84 aircraft and aircrews located at Tinker Air Force Base for control by 33d Air Division (Defense). (Secret).

b. TACTICAL AIR COMMAND aircraft and aircrews that have been committed for air defense will be provided as follows: *

[redacted]

[redacted]

(1) The 479th FIGHTER DAY WING will furnish all available F-100A aircraft and aircrews located at George Air Force Base for control by 27th Air Division (Defense).

(2) The 366th FIGHTER BOMBER WING will furnish all available F-84F aircraft and aircrews located at Alexandria Air Force Base for control by 33rd Air Division (Defense).

(3) The 405th FIGHTER BOMBER WING will furnish all available F-84F aircraft and aircrews located at Langley Air Force Base for control by 26th Air Division (Defense).

(4) The 450th FIGHTER BOMBER WING will furnish all available F-86F aircraft and aircrews located at Foster Air Force Base for control by 33rd Air Division (Defense).

(5) The 18TH AIR FORCE will provide airlift for deploying detachments as outlined in Annex B. (See paragraph 3x below.) [redacted]

c. AIR TRAINING COMMAND aircraft and aircrews that have been committed for air defense will be provided as follows:

(1) The 3625TH COMBAT CREW TRAINING WING will furnish all available F-86D aircraft and aircrews located at Tyndall Air Force Base for control by 35th Air Division (Defense).

(2) The 3555TH COMBAT CREW TRAINING WING will furnish all available F-86D aircraft and aircrews located at Perrin Air Force Base for control by 33rd Air Division (Defense).

(3) The 3550TH COMBAT CREW TRAINING WING will furnish all available F-89D and F-94C aircraft and aircrews located at Moody Air Force Base for control by 35th Air Division (Defense).

(4) The 3595TH COMBAT CREW TRAINING WING will deploy F-86 aircraft and aircrews located at Nellis Air Force Base as outlined in Annex B.

(5) The 3600TH COMBAT CREW TRAINING WING will deploy F-84 aircraft and aircrews located at Luke AFB as outlined in Annex B.

[redacted]

[redacted]

(6) Airlift for ATRC detachments will be provided from ATRC resources as outlined in Annex B. (See paragraph 3x below.) [redacted]

d. AIR PROVING GROUND COMMAND aircraft and aircrews that have been committed for air defense will be provided as follows:

(1) The Air Force Operational Test Center will furnish all available combat aircraft and aircrews located at Eglin Air Force Base for control by 35th Air Division (Defense). [redacted]

e. AIR RESEARCH AND DEVELOPMENT COMMAND aircraft and aircrews that have been committed for air defense will be provided as follows:

(1) The Air Force Armament Center will furnish all available combat aircraft and aircrews located at Eglin Air Force Base for control by 35th Air Division (Defense). (SECRET).

f. JOINT WESTERN AIR DEFENSE FORCE will provide airlift for deploying detachments as outlined in Annex B. (See paragraph 3x below.) (Unclassified).

x. GENERAL INSTRUCTIONS:

(1) When the tactical situation permits, forces listed for in-place use under the provisions of this annex will be deployed in accordance with Annex B. Implementing order for this deployment will be the messages illustrated in Appendix 2 and 3 to Annex B.

(2) Commands providing supplementary airlift will dispatch such aircraft immediately to the on-load bases upon receipt of the implementation order to this annex. Upon arrival at the on-load base, airlift crews will be prepared to support the deployment as listed in paragraphs 3c(4), 3c(5) and 3x(1) above.

0137

[redacted]

(3) Commands providing supplementary airlift will dispatch such aircraft immediately to the on-load bases upon receipt of the implementation order to this annex. Upon arrival at on-load base, airlift crews will be prepared to support the deployment as listed in paragraphs 3x(1) and 3x(2) above. (Unclassified).

4. LOGISTICAL MATTERS:

a. See Annex C, Logistics.

5. COMMUNICATIONS AND COMMAND

a. COMMUNICATIONS:

(1) See Annex D, Communications.

b. COMMAND:

(1) See paragraph 5b, Basic Plan.

CHIDLAW
COMMANDER IN CHIEF

APPENDIX:
1. Msg of notification for deployment under Annex A.
2. Msg of notification for in-place use under Annex A.
3. Reporting Instructions for CONAD V-10 Report.

OFFICIAL:

Kenneth P. Bergquist

KENNETH P. BERGQUIST
Major General, USAF
Deputy Chief of Staff, Operations

* Availability of TAC and SAC aircraft and aircrews will be affected by overseas rotation. CONAD will notify holder of OPR PLAN 4-55 of these rotations when they occur.

[redacted]

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)
CINCONAD

DATE-TIME GROUP

SECURITY CLASSIFICATION
UNCLASSIFIED

PRECEDENCE FOR: ACTION FLASH INFORMATION FLASH

☐ BOOK MESSAGE ☒ ORIGINAL MESSAGE

☒ MULTIPLE ADDRESS CRYPTOGRAPHICATION ☐ YES ☒ NO

REFERS TO MESSAGE:

IDENTIFICATION CLASSIFICATION

TO: COMDR JWADF HAMILTON AFB HAMILTON CALIF
COMDR 18TH AF DONALDSON AFB S C
COMDR 4750TH TNG WG(DEF) YUMA CTY APRT ARIZ
COMDR 3510TH CCTW RANDOLPH AFB TEX
COMDR 3595TH CCTW NELLIS AFB NEV
COMDR 3600TH CCTW LUKE AFB ARIZ

INFO:
COMDR ATRC SCOTT AFB ILL
COMDR CTAF RANDOLPH AFB TEX
COMDR FTAF JAMES CONNALLY AFB TEX
COMDR AMC WRIGHT-PATTERSON AFB OHIO
COMDR OOAMA HILL AFB UTAH
COMDR OCAMA TINKER AFB OKLA
COMDR SMAMA McCLELLAN AFB CALIF
COMDR JEADF STEWART AFB NEWBURGH NY
COMDR JCADF GRANDVIEW AFB GRANDVIEW MO
COMDR 4600TH ABG ENT AFB COLO SPRINGS COLO (COURIER)
COMDR ROME AIR DEVELOPMENT CEN, GRIFFISS AFB NY
COMDR AF SPECIAL WEAPONS CEN KIRTLAND AFB NM

(UNCLASSIFIED) COC_____. Impl Annex A to CONAD OPLAN 4-55, 1 Apr 55, deployment. Req action adees ack.

APPENDIX 1, ANNEX A
OPR PLAN 4-55
1 Apr 55

SECURITY CLASSIFICATION
UNCLASSIFIED

PAGE 1 OF 1 PAGES

CRYPTER'S NAME (and signature, when required)

RELEASING OFFICER'S SIGNATURE

SYMBOL TELEPHONE OFFICIAL TITLE

DD FORM 1 MAY 48 173 REPLACES WD AGO FORM 11-168, 15 JUN 1945, AND WD AGO FORM 6022, 1 APR 1946, WHICH MAY BE USED.

AF - ABC - COLO. SPRINGS, COLO.

Will be confirmed in Standard Publication Form under paragraph 3a, ADCSM 5-3 YES NO

Prepared by_____
Telephone_____
Date_____

COORDINATE WITH COLITHO PENCIL ONLY

0139

ROUTINE

JOINT MESSAGEFORM

CONSERVATIONS CENTER NO.

APPENDIX 2
TO
ANNEX A

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CINCONAD

DATE-TIME GROUP

SECURITY CLASSIFICATION
UNCLASSIFIED

PRECEDENCE FOR: ACTION FLASH INFORMATION FLASH

☐ BOOK MESSAGE ☒ ORIGINAL MESSAGE

☒ MULTIPLE ADDRESS CRYPTOPRICATION ☐ YES ☒ NO

REFERS TO MESSAGE:

IDENTIFICATION CLASSIFICATION

TO: COMDR SAC OFFUTT AFB NEB ATTN: FLYCON
COMDR ATRC SCOTT AFB ILL
COMDR JWADF HAMILTON AFB HAMILTON CALIF
COMDR 18TH AF DONALDSON AFB S C
COMDR 479TH FBW GEORGE AFB CALIF
COMDR 366th FBW ALEXANDRIA AFB LA

INFO: COMDR 405TH FBW LANGLEY AFB VA
COMDR 450TH FBW FOSTER AFB TEX
COMDR AF ARMAMENT CEN EGLIN AFB FLA
COMDR 3550TH CCTW MOODY AFB GA
COMDR 3625TH CCTW TYNDALL AFB FLA
COMDR 3555TH CCTW PERRIN AFB TEX
COMDR AF OPR TEST CEN EGLIN AFB FLA
COMDR 4750TH TNG WG (DEF) YUMA COUNTY APRT ARIZ

INFO: COMDR APGC EGLIN AFB FLA
COMDR JEADF STEWART AFB NEWBURGH NY
COMDR JCADF GRANDVIEW AFB GRANDVIEW MO
COMDR 40TH ADIV (SAC) TURNER AFB GA
COMDR 42D ADIV (SAC) BERGSTROM AFB TEX
COMDR 506TH SFW TINKER AFB OKLA
COMDR 407TH SFW GREAT FALLS AFB MONT
COMDR TAC LANGLEY AFB VA
COMDR 9TH AF SHAW AFB S C
COMDR ARDC BALTIMORE MD

(UNCLASSIFIED) COC_____. Impl Annex A to CONAD OPLAN 4-55, 1 Apr 55. Req action adees ack.

APPENDIX 2, ANNEX A
OPR PLAN 4-55
1 Apr 55

SECURITY CLASSIFICATION
UNCLASSIFIED

PAGE 1 OF 1 PAGES

DRAFTER'S NAME (and signature, when required)

RELEASING OFFICER'S SIGNATURE

SYMBOL TELEPHONE

OFFICIAL TITLE

DD FORM 1 MAY 48 173 REPLACES WD AGO FORM 11-188, 15 JUN 1945, AND WD AGO FORM 688, 1 APR 1948, WHICH MAY BE USED.

AF - ASC - COLO. SPRINGS, COLO.

Will be confirmed in Standard Publication Form under paragraph 3a, ADCSM 5-3 YES NO

Prepared by_____

Telephone_____

Date_____

COORDINATE WITH COLITHO PENCIL ONLY

APPENDIX 3 (UNCLASSIFIED)
TO
ANNEX A
OF
OPERATIONS PLAN
SERIAL NO. 4-55

REPORTING INSTRUCTIONS FOR ADC V-10 REPORT

1. The ADC V-10 Report is a monthly report (furnished Continental Air Defense Command, the Air Defense Forces, and Air Divisions (Defense) by participating fighter units of SAC, TAC, ATRC, APGC and ARDC) which reflects the current fighter aircraft and aircrew availability for air defense.

2. The report will be submitted by air mail letter and will consist of the following items:

a. Item 1 - Unit designation.

b. Item 2 - Station.

c. Item 3 - Number and type of primary mission aircraft assigned.

d. Item 4 - Estimate of the number of primary mission aircraft that are combat ready and will be available to augment CONAD in the event of a hostile attack during the period until the next monthly report is made. Aircraft combat ready for the purpose of this plan will be in-commission and equipped with:

(1) Operating armament.

(2) Operating gunsight or fire control system.

(3) Sufficient instrument facilities to permit weather penetrations and night flying.

(4) An operating oxygen system.

(5) VHF or UHF air-to-ground communication facilities.

e. Item 5 - Number of combat aircrews assigned or available to the unit.

f. Item 6 - Number of combat aircrews combat ready and available for air defense purposes. To be combat ready for the purposes of this plan, a pilot should be:

(1) Current and qualified for night flying in the primary mission aircraft.

(2) In possession of a current instrument card.

(3) Familiar with the operation of the armament and sighting system in the primary mission aircraft.

g. Item 7 - Remarks as desired and explanation of the preceding items.

3. The report is prepared as of the fifteenth of each month and forwarded to reach CONAD not later than the twentieth of the month. Information copies of the report will be forwarded to the Air Defense Force and to the Air Division (Defense) within whose area the unit will deploy. Individual reports will be classified CONFIDENTIAL.

4. Supplemental reports will be submitted whenever aircraft availability changes by fifteen or more aircraft from the current report.

ANNEX B

TO

OPERATIONS PLAN

SERIAL NO. 4-55

DEPLOYMENT OF AUGMENTATION FORCES

ANNEX B
OPR PLAN 4-55
1 Apr 55

[redacted]

ANNEX B
TO
OPERATIONS PLAN
SERIAL NO. 4-55

DEPLOYMENT OF AUGMENTATION FORCES

1. SITUATION:

a. In some instances fighter aircraft of other commands will contribute more to air defense if they are deployed to positions where early engagement of enemy aircraft is more likely. This will be possible only if sufficient warning of an attack is received to permit the plan established in this annex to be carried out. [redacted]

2. MISSION:

a. Augmentation aircraft will be placed in the most effective defensive location with reference to the current deployment of CONAD interceptor units and AC&W sites. (Unclassified).

3. TASKS FOR PARTICIPATING UNITS:

a. STRATEGIC AIR COMMAND aircraft and aircrews that have been committed for air defense will be deployed as listed in Appendix 1 to Annex B. * (Unclassified).

b. TACTICAL AIR COMMAND aircraft and aircrews that have been committed for air defense will be deployed as specified in Appendix 1 to Annex B. * (Unclassified).

c. AIR TRAINING COMMAND aircraft and aircrews that have been committed for air defense will be deployed as specified in Appendix 1 to Annex B. (Unclassified).

d. AIR PROVING GROUND COMMAND aircraft and aircrews that have been committed for air defense will be provided as specified in Appendix 1 to Annex B. (Unclassified).

e. AIR RESEARCH AND DEVELOPMENT COMMAND aircraft and aircrews that have been committed for air defense will be provided as specified in Appendix 1 to Annex B. (Unclassified).

* Availability of TAC and SAC aircraft and aircrews will be affected by overseas rotation. CONAD will notify holders of Opr Plan 4-55 of these rotations when they occur.

ANNEX B
OPR PLAN 4-55
1 Apr 55

[redacted]

[redacted]

x. GENERAL INSTRUCTIONS:

(1) Squadrons or like units which will deploy to non-Air Defense Command bases will be organized for independent operations, to include a commander, operations officer, flight commanders, intelligence personnel, etc. Units which will deploy to ADC bases will be integrated with the ADC Fighter Interceptor Squadron located there and operate as additional flights. Flight commanders for the augmentation units will be appointed by the commander furnishing the augmentation force. (Unclassified).

(2) Augmentation forces will provide a crew ratio of 1.5 crews per primary mission aircraft in support of this plan wherever possible. (Unclassified).

(3) Deploying forces will depart home station with the least possible delay after notification that this annex has been implemented. Departures will be made as 4-aircraft flights become available. (Unclassified).

(4) Where possible, departing fighters will leave their home stations with a combat load of ammunition aboard and guns charged hot. (Unclassified).

(5) T-33 aircraft accompanying the deploying detachment will carry crew chiefs for the primary mission aircraft. The T-33 pilot will be qualified in the primary mission aircraft in order to provide the 1.5 crew ratio. Once deployed, the T-33 aircraft may be used for CAP or as trailers, utilizing pilots of the primary mission aircraft on a reduced status of alert. Support personnel and spare parts will not be airlifted to the deployment base for T-33 aircraft. Transient maintenance facilities at the deploying base will be used for the T-33's as necessary. (Unclassified).

(6) Augmentation unit commanders, when receiving order to deploy, will call by long distance telephone collect to the Air Defense Force Combat Operations Center within whose area the unit will deploy, advising them of number aircraft to be deployed and the estimated time of departure. In addition, augmentation unit commanders, when arriving at en route refueling base, will call collect to the Air Defense Force COC within whose area the unit is deploying, advise of estimated time of departure from en route refueling base and of any reason which will prevent or unduly delay further deployment. Telephone numbers of Joint Air Defense Force Combat Operations Centers are as follows:

(a) Joint Eastern Air Defense Force: Newburgh, New York, 4900, Ext 646.

(b) Joint Central Air Defense Force: Kansas City, Missouri, Emerson 5200, Ext 615, 616.

(c) Joint Western Air Defense Force: Ignacio, California, Tucker 3-7711, Ext 2451. (Unclassified)

(7) In event the tactical situation or weather conditions require alternate refueling or stop-over bases, deviations from deployment routes specified in this annex may be made to expedite arrival at deployment bases. Unit commanders concerned will advise the appropriate air defense force and refueling base immediately upon determining that a deviation will be made. (Unclassified).

(8) In order that sufficient navigational aids may be made available to deployment flights (fighter and support aircraft except as noted in paragraph (c) below) during "Warning Red" and "Warning Yellow", the following procedures will apply to all deployment flights:

[redacted]

(a) All aircraft will file IFR reporting procedures regardless of prevailing weather conditions. (Unclassified).

(b) Section D of Form DD 175 will contain the suffix "DAU" and the detachment designation to the aircraft identification number. (Example: The flight leader of detachment S-3 deploying from Bergstrom AFB to Walker AFB will enter in the identification block of Section D the following: AF 1234 DAU (S-3)). This suffix will not be used in air-ground communications. Its use is intended for use only during conditions stated in paragraph 1, basic plan, and does not apply to exercise or training deployment. [redacted]

(c) Airlift aircraft furnished by 18th Air Force will use the suffix "TBO" and the detachment designation of the detachment being airlifted in the same manner as noted above. Airlift aircraft furnished by ATRC and ADC will use the suffix "DAU" as outlined in paragraph (b) above. [redacted]

(d) Section IV of Form DD 175 "Remarks" will contain a list of the minimum navigational aids required to accomplish the flight. (Unclassified).

(e) Aids selected will be located as far as possible from critical target areas. (Unclassified).

(f) ADDCs or GCI stations may be requested to furnish let-down assistance during IFR conditions. (Unclassified).

(g) Additional navigational aids may be made available to aircraft encountering in-flight emergencies. Under such conditions, the pilot of the distressed aircraft will contact the nearest CAA facility, stating type of emergency and the navigational aid(s) desired. The CAA air route traffic control center will, in turn,

relay the request to the appropriate air division commander who will determine the tactical feasibility of turning on such aids. (Unclassified).

(9) The following instructions will apply to all deployment flights:

(a) Normal CAA procedures will be followed.

(b) Aircraft commanders will comply with AFR 60-22 and Civil Air Regulations Part 620 when operating within ADIZ's.

(c) Frequencies shown in current radio facility charts will be used. (Unclassified).

(10) Joint Air Defense Force commanders, to whom a specific augmentation unit is allocated, may divert deploying aircraft en route when necessary to repel those attacks that occur during the flights to the deployment bases, when weather conditions preclude deployment to the specified base, or when the tactical situation requires redeployment. Diversion of a fighter unit or detachment will be authority for similar diversion of the airlift aircraft flying in support of the unit or detachment. (Unclassified).

(11) Additional aircraft that may become available subsequent to deployment under the provisions of this annex will remain at the home station as a fighter reserve for air defense operations. (Unclassified).

4. LOGISTICAL MATTERS:

a. See Annex C, Logistics.

5. COMMUNICATIONS AND COMMAND:

a. COMMUNICATIONS:

(1) See Annex D, Communications.

b. COMMAND:

(1) See paragraph 5.b. of Basic Plan.

CHIDLAW
COMMANDER IN CHIEF

APPENDIX: 1. Augmentation Forces Deployment Plan

2. Message of Notification to ATRC for Implementation of Annex B

3. Message of Notification to SAC, TAC, and APGC for Implementation of Annex B

OFFICIAL:

Kenneth P. Bergquist

KENNETH P. BERGQUIST
Major General, USAF
Deputy Chief of Staff, Operations

[redacted]

APPENDIX 1 [redacted]
TO
ANNEX B
OPERATIONS PLAN
SERIAL NO. 4-55

AUGMENTATION FORCES DEPLOYMENT PLAN

Major Command (a)	Organization and Location (b)	Detachment Designation (c)	Aircraft Furnished Quantity (d)	Type (e)	Deployment Bases (f)	En Route Refueling Bases (g)	Operational Control (h)	Command Furnishing Airlift (i)
SAC	40th ADiv Turner AFB, Ga	S-1	24	F-84F	Lockbourne AFB, Ohio		30th ADiv (Def)	18 AF
		S-2	24	F-84F	Hunter AFB,Ga		35th ADiv (Def)	18 AF
			Balance	F-84F	Turner AFB,Ga		35th ADiv (Def)	
	42nd ADiv Bergstrom AFB, Texas	S-3	16	F-84F	Walker AFB, NM		34th ADiv (Def)	18 AF
		S-4	16	F-84F	Smoky Hill AFB Kansas		33rd ADiv (Def)	18 AF
		S-5	16	F-84F	Lincoln AFB, Neb		31st ADiv (Def)	18 AF
			Balance	F-84F	Bergstrom AFB,Tex		33rd ADiv (Def)	
	407th SFW Great Falls AFB Mont		All	F-84F	Great Falls AFB Mont		29th ADiv (Def)	
	506th SFW Tinker AFB Okla		All	F-84F	Tinker AFB, Okla		33rd ADiv (Def)	

[redacted]

[redacted]

Major Command (a)	Organization and Location (b)	Detachment Designation (c)	Aircraft Quantity (d)	Furnished Type (e)	Deployment Bases (f)	En Route Refueling Bases (g)	Operational Control (h)	Command Furnishing Airlift (i)
TAC	366th FBW Alexandria AFB,La		All	F-84F	Alexandria AFB, La.		33rd ADiv (Def)	
	405th FBW Langley AFB, Va		All	F-84F	Langley AFB Va		26th ADiv (Def)	
	450th FBW Foster AFB, Tex		All	F-86H	Foster AFB,Tex		33rd ADiv (Def)	
	479th FDW George AFB, Calif		All	F-100	George AFB Calif		27th ADiv (Def)	
ATRC	3550th CCTW Moody AFB Ga	A-1	12 6	F-94C T-33	New Castle AFB, Del	Shaw AFB (IFR Cond only)	26th ADiv (Def)	ATRC
		A-2	12 6	F-94C T-33	Griffiss AFB, NY	Gtr Pitt(VFR) Shaw-Langley (IFR)	32nd ADiv (Def)	ATRC
		A-3	16 8	F-89D T-33	Kinross AFB Mich	Wright-Patterson AFB	30th ADiv (Def)	ATRC
			Balance	F-89D F-94C	Moody AFB Ga		35th ADiv (Def)	
	3555th CCTW Perrin AFB, Texas	A-4	16 8	F-86D T-33	Duluth AFB Minn	Grandview AFB, Mo	31st ADiv (Def)	ATRC
		A-5	16 8	F-86D T-33	Wurtsmith AFB, Mich	Scott AFB Ill	30th ADiv (Def)	ATRC

[redacted]

Major Command (a)	Organization and Location (b)	Detachment Designation (c)	Aircraft Quantity (d)	Furnished Type (e)	Deployment Bases (f)	En Route Refueling Bases (g)	Operational Control (h)	Command Furnishing Aircraft (i)
ATRC (contd)	3555th CCTW Perrin AFB Texas	A-6	16 8	F-86D T-33	Youngstown AFB, Ohio	Scott AFB Ill	30th ADiv (Def)	ATRC
			Balance	F-86D	Perrin AFB Texas		33rd ADiv (Def)	
	3595th CCTW Nellis AFB, Nev	A-7	16 4	F-86F T-33	Paine AFB Wash	McClellan AFB, Calif	25th ADiv (Def)	ATRC
		A-8	16 4	F-86F T-33	McChord AFB Wash	McClellan AFB, Calif	25th ADiv (Def)	CONAD (JWADF)
		A-9	16 4	F-86F T-33	Larson AFB Wash	McClellan AFB, Calif	9th ADiv (Def)	ATRC
		A-10	16 4	F-86F T-33	Geiger AFB Wash	Mountain Home AFB, Idaho	9th ADiv (Def)	ATRC
		A-11	16 4	F-86F T-33	Travis AFB Calif		28th ADiv (Def)	ATRC
		A-12	16 4	F-86F T-33	McClellan AFB, Calif		28th ADiv (Def)	CONAD (JWADF)
		A-13	16 4	F-86F T-33	Mather AFB Calif		28th ADiv (Def)	ATRC
		A-14	16 4	F-86F T-33	Castle AFB Calif		28th ADiv (Def)	ATRC

Major Command (a)	Organization and Location (b)	Detachment Designation (c)	Aircraft Quantity (d)	Furnished Type (e)	Deployment Bases (f)	En Route Refueling Bases (g)	Operational Control (h)	Command Furnishing Aircraft (i)
ATRC (contd)	3595th CCTW (contd)	A-15	16 4	F-86F T-33	Oxnard AFB Calif		27th ADiv (Def)	CONAD (JWADF)
		A-16	16 4	F-86F T-33	Yuma County AFB, Ariz		27th ADiv (Def)	CONAD (JWADF)
		Remainder of combat ready aircraft and aircrews will remain at Nellis AFB for control by JWADF as a fighter reserve.						
	3600th CCTW Luke AFB, Ariz	A-17	16 8	F-84F T-33	Ellsworth AFB, SD	Lowry AFB	29th ADiv (Def)	18th AF
		A-18	16 8	F-84F T-33	Kirtland AFB, NM		34th ADiv (Def)	18th AF
		A-19	16 8	F-84G T-33	Tinker AFB Okla		33rd ADiv (Def)	18th AF
		Remainder of combat ready aircraft and aircrews will remain at Luke AFB for control by JCADF as a fighter reserve.						
	3625th CCTW Tyndall AFB Fla	A-20	16 8	F-86D T-33	Charleston AFB, SC		35th ADiv (Def)	ATRC
			Balance	F-86D	Tyndall AFB, Fla		35th ADiv (Def)	
APGC	AFOTC Eglin AFB, Fla		8	Misc	Eglin AFB Fla		35th ADiv (Def)	
ARDC	AF Armament Cen Eglin AFB, Fla		8	Misc	Eglin AFB Fla		35th ADiv (Def)	
	AFCRC Hanscom AFB, Mass		8	Misc	Hanscom AFB Mass		32nd ADiv (Def)	

Deployment Map
of
Augmentation Force

Drop "ADC HR"
+
use
ADC History 1953A, Doc.
CONAD/ADC Hist, 1954B

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

APPENDIX 2
TO
ANNEX B

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CINCONAD

DATE-TIME GROUP

SECURITY CLASSIFICATION
UNCLASSIFIED

PRECEDENCE FOR: ACTION FLASH INFORMATION FLASH

☐ BOOK MESSAGE ☒ ORIGINAL MESSAGE

☒ MULTIPLE ADDRESS CRYPTOPRIFICATION ☐ YES ☒ NO

REFERS TO MESSAGE:

IDENTIFICATION CLASSIFICATION

TO: COMDR JWADF HAMILTON AFB HAMILTON CALIF
COMDR 18TH AF DONALDSON AFB S C
COMDR ATRC SCOTT AFB ILL
COMDR 3625th CCTW TYNDALL AFB FLA
COMDR 3510TH CCTW RANDOLPH AFB TEX
COMDR 3550TH CCTW MOODY AFB GA
XXXXCOMDR 3555TH CCTW PERRIN AFB TEX
COMDR 3600TH CCTW LUKE AFB ARIZ
COMDR 3595TH CCTW NELLIS AFB LAS VEGAS NEV
COMDR 4750TH DEG WG (WPN) YUMA CO APRT ARIZ

INFO: COMDR CTAF RANDOLPH AFB TEX
COMDR FTAF JAMES CONNALLY AFB TEX
COMDR JEADF STEWART AFB NEWBURGH NY
COMDR JCADF GRANDVIEW AFB GRANDVIEW MO

(UNCLASSIFIED) COC_____. Impl Annex B to CONAD OPLAN 4-55,

1 Apr 55. Req action adees ack.

APPENDIX 2, ANNEX B
OPR PLAN 4-55
1 Apr 55

SECURITY CLASSIFICATION
UNCLASSIFIED

PAGE 1 OF 1 PAGES

DRAFTER'S NAME (and signature, when required)

RELEASING OFFICER'S SIGNATURE

SYMBOL TELEPHONE OFFICIAL TITLE

DD FORM 1 MAY 49 173 REPLACES WD AGO FORM 11-188, 15 JUN 1945, AND WD AGO FORM 688, 1 APR 1942, WHICH MAY BE USED.

AF - ABC - COLO. SPRINGS, COLO.

Will be confirmed in Standard Publication Form under paragraph 3a, ADCSM 5-3 YES NO

Prepared by_____

Telephone_____

Date_____

COORDINATE WITH COLITHO PENCIL ONLY

UNCLASSIFIED

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

APPENDIX 3
TO
ANNEX B

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CINCONAD

DATE-TIME GROUP	SECURITY CLASSIFICATION UNCLASSIFIED
PRECEDENCE FOR: ACTION FLASH	INFORMATION FLASH
☐ BOOK MESSAGE	☒ ORIGINAL MESSAGE
☒ MULTIPLE ADDRESS	CRYPTOPRECAUTION ☐ YES ☒ NO
REFERS TO MESSAGE:	
IDENTIFICATION	CLASSIFICATION

TO: COMDR SAC OFFUTT AFB NEB ATTN: FLYDON
COMDR 18TH AF DONALDSON AFB S C
COMDR 405TH FBW LANGLEY AFB VA
COMDR 479TH FBW GEORGE AFB CALIF
COMDR 366th FBW ALEXANDRIA AFB LA
COMDR AFOIC EGLIN AFB FLA

INFO: COMDR 450TH FBW FOSTER AFB TEX
COMDR AF ARMT CEN EGLIN AFB FLA
COMDR AFCRC HANSCOM AFB MASS

INFO: COMDR TAC LANGLEY AFB VA
COMDR APGC EGLIN AFB FLA
COMDR OCAMA TINKER AFB OKLA
COMDR SMAMA McCLELLAN AFB CALIF
COMDR JEADF STEWART AFB NY
COMDR JCADF GRANDVIEW AFB MO
COMDR JWADF HAMILTON AFB CALIF
COMDR 40TH ADIV (SAC) TURNER AFB GA
COMDR 42ND ADIV (SAC) BERGSTROM AFB TEX
COMDR AMC WRIGHT-PATTERSON AFB OHIO
COMDR 9TH AF SHAW AFB S C
COMDR ARDC BALTIMORE MD
COMDR RADC GRIFFISS AFB N Y
COMDR AF SPEC WPN COMD KIRTLAND AFB N M
COMDR 506TH SFW TINKER AFB OKLA
COMDR 407TH SFW GREAT FALLS AFB MONT
COMDR 818TH ADIV (SAC) LINCOLN AFB NEB

(UNCLASSIFIED) COC ______________. Encl Annex B to CONAD OPLAN 4-55, 1 Apr 55. Req action addees ack.

APPENDIX 3, ANNEX B
OPR PLAN 4-55
1 Apr 55

SECURITY CLASSIFICATION UNCLASSIFIED	PAGE 1 OF 1 PAGES
DRAFTER'S NAME (and signature, when required)	RELEASING OFFICER'S SIGNATURE
SYMBOL / TELEPHONE	OFFICIAL TITLE

DD FORM 1 MAY 49 173 REPLACES WD AGO FORM 11-100, 15 JUN 1945, AND WD AGO FORM 690, 1 APR 1948, WHICH MAY BE USED.

AF-ADC-COLO. SPRINGS, COLO.

Will be confirmed in Standard Publication Form under paragraph 3a, ADCSM 5-3 YES NO

Prepared by__________
Telephone__________
Date__________

COORDINATE WITH COLITHO PENCIL ONLY

UNCLASSIFIED

ANNEX C

TO

OPERATIONS PLAN

SERIAL NO. 4-55

CONAD WARTIME PLANNING FACTORS FOR AUGMENTATION FORCES

[redacted]

ANNEX C
TO
CONAD OPR PLAN 4-55

CONAD WARTIME PLANNING FACTORS FOR AUGMENTATION FORCES

Line No.		AIRCRAFT MODEL AND SERIES									
		T33	F84F	F84DEG	F86AE	F86F	F86D	F86H	F89D	F94C	F100A
	UTILIZATION RATES										
1.	TOTAL SORTIES 1/										
a.	1st Day	1	2	2	2	2	2	2	2	2	2
b.	2nd thru 7th day (per day)	1	1	1	1	1	1	1	1	1	1
c.	7th thru 30th day (per day)	1	1	1	1	1	1	1	1	1	1
d.	2nd thru 3rd month (per month)	15	15	15	15	15	15	15	15	15	15
e.	thereafter (per month)	15	15	15	15	15	15	15	15	15	15
2.	FLYING HOURS PER SORTIE	2.0	2.0	2.2	1.5	1.5	1.2	1.5	2.0	1.5	1.8
	EXPENDITURE RATES										
3.	FUEL (gal per hour)	350	490	370	405	500	635	615	730	485	690
4.	COMBAT AMMUNITION 2/										
a.	1st day	0	80	80	80	80	80	80	80	80	80
b.	2nd thru 6th day (per day)	0	25	25	25	25	25	25	25	25	25
c.	7th thru 30th day (per day)	0	10	10	10	10	10	10	10	10	10
d.	2nd thru 3rd month (per month)	0	5	5	5	5	5	5	5	5	5
e.	thereafter (per month)	0	1	1	1	1	1	1	1	1	1
5.	AUXILIARY FUEL (PYLON) TANKS 3/										
a.	1st day	0	80	0	80	80	80	80	0	0	80
b.	2nd thru 6th day (per day)	0	25	0	25	25	25	25	0	0	25
c.	7th thru 30th day (per day)	0	10	0	10	10	10	10	0	0	10
d.	2nd thru 3rd month (per month)	0	5	0	5	5	5	5	0	0	5
e.	thereafter (per month)	0	1	0	1	1	1	1	0	0	1

NOTES: 1/ Per aircraft allocated by Appendix 1, Annex B to DEPLOYMENT Augmentation and/or IN-PLACE Augmentation. (For logistic planning purposes consider organizations as possessing total U/E aircraft). Rates are not applicable to "Fighter Reserve" aircraft.

2/ Indicates percent (%) of sorties flown which expend total load of combat ammunition.

3/ Indicates percent (%) of sorties flown which expend two (2) pylon tanks. For logistic planning purposes, expenditure of center line tip tanks will not exceed rates established by peacetime consumption.

ANNEX C
CONAD OPR PLAN 4-55
1 Apr 55

[redacted]

ANNEX D

TO

CONAD OPERATIONS PLAN

SERIAL NO. 4-55

LOGISTICS

APPENDIX	TITLE
1	Materiel Reserve Requirements
2	Supplementary Airlift Requirements
3	Project Officers
4	Distribution of Supporting Plans

[redacted]

ANNEX D

TO

OPERATIONS PLAN

SERIAL NO. 4-55

LOGISTICS

1. BASES HAVING FORCES EARMARKED TO DEPLOY WILL: (CONFIDENTIAL)

a. Prior to the time augmentation is ordered:

(The provisions of this sub-par are effective upon receipt)

(1) Prepare and/or earmark for movement by air on short notice; sufficient supplies (less war-consumables*), personnel, and equipment to support each augmentation detachment for a 5-day period of sustained combat operations at its respective deployment base.

(2) Make frequent** coordination visits to the deployment base of each detachment for the purpose of determining what equipment, supplies and personnel can be made available to the detachment and to the end that initial airlift requirements may be reduced to a minimum.

(3) Make arrangements (through frequent** coordination visits) for expeditious servicing at those enroute refueling bases which will be utilized by augmentation detachments of their command.

(4) Establish and maintain materiel reserves in accordance with Appendix 1, this Annex.

(5) Maintain (on-base) quantities of auxiliary fuel tanks specified by the NIGHT LIFE portion of AFL 67-44 (Project AF-GEN). (Refer to par 1c, App 1, this Annex).

(6) Prepare and maintain in a current status, a detailed LOADING & DEPLOYMENT PLAN covering tasks outlined in paragraph 1, this Annex. (Refer to App 4, this Annex, for distribution).

(7) Appoint a DEPLOYMENT PROJECT OFFICER and alternate to coordinate (and act as a focal point for) all actions required by paragraph 1, this Annex. (Refer to App 3, this Annex).

(8) Cooperate with the appropriate Air Defense Force to the end that compliance with paragraph 5a(1), below is achieved.

. . . . . .

NOTES: * Limited to combat ammo, breathing oxygen (non-liquid), POL, and auxiliary fuel tanks (pylon).

** Not less than once each quarter.

[redacted]

[redacted]

b. When MINIMUM WARNING augmentation is ordered: (Annex A)

(1) Comply with paragraph 1c, below, if all or any portion of forces allocated to Air Defense Augmentation are ordered to deploy in accordance with paragraph 3x(1), Annex A.

(2) Initiate immediate action to bring total number of combat-ready aircraft to as high a figure as possible.

(3) Place all unit-assigned (organic) support aircraft on stand-by for the purpose of airlifting first priority personnel and cargo. (Refer to 1c(3)(a), below).

(4) Load all combat-ready aircraft with a full load of fuel, oxygen and combat ammunition.

(5) Be prepared to implement tasks outlined in paragraph 1c, below, on short notice.

c. When DEPLOYMENT augmentation is ordered: (Annex B)

(1) Prepare personnel, supplies, and equipment previously earmarked in accordance with paragraph 1a(1), above, for immediate loading upon arrival (or availability) of supporting airlift.

(2) As soon as possible, but NLT 15 minutes after departure of first augmentation fighters; provide (by telephone) enroute refueling bases with the following information:

(a) Type and number of aircraft to be expected.

(b) Detachment identification.

(c) ETA (by flights if possible).

(d) Extent of servicing reqd. (Indicate Hi or Lo oxy).

(e) Whether aircraft will arrive with or without "HOT" armament.

(3) Airlift to deployment bases; sufficient supplies (less war-consumables), personnel, and equipment to support each augmentation detachment for a 5-day period of sustained air defense combat operations.

(a) All available unit-assigned (organic) support aircraft will be utilized for the purpose of airlifting first priority personnel and cargo and to reduce the requirement for supplementary airlift provided from other sources. (Refer to par 1b(3), above).

NOTE: ADC objective is to get first priority personnel and cargo airborne NLT 3 hours after receipt of deployment order.

[redacted]

[redacted]

(b) Supplementary airlift will be provided from 5 to 15 hours after receipt of deployment order and in accordance with Appendix 2, this Annex.

(4) Once deployment has been effected, maintain each deployed augmentation detachment with a 5-day level of aircraft spares peculiar to the type aircraft deployed. Level will be resupplied (maintained) by use of unit-assigned support aircraft (incl T-33) and from resources available either to the HOME BASE or to the DEPLOYMENT BASE.

(5) If required (and not available at the deployment base); resupply their own detachments with Liquid Oxygen (Lq Ox) by use of unit-assigned support aircraft and from resources available either to the HOME BASE or to the DEPLOYMENT BASE.

2. BASES HAVING FORCES EARMARKED TO REMAIN IN-PLACE WILL:(CONF)

a. Prior to the time augmentation is ordered:

(the provisions of this sub-par are effective upon receipt)

(1) Establish and maintain materiel reserves in accordance with Appendix 1, this Annex.

(2) Maintain (on-base) quantities of auxiliary fuel tanks specified by the NIGHT LIFE portion of AFL 67-44 (Project AF-GEN). (Ref par 1c, Apr 1)

b. When augmentation is ordered: (either Annex A or Annex B).

(1) All Bases:

(a) Initiate immediate action to bring total number of combat-ready aircraft to as high a figure as possible.

(b) Load all combat-ready aircraft with full load of fuel, oxygen, and combat ammunition.

(c) Be prepared for sustained air defense combat operations.

(2) Bases having FIGHTER RESERVE forces:

(a) Be prepared (on short notice) to deploy FIGHTER RESERVE aircraft as directed by the Air Defense Force to which assigned for control.

(b) Be prepared to utilize unit-assigned support airlift to support the deployment of their own FIGHTER RESERVE aircraft. In the event unit-assigned airlift is not adequate to support deployment, airlift assistance will be requested from the Air Defense Force directing the deployment. (Refer to par 5a(2), this Annex).

[redacted]

3. DEPLOYMENT BASES (Bases receiving augmentation forces) WILL: (CONFIDENTIAL)

a. Prior to the time augmentation is ordered:

(The provisions of this sub-par are effective upon receipt).

(1) Take necessary action to insure that all required base services together with normal base-level logistic support will be available to augmentation detachments and their supporting airlift upon arrival.

(2) Establish and maintain materiel reserves in accordance with Appendix 1, this Annex.

(3) Maintain (on-base) quantities of auxiliary fuel tanks specified by the NIGHT LIFE portion of AFL 67-44 (Project AF-GEN). (Refer to par 1c, App 1, this Annex)

(4) Prepare and maintain in a current status, a detailed BASE SUPPORT PLAN covering tasks outlined in paragraph 3, this Annex. Plan will include, but not be limited to, arrangements and responsibilities for:

(a) Aircraft parking (including sketch of ramp layout).

(b) "Real" facilities available.

(c) Supply and Maintenance.

(d) Reservicing (including "hardstand" delivery of combat ammo).

(e) Transportation.

(f) Billeting and messing.

(g) Finance.

(h) Personal Affairs matters (including casualty assistance).

(Refer to App 4, this Annex, for distribution).

(5) Appoint an AUGMENTATION PROJECT OFFICER and an alternate to coordinate (and act as a focal point for) all actions required by paragraph 3, this Annex. (Refer to App 3, this Annex).

b. When augmentation is ordered: (either Annex A or Annex B)

(1) Implement the BASE SUPPORT PLAN previously prepared in accordance with paragraph 3a(4), above.

(2) Upon arrival of an augmentation detachment (or any portion thereof) take immediate action to bring the detachment to as high a state of combat-readiness as possible.

[redacted]

NOTE: ADC objective is to have augmentation aircraft fully reserviced and combat-ready NLT 30 minutes after arrival.

4. ENROUTE REFUELING BASES WILL: (CONFIDENTIAL)

a. Prior to the time augmentation is ordered:

(The provisions of this sub-par effective upon receipt)

(1) Be prepared (24 hours daily and with minimum warning) to provide all augmentation detachments scheduled for deployment through their base:

(a) With expeditious reservicing and starting assistance.

(b) With priority landing, taxiing, and flight clearance assistance.

NOTE: ADC total "time-on-the-ground" objective (for any single aircraft) is 30 minutes.

(2) Establish and maintain (on-base) POL reserves in accordance with Appendix 1, this Annex.

(3) Prepare and maintain in a current status, a detailed AUGMENTATION RESERVICE PLAN covering tasks outlined by paragraph 4, this Annex. (Refer to App 4, this Annex, for distribution).

(4) Appoint an ENROUTE RESERVICE PROJECT OFFICER and an alternate to coordinate (and act as a focal point for) all actions required by paragraph 4, this Annex. (Refer to App 3, this Annex).

b. When augmentation is ordered: (either Annex A or Annex B)

(1) Assist augmentation aircraft to take-off as soon after landing as possible by providing:

(a) Expeditious reservicing and starting assistance.

(b) Priority landing, taxiing, and flight clearance assistance

5. ALL AIR DEFENSE FORCES WILL:

a. Prior to the time augmentation is ordered:

(The provisions of this sub-par effective upon receipt)

(1) Initiate necessary actions to insure compliance with paragraphs 1a, 2a, 3a, and 4a, this Annex, by those bases supporting the fighter augmentation of their command.

(2) Be prepared to provide airlift support from their own resources to FIGHTER RESERVE forces attached to their command.

[redacted]

b. When augmentation is ordered: (either Annex A or Annex B)

(1) If FIGHTER RESERVE forces are ordered to deploy:

(a) When requested by the reserve force, provide supporting airlift from ADF resources. (Refer to par 2b(2)(b), this annex)

(b) Arrange and/or insure the logistic support of these forces at their respective deployment bases.

6. PARTICIPATING MAJOR AIR COMMANDS WILL: [redacted]

a. Prior to the time augmentation is ordered:

(the provisions of this sub-par are effective upon receipt).

(1) Initiate necessary actions to insure compliance with paragraphs 1a, 2a, 3a, and 4a, this Annex, by bases under their command jurisdiction.

(2) Cooperate with the appropriate Air Defense Force to the end that compliance with paragraph 5a(1), above, is achieved.

b. When augmentation is ordered: (either Annex A or Annex B)

(1) Provide augmentation forces with supplementary airlift in accordance with Appendix 2, this Annex. Airlift will be provided from sources as close as possible to the Detachment being airlifted.

7. ORGANIZATIONS PROVIDING SUPPLEMENTARY AIRLIFT WILL [redacted]

a. Prior to the time augmentation is ordered:

(the provisions of this sub-par are effective upon receipt).

(1) Make *frequent coordination visits to their respective "onload" bases (App 2, this Annex) for the purpose of gaining familiarity with the loading plan of the detachment to be airlifted and to the end that when augmentation is ordered, total time-on-the-ground (at the onload base) is reduced to a minimum. Personnel making such visits will be prepared to render technical advice and assistance with respect to loading, manifesting and/or cargo preparation problems.

8. SPECIAL ISSUES OF UNAUTHORIZED EQUIPMENT: Requests for special issues of unauthorized equipment required to support this plan will be processed in accordance with AFR 67-83 and AFM 67-1 (par 11, Sec 5, Vol II). (UNCLASSIFIED)

NOTE: *Not less than once each quarter

[redacted]

9. LOCAL PROCUREMENT: On D-Day, Commanders are authorized to have materiels and services procured and to obligate and expend funds necessary to provide for immediate operational requirements. Authority for emergency local procurement will be delegated down to base level. (Authority: USAF WPC 54-2-I) (UNCLD)

CHIDLAW
COMMANDER-IN-CHIEF

APPENDICES:
1. Materiel Reserve Requirements
2. Supplementary Airlift Requirements
3. Project Officers
4. Distribution of Supporting Plans

OFFICIAL:

Stanley Sebastian
For MARSHALL S. ROTH Col, Asst DCS/M
Major General, USAF
DCS/Materiel

[redacted]

[redacted]

APPENDIX 1

TO

ANNEX D

MATERIEL RESERVE REQUIREMENTS

1. GENERAL: [redacted]

a. Reserves outlined by paragraph 3 of this Appendix are considered as minimum levels required for the support of Fighter Forces listed in Appendix 1, Annex B, and:

(1) Are not to be considered a part of (nor applied against) reserve levels established by other authority.

(2) Do not include requirement for regular ADC forces.

(3) Do not include requirement for supporting airlift

(4) Do not include requirement for ANG, USN or USMC aircraft assigned an Air Defense role by other plans and/or directives.

b. Except for auxiliary fuel tanks, reserve levels for commodities not specifically listed in paragraph 3 will be established by applying PLANNING FACTORS listed in Annex C to either (1) STOCKAGE OBJECTIVES of the Command having jurisdiction over the base, or (2) STOCKAGE OBJECTIVES listed by paragraph 2, below.

c. Quantity and type of auxiliary fuel tanks required to support this plan will be computed by ADC and forwarded to AMC for inclusion in the NIGHT LIFE portion of AFL 67-44 (Project AF-GEN).

d. Air Defense Forces and participating Major Commands will advise HQ CONAD when requirements outlined by paragraph 3 are in-place. In the event base requirements are not in-place within 90 days after the publication date of this plan, HQ CONAD will be advised ASAP of the action being taken and/or the major limiting factors which prohibit the particular requirement from being fulfilled.

2. CONAD STOCKAGE OBJECTIVES FOR AUGMENTATION FORCES [redacted]

(Refer to next page)

[redacted]

[redacted]

2. CONAD STOCKAGE OBJECTIVES FOR AUGMENTATION FORCES (SECRET)

a.	at AUGMENTATION BASES (Bases providing augmentation forces)
for aircraft earmarked by App 1, Annex B to DEPLOY	One full load* FUEL and AMMO per aircraft. For aircraft designated to remain in-place under a condition of MINIMUM WARNING (Annex A), add one day's combat per aircraft at rates listed in Annex C.
for aircraft earmarked by App 1 Annex B to remain IN-PLACE (indefinitely)	30 days combat per aircraft at rates listed in Annex C (Wartime Planning Factors).
for aircraft earmarked by App 1 Annex B to remain as a FIGHTER RESERVE	One full load* FUEL and AMMO per aircraft.

b.	at ENROUTE REFUELING BASES
for aircraft scheduled to be RESERVICED when either Annex A or Annex B is implemented	One full load* FUEL and OXYGEN** per aircraft.

c.	at DEPLOYMENT BASES (Bases receiving augmentation forces)
for aircraft scheduled to ARRIVE when either Annex A or Annex B is implemented	30 days combat per aircraft at rates listed in Annex C (Wartime Planning Factors).

NOTES: *Fuel requirements based on full internal and external capacity (less pylon capacity for F-94C, F89D and F-84DEG aircraft).

**Except Liquid Oxygen. (for planning purposes, assume that aircraft using Lq Ox do not require oxygen replenishment at enroute refueling bases)

APPENDIX 1, ANNEX D
CONAD OPR PLAN 4-5[redacted]
1 Apr 55

[redacted]

ENTI	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	REQUIREMENTS					BASED ON	
				JET POL (Gal)	4/	50 CAL API M8 (Rnds)	20 MM HEI (Rnds)	2.75" FFAR HE (Rnds)	TYPE	QTY
	a	b	c	d		e	f	g	h	i
1.	Bergstrom			3,242,520	1/	1,188,540			F84F	102
2.			Walker	486,080	1/	151,200			F84F	16
3.			Smoky Hill	486,080	1/	151,200			F84F	16
4.			Lincoln	486,080	1/	151,200			F84F	16
5.	Turner			3,242,520	1/	1,188,540			F84F	102
6.			Lockbourne	729,120	1/	226,800			F84F	24
7.			Hunter	729,120	1/	226,800			F84F	24
8.	Moody			1,179,047	1/			19,292	F89D F94C	15 15
9.		Shaw (IFR only)		15,258	2/				(F94C (T33	12) 6)
10.			New Castle	396,630	1/			3,024	F94C T33	12 6
11.		Gtr-Pitt (VFR)		15,258	2/				(F94C (T33	12) 6)
12.		Shaw (IFR only)		15,258	2/				(F94C (T33	12) 6)
13.		Langley (IFR only)		15,258	2/				(F94C (T33	12) 6)
14.			Griffiss	396,630				3,024	F94C T33	12 6

LINE	A MENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	REQUIREMENTS JET POL (Gal) 4/	50 CAL API M8 (Rnds)	20 MM HEI (Rnds)	2.75" FFAR HE (Rnds)	BASED ON TYPE	QTY
			c	d	e	f	g	h	i
15.	Moody (Cont)	Wright-Patterson		35,704 2/				(F89D (T33	16) 8)
16.			Kinross	892,160 1/			8,736	F89D T33	16 8
17.	Perrin			1,378,608 1/			9,547	F86D	52
18.		Grandview		20,104 2/				(F86D (T33	16) 8)
19.			Duluth	545,952 1/			2,016	F86D T33	16 8
20.		Scott		40,208 2/				(86D (T33	32) 16)
21.			Wurtsmith	545,952 1/			2,016	F86D T33	16 8
22.			Youngstown	545,952 1/			2,016	F86D T33	16 8
23.	Nellis			332,056 1/	451,000	52,800		F86F F84F F100	105 15 48
24.		McClellan		49,836 2/				(F86F (T33	48) 12)
25.			Paine	456,000 1/	134,400			F86F T33	16 4
26.			McChord	456,000 1/	134,400			F86F T33	16 4
27.			Larson	[illegible] 1/	134,400			F86F T33	16 4

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	REQUIREMENTS				BASED ON	
				JET POL (Gal) 4/	50 CAL API M8 (Rnds)	20 MM HEI (Rnds)	2.75" FFAR HE (Rnds)	TYPE	QTY
	a	b	c	d	e	f	g	h	i
28.	(Nellis(Cont)	Mtn Home		16,612 2/				(F86F (T33	16) 4)
29.			Geiger	456,000 1/	134,400			F86F T33	16 4
30.			Travis	456,000 1/	134,400			F86F T33	16 4
31.			McClellan	456,000 1/	134,400			F86F T33	16 4
32.			Mather	456,000 1/	134,400			F86F T33	16 4
33.			Castle	456,000 1/	134,400			F86F T33	16 4
34.			Oxnard	456,000 1/	134,400			F86F T33	16 4
35.			Yuma	456,000 1/	134,400			F86F T33	16 4

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	REQUIREMENTS JET POL (Gal) 4/	50 CAL API MB (Rnds)	20 MM I (Rnds)	2.75" FFAR HE (Rnds)	BASED ON TYPE	BASED ON QTY
	a	b	c	d	e	f	g	h	i
36.	Luke			172,719 1/	271,800			F84F F84G/E	26 77
37.		Lowry		23,064 2/				(F84F (T 3	16) 8)
38.			Ellsworth	654,080 1/	151,200			F84F T33	16 8
39.			Kirtland	654,080 1/	151,200			F84F T33	16 8
40.			Tinker	654,080 1/	151,200			F84F T33	16 8
41.	Tyndall			1,561,896 1/			9,062	F8 D	64
42.			Charleston	545,952 1/			2,016	F86D T33	16 8
43.	Great Falls			2,278,500 1/	708,750			F84F	75
44.	Tinker			2,278,500 1/	708,750			F84F	75
45.	George			5,032,462 1/		708,750		F100 F86H	75 75
46.	Alexandria			4,557,000 1/	1,417,500			F84F	150
47.	Langley			2,278,500 1/	708,750			F84F	75
48.	Foster			4,289,625 1/	1,260,000			F86H	150

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	REQUIREMENTS				BASED ON	
				JET POL (Gal) 4/	50 CAL APT M8 (Rnds)	20 MM HEI (Rnds)	2.75" FFAR HE (Rnds)	TYPE	QTY
	a	b	c	d	e	f	g	h	i
49.	Clovis 5/			(4,289,625) 1/	(630,000)	(275,625)		F86H	150
50.	Eglin			3/	3/	3/	3/	3/	3/
51.	Hanscom			3/	3/	3/	3/	3/	3/

NOTES: 1/ Maximum quantity possible (consistent with available storage and operational requirements) will be maintained in base storage. The major command having jurisdiction over the base will request MAAMA to place the remainder in terminal storage (ref AFL 67-44). Request will include a recommendation that the quantity be earmarked (under the column "Command Reqd for" in the fuels annex of Project NIGHT LIFE): (1) for the command providing the augmentation a/c and (2) by the suffix "(ADC Aug)". EXAMPLE: ATRC (ADC Aug)

2/ Total quantity to be maintained on-base at all times.

3 To be determined by Commander, based on: (1) type and quantity of aircraft allocated to Air Defense, and (2) Stockage Objectives contained in paragraph 2a, this Appendix.

4/ Requirements for Jet Lubricants is .067% of gross fuel requirement shown in Col d.

5/ Future requirement. To be established at a time determined by Commander TAC.

APPENDIX 2, ANNEX D
CONAD OPR PLAN 4-55
1 Apr 55

APPENDIX 2
TO
ANNEX D

SUPPLEMENTARY AIRLIFT REQUIREMENTS

Line No.	Command designated to fulfill REQUIREMENT	Airlift Onload Point (Augmentation Base)	Organization being airlifted		REQUIREMENT					Airlift Offload Point (Deployment Base)
			Wing or Div	Detachment No.	No. of Pass	Wt of Pass & Baggage	Wt of Cargo	Cu. Ft. Cargo	Total Weight	
	a.	b.	c.	d.	e.	f.	g.	h.	i	j.
1.	TAC(18thAF)	Bergstrom	42d ADiv	S-1	41	10250	18877	2166	29127	Walker
2.	"	"	" "	S-2	41	10250	18877	2166	29127	Smoky Hill
3.	"	"	" "	S-3	41	10250	18877	2166	29127	Lincoln
4.	"	Turner	40th ADiv	S-4	82	20500	36800	3076	57300	Lockbourne
5.	"	"	" "	S-5	68	17000	28506	2432	45506	Hunter
6.	"	Luke	3600th FTWg	A-17	30	7500	23411	2456	30911	Ellsworth
7.	"	"	" "	A-18	30	7500	23411	2456	30911	Kirtland
8.	"	"	" "	A-19	30	7500	23411	2456	30911	Tinker
9.	ADC(WADF)	Nellis	3595th FTWg	A-8	47	11750	8105	589	19855	McChord
10.	ADC(WADF)	"	" "	A-12	47	11750	8105	589	19855	McClellan
11.	ADC(WADF)	"	" "	A-15	47	11750	1815	589	13565	Oxnard
12.	ADC(WADF)	"	" "	A-16	47	11750	8105	589	19855	Yuma

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1 Apr 55

Line No.	Command designated to fulfill REQUIREMENT	Airlift Onload Point (Augmentation Base)	Organization being airlifted		REQUIREMENT					Airlift Offload Point (Deployment Base)
			Wing or Div.	Detachment No.	No. of Pass.	Wt of Pass & Baggage	Wt. of Cargo	Cu. Ft. Cargo	Total Weight	
	a.	b.	c.	d.	e.	f.	g.	h.	i.	j
13.	ATRC	Moody	3550th FTWg	A-1						New Castle
14.	"	"	" "	A-2						Griffiss
15.	"	"	" "	A-3						Kinross
16.	"	Perrin	3555th FTWg	A-4						Duluth
17.	"	"	" "	A-5						Wurtsmith
18.	"	"	" "	A-6						Youngstown
19.	"	Nellis	3595th FTWg	A-7	REQUIREMENT (Columns e thru i) maintained by Hq ATRC					Paine
20.	"	"	" "	A-9						Larson
21.	"	"	" "	A-10						Geiger
22.	"	"	" "	A-11						Travis
23.	"	"	" "	A-13						Mather
24.	"	"	" "	A-14						Castle
25.	"	Tyndall	3625th FTWg	A-20						Charleston
26.										
27.										

SUPPLEMENTARY AIRLIFT REQUIREMENTS (Cont)
TO
ANNEX D

CONAD OBJECTIVES FOR SUPPLEMENTARY AIRLIFT:

a. Departure Bases: Airborne (or diverted from peacetime task) within 3 hours after receipt of movement order.
b. On-Load Bases: 2 hours maximum time-on-the-ground.
c. Enroute Refueling Bases: 45 minutes maximum time-on-the-ground.

APPENDIX 3
TO
ANNEX D

PROJECT OFFICERS

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	PROJECT OFFICER & ALTERNATE (*) RANK NAME	BASE PHONE NO. (CENTRAL OPR.)	ON-BASE EXT. DUTY	ON-BASE EXT. OFF-DUTY	OFF-BASE PHONE
	a	b	c	d	e	f	g	h
1.	Bergstrom			LtCol F E Binnell (*)Maj J J Burns	Austin 6-6481	2304 439	NA NA	Austin 7-4801 Austin 7-5466
2.			Walker	LtCol C H Camp, Jr (*)Maj J A Hadley	Roswell 7-4411	430 430	5533 7-5500	5533 7-5500
3.			Smoky Hill	Maj M E Saunders (*)Capt W B Bryson	Salina 7-4411	443 443	NA NA	Salina 7-1703 Salina 7-4163
4.			Lincoln	Maj V O Stevens (*)Capt L Peeples (*)LtCol R M Warner	Lincoln 2-9611	505 537 491	NA NA NA	Lincoln 3-5132 Lincoln 6-1500 Lincoln 4-3285
5.	Turner			LtCol E W Clayton (*)Capt P Zwaryeh		7022 644	433/471 433/235	BOQ 283 HE-22820
6.			Lockbourne	Capt W G Holliday (*)1/Lt J T DeBree	FR 75711	7301 543	7458 7281	NA CA 1-0896
7.			Hunter	Maj H L Smith (*)Maj J W Hamil	Savannah 44461	24271 24271	NA NA	None 46108

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PROJECT OFFICERS

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	PROJECT OFFICER & ALTERNATE (*) RANK NAME	BASE PHONE NO. (CENTRAL OPR.)	ON-BASE EXT. DUTY	ON-BASE EXT. OFF-DUTY	OFF-BASE PHONE
	a	b	c	d	e	f	g	h
8.	Moody			Capt C E Crowder (*)Capt D J Light	Valdosta 3400	272 272	NA NA	Valdosta 2790J Valdosta 2977R
9.		Shaw (IFR only)		LtCol B R Powell (*)Capt E R Thompson (*)Capt H K Carper	Sumter 3-3321	3133 5113 4229	NA NA 64662	None Sumter 3-3553 NA
10.			NewCastle	Capt J K Doenges (*)1/Lt H H Nohe	NewCastle 4161	173 173	NA NA	Newark 3029 5-4636
11.		Gtr-Pitt (VFR)		1/Lt V H Anders (*)2/Lt R B Stephens	Amherst 4-5000	238 236	NA 362	Amherst 4-1196 NA
12.		Shaw (IFR only)		(Same as Line 9)				
13.		Langley (IFR only)		Capt J A Wilson (*)Capt E Courtney,Jr	Hampton 7911	6108 6104	6118 NA	NA Hampt...0044
14.			Griffiss	Capt R Cumming (*)Maj R R Clifford	Rome 3200	7764 7752	5207 NA	NA Rome 2832-J
15.		Wright-Patterson		Mr J M Beard (Civ) (*)Mr D L Bowman(Civ)	KEnmore 7111	55219 55219	55233 55233	Fairborn 8-8713 Fairborn 8-5155
16.			Kinross	Maj R L Thomas (*)Capt J M Vargo	Melrose 2-2261	254 256	NA NA	Melrose 5-5247 Rudyard 2345

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PROJECT OFFICERS

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	PROJECT OFFICER & ALTERNATE (*) RANK NAME	BASE PHONE NO. (CENTRAL OPR.)	ON-BASE EXT. DUTY	ON-BASE EXT. OFF-DUTY	OFF-BASE PHONE
	a	b	c	d	e	f	g	h
17.	Perrin			LtCol A J Freund, Jr (*)Maj R B Johnson	Sherman 3800	206 206	NA NA	Sherman 1723 Denison 3153-J
18.		Grandview		1/Lt J D Cunningham (*)Maj J D Ogle	Emerson 5200	529 557	NA NA	Woodward 3676 Springdale 4221
19.			Duluth	LtCol W E Sackett (*)Maj R W Keefer	Randolph 7-6801	9 152	NA NA	RA 4-0452 RA 9-8603
20.		Scott		Capt L B Papp (*)Capt J L Lawrence,Jr	Adams 3-4000	4205 6104	34106 34106	Colm e,Ext 31114 Colm e,Ext 31227
21.			Wurtsmith	LtCol D C McGee (*)Capt F J Waid	Seneca 9-3611	358 358	277 NA	NA Seneca 9-5186
22.			Youngs-town	Capt E P Drummond,Jr (*)1/Lt R M Connor	Warren 4-2183	236 236	313 NA	NA KE 4-3550

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PROJECT OFFICERS

LTR	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	PROJECT OFFICER & ALTERNATE (*) RANK NAME	BASE PHONE NO. (CENTRAL OPR.)	ON-BASE EXT. DUTY	ON-BASE EXT. OFF-DUTY	OFF-BASE PHONE
	a	b	c	d	e	f	g	h
23.	Nellis			Maj F K Mathews (*)Capt C L Utterback	Las Vegas 2600	318 318	5462 6983	NA NA
24.		McClellan		Maj R L Hughes (*)Maj R W Kimble	Wabash 2-1511	6132 2-2142	NA NA	Ivanhoe 9-9102 Ivanhoe 7-6892
25.			Paine	Capt E A Melo, Jr (*)1/Lt H C Compton	Highland 1611	131 3	NA NA	GR2595 NA
26.			McChord	Maj J M Hollingsworth (*)Capt J W Bell	Lakewood 2121	5516 5838	NA NA	Lakewood 2960 Lakewood 2708
27.			Larson					
28.		Mtn Home		Capt R E Metcalf (*)M/Sgt J McConnell	Temple 2-4611	353 353	NA TE 2-4681	Boise,Ida 37331 NA
29.			Geiger					

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PROJECT OFFICERS

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	PROJECT OFFICER & ALTERNATE (*) RANK NAME	BASE PHONE NO. (CENTRAL OPR.)	ON-BASE EXT. DUTY	ON-BASE EXT. OFF-DUTY	OFF-BASE PHONE
	a	b	c	d	e	f	g	h
30.	Nellis (Cont)		Travis					
31.			McClellan	(Same as Line 24)				
32.			Mather	Capt J H Dryden (*)Capt J B McIntyre	Hillcrest 6-7861	527 322	NA NA	Hudson 6-8668 Ivanhoe 9-9074
33.			Castle					
34.			Oxnard	Capt A R Smith (*)Maj O T Howard	Hunter 3-1151	314 437	NA NA	HU 3-7440 HU 3-3881
35.			Yuma	Capt H Middleton	SU 3-8821	490		SU 3-6513

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PROJECT OFFICERS

LINE	AUGMENTATION BASE	ENROUTE REFUEL BASE	DEPLOYMENT BASE	PROJECT OFFICER & ALTERNATE (*) RANK NAME	BASE PHONE NO. (CENTRAL OPR.)	ON-BASE EXT. DUTY	ON-BASE EXT. OFF-DUTY	OFF-BASE PHONE
	a	b	c	d	e	f	g	h
36.	Luke			LtCol P C Lusby (*)Maj R W Ward		287 577	435 NA	Phoenix AM63048 Phoenix AM53854
37.		Lowry		Maj E Chmura (*)Maj R Burns, Jr	Dexter 3-8581	1316 1316	525 NA	NA Empire 6-0159
38.			Ellsworth	Capt C M Swenson (*)Capt W Downey	Fillmore 22400	8236/ 8066	NA NA	Warwick 3-2281 Warwick 3-5815
39.			Kirtland					
40.			Tinker	Command Post Duty Officer	Pershing 2-2271	7171	NA	NA
41.	Tyndall			Maj T G Mosier (*)Capt S T Nelms	Atlantic 6-2211	2218 2218	NA NA	Atlantic 6-3371 NA
42.			Charleston					

Bases listed in Columns a thru c will submit changes direct to Hq CONAD (Attn: COMLO-1) with info to bases concerned and as directed by Major Command having jurisdiction over the base.

APPENDIX 4

TO

ANNEX D

DISTRIBUTION OF SUPPORTING PLANS

1. (Unclassified) Distribution of the LOADING & DEPLOYMENT plan, the BASE SUPPORT plan and the ENROUTE RESERVICE plan (together with all amendments) will include but not be limited to:

a. LOADING & DEPLOYMENT plan:

(1) Each Augmentation Detachment concerned . . . (1)

(2) Command designated (by App 2, this Annex) to provide supplementary airlift . . . . . (5)

(3) Air Defense Force concerned. . . . . (2)

(4) Hq Air Defense Command . . . . . (2)
(1 cy ATTN: ADOOT-B3, 1 cy ATTN: ADMLO-1)

b. BASE SUPPORT plan:

(1) Base providing Augmentation Detachment . . . (1)

(2) Augmentation Detachment concerned. . . . . (1)

(3) Air Division in whose area deployment base is located. . . . . (3)

(4) Air Defense Force in whose area deployment base is located . . . . . (2)

(5) Hq Air Defense Command . . . . . (2)
(1 cy ATTN: ADOOT-B3, 1 cy ATTN: ADMLO-1)

c. ENROUTE RESERVICE plan:

(1) Each Augmentation Base concerned . . . . . (1)

(2) Each Augmentation Detachment concerned . . . (1)

(3) Air Division being augmented . . . . . (1)

(4) Air Defense Force being augmented. . . . . (2)

(5) Hq Air Defense Command . . . . . (2)
(1 cy ATTN: ADOOT-B3, 1 cy ATTN: ADMLO-1)

ANNEX E

TO

OPERATIONS PLAN

SERIAL NO. 4-55

COMMUNICATIONS - ELECTRONICS

ANNEX E
TO
OPERATIONS PLAN
SERIAL NO. 4-55

COMMUNICATIONS - ELECTRONICS

1. SITUATION:

a. Fighter-interceptor aircraft of other major USAF commands will be placed under the operational control of this command under the conditions outlined in paragraph 5.b.(1) of basic plan. (Unclassified).

2. MISSION:

a. To provide operational communications and electronics support for augmentation aircraft when placed under the operational control of CONAD by implementation of this operations plan. (Unclassified).

3. TASKS FOR PARTICIPATING AND SUBORDINATE COMMANDS:

a. Joint Air Defense Forces will:

(1) Immediately establish contact and coordination with all augmentation units to insure appropriate distribution and understanding of all pertinent ADC CEI's, SOP's, authentication codes, and current directives concerning anti-jamming techniques and ECM reporting procedures required by the unit for operation with CONAD. (Unclassified).

(2) Determine, in coordination with the augmentation AC&W and fighter units, tactical call words assigned for dissemination and utilization upon implementation of this plan. Call words will be forwarded to this headquarters for inclusion in ADC CEI's. (Unclassified).

(3) In coordination with the AC&W augmentation unit, determine UHF and VHF tactical frequencies assigned to augmentation radars and disseminate that information for use by fighter aircraft operating with those radars. (Unclassified).

(4) Insure that CONAD AC&W stations maintain a stock of crystals required for VHF channelization on assigned ground/air TAC frequencies. (Unclassified).

[redacted]

(5) Advise augmentation fighter units of the CONAD tactical frequencies that will be required en route and upon their arrival at the deployment base. (Unclassified).

(6) Place orders for the installation of engineered circuits (scramble, status, etc.), between AC&W stations and bases for use by augmentation forces as soon as possible after an air base has been selected for this purpose. These circuits will be placed on a full period status immediately prior to arrival of the augmentation unit at the base. (Unclassified).

b. Augmentation Fighter Forces will:

(1) Channelize aircraft on the VHF AICC, Fighter/Bomber liaison frequency, 133.20 mcs or the UHF AICC frequency 364.20 mcs immediately upon implementation of this plan and prior to departure from the home base. (Note: The term GCI has been replaced by "Aircraft Intercept Control Common" - AICC). [redacted]

(2) Procure and maintain a stock of crystals required to channelize each aircraft on the tactical VHF frequencies assigned by the respective air defense force, and channelize each aircraft on such frequencies upon arrival at the deployment base in accordance with instructions from the CONAD project officer. (Unclassified).

c. Augmentation AC&W Units will:

(1) Insure that ground radar stations, having ground/air capability and committed for air defense, will be channelized to include the VHF AICC, Fighter/Bomber, UHF AICC, and emergency frequencies. (Unclassified).

(2) Continue to use assigned call words and tactical frequencies for direction of fighter aircraft. (Unclassified).

[redacted]

[redacted]

x. GENERAL INSTRUCTIONS:

(1) Recognition and identification will be accomplished as prescribed by the current edition of ACP 156/158 and AFSAL 5104. (Unclassified).

(2) Authentication systems prescribed in the following publications apply:

(a) ADC COI 14 series low air-ground-air communications between fighter aircraft and AC&W stations.

(b) ADC CEI Annex 14-A ( ), for point-to-point communications over AC&W tactical circuits. (Unclassified).

(3) IFF will be operated in accordance with ADC CEI 2350. Augmentation aircraft equipped with Mark X IFF will employ Mode II setting while en route from home base to augmentation base; thereafter while under operation control of CONAD, the mode setting will be as prescribed by current operating procedures. [redacted]

(4) AC&W stations will use call word assignments contained in ADC CEI (Unclassified)

(5) Augmentation units will use crypto facilities available at augmentation bases. (Unclassified).

CHIDLAW
COMMANDER IN CHIEF

OFFICIAL:

Kenneth P. Bergquist

KENNETH P. BERGQUIST
Major General, USAF
Deputy Chief of Staff, Operations

[redacted]

ANNEX F

TO

OPERATIONS PLAN

SERIAL NO. 4-55

INTELLIGENCE

[redacted]

ANNEX "F"

TO

CONTINENTAL AIR DEFENSE COMMAND OPERATIONS PLAN

SERIAL NUMBER 4-55

INTELLIGENCE

Ref: ADCM 200-1, Mission Intelligence
CONAD Weekly Intelligence Review
CONAD Intelligence Estimates

Headquarters
Continental Air Defense Command
Ent AFB, Colorado Springs, Colo.
1 April 1955

FOREWORD:

The intelligence contained in paragraph 1, below, is based on the Continental Air Defense Command Intelligence Estimate of 1 March 1955.

The inadequacy of positive information on Soviet capabilities necessarily limits the definition of the current threat. The entire spectrum of possible Soviet capabilities must be considered and examined. In view of the acknowledged hostility of the Soviet Union, any plan for the conduct of the air defense of the United States requires cognizance of maximum Soviet capabilities for air attack. These maximum capabilities are pointed out in the annex.

The information and analysis on which this annex is based are considered accurate at the date of writing. The originator of any plan or operation which is based on this annex should refer to the Intelligence Estimate, Continental Air Defense Command, which is revised the first of each month.

1. ENEMY SITUATION

a. General

The most likely enemy of the United States is the U.S.S.R. with its Satellites and Communist China. Principal forces which could be used against the continental United States are the Soviet Long Range Aviation, the long-range submarine component of the Soviet Navy, and the sabotage potential of the Communist Party in the United States.

[redacted]

[redacted]

The U.S.S.R. could attack any target in the United States. It probably would assign priority to those targets whose destruction would most disrupt the military, industrial, and economic fabric of the nation. In addition to the U.S. retaliatory capability, which would probably be a target for the initial attack, it is believed that prime targets would also include industrial metropolitan areas and key facilities.

The principal means of attack could be supplemented by limited airborne operations against selected pinpoint targets on the approaches to the continental United States and by subversion and sabotage activities within the United States. None of these supplementary means will be evidenced on a significant scale prior to the initial air attack because of the danger, from the Soviet standpoint, of alerting U.S. defenses or precipitating U.S. offensive action.

b. Enemy Air Forces

Soviet Long Range Aviation, using weapons of mass destruction, is recognized as the principal threat to the United States. Principal U.S.S.R. air weapons systems regarded as effective for attack on the United States are BULL/TU-4 medium bombers and possibly short-range, air-launched and submarine-launched, cruise type missiles. (See paragraph c, "Enemy Naval Forces.") Additionally, the U.S.S.R. may be able to employ small numbers of turbojet medium bombers.

(1) Long Range Aviation

(a) Aircraft Strength

Soviet Long Range Aviation (SLRA) medium bomber regiments are believed to total about 43 regiments with a combined T/O&E strength of 1,376 aircraft (32 aircraft per regiment). The estimated actual strength of these 43 regiments total approximately 1,200 medium bombers.

[redacted]

[redacted]

Based on the estimated production rate of 15 BADGERS/Type-39's per month, the total production of this type aircraft should be approximately 135 as of 1 March 1955. There is, however, no firm information concerning integration of these aircraft into operational units other than into those three regiments previously reported.

It is believed that these regiments--at Orsha, Baranovichi, and the one reported at an unknown location--would not normally be equipped beyond T/O&E strength ahead of some integration into other SLRA regiments. It is, therefore, estimated that other regiments are being equipped with BADGER/Type-39 aircraft in phase with production. It is deemed entirely possible that some 60 to 100 of these aircraft are already available for operational planning by SLRA.

The SLRA is credited with having available for any one operation a maximum of about 90 percent of its aircraft in active units, if launched from home bases. There would be approximately 1,000 BULLS/TU-4's and at least an equal percentage of its BADGERS/Type-39's. To achieve this figure, an extensive standdown probably would be necessary. It is probable that 50 percent of the aircraft in active units would be available initially without a standdown. This would provide approximately 550 BULLS/TU-4's and as many as 50 BADGERS/Type-39's for an initial strike with no more than routine operational maintenance required.

(b) Launching Areas

The Soviet potential for launching Long Range Aviation attacks from home bases must be recognized. Base areas

[redacted]

closest to North American targets, which could be used for launching long-range air operations include the Kola Peninsula area; the Leningrad complex; the Chukotski and Kamchatka areas in northeastern Siberia; and the Baltic-East German area.

(c) Logistics

There are no known logistical shortages or lags which would hinder initial attack against the continental United States. It is considered possible for the U.S.S.R. to support logistically attacks launched from advanced Arctic bases with prior stockpiling.

(d) Technical Characteristics and Attack Capabilities

Technical characteristics of the BULL/TU-4 aircraft are considered to be essentially the same as those of the latest USAF B-29. Maximum combat range for the standard configuration of the BULL/TU-4 is estimated to be 3,300 nautical miles. With one aerial refueling, this range could be extended to 4,500 nautical miles. It is estimated that a stripped version of the BULL/TU-4, utilizing optimum cruise control, could fly 4,000 nautical miles, and with one aerial refueling, the maximum range could be increased to 5,600 nautical miles. It should be noted that the foregoing range data are predicted on the specification MIL-C-5011A modified, which imposes certain penalties and restrictions. This specification outlines the standard mission profile which is the basis for comparison of all U.S. bomber aircraft. The Strategic Air Command has flown a B-29B with a 10,000 pound bomb load and

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no refueling, a total distance of 5,000 nautical miles, or 25 per cent further than the 4,000 nautical miles quoted above. For air defense purposes this greater distance must be considered to be within the capability of the Soviets. Considering the above characteristics and the location of present SLRA bases, it is evident that this aircraft could reach a substantial number of potential U.S. targets from its "home" bases.

The BADGER/Type-39, a new twin-engine, turbojet swept wing, medium bomber, is in series production and is being integrated into SLRA operational units. The BADGER/Type-39 is approximately the same size as the U.S. B-47 and its two engines are each credited with an 18,000 pound installed thrust. This bomber is capable of carrying a 10,000 pound bomb load 1,600 nautical miles on a combat radius mission. On a one-way mission and one hour's fuel remaining, it can carry a 10,000 pound bomb load 3,100 nautical miles and be over the target as high as 50,000 feet. With one aerial refueling, the radius is increased to 2,200 nautical miles and the range to 4,300 nautical miles. The BADGER/Type-39 is estimated to cruise at Mach 0.8 and to have a target run-in speed of Mach 0.83. Considering the characteristics of the BADGER/Type-39 and the location of present SLRA "home" bases, it is evident that this aircraft could not reach a majority of potential U.S. targets without inflight refueling.

The BISON/Type-37, a four-engine turbojet swept wing, heavy bomber, was first observed in flight during practices for the 1954 Moscow May Day Show. This

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turbojet heavy bomber approximates the U.S. B-52 in size and is forecast to appear in operational units by the end of 1956. The BISON/Type-37's power plants are estimated to be the same as are in the BADGER/Type-39 (i.e., 18,000 pounds thrust each). The power plants now installed in the BISON/Type-37 are estimated to improve to 20,500 pounds installed thrust by the end of 1956. The estimated performance characteristics of the BISON/Type-37 are predicated upon the 20,500 pounds thrust engines.

The BISON/Type-37 is estimated to be capable of carrying a 10,000 pound bomb load 3,100 nautical miles on a combat radius mission. On a one-way mission and with one hour fuel remaining, it probably can carry a 10,000 pound bomb load 6,100 nautical miles and be over the target as high as 56,000 feet. With one aerial refueling, the radius is increased to 4,300 nautical miles and the range to 8,100 nautical miles. The BISON/Type-37 is estimated to cruise at Mach 0.8 and can probably reach all targets in the United States. The performance estimates for the BADGER/Type-39 and the BISON/Type-37 are calculated in accordance with U.S. military mission profiles except that fuel reserves are reduced and aircraft operate at altitudes permitting maximum radius or range.

No intelligence information is available concerning Soviet capabilities for in-flight refueling. However, the Soviet has had access to the know-how and the equipment, and it is considered within Soviet capabilities to develop the equipment and techniques required for

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operational use of in-flight refueling. If the Soviet does have such a capability, the basic ranges of the aircraft listed above can be extended accordinly. The BARGE/Type-31, which previously was estimated to appear in the Soviet order of battle of bomber aircraft, has not been verified as being in the operational units. As many as seven of these aircraft were reported to have been seen at one time.

The original sightings of the BARGE/Type-31 in an air-show over Moscow indicated that it was powered with reciprocating engines. No direct evidence has become available which would substantiate the theory that turboprop engines were to be installed in the aircraft. The performance of the aircraft using either conventional or turboprop engines does not compare favorably with the performance of the turbojet aircraft sighted at the May Day Air Show in 1954. The sightings of seven of the BARGE/Type-31 aircraft would indicate a production greater than the prototype stage. However, considering the performance of the newer jet type aircraft and the possibility that these sightings could have been cases of mistaken identity, it is felt that the BARGE/Type-31 is not to be integrated into the long-range units as a bomber aircraft. If the sightings were correct, it would appear that the BARGE/Type-31 could be incorporated in the Soviet tanker or transport aircraft inventory.

1. Armament

The early BULLS/TU-4's were armed with 12.7 mm guns in all turrets. However, beginning in 1951,

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all BULLS/TU-4's subsequently sighted were equipped with 23 mm guns. It is believed that all of the earlier BULLS/TU-4's have been so modified and that the 23 mm gun installation is now standard equipment. The BADGER/Type-39 and BISON/Type-37 appear to be armed with 23 mm guns in three turrets - a tail turret, an upper and a lower turret. Radar installations which could well be part of a radar fire control system are evident on both aircraft.

2. Radar

Soviet bomber aircraft would be expected to use airborne radar, probably a Soviet version of AN/APQ-13 or the AN/APS-15, operating in the super high frequency (SHF) band, for navigation and blind bombing. It is probable that the Soviet has developed an electronic computer, giving this radar a capability comparable to the U.S. type AN/APQ-23, with a range of 120 miles at 35,000 feet.

With this equipment the Soviet will be able to bomb from any altitude within the capability of the aircraft.

Analysis of SLRA proficiency and accuracy indicates a CEP of less than 5,000 feet at 50,000 feet altitude and improving at lower altitudes.

3. Optical Bombing Equipment

The Soviets have received both the Norden M-9 and the German LOFTE optical bomb sights.

4. Radio

The Soviets may be expected to have the following

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radio aids:

Loran Receiver for low-frequency reception.

Marker Beacon Receiver, MRP-48-P, operating in the 75 mc/s band (Soviet version of US BC-357).

Radio Altimeter, RV-2, similar to US type AN/APN-1, frequency modulated, operating in the 420 to 460 mc/s band.

Radio Compass ARK-5, similar to SCR-269, with an effective range of 250 to 300 miles, frequency ranges from the 150 to 1300 Kc/s in three bands with a bearing accuracy of $\pm$ 2.5°.

IFF, automatically and continuously varied in frequency from approximately 150 to 200 mc/s, with numerous coding combinations and an approximate range of 200 miles at 20,000 - 30,000 feet, equivalent to SCR 695.

(e) ECM

Soviet capabilities in ECM may well have progressed to a point where they constitute a major threat. The probable degredation of the U.S. defense system in the presence of simple countermeasures makes highly attractive the use of such ECM by an attacker. Analysts in the U.S.S.R. are as capable of arriving at conclusions regarding the "payoff" for ECM as are their U.S. counterparts. The development of simple ECM equipment or techniques required for a high degree of effectiveness is not judged to be difficult or beyond U.S.S.R. capabilities.

(f) Fighting Effectiveness

Soviet Long Range Aviation combat crews are regarded as the products of rigorous training and discipline. As members

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of an elite organization, SLRA aircrews may be expected to have a high level of morale combined with considerable flying skill. Despite any defections, purges, or indications of discontent within the air or ground forces of the U.S.S.R., Soviet Long Range Aviation personnel may be expected to remain loyal, to press their attacks, and to fight aggressively. Evidence points to training of Long Range Aviation personnel in navigational flights with the Soviet Civil Air Fleet (Aeroflot) throughout the Soviet Union, Eastern Europe and the Far East in all weather, over all types of terrain, and over water. The Civil Air Fleet provides a pool of experienced aircrews for potential use in Soviet Long Range Aviation operations.

(g) Tactics and Techniques

No specific intelligence is available to indicate tactics or techniques which might be employed by the Soviet Long Range Aviation in approaching and attacking targets in the United States. However, it is believed that the SLRA's tactics probably would be adapted to prevailing weather at time of attack, and to the objective selected.

The SLRA is capable of attacking the U.S. at any hour, day or night. The time of attack is primarily dependent on two factors: first, the capability of SLRA for day and night missions; and second, the status of the opposing defenses. It is believed that, as far as the first factor is concerned, there is no preponderant advantage for day or night attack. Soviet knowledge of the status of defenses probably would determine, to

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a great extent, the time actually chosen for attack. Single BULL/TU-4 aircraft or formations of them could approach and bomb at altitudes as high as 42,000 feet or down to ground level.

In the case of the low-level approach with piston engine bombers, the Soviets could use special techniques for delivery of the bomb itself. Aircraft could be expected to make maximum use of ECM, or USAF aircraft markings (especially SAC) and of English-speaking pilots for reporting in to ADIZ's and/or airways. Simultaneous penetration of the air defense system at multiple points at minimum altitude constitutes one of the most dangerous threats against the continental United States.

For the BADGER/Type-39 the target area ceiling could be as high as 50,000 feet, thereby exploiting the high-altitude weakness of U.S. radar. Because of excessive fuel consumption by jet aircraft at low altitudes, it is considered unlikely that jet bombers would be utilized for low-level attacks at long ranges.

(2) Guided Missiles

There are no known U.S.S.R. operational guided missiles. However, the U.S.S.R., with the help of German scientists, has engaged in large-scale development programs of various types of guided missiles since the end of World War II. Such programs could result in highly effective surface-to-surface (submarine-launched) and air-to-surface guided missiles. These missiles could be large enough to carry warheads of mass destruction.

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(a) Surface-to-Surface Types

Intelligence reveals that the Soviets have constructed winged, single-engine and two-engine pulse-jet powered missiles (V-1 type) having an estimated maximum range of 200 nautical miles. There is also intelligence indicating Soviet interest in turbo-jet powered winged missiles having better range and payload characteristics than the V-1 type. All of these missiles, including the V-1 type, could have nuclear warheads. There is no positive intelligence indicating that the Soviets are fiting out submarines for launching missiles. However, they have the capability to do so, and therefore the possibility cannot be ignored.

(b) Air-to-Surface Types

Aircraft-launched guided missiles, up to an advanced development of the V-1 concept, could be carried by BULL/TU-4 and BADGER/Type-39 aircraft, although the aircraft's ranges might be decreased. Missile ranges of 200 nautical miles can be expected.

(3) Weapons

(a) Nuclear Weapons

The Soviets have detonated several nuclear weapons and/or devices to date. One of these tests was of high yield and utilized thermonuclear reactions. The Soviets have reached a point in their nuclear weapons development where the specific models of nuclear weapons stockpiled can be dictated by military requirements rather than technological limitations. Information is not available concerning the design or yield of the Soviet weapons being stockpiled. However, they have demonstrated

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yields up to approximately one megaton. It is estimated that the Soviet could have up to 300 standard weapons in their stockpile by 1 January 1955. The dimensions and weight of any of the Soviet nuclear weapons tested would probably allow air delivery by the BULL/TU-4, BISON/Type-37, and BADGER/Type-39 aircraft.

(b) Biological Weapons

A variety of BW agents are available to the U.S.S.R., in the categories of anti-personnel, anti-animal, and anti-crop. No intelligence is available on Soviet efforts to produce and stockpile BW agents. A number of installations in the U.S.S.R. and Satellites are engaged in functions related to BW research and production, but no single installation is known to be conducting research on a large scale. The Soviets have a variety of bombs which could be used for BW. BW probably would be used to supplement any nuclear attack on the U.S. when, in Soviet opinion, such action would give reasonable promise of decisive military success.

(c) Chemical Weapons

Chemical warfare is an integral part of the tactical doctrine of the Soviet Army, Navy and Air Forces. Production efforts are estimated to be concerned primarily with German nerve gases. Several types of disseminating equipment, for use by long-range aircraft, are believed to have been field tested. Production and stockpiling of GA gas are estimated to be sufficient for sustained attacks against the United States. However, so long as nuclear

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weapons and chemical weapons compete for long-range carriers, the lower military effectiveness of CW reduces the probability of a major CW attack on the U.S. Even so, the possibility of special CW attacks against unprepared population centers to create shock and adverse psychological effect cannot be overlooked.

c. Enemy Naval Forces

The long-range submarine force is the only element of the Soviet Navy which is considered to have a potential for air attack upon the continental United States today. While it is considered technically within Soviet capabilities to modify submarines for the launching of V-1 type and turbo-jet powered missiles, there is no evidence of such modification today. However, this possibility cannot be ignored.

Known capabilities of the long-range submarines are confined primarily to mining activities and other forms of undersea warfare. As an adjunct to air attack, Soviet long-range submarines could perform the following tasks: (a) provide navigational fixes for an attacking bomber force; (b) conduct barrage jamming and create electronic interference with air defense equipment; and (c) debark sabotage and espionage groups.

(1) Strength

The entire Soviet submarine force is estimated to consist of 368 submarines of various types, of which 107 are the newly constructed long-range type, 78 are of the older long-range type, and 53 are of the medium-range type. The remaining submarines are of coastal types which do not affect the CONAD mission because of their short range and small size. Both the newly constructed long-range types and the older long-range types are capable of operating off the coasts of the United

[redacted]

States. The 53 medium-range submarines constitute a potential long-range patrol threat if the U.S.S.R. develops an ocean-refueling capability.

(2) Disposition

Total U.S.S.R. submarines by category and fleet:

	Baltic	North	Black	Pacific	Unassigned	Total
Long Range*	14	20	25	5	43	107
Long Range	26	22	12	18		78
Medium Range	22	0	8	23		53
Coastal	49	5	30	46		130
TOTAL	111	47	75	92	43	368

*New Construction.

d. Enemy Ground Forces

The U.S.S.R. has an estimated 100,000 trained airborne troops available today. In addition, the U.S.S.R. has about 100,000 ground troops who have had some air transportability training. Approximately 550 air transports of the CAB/LI-2 and COACH/IL-12 type are believed to be available with crews trained in the delivery of airborne troops. In addition, it is estimated that 50 HOUND/Type-36 helicopters are assigned to the air component of the airborne forces.

Because of air transport limitations (primarily due to the size and range of aircraft assigned), the U.S.S.R. is not believed capable of launching major operations with airborne troops against the continental United States today. However, small, highly-trained assualt groups probably could attack selected targets in other areas of North America such as Alaska or northeast or northwest Canada.

2. INTELLIGENCE REQUIREMENTS

The following are considered primary essential elements of information and will be reported in accordance with the provisions of Air Defense

[redacted]

Command (ADC) Regulation 200-2*.

a. First positive indication that an attack is underway.

b. Type of enemy aircraft observed or intercepted.

c. Observed enemy tactics, methods of utilizing weather for offensive and defensive purposes, and methods of utilizing daylight and darkness for offensive and defensive purposes.

d. The number of enemy aircraft by type damaged or destroyed, and location of crashed enemy aircraft.

e. Information obtained from captured enemy personnel, documents, and materiel furnishing information on take-off bases, tactics, air order of battle, future attacks, target systems, aircraft navigational and bombing systems, and operational characteristics of the aircraft.

f. Targets attacked overtly or covertly by the armed forces of the enemy, points of weapon impact, and types of weapons employed.

g. Targets attacked overtly or covertly by enemy guerrillas, agents or saboteurs, and types of weapons employed.

h. New types of electronic countermeasures equipment, tactics and techniques.

i. Aircraft armament.

j. Aircraft markings and identification.

k. Aircraft configuration (radomes, wing tanks, navdomes).

3. INTELLIGENCE ACTIVITIES

a. Reconnaissance

Responsibilities for aerial reconnaissance within the Zone of Interior have been allocated as follows:

(1) Air Defense Command

(a) To designate damaged areas upon which photographic reconnaissance is required. Reference Appendix 1, Annex "H", 9th Air Force Operations Plan 13-54.

*The provisions of ADC Regulation 200-2 will apply until such time as a comparable CONAD regulation is published.

[redacted]

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(b) To accomplish weapons impact evaluation as required by the ADC mission and report damaged areas as directed by paragraph 7.d.(15), Air Force Regulation 55-81.

(c) To relay immediately photo interpretation (PI) reports to Reconnaissance Branch, DI USAF, as received from TAC units as required by Appendix 2, Annex "H", 9th Air Force Operations Plan 13-54.

(2) Headquarters USAF

To direct TAC to accomplish the required mission as required by Appendix 1, Annex "H", 9th Air Force Operations Plan 13-54.

(3) Tactical Air Command

(a) When so directed by Headquarters USAF or alternate (Headquarters ADC), dispatch necessary photo reconnaissance aircraft to objective areas designated by ADC as outlined in 9th Air Force Operations Plan 13-54.

(b) Upon completion of missions, process and dispatch photographs and PI Reports as required by AFR 200-6 and 9th Air Force Operations Plan 13-54.

(c) Deliver PI Reports and photos as required by Appendix 2, Annex "H", 9th Air Force Operations Plan 13-54.

b. Captured Enemy Personnel, Materiel and Documents

Tactical intelligence exploitation of captured enemy personnel, materiel and documents is the responsibility of the 4602d Air Intelligence Service Squadron (Ref ADC Regulation 24-4, 3 January 1953).**

c. Supplementary Early Warning and Combat Intelligence

United States Air Force Security Service will: (1) provide CINCONAD with supplementary early warning in an effort to determine the imminence of

**The provisions of ADC Regulation 24-4 will apply until such time as a comparable CONAD regulation is published superseding portions of this regulation.

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air attack; and (2) during and subsequent to air attack will supplement CONAD reporting of enemy air routes, tactics, and courses of action. Reference is made to Appendix 5, dated 1 January 1954, of Annex "H" to AFSSEWMP 1-53.

d. Reports and Distribution

Combat intelligence reports and reporting procedures will be in accordance with ADC Regulation 200-2, ADC Letter 200-1 and Reporting Guide for ADC Intelligence.***

OFFICIAL:

Lt Col USAF

for and in the absence of

W. M. BURGESS
Brigadier General, USAF
Deputy Chief of Staff/Intelligence

CHIDLAW
GENERAL

***The provisions of ADC Letter 200-1 and Reporting Guide for ADC Intelligence will apply until such time as a comparable CONAD regulation and reporting guide are published.

[redacted]

ANNEX G

TO

OPERATIONS PLAN

SERIAL NO. 4-55

AC&W

[redacted]

ANNEX G
TO
OPERATIONS PLAN
SERIAL NO. 4-55

UTILIZATION OF RADARS OF USAF COMMANDS

1. SUMMARY:

a. Radar locations of the Continental Air Defense Command do not provide sufficient coverage for complete protection of all targets being defended. Radars of USAF Commands may be so located as to provide an additional capability for the air defense of the United States. [redacted]

2. MISSION:

a. To utilize radar units of USAF Commands in support of the air defense mission during periods of emergency or in some cases as a part of the day-to-day active air defense system. (Unclassified).

3. TASKS FOR PARTICIPATING UNITS:

a. Tactical Air Command. Tactical Control Groups will augment CONAD as provided in current agreements and current operating procedures.

b. Air Research and Development Command radars that have been committed for air defense are listed in Appendix 2.

c. Air Training Command radars that have been committed for air defense are listed in Appendix 3.

d. Air Proving Ground Command radars that have been committed for air defense are listed in Appendix 4. (Unclassified).

CHIDLAW
COMMANDER IN CHIEF

APPENDIX:
1. Aval TAC Radars
2. Aval ARDC Radars
3. Aval ATRC Radars
4. Aval APGC Radars
5. Msg of Notification to AC&W Units

OFFICIAL:

Kenneth P. Bergquist

KENNETH P. BERGQUIST
Major General, USAF
Deputy Chief of Staff, Operations

[redacted]

[redacted]

APPENDIX 1 [redacted]
TO
ANNEX G
OPERATIONS PLAN
SERIAL NO. 4-55

AVAILABILITY OF AUGMENTATION RADARS
OF
TACTICAL AIR COMMAND

UNIT	LOCATION	TYPE RADAR	FUNC-TION	WHEN USED	REPORTS TO
726th TC Sq	Shaw AFB, SC	None	ACC	Active Air Def	35th ADiv (Def) ADCC and P-42
727th AC&W Sq	Myrtle Beach SC	MPS-7 MPS-8	CRC	Active Air Def	ACC
Det #1	Shaw AFB, SC	TPS-1D MPS-8	CRP	Active Air Def	Shaw CRC
Det #2	Charleston SC	TPS-1D MPS-8	CRP	Active Air Def	Shaw CRC
728th AC&W Sq	Donaldson AFB SC	MPS-7 TPS-1D MPS-8	CRC	Active Air Def	ACC
Det #1	Ft Bragg NC	TPS-1D MPS-8	CRP	Active Air Def	ACC
Det #2	Augusta Ga	TPS-1D MPS-8	CRP	Active Air Def	ACC
729th AC&W Sq	Robins AFB Ga	MPS-7 TPS-1D MPS-8	CRC	Active Air Def	ACC
Det #1	Savannah Ga	TPS-1D MPS-8	CRP	Active Air Def	ACC

[redacted]

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APPENDIX 2
TO
ANNEX G
OPERATIONS PLAN
SERIAL NO. 4-55

AVAILABILITY OF AUGMENTATION RADARS
OF
AIR RESEARCH AND DEVELOPMENT COMMAND

UNIT	LOCATION	TYPE RADAR	FUNC-TION	WHEN USED	REPORTS TO
Rome Air Development Center	Verona NY	FPS-3 FPS-5	ADDC	Emer-gencies	32d ADiv (Def) ADCC
Rome Air Development Center	Syracuse NY	FPS-7	ADDC	Emer-gencies	32d ADiv (Def) ADCC
Wright Air Development Center	Jamestown Ohio	CPS-6	EW	Exercises and Emergencies	30th ADiv (Def) ADCC
Cape Cod System		Varied and Experi-mental	Varied	Emer-gencies	32d ADiv (Def) ADCC

[redacted]

[redacted]

APPENDIX [redacted]
TO
ANNEX G
OPERATIONS PLAN
SERIAL NO. 4-55

AVAILABILITY OF AUGMENTATION RADARS
OF
AIR TRAINING COMMAND

UNIT	LOCATION	TYPE RADAR	FUNC-TION	WHEN USED	REPORTS TO
3625th Fly Tng Wg	Tyndall AFB Fla	CPS-6 CPS-5 CPS-4	ADDC	Exercises and Emergencies	35th ADiv (Def) ADCC
3380th Test Tng Wg	Keesler AFB Miss	CPS-1 CPS-4	EW	Exercises and Emergencies	Eglin AFB GCI
3555th Tng Wg	Perrin AFB Tex	FPS-3	ADDC	Emergencies and Backup	P-78

[redacted]

APPENDIX 3, ANNEX G
OPR PLAN 4-55
1 Apr 55

[redacted]

APPENDIX 4 [redacted]
TO
ANNEX G
OPERATIONS PLAN
SERIAL NO. 4-55

AVAILABILITY OF AUGMENTATION RADARS
OF
AIR PROVING GROUND COMMAND

UNIT	LOCATION	TYPE RADAR	FUNC-TION	WHEN USED	REPORTS TO
3206th Support Wg (Test)	Eglin AFB Fla	FPS-3 CPS-5 CPS-4	GCI	Exercises and Emergencies	Tyndall AFB ADDC
3206th Support Wg (Test)	Eglin AFB Fla	FPS-4	GCI	Exercises and Emergencies	Tyndall AFB ADDC
3206th Support Wg (Test)	Robins AFB Ga	CPS-1 CPS-4	GCI	Exercises and Emergencies	Tyndall AFB ADDC

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APPENDIX 4, ANNEX G
OPR PLAN 4-55
[illegible] 55

ROUTINE

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

APPENDIX 5
TO
ANNEX G

[redacted]

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CINCONAD

DATE-TIME GROUP

SECURITY CLASSIFICATION
UNCLASSIFIED

PRECEDENCE FOR: ACTION FLASH INFORMATION FLASH

☐ BOOK MESSAGE ☒ ORIGINAL MESSAGE

☒ MULTIPLE ADDRESS CRYPTOPROTECTION ☐ YES ☒ NO

REFERS TO MESSAGE:

IDENTIFICATION CLASSIFICATION

TO: COMDR ROME AIR DEV CEN GRIFFISS AFB
ROME N Y
COMDR 3380TH TEST TNG WG KEESLER AFB MISS
COMDR 3625TH FTW TYNDALL AFB FLA
COMDR 3555TH FTW PERRIN AFB TEX
COMDR 3206TH SUPP WG (TEST) EGLIN AFB FLA

XREQ: COMDR 507TH TAC CON GP SHAW AFB S C
COMDR WADC WRIGHT PATTERSON AFB OHIO

INFO: COMDR TAC LANGLEY AFB VA
COMDR ATRC SCOTT AFB ILL
COMDR ARDC BALTIMORE MD
COMDR JCADF GRANDVIEW AFB MO
COMDR JEADF STEWART AFB N Y
COMDR 9TH AF SHAW AFB S C

(UNCLASSIFIED) COC_____. Impl Annex G to CONAD OPLAN 4-55.

1 Apr 55. Req action adee ack.

APPENDIX 5, ANNEX G
OPR PLAN 4-55
1 Apr 55

SECURITY CLASSIFICATION
UNCLASSIFIED

PAGE 1 OF 1 PAGES

DRAFTER'S NAME (and signature, when required)

RELEASING OFFICER'S SIGNATURE

SYMBOL TELEPHONE OFFICIAL TITLE

DD FORM 1 MAY 48 173 REPLACES WD AGO FORM 11-18L, 15 JUN 1948, A... 1 APR 1948, WHICH MAY BE USED.

[redacted]

AF - ABC - COLO. SPRINGS, COLO.

Will be confirmed in Standard Publication Form under paragraph 3a, ADCSM 5-3 YES NO

Prepared by_____

Telephone_____

Date_____

COORDINATE WITH COLITHO PENCIL ONLY

UNCLASSIFIED

[redacted]

FILE NUMBER

CENTRAL AIR DEFENSE FORCE
GRANDVIEW AIR FORCE BASE
GRANDVIEW, MISSOURI

27 DEC [illegible]

[illegible]

SUBJECT: (Unclassified) Activation of Certain ANG Alert Detachments in CADF

DOC 373 ADD 55a

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

1. This headquarters feels that there is a requirement to activate certain National Guard Fighter-Interceptor Squadron Detachments to supplement existing alert capabilities and to afford director practice for radar direction centers.

2. National Guard Augmentation Squadrons which do not have a current active alert detachment, have been listed (Inclosure 1) by category, as follows:

a. I. Tactical Day Fighters required for immediate use for alert purposes.

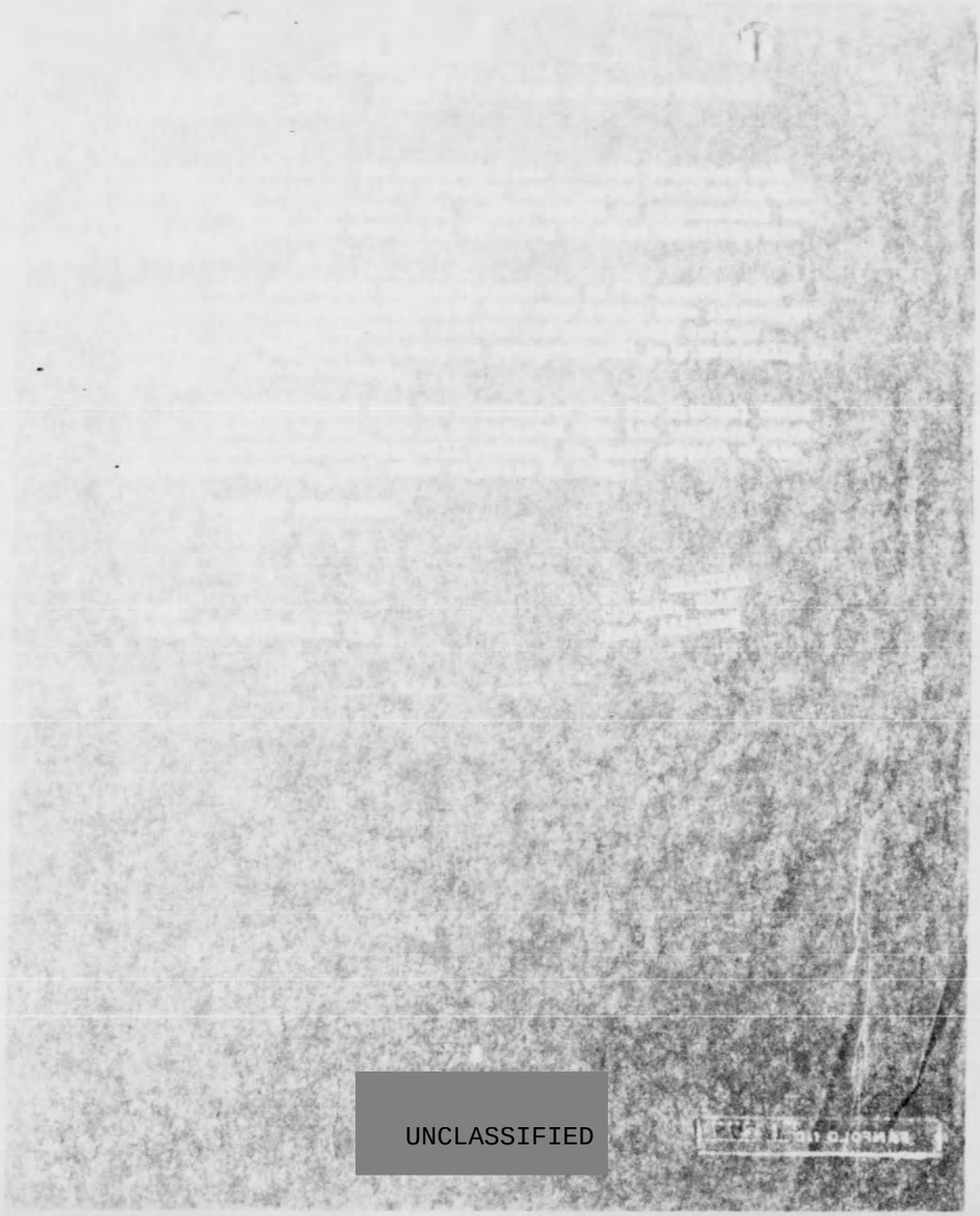
b. II. Second priority Tactical Day Fighters (effectiveness is possibly limited to reciprocating engine targets).

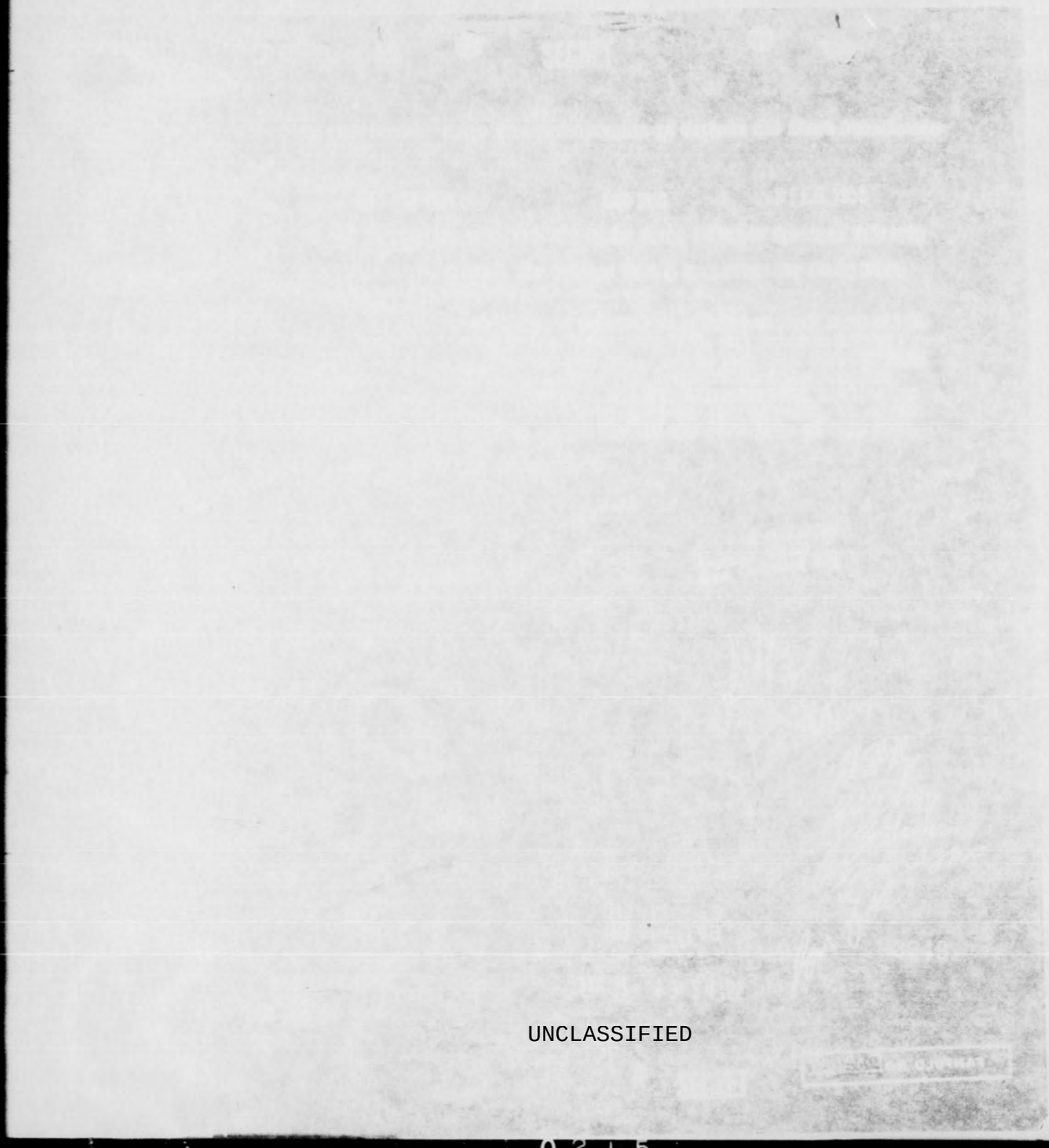
c. III. Tactical Day Fighters in locations which preclude use (no operational radar to direct).

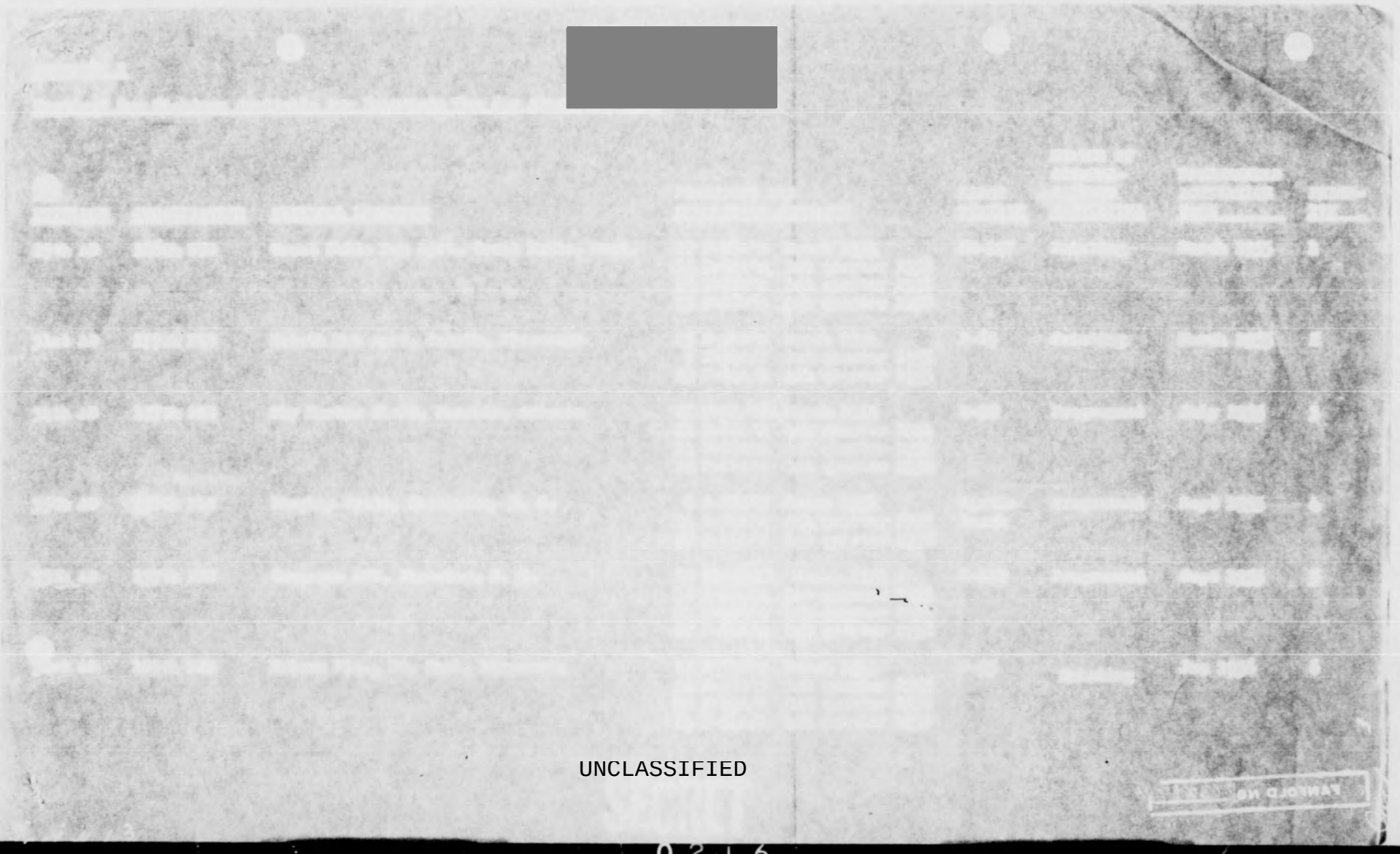
d. IV. Second priority Tactical Day Fighters in locations which duplicate existing CADF Fighter-Interceptor coverage.

3. It is proposed that alert detachments from Category I and II Air National Guard Units be activated. The priority in which this activation is requested is first, Phase I and, then, Phase II. Activation of Category III and IV Units is not proposed.

UNCLASSIFIED







[redacted]

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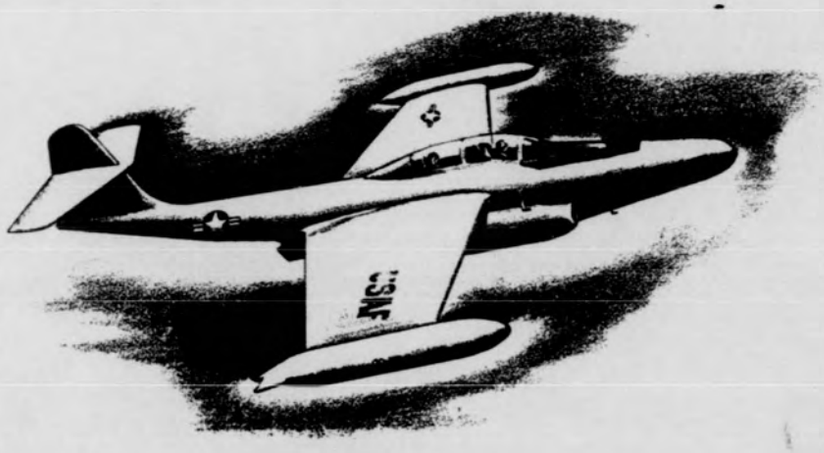
OPERATIONS PLAN

SERIAL NO. 5-55



1 JULY 55

UNCLASSIFIED

AIR DEFENSE COMMAND

ENT AIR FORCE BASE
COLORADO SPRINGS, COLORADO

[redacted]

AIR DEFENSE COMMAND
OPERATIONS PLAN

5-55

OFFICIAL:

THURSTON H. BAXTER
COLONEL, USAF
EXECUTIVE
NATIONAL GUARD BUREAU

EDGAR C. ERICKSON
MAJOR GENERAL
CHIEF
NATIONAL GUARD BUREAU

PREPARED BY AIR DEFENSE COMMAND

[redacted]

HEADQUARTERS AIR DEFENSE COMMAND
Ent Air Force Base, Colorado Springs, Colorado
1 July 1955

OPERATIONS PLAN

Serial No. 5-55

CHARTS AND MAPS REFERENCES: As Required

TASK ORGANIZATIONS:

a. CADF - Major General J. V. Crabb

b. EADF - Major General M. R. Nelson

c. WADF - Major General W. E. Todd

d. 3rd Weather Group - Colonel R. K. Pierce, Jr.

1. GENERAL SITUATION:

Summary of the Situation: The international, political, economic and military situation is such that war between the United States and USSR may be precipitated intentionally or unintentionally at any time with little or no warning. War will increase the probability of or result in aerial attack on the United States. In the event of such an attack, certain units of the Air National Guard possessing an air defense capability will augment the Air Defense Forces. Without this effort the capability of the United States to wage defensive warfare might be dangerously reduced during the first few days of attack. In order to insure that these units are maintained in a state of preparedness tactically, administratively, and logistically, close liaison between the Air Defense Command and the Air National Guard must be maintained.

a. Friendly Forces:

(1) Twenty-three ANG Fighter Interceptor Wings (17 AI squadrons and 53 non-AI squadrons) have mobilization assignments to the Air Defense Command.

(2) Logistic tasks for major air commands are outlined in Annex C of this plan.

(3) Subsequent to initial mobilization, Continental Air Command will process all personnel of ANG units mobilized.

[redacted]

[redacted]

2. MISSION: To provide wartime integration, utilization and support of ANG units which have M-Day assignments to the Air Defense Command.

3. TASKS FOR SUBORDINATE UNITS:

a. AIR DEFENSE FORCES will:

(1) Prepare supporting plans to this Operations Plan. The following factors will be considered in the preparation of supporting plans:

(a) ANG units will not be included as task organizations prior to D-Day.

(b) Mobilization objectives are to have fifty percent (50%) of assigned aircraft, pilots and support personnel available for the air defense mission within two hours after the initial notice of mobilization is received by the unit. The remaining fifty percent (50%) are expected to be available within twenty-four (24) hours after recall.

(c) Wartime planning factors are attached as Annex B.

(d) Air Defense Division plans will include alerting procedures for ANG units.

(e) Copies of Air Defense Force and Air Defense Division supporting plans will be forwarded to Headquarters, Air Defense Command.

(2) Provide assistance to ANG units in preparing alert plans.

(3) Assist in planning scramble and recovery procedures for D-Day use on ANG bases where such procedures do not presently exist.

[redacted]

[redacted]

(4) Encourage ANG units to participate in ADC and local air defense exercises. Commanders of ANG units that participate in these exercises will be invited to exercise critiques.

(5) Within their capability provide personnel and material to present lectures on air defense operations at ANG drill periods when requested. Such personnel will be technically qualified in the field they represent.

(6) Provide ANG units with current regulations and publications pertaining to the air defense mission.

(7) Take action to insure ANG units are filled to authorized strength subsequent to mobilization.

b. 3RD WEATHER GROUP will:

(1) Upon mobilization of the ANG provide weather support as required to ANG units having mobilization assignments to the Air Defense Command. (Annex F).

(2) Provide assistance and advisory service for training ANG weather flights.

x. This plan will be effective upon receipt.

4. ADMINISTRATIVE AND LOGISTICAL MATTERS:

a. ADMINISTRATION:

(1) Policies for wartime utilization:

(a) It is assumed that should an attack or an eminent attack upon this nation occur, the Commander, Air Defense Command will have been delegated the Presidential authority to immediately call/order into active military service such units of the Air National Guard, as required, that have an air defense mission. This authority will be further delegated to Air Defense Force commanders.

[redacted]

(b) Upon receipt of the message contained in Annex F or telephone call from Combat Operations Center ADC, Air Defense Force commanders will call/order units of the ANG into active duty in accordance with AFR 45-51, "Mobilization of the Air National Guard" as amended. This action will include notification of State Governors and Air Defense Divisions who will alert ANG units in accordance with pre-determined alert plans.

(c) It is assumed that Congress will have declared a state of war subsequent to the call/order of all ANG units into active military service.

(d) Unit integrity of ANG units assigned to ADC will be maintained.

(e) These twenty-three ANG Fighter Interceptor Wings will remain assigned to ADC after D-Day until reassigned by Headquarters USAF.

(2) In order for Headquarters ADC to support the task of the Air Defense Forces as set forth in paragraph 3a(7), Air Defense Forces will report to ADC, by unit, the number of individuals in each AFSC required to bring each unit to authorized strength. This report will be submitted to arrive in Headquarters ADC within seven (7) days after the unit has been mobilized and assigned to ADC. This report is in addition to any reports the Air Defense Forces or Headquarters ADC may receive as required in AFR 45-51.

b. LOGISTICS: See Annex C of this Plan.

[redacted]

[redacted]

5. COMMUNICATIONS AND COMMAND MATTERS:

a. COMMUNICATIONS:

(1) Air Defense Forces will:

(a) Specify tactical frequencies for use by ANG units.

(b) Assist ANG units in procuring and utilizing crystals to permit operation on GCI (common) joint USAF, Canadian, USN and UK fighter/bomber frequencies, and one ADC tactical frequency.

(c) Wherever possible utilize tactical call signs presently assigned ANG units.

(d) Coordinate Air/Ground communications with all interested agencies.

(e) Arrange for engineered land line circuits from Control Centers and Direction Centers to ANG air alert rooms. (GFP circuits are authorized to ANG squadrons participating in air alert programs). Requirements will be submitted in accordance with CONAD Regulation 102-1, dated 18 March 1955, "Standard Wire Communications Network".

(f) Assist in planning navigational aids to be used after D-Day.

(g) Issue instructions for operation of point to point communications.

(h) Issue instructions for use of cryptographic facilities.

(i) Insure that ANG personnel receive indoctrination in Electronic Warfare.

[redacted]

b. COMMAND.

(1) Upon mobilization of the ANG, command of ANG fighter units will be with the ADC organization to which the respective ANG unit has a mobilization assignment. Mobilization assignments for ANG units to ADC are indicated in Annex D of the plan. ADC forces will further assign ANG units to appropriate Air Defense Divisions.

SMITH
MAJOR GENERAL

ANNEX: A. Intelligence

B. Wartime Planning Factors

C. Logistics

D. M-Day Assignments

E. Weather

F. Message to Air Defense Forces

DISTRIBUTION:
See Distribution List

OFFICIAL:

CHARLES R. BOND, JR.
Colonel, USAF
Acting Deputy Chief of Staff, Operations

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ADDRE	2 cys
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ADOPR	1 cy
ADOCE	2 cys
ADOOT	1 cy
ADOOT-B	1 cy
ADOOT-B1	1 cy
ADOOT-B3	4 cys
ADOOT-C	1 cy
ADOOT-D	4 cys
ADOOT-E	1 cy
ADMLO-1	2 cys
ADMLO-2	1 cy
ADMMC	1 cy
ADMAC-1A	1 cy
ADMAC-1B	1 cy
ADMSV-3C	1 cy
ADMIS	1 cy
Comd Adj (Reserve)	50 cys
ConAC	5 cys
ConAC (For further distr to numbered AF's)	8 cys
AU	1 cy
CADF	10 cys
EADF	10 cys
WADF	10 cys
Air Def Divisions	2 cys ea
2466th ARFC	1 cy
2577th ARFC	1 cy
2252nd ARFC	1 cy
2589th ARFC	1 cy
2473rd ARFC	1 cy
2596th ARFC	1 cy
Griffiss AFB	1 cy

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OPR PLAN 5-55
1 July 55

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Mountain Home AFB	1 cy
Westover AFB	1 cy
Great Falls AFB	1 cy
Air Defense Group	
500th	1 cy
501st	1 cy
502nd	1 cy
503rd	1 cy
514th	1 cy
515th	1 cy
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518th	1 cy
520th	1 cy
521st	1 cy
525th	1 cy
530th	1 cy
533rd	1 cy
564th	1 cy
575th	1 cy
4700th	1 cy
Syracuse AF Station	1 cy
Andrews AFB	1 cy
Grenier AFB	1 cy
McGuire AFB	1 cy
ANG Ftr Wg Hq (23 Wgs - 2 cys ea)	46 cys
ANG Ftr Grp Hq (23 Grps - 2 cys ea)	46 cys
ANG Ftr Sq (70 Sqs - 2 cys ea)	140 cys
USP and DO (each State)	48 cys
State Adj Generals (1 ea)	48 cys
AWS	2 cys
3rd Wea Grp	5 cys
ADC-RCAF	1 cy
ATC	2 cys
SAC	2 cys
TAC	2 cys
TAC (For further distr to Pope & Shaw AFB)	2 cys
AMC	2 cys
AMC (Attn: MCSRMA (USAF Ammo Control Point))	1 cy
MATS	2 cys
ANG M&S Grp (23 Grps - 1 cy ea)	23 cys
ANG AB Grp (23 Grps - 1 cy ea)	23 cys

[redacted]

ANNEX A

TO

ADC OPERATIONS PLAN

SERIAL NO. 5-55

INTELLIGENCE

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ANNEX "A"

TO

AIR DEFENSE COMMAND OPERATIONS PLAN

SERIAL NUMBER 5-55

INTELLIGENCE

Ref: ADCM 200-1, Mission Intelligence
CONAD Weekly Intelligence Review
CONAD Intelligence Estimates

Headquarters
Continental Air Defense Command
Ent AFB, Colorado Springs, Colo.

FOREWORD:

The intelligence contained in paragraph 1 below is based on the Continental Air Defense Command Intelligence Estimate of 1 June 1955.

The inadequacy of positive information on Soviet capabilities necessarily limits the definition of the current threat. The entire spectrum of possible Soviet capabilities must be considered and examined. In view of the acknowledged hostility of the Soviet Union, any plan for the conduct of the air defense of the United States requires cognizance of maximum Soviet capabilities for air attack. These maximum capabilities are pointed out in the annex.

The information and analysis on which this annex is based are considered accurate at the date of writing. The originator of any plan or operation which is based on this annex should refer to the Intelligence Estimate, Continental Air Defense Command which is revised the first of each month.

1. ENEMY SITUATION

a. General

The most likely enemy of the United States is the U.S.S.R. with its Satellites and Communist China. Principal forces which could be used

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against the continental United States are the Soviet Long Range Aviation, the long-range submarine component of the Soviet Navy, and the sabotage potential of the Communist Party in the United States.

The U.S.S.R. could attack any target in the United States. It probably would assign priority to those targets whose destruction would most disrupt the military, industrial, and economic fabric of the nation. In addition to the U.S. retaliatory capability, which would probably be a target for the initial attack, it is believed that prime targets would also include industrial metropolitan areas and key facilities.

The principal means of attack could be supplemented by limited airborne operations against selected pinpoint targets on the approaches to the continental United States and by subversion and sabotage activities within the United States. None of these supplementary means will be evidenced on a significant scale prior to the initial air attack because of the danger, from the Soviet standpoint, of alerting U. S. defenses or precipitating U.S. offensive action.

b. Enemy Air Forces

Soviet Long Range Aviation, using weapons of mass destruction, is recognized as the principal threat to the United States. Principal U.S.S.R. air weapons systems regarded as effective for attack on the United States are BULL medium bombers, increasing numbers of turbojet medium bombers, and small numbers of turbojet and turboprop heavy bombers. Additionally, short-range, air-launched, and submarine-launched, cruise type missiles may be employed against coastal targets to augment the main strike effort. (See paragraph c, Enemy Naval Forces).

(1) Long Range Aviation

(a) Aircraft Strength

Soviet Long Range Aviation (SLRA) medium bomber regiments are believed to total about 43 regiments with a combined T/O&E strength of 1376 aircraft (32 aircraft per regiment). The estimated actual strength of these

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43 regiments total about 1200 bombers, consisting of approximately 1,000 BULL, 160 BADGER and possibly 20 each BISON and BEAR aircraft. Five and possibly as many as 10 of these SLRA medium bomber units are believed to be equipped or equipping with BADGER aircraft and one each is believed to be converting to BISON and BEAR. The combined T/O&E strength of these five regiments is estimated at 160 aircraft; their actual strength is estimated to be between 120 and 140 BADGER aircraft.

The SLRA is credited with having available a maximum of 90 percent of aircraft in active units, or approximately 900 BULLS and at least an equal percentage of its BADGERS for any one operation if launched from "home" bases. To achieve this figure, an extensive stand-down probably would be necessary. It is probable that 50 percent of the aircraft in active units would be available initially without a stand-down. This would provide approximately 460 BULLS and as many as 70-80 BADGERS and possibly 10 each BISON and BEAR aircraft for an initial strike with no more than routine operational maintenance required.

(b) Launching Areas

The Soviet potential for launching Long Range Aviation attacks from home bases must be recognized. Base areas closest to North American targets, which could be used for launching long-range air operations include the Kola Peninsula area; the Leningrad complex; the Chukotski and Kamchatka areas in northeastern Siberia; and the Baltic-East German area.

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(c) Logistics

There are no known logistical shortages or lags which would hinder initial attack against the continental United States. It is considered possible for the U.S.S.R. to support logistically attacks launched from advanced Arctic bases with prior stock piling.

(d) Technical Characteristics and Attack Capabilities

Technical characteristics of the BULL aircraft are considered to be essentially the same as those of the latest USAF B-29. Maximum combat range for the standard configuration of the BULL is estimated to be 3300 nautical miles. With one aerial refueling, this range could be extended to 4500 nautical miles. It is estimated that a stripped version of the BULL, utilizing optimum cruise control, could fly 4000 nautical miles, and with one aerial refueling, the maximum range could be increased to 5600 nautical miles.

It should be noted that the foregoing range data are predicted on the specification MIL-C-5011A modified, which imposes certain penalties and restrictions. This specification outlines the standard mission profile which is the basis for comparison of all U.S. bomber aircraft. The Strategic Air Command has flown a B-29B with a 10,000 pound bomb load and no refueling, a total distance of 5,000 nautical miles, or 25 per cent further than the 4,000 nautical miles quoted above. For air defense purposes this greater distance must be considered to be within the capability of the Soviets. Considering the above characteristics and the location

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of present SLRA bases, it is evident that this aircraft could reach a substantial number of potential U. S. targets from its "home" bases.

The BADGER, a twin-engine, turbojet swept wing, medium bomber, is in series production and is being integrated into SLRA operational units. The BADGER is approximately the same size as the U.S. B-47 and its two engines are each credited with an 18,000 pound installed thrust. This bomber is capable of carrying a 10,000 pound bomb load 1600 nautical miles on a combat radius mission. On a one-way mission and one hour's fuel remaining, it can carry a 10,000 pound bomb load 3100 nautical miles and be over the target as high as 50,000 feet. With one aerial refueling, the radius is increased to 2200 nautical miles and the range to 4300 nautical miles. The BADGER is estimated to cruise at Mach 0.8 and to have a target run-in speed of Mach 0.83. Considering the characteristics of the BADGER and the location of present SLRA "home" bases, it is evident that this aircraft could not reach a majority of potential U.S. targets without in-flight refueling.

The BISON, a four-engine turbojet swept wing heavy bomber, was first observed in flight during practices for the 1954 Moscow May Day show. This turbojet heavy bomber approximates the U.S. B-52 in size and is believed to be in at least one operational unit at the present time (June 1955). The BISON's power plants are estimated to be a more powerful version of those in the BADGER (i.e., 20,500 pounds thrust each). The estimated performance characteristics of the BISON are predicated upon the 20,500 pound thrust engines.

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The BISON is estimated to be capable of carrying a 10,000 pound bomb load 3100 nautical miles on a combat radius mission. On a one-way mission and with one hour fuel remaining, it probably can carry a 10,000 pound bomb load 6100 nautical miles and be over the target as high as 57,000 feet. With one aerial refueling, the radius is increased to 4300 nautical miles and the range to 8100 nautical miles. The BISON is estimated to cruise at Mach 0.8 and can probably reach all targets in the United States. The performance estimates for the BADGER and the BISON are calculated in accordance with U.S. military mission profiles except that fuel reserves are reduced and aircraft operate at altitudes permitting maximum radius or range.

The BEAR, a four-engine turboprop swept wing heavy bomber, was first observed in flight during practices for the 1955 Moscow May Day show and is believed to be in series production. From preliminary analysis based on photo interpretation, it is estimated that the BEAR is powered by four JUMO-022, K series engines. Each engine is estimated to deliver 12,100 equivalent shaft horsepower (including the jet thrust). Photo interpretation has revealed that the BEAR is about midway in size between the BISON and BADGER turbojet bombers.

The BEAR is estimated to be capable of carrying a 10,000 pound bomb load 3,700 nautical miles on a combat radius mission. On a one-way mission and with one hour fuel remaining, it probably can carry a 10,000 pound bomb load 7,200 nautical miles and be over the target as high as 40,000 feet. The BEAR is estimated to cruise at 470 Kts. and can probably reach all targets in the

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United States and return to home base without aerial refueling. The above performance, which is calculated in accordance with U.S. military mission profiles, is tentative and by no means complete. The BEAR's range and radius, based on optimum cruise mission, is not yet available.

No intelligence information is available concerning Soviet capabilities for in-flight refueling. However, the Soviet has had access to the know-how and the equipment, and it is considered within Soviet capabilities to develop the equipment and techniques required for operational use of in-flight refueling. If the Soviet does have such a capability, the basic ranges of the aircraft listed above can be extended accordingly.

1. Armament

The early BULLS were armed with 12.7 mm guns in all turrets. However, beginning in 1951, all BULLS subsequently sighted were equipped with 23 mm guns. It is believed that all of the earlier BULLS have been so modified and that the 23 mm gun installation is now standard equipment. The BADGER and BISON appear to be armed with 23 mm guns in three turrets - a tail turret, an upper and a lower turret. Radar installations which could well be part of a radar fire control system are evident on both aircraft. Photo interpretation has revealed a tail turret with two guns of unknown caliber installed on the BEAR aircraft.

2. Radar

Soviet bomber aircraft would be expected to use

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airborne radar, probably a Soviet version of AN/APQ-13 or the AN/APS-15, operating in the super high frequency (SHF) band, for navigation and blind bombing. It is probable that the Soviet has developed an electronic computer, giving this radar a capability comparable to the U.S. type AN/APQ-23, with a range of 120 miles at 35,000 feet.

With this equipment the Soviet will be able to bomb from any altitude within the capability of the aircraft.

Analysis of SLRA proficiency and accuracy indicates a CEP of less than 5,000 feet at 50,000 feet altitude and improving at lower altitudes.

3. Optical Bombing Equipment

The Soviets have received both the Norden M-9 and the German LOFTE optical bomb sights.

4. Radio

The Soviets may be expected to have the following radio aids:

Loran Receiver for low-frequency reception.

Marker Beacon Receiver, MRP-48-P, operating in the 75 mc/s band (Soviet version of U.S. BC-357).

Radio Altimeter, RV-2, similar to U.S. Type AN/APN-1, frequency modulated, operating in the 420 to 460 mc/s band.

Radio Compass ARK-5, similar to SCR-269, with an effective range of 250 to 300 miles, frequency ranges from the 150 to 1300 Kc/s in three bands with a bearing accuracy of ±2.5°.

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IFF, automatically and continuously varied in frequency from approximately 150 to 200 mc/s, with numerous coding combinations and an approximate range of 200 miles at 20,000 - 30,000 feet, equivalent to SCR 695.

(e) ECM

Soviet capabilities in ECM may well have progressed to a point where they constitute a major threat. The probable degradation of the U.S. defense system in the presence of simple countermeasures make highly attractive the use of such ECM by an attacker. Analysts in the U.S.S.R. are as capable of arriving at conclusions regarding the "payoff" for ECM as are their U.S. counterparts. The development of simple ECM equipment or techniques required for a high degree of effectiveness is not judged to be difficult or beyond U.S.S.R. capabilities.

Radar target sizes have decreased by a significant factor through the introduction of jet aircraft. Recent reports indicate the possibility of the development of anti-radar materials suitable for aircraft application. Such a development will further reduce the radar reflections.

(f) Fighting Effectiveness

Soviet Long Range Aviation combat crews are regarded as the products of rigorous training and discipline. As members of an elite organization, SLRA aircrews may be expected to have a high level of morale combined with considerable flying skill. Despite any defections, purges, or indications of discontent within the air or ground forces of the U.S.S.R., Soviet Long Range

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Aviation personnel may be expected to remain loyal, to press their attacks, and to fight aggressively. Evidence points to training of Long Range Aviation personnel in navigational flights with the Soviet Civil Air Fleet (Aeroflot) throughout the Soviet Union, Eastern Europe and the Far East in all weather, over all types of terrain, and over water. The Civil Air Fleet, therefore, provides a training for Long Range Aviation personnel.

(g) Tactics and Techniques

No specific intelligence is available to indicate tactics or techniques which might be employed by the Soviet Long Range Aviation in approaching and attacking targets in the United States. However, it is believed that the SLRA's tactics probably would be adapted to prevailing weather at time of attack, and to the objective selected.

The SLRA is capable of attacking the U.S. at any hour, day or night. The time of attack is primarily dependent on two factors: First, the capability of SLRA for day and night missions; and second, the status of the opposing defenses. It is believed that, as far as the first factor is concerned, there is no preponderant advantage for day or night attack. Soviet knowledge of the status of defenses probably would determine, to a great extent, the time actually chosen for attack.

Single BULL aircraft or formations of them could approach and bomb at altitudes as high as 42,000 feet or down to ground level. For the BADGER and BISON the target area ceiling could be as high as 50,000 to 57,000 feet, thereby exploiting the high-altitude weakness

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of U.S. radar. Because of excessive fuel consumption by jet aircraft at low altitudes, it is considered unlikely that jet bombers would be utilized for low-level attacks at long ranges. The altitude limitation imposed on the four engine turboprop BEAR aircraft and its configuration makes this vehicle susceptible to detection by U.S. radar and to interception by CONAD's present interceptors. It is, therefore, reasonable to expect the BEAR may be employed in minimum altitude attack to avoid detection and to exploit the advantage of increased range inherent in the turboprop aircraft at low altitude as compared to the low altitude/fuel consumption ratio of the turbojet types. Therefore, it is evident that the Soviet possesses the potential for simultaneous attack at extremely high and extremely low altitudes with high performance aircraft. In the case of the low-level approach with piston engine and turboprop bombers, the Soviets could use special techniques for delivery of the bomb itself. Aircraft would be expected to make maximum use of ECM, or USAF aircraft markings (especially SAC), and of English-speaking pilots for reporting in to ADIZ's and/or airways.

(2) Guided Missiles

There are no known U.S.S.R. operational guided missiles. However, the U.S.S.R., with the help of German scientists, has engaged in large-scale development programs of various types of guided missiles since the end of World War II. Such programs could result in highly effective surface-to-surface (submarine-launched) and air-to-surface guided missiles. These missiles could be large enough to carry warheads of mass destruction.

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(3) Weapons

(a) Nuclear Weapons

The Soviets have detonated several nuclear weapons and/or devices to date. One of these tests was of high yield and utilized thermonuclear reactions. The Soviets have reached a point in their nuclear weapons development where the specific models of nuclear weapons stockpiled can be dictated by military requirements rather than technological limitations. Information is not available concerning the design or yield of the Soviet weapons being stockpiled. However, they have demonstrated yields up to approximately one megaton. It is estimated that the Soviet could have up to 380 standard weapons in their stockpile by 1 June 1955. The dimensions and weight of any of the Soviet nuclear weapons tested would probably allow air delivery by the BULL, BISON, BEAR, and BADGER aircraft.

(b) Biological Weapons

A variety of BW agents are available to the U.S.S.R. in the categories of anti-personnel, anti-animal, and anti-crop. No intelligence is available on Soviet efforts to produce and stockpile BW agents. A number of installations in the U.S.S.R. and Satellites are engaged in functions related to BW research and production, but no single installation is known to be conducting research on a large scale. The Soviets have a variety of bombs which could be used for BW. BW probably would be used to supplement any nuclear attack on the U.S. when, in Soviet opinion, such action would give reasonable promise of decisive military success.

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(c) Chemical Weapons

Chemical warfare is an integral part of the tactical doctrine of the Soviet Army, Navy and Air Forces. Production efforts are estimated to be concerned primarily with German nerve gases. Several types of disseminating equipment, for use by long-range aircraft, are believed to have been field tested. Productions and stockpiling of GA gas are estimated to be sufficient for sustained attacks against the United States. However, so long as nuclear weapons and chemical weapons compete for long-range carriers, the lower military effectiveness of CW reduces the probability of a major CW attack on the U.S. Even so, the possibility of special CW attacks against unprepared population centers to create shock and adverse psychological effect cannot be overlooked.

c. Enemy Naval Forces

The long-range submarine force is the only element of the Soviet Navy which is considered to have a potential for air attack upon the continental United States today. While it is considered technically within Soviet capabilities to modify submarines for the launching of V-1 type and turbojet powered missiles, there is no evidence of such modification today. However, this possibility cannot be ignored.

Known capabilities of the long-range submarines are confined primarily to mining activities and other forms of undersea warfare. As an adjunct to air attack, Soviet long-range submarines could perform the following tasks: (a) provide navigational fixes for an attacking bomber force; (b) conduct barrage jamming and create electronic interference with air defense equipment; and (c) debark sabotage and espionage groups.

(1) Strength

The entire Soviet submarine force is estimated to consist of 363 submarines of various types, of which 107 are

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the newly-constructed long-range type, 78 are of the older long-range type, and 53 are of the medium-range type. The remaining submarines are of coastal types which do not affect the CONAD mission because of their short range and small size.

Both the newly-constructed long-range types and the older long-range types are capable of operating off the coasts of the United States. The 53 medium-range submarines constitute a potential long-range patrol threat if the U.S.S.R. develops an ocean-refueling capability.

An additional 31 long-range submarines are estimated to have been launched between 1 January and 31 May 1959 but are not included in the totals.

(2) Disposition

Total U.S.S.R. submarines by type and assignment:

	Baltic	North	Black	Pacific	Unassigned	Total
Long Range*	17	20	25	5	40	107
Long Range	26	22	12	18		78
Medium Range	19	0	8	23	3	53
Coastal	46	5	30	44	—	125
TOTAL	108	47	75	90	43	363

*Constructed since 1950 ("W" and "Z" classes)

d. Enemy Ground Forces

The U.S.S.R. has an estimated 100,000 trained airborne troops available today. In addition, the U.S.S.R. has about 100,000 ground troops who have had some air transportability training. Present estimated strength of aircraft available to Aviation of Airborne Troops is approximately 550 CAB and COACH transports and 250 gliders (including MARE and MIST types).

Because of air transport limitations (primarily due to the size and range of aircraft assigned), the U.S.S.R. is not believed capable of

[redacted]

launching major operations with airborne troops against the continental United States today. However, small, highly-trained assault groups probably could attack selected targets in other areas of North America such as Alaska or northeast or northwest Canada.

2. INTELLIGENCE REQUIREMENTS

The following are considered primary essential elements of information and will be reported in accordance with the provisions of CONAD Regulation 200-2.

a. First positive indication that attack is underway.

b. Type of enemy aircraft observed or intercepted.

c. Observed enemy tactics, methods of utilizing weather for offensive and defensive purposes, and methods of utilizing daylight and darkness for offensive and defensive purposes.

d. The number of enemy aircraft, by type, damaged or destroyed, and location of crashed enemy aircraft.

e. Information obtained from captured enemy personnel, documents, and materiel furnishing information on take-off bases, tactics, air order of battle, future attacks, target systems, aircraft navigational and bombing systems, and operational characteristics of the aircraft.

f. Targets attacked overtly or covertly by the armed forces of the enemy, points of weapon impact, and types of weapons employed.

g. Targets attacked overtly or covertly by enemy guerrillas, agents or saboteurs, and types of weapons employed.

h. New types of electronic countermeasures equipment, tactics, and techniques.

i. Aircraft armament.

j. Aircraft markings and identification.

k. Aircraft configuration (radomes, wing tanks, navdomes).

[redacted]

3. INTELLIGENCE ACTIVITIES

a. Reconnaissance

Responsibilities for aerial reconnaissance within the Zone of Interior have been allocated as follows:

(1) Air Defense Command

(a) To designate damaged areas upon which photographic reconnaissance is required. Reference Appendix 1, Annex "H", 9th Air Force Operations Plan 13-54.

(b) To accomplish weapons impact evaluation as required by the ADC mission and report damaged areas as directed by paragraph 7d(15), Air Force Regulation 55-81.

(c) To relay immediately photo interpretation (PI) reports to Reconnaissance Branch, DI USAF, as received from TAC units as required by Appendix 2, Annex "H", 9th Air Force Operations Plan 13-54.

(2) Headquarters USAF

To direct TAC to accomplish the required mission as required by Appendix 1, Annex "H", 9th Air Force Operations Plan 13-54.

(3) Tactical Air Command

(a) When so directed by Headquarters USAF or alternate (Headquarters ADC), dispatch necessary photo reconnaissance aircraft to objective areas designated by ADC as outlined in 9th Air Force Operations Plan 13-54.

(b) Upon completion of missions, process and dispatch photographs and PI Reports as required by AFR 200-6 and 9th Air Force Operations Plan 13-54.

(c) Deliver PI Reports and photos as required by Appendix 2, Annex "H", 9th Air Force Operations Plan 13-54.

b. Captured Enemy Personnel, Materiel and Documents

Tactical intelligence exploitation of captured enemy personnel,

[redacted]

[redacted]

materiel and documents is the responsibility of the 4602nd Air Intelligence Squadron. (Ref ADC Regulation 24-4, 3 January 1953.)*

c. Supplemental Early Warning and Combat Intelligence

United States Air Force Security Service will: (1) provide the Air Defense Command with supplementary early warning in an effort to determine the imminence of air attack; and (2) during and subsequent to air attack will supplement ADC reporting of enemy air routes, tactics, and courses of action. Reference is made to Appendix 5, dated 1 January 1954, of Annex "H" to AFSSEWMP 1-53.

d. Reports and Distribution

Combat intelligence reports and reporting procedures will be in accordance with CONAD Regulation 200-2.

e. Combat Crew Interrogation

(1) During hostilities, or Joint Canadian USAF Air Defense Exercises, any RCAF pilot engaged in air defense activities landing on a USAF Air Base will be interrogated in accordance with existing ADC USAF interrogation procedures. The intelligence produced from the information resulting from the interrogation will be disseminated in accordance with CONAD Regulation 200-2, "Combat Intelligence Reports and Procedures."

(2) During hostilities, or Joint Canadian USAF Air Defense Exercises, any USAF pilot engaged in air defense activities landing on an RCAF station will be interrogated in accordance with existing ADC-RCAF interrogation procedures.

*The provisions of ADC Regulation 24-4 will apply until such time as a comparable CONAD Regulation is published superseding portions of this regulation.

[redacted]

[redacted]

The intelligence produced from the information resulting from the interrogation will be disseminated in accordance with ADC-RCAF Air Staff Instructions, Intelligence Operations, Number 4/3/1.

SMITH
MAJOR GENERAL

OFFICIAL:

for and in the absence of
W. M. BURGESS
Brigadier General, USAF
Deputy Chief of Staff/Intelligence

[redacted]

[redacted]

ANNEX B
TO
OPERATIONS PLAN
SERIAL NO. 5-55

WARTIME PLANNING FACTORS
FOR ANG FORCES WITH MOBILIZATION ASSIGNMENTS TO ADC

[redacted]

ANNEX B
OPR PLAN 5-55
1 July 55

ANNEX B
WARTIME PLANNING FACTORS
FOR ANG FORCES WITH MOBILIZATION ASSIGNMENTS TO ADC

Line No.		AIRCRAFT MODEL AND SERIES								
		T33	F51DH	F80ABC	F84DEG	F84F	F86AE	F86F	F89B/C	F94AB
	UTILIZATION RATES									
1.	TOTAL SORTIES 1/									
a.	1st day	1	2	2	2	2	2	2	2	2
b.	2nd thru 6th day (per day)	1	1	1	1	1	1	1	1	1
c.	7th thru 30th day (per day)	1	1	1	1	1	1	1	1	1
d.	2nd thru 3rd month (per month)	30	15	15	15	15	15	15	15	15
e.	Thereafter (per month)	30	15	15	15	15	15	15	15	15
2.	FLYING HOURS PER SORTIE	2.0	2.0	2.0	2.2	2.0	1.5	1.5	2.0	1.5
	EXPENDITURE RATES									
3.	FUEL (gal per hour)	350	65	400	370	490	405	500	700	450
4.	COMBAT AMMUNITION 2/									
a.	1st day	0	80	80	80	80	80	80	80	80
b.	2nd thru 6th day (per day)	0	25	25	25	25	25	25	25	25
c.	7th thru 30th day (per day)	0	10	10	10	10	10	10	10	10
d.	2nd thru 3rd month (per month)	0	5	5	5	5	5	5	5	5
e.	Thereafter (per month)	0	1	1	1	1	1	1	1	1
5.	AUXILIARY FUEL (pylon) TANKS 3/									
a.	1st day	0	0	0	0	80	80	80	0	0
b.	2nd thru 6th day (per day)	0	0	0	0	25	25	25	0	0
c.	7th thru 30th day (per day)	0	0	0	0	10	10	10	0	0
d.	2nd thru 3rd month (per month)	0	0	0	0	5	5	5	0	0
e.	Thereafter (per month)	0	0	0	0	1	1	1	0	0

NOTES: 1/ Per aircraft in inventory. (For planning purposes, assume 25 UE and 3 T33 per sq).
2/ Indicates percent (%) of sorties flown which expend total load of combat ammunition.
3/ Indicates percent (%) of sorties flown which expend two (2) pylon tanks. (For logistics planning purposes, expenditure of center line tip tanks will not exceed rates established by peacetime consumption).

[redacted]

ANNEX C

TO

ADC OPERATIONS PLAN

SERIAL NO. 5-55

LOGISTICS

APPENDIX	TITLE
1	Materiel Reserve Requirements
2	Ammunition Storage and Delivery Plan

[redacted]

[redacted]

ANNEX C

TO

OPERATIONS PLAN

SERIAL NO. 5-55

L O G I S T I C S

1. PURPOSE: [redacted]

a. To outline the logistics tasks to be accomplished prior to, on and subsequent to M-Day to insure maximum utilization of the twenty-three (23) ANG Fighter Interceptor Wings by ADC in the D-Day Air Defense mission.

b. To provide guidance for more detailed logistics planning by Air Defense Forces, participating USAF Major Commands and ANG units to further insure a successful, orderly and immediate transition from a pre D-Day peacetime status to full-time utilization of ANG units in the defense of the Continental United States against air attack.

c. To clarify pre D-Day, D-Day and post D-Day logistic responsibilities of ADC, participating USAF Major Commands, Defense Forces and ANG units as appropriate, to the end that all planning and material actions are in consonance with wartime objectives.

2. RESUME OF THE LOGISTICS SITUATION: [redacted]

a. Shortages of critical supplies and equipment may be expected during the early phases of war. Since it is neither possible nor economically practical at the present time to prestock all supplies and equipment required during the initial phase of operations, it will be necessary for the operational commanders at each echelon to maintain constant surveillance over the proper care and utilization of assets on hand. Strict control must be maintained over critical items, whether serviceable or reparable, to permit possible redistribution within the air defense system.

b. In view of the immediate D-Day requirement for expenditure of war consumables, it is essential that reserve stocks presently in being are prepositioned for immediate use on and subsequent to D-Day. Since the ANG is prohibited from prepositioning supplies and equipment for other than training purposes, it is necessary (as an interim solution) to preposition the most critical war consumables (POL and ammo) within the immediate areas, either at nearest Air Force installation or at leased civilian facilities. This situation will exist until such time as suitable plans and/or arrangements (presently under development) can be completed to preposition war reserves on ANG bases.

3. ASSUMPTIONS: [redacted]

a. D-Day and M-Day will occur simultaneously.

[redacted]

[redacted]

b. Wartime logistic support of the ANG will be on an austere basis during the first thirty (30) days.

c. AMC will provide follow-on support for ANG units beyond that period for which materiel reserve requirements have been established.

d. Appropriate instructions will be developed by the NG Bureau outlining the pre D-Day tasks for ANG Fighter Interceptor Squadrons to insure successful implementation of this plan.

4. GENERAL: [redacted]

a. Equipment:

(1) ANG Fighter Interceptor Squadrons are considered to be in Equipping Category "D" as defined in AFL 67-112 (Conf), Subj: (U) Equipping of Air Force T/O (TO&E) Units, dated 29 April 1955. These units will be equipped with only Minimum Essential Equipment required to fulfill their peacetime training mission.

(2) Equipment (peacetime training allowances) for ANG units are developed under the jurisdiction of the NG Bureau, Washington, D.C., and listed in the ANG Equipment Authorization List (ANGEAL).

(3) The Air Defense Command will take action to provision items necessary to provide equipment augmentation for ANG units scheduled for a D-Day mission of air defense. This equipment will be provisioned as Mobilization Reserve Materiel Requirement (MRMR) and prestocked for D-Day use.

(4) Provisioning of equipment for both peacetime and D-Day needs as outlined above will be derived through determination of equipment required but not provided by other authority nor available through joint usage of equipment authorized other organizations.

b. Priorities for Equipping:

(1) Refer to current USAF Operating Program, "Priorities of Programmed Units (OPU)".

(2) On D-Day, unit precedence categories and precedence numbers will be revised by USAF in accordance with the urgency of the mission to be accomplished.

c. Supply and Availability of Equipment:

(1) Equipment (aircraft, vehicles, special tools, GHE and allied support equipment) will accompany these units into active military

[redacted]

service and will thereafter be considered within the overall assets of the Air Force.

(2) The equipment and supplies of the ANG Wings (Non-AI) will remain frozen within the units, insofar as practicable, to provide maximum unit effectiveness upon release by ADC or reassignment in accordance with USAF war planning.

(3) Effective D-Day, ANG operating stock levels (including bench stocks, service stocks, base supply and depot stocks) plus those war consumables (par 4 e, below) that are prestocked for use after D-Day, issued to, available or ear-marked for the ANG will constitute the immediate source of supply for these units.

(4) ANG non-federal equipment not required for the war effort will remain with or revert to the NG Bureau for planned post-war utilization.

d. Wartime Planning Factors:

(1) The wartime planning factors outlined in Annex B, this plan (extract from ADC CMP 1-55, 10 Apr 55), were utilized to compute the Materiel Reserve Requirements delineated in App 1, this Annex.

e. Materiel Reserve Requirement (War Consumables):

(1) The war reserve commodities necessary to support this plan will be determined, computed and forwarded by ADC to AMC for inclusion in NIGHT LIFE portion of AFL 67-44 (Project AF-GEN).

(2) The established requirements (war consumables) of auxiliary fuel tanks, ammunition and POL and the planned distribution of these assets are set forth in App 1 and 2, this Annex.

f. Accounting for Air Force Property:

(1) Equipment and supplies for ANG units are requisitioned, stored, issued and accounted for as set forth in Vol XI, AFM 67-1.

(2) Upon mobilization, Sec V, AFR 45-51, as amended, will govern the termination, transfer and accountability of property.

5. LOGISTICS TASKS TO BE ACCOMPLISHED PRIOR TO D-DAY: ~~(CONF)~~

a. Air Defense Command will:

(1) Initiate necessary action to procure additional facilities, equipment and supplies to support

[redacted]

[redacted]

the maximum operation of ANG forces performing the air defense mission, or provide means by which they may be obtained.

(2) Compute and take necessary action to establish Materiel Reserve Requirements to support ANG units during the Decisive Phase of the war.

(3) Maintain close l son with Hq AMC to insure that:

(a) AFL 67-44 correctly reflects total reserve needs;

(b) Timely shipment of materiel reserves is accomplished;

(c) Plans are prepared to insure post D-Day shipment of remaining reserves.

(4) Coordinate with major commands concerned to insure that pre D-Day and post D-Day logistic tasks are accomplished (Ref par 5 c, below).

b. By Air Defense Forces:

(1) Prepare supporting plans (for Air Division guidance) to provide D-Day and post D-Day logistics support to ANG units listed in ANNEX D and be prepared to implement such plans when directed. Supporting plans will include, but not be limited to, procedures for notifying all AF bases and ANG units listed in Appendix 2 to the end that (upon receipt of implementing order, ANNEX F) ammunition delivery and pick-up scheme will be accomplished within the shortest time possible.

(2) Coordinate and assist wherever possible in the accomplishment of those tasks outlined in paragraph 5 c, below, which are peculiar to the participating USAF major commands.

(3) Be prepared to assist the ANG Wings in the development of additional pre D-Day and D-Day requirements.

(4) Require Air Division to maintain liaison between ANG unit and ammunition storage base.

c. By Air Defense Forces and Participating USAF Major Commands:

(1) For ANG units located on AF bases or jointly occupying a civilian (municipal) facility where an active AF account is established:

(a) Insofar as practicable, take necessary p e D Day action for planned D-Day integration of ANG officer and enlisted

[redacted]

[redacted]

personnel into suitable on-base billets and arrange for joint utilization of messing, medical and other base support facilities and services. This action will be accomplished through coordination with appropriate ANG commanders to preclude the unnecessary expenditure of funds under emergency actions authorized in AFR 45-51, "Mbbilization of the Air National Guard", as amended.

(b) Be prepared to assist in making arrangements for acquisition of additional off-base facilities and services to supplement support provided by preceding paragraph (a).

(c) Insure that bases are prepared to assume responsibility for all unissued federal stocks possessed by ANG Base Supply Officers.

(d) Insure that bases under the jurisdiction of Air Defense Forces or participating USAF major command, as appropriate, are prepared to receive, store and issue additional supplies and equipment to support the increased activity of ANG Fighter Interceptor Squadrons on and subsequent to D-Day.

(e) Insure that AF Base Petroleum Officers are familiar with:

1. ANG jet fuel requirements contained in Appendix 1, this Annex, NIGHT LIFE portion of AFL 67-44;

2. Terminal at which reserve fuel is to be stored;

3. The AMC Field Petroleum Supply Officers to be contacted; and that,

4. Liaison is established with appropriate AMC Field Petroleum Supply Officer who is responsible for furnishing Base Commanders with current procedures and method of transportation from terminals to appropriate bases.

(f) Insure that sufficient Avlubes are maintained at each base to support the total Avfuel requirement (Appendix 1) based on the factor .067% of the gross fuel requirement.

(g) Insure that bases receive, store and maintain quantities of auxiliary fuel tanks and combat ammunition as set forth in App 1, this Annex, and NIGHT LIFE portion of AFL 67-44.

[redacted]

[redacted]

(2) For ANG units not located on AF bases, i.e., located on ANG base (civilian (municipal) facility) where no active AF account is established:

(a) Insure that ammunition support bases designated in "Ammunition Storage and Delivery Plan", App 2, this Annex, are prepared, or have made necessary arrangements, to store quantities of combat ammunition specified therein and have plans developed for delivery and/or issue of total ammunition needs.

(b) Insure that support bases conduct frequent coordination visits to applicable ANG bases and that liaison is maintained to the end that complete understanding of pre D-Day and D-Day responsibilities is assured and that all possible methods of expediting ammunition delivery to ANG bases have been explored (ref App 2).

6. LOGISTICS TASKS TO BE ACCOMPLISHED ON AND SUBSEQUENT TO D-DAY: [redacted]

a. By Air Defense Forces and Participating USAF Major Commands:

(1) For ANG units located on AF bases or jointly occupying a civilian (municipal) facility where an active AF account is established:

(a) Integrate officer and enlisted personnel into available billets and make available other base facilities and services for joint usage as capacity and capability dictate (Ref par 5 c (1) (a), above).

(b) Bases will assume responsibility for all unissued federal stocks possessed by ANG Base Supply Officers (Ref par 5 c (1) (c), above).

(c) Take necessary action to insure continued logistical support of ANG units (Ref par 5 c (1) (d), above).

(d) Make available for immediate issue those war consumables listed in App 1, this Annex.

(e) Base Petroleum Officers will contact appropriate AMC Field Petroleum Supply Officer and arrange for scheduled delivery of fuel (Ref par 5 c (1) (e), above).

(2) For ANG units not located on AF bases, i.e., located on ANG base (civilian (municipal) facility) where no active AF account is established:

0256

[redacted]

(a) Take immediate action to deliver quantities of combat ammunition specified in App 2, this Annex, to ANG unit at destination within the time (hours) indicated.

(b) Be prepared to issue ammunition to those ANG units effecting pick-up.

b. By Headquarters Air Materiel Command:

(1) Coordinate with Hq ADC in the development of Materiel Reserve Requirements to support the seventy (70) Air National Guard Fighter Interceptor Squadrons.

(2) Maintain NIGHT LIFE portion of AFL 67-44 to reflect ANG Materiel Reserve Requirements by quantity and location.

(3) Take necessary action to effect pre D-Day automatic distribution of auxiliary fuel tank requirements for ANG units located on AF installations.

(4) Develop plans for immediate post D-Day shipment of auxiliary fuel tanks to ANG units not located on AF installations.

(5) Honor requisitions and insure shipment of combat ammunition in accordance with quantities set forth in App 1, this Annex, and as published in NIGHT LIFE portion of AFL 67-44.

(6) Maintain fuel reserves in terminal storage in accordance with Sec III, AFL 67-44.

(7) Provide liaison between AMC Field Petroleum Supply Officers and Base Commanders (AF and ANG) to provide commanders with current procedures and method of transportation of fuel from terminals at which reserve fuel is to be stored.

c. By ANG units not located on an AF installation:

(1) Receive ammunition delivered from support base and/or accomplish pick-up of ammunition in accordance with the storage and delivery plan outlined in Appendix 2, this Annex, by achieving the following:

(a) Designate off-loading point for receipt and inspection of ammunition on or adjacent to aircraft hardstand servicing area to facilitate the expeditious servicing and reservicing of aircraft.

[redacted]

[redacted]

(b) Dispatch necessary transportation (air or motor vehicle) and personnel to the support base to accomplish pick-up of ammunition within the time allotted (Ref App 2).

(c) Establish schedule and obligate transportation and personnel to pick up the residual quantity of ammunition from support base designated in Appendix 2 to insure adequate quantities on hand at all times.

(2) Be prepared to receive and utilize auxiliary fuel tanks provided through post D-Day shipment from depot sources (Ref par 6 b (4), above).

d. By all ANG units:

(1) Comply with applicable portions of AFR 45-51, as amended, AFM 67-1 and other directives which become effective on M-Day.

(2) Initiate action to bring all assigned aircraft to a high state of combat readiness within shortest time possible.

(3) Ready all available aircraft for immediate combat operation by servicing with fuel, oxygen and combat ammunition.

(4) Prepare to support sustained air defense combat operations.

(5) Alert and schedule all maintenance and servicing crews to provide the most efficient reservicing of aircraft.

SMITH
MAJOR GENERAL
COMMANDER

APPENDICES: 1. Materiel Reserve Requirements
2. Ammunition Storage and Delivery Plan

OFFICIAL:

Marshall S. Roth

MARSHALL S. ROTH
Major General, USAF
DCS/Materiel

[redacted]

APPENDIX 1

TO

ANNEX C

MATERIEL RESERVE REQUIREMENTS

1. GENERAL: [redacted]

a. Reserves outlined in this appendix are considered minimum levels required for the support of ANG Fighter Interceptor Squadrons listed in Annex D.

(1) Reserves are not to be considered a part of (nor applied against) reserve levels established by other authority.

(2) For logistic planning purposes, reserves are based on:

(a) Total UE (25) aircraft.

(b) Type of aircraft possessed six (6) months hence as indicated in current programming documents.

(c) Wartime Planning Factors outlined in Annex B.

(3) Accounting, storage, use and reporting will be governed by provisions of AFL 67-44, Subj: (U) Prestocking of Equipment and Supplies (Project AF-GEN-1-50-OPR), dtd 15 May 1955, as amended.

2. AMMUNITION: [redacted]

a. Ninety (90) day combat ammunition requirements for the seventy (70) ANG Fighter Interceptor Squadrons are listed in column g, paragraph 5, this Appendix. These requirements are computed and submitted by ADC to AMC for inclusion in NIGHT LIFE portion of AFL 67-44 (Project AF-GEN).

b. Combat ammunition for ANG squadrons located on AF installations is to be requisitioned by and shipped to the appropriate AF base, ear-marked, and held in storage for D-Day issue to ANG units.

c. A detailed support plan for D-Day and post D-Day delivery of combat ammunition to ANG squadrons not located on AF installations (i.e., located on ANG bases or civilian (municipal) facilities) is set forth in Appendix 2, this Annex.

[redacted]

[redacted]

3. AUXILIARY FUEL TANKS: [redacted]

a. Auxiliary fuel tank requirements listed in column h, paragraph 5, below, are published in NIGHT LIFE portion of AFL 67-44.

b. Automatic distribution of quantities ear-marked for ANG squadrons located on AF installations is to be accomplished by AMC.

c. As in interim policy, AMC will retain in depot stock auxiliary fuel tanks for post D-Day shipment to ANG squadrons not located on AF installations. (Ref paragraph 6 b (4), this Annex.)

4. POL (JET): [redacted]

a. Jet aircraft fuel requirements (column e, paragraph 5, below) are computed by ADC and forwarded to Fuels and Lubrications Divisions, Middletown Air Materiel Area (MAAMA).

b. In accordance with Sec III, AFL 67-44, MAAMA will maintain within proximity of the installations (AF or ANG) upon which the ANG Fighter Squadrons are located (reasonable supply distance) adequate fuels to support the reserve requirement. (Ref par 6 b (6), this Annex.)

5. MATERIEL RESERVE REQUIREMENTS: [redacted]

a. The following requirements indicate reserve needs of the above commodities for the seventy (70) ANG Fighter Interceptor Squadrons listed in column a:

(Refer to next page.)

	LINE	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
						JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
		a	b	c	d	e	f	g	h	i	j
E A D F	1	Akron-Canton Aprt Canton, Ohio	ANG	112th (Non-AI)	F51D	100,750 4/		303,750			2/
	2	Andrews AFB Camp Springs, Md	MATS	121st (Non-AI)	F86E	470,812		270,000	168		1/
	3	Baer Field Ft Wayne, Ind	ANG	163d (Non-AI)	F80C	620,000		303,750			2/
	4	Barnes Muni Aprt Westfield, Mass	ANG	131st (AI)	F94A/B	523,125		405,000			2/
	5	Bradley Field Windsor Locks, Conn	ANG	118th (Non-AI)	F84D	630,850		303,750			2/
	6	Congaree Air Base Eastover, S C	ANG	157th (Non-AI)	F80C	620,000		303,750			2/
	7	Dayton Muni Aprt Vandalia, Ohio	ANG	162d (Non-AI)	F84E	630,850		303,750			2/
	8	Detroit Wayne Maj Aprt Romulus, Mich	ANG	107th (AI)	F89C	1,085,000	202,500				2/
	9	Detroit Wayne Maj Aprt Romulus, Mich	ANG	171st (AI)	F89C	1,085,000	202,500				2/
	10	Dobbins AFB Marietta, Ga	ConAC	128th (Non-AI)	F84D	630,850		303,750			1/

APPENDIX 1
ANNEX C
OPLAN 5-55
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LINE	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
					JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
	a	b	c	d	e	f	g	h	i	j
11	Douglas Field Charlotte, N C	ANG	156th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
12	Dow AFB Bangor, Maine	SAC	132d (AI)	F94A/B	523,125		405,000			1/
13	Ethan-Allen AFB Winooski, Vt	ADC	134th (AI)	F94A/B	523,125		405,000			1/
14	Gen B Mitchell Fld Milwaukee, Wisc	ConAC	126th (AI)	F89C	1,085,000	202,500				1/
15	Gtr Pittsburgh Aprt Coraopolis, Pa	ADC	146th (Non-AI)	F84F	759,500		303,750		168	1/
16	Gtr Pittsburgh Aprt Coraopolis, Pa	ADC	147th (Non-AI)	F84F	759,500		303,750		168	1/
17	Grenier AFB Manchester, N H	MATS	133d (AI)	F94A/B	523,125		405,000			1/
18	Harbor Field Baltimore, Md	ANG	104th (Non-AI)	F86E	470,812		270,000	168		2/ 3/
19	Hulman Field Terre Haute, Ind	ANG	113th (Non-AI)	F80C	620,000		303,750			2/
20	Kanawha County Aprt Charleston, W Va	ANG	167th (Non-AI)	F51D	100,750 4/		303,750			2/

	LINE	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
						JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
		a	b	c	d	e	f	g	h	i	j
E A D F	21	Kellogg Field Battle Creek, Mich	ANG	172d (AI)	F89C	1,085,000	202,500				2/
	22	Lockbourne AFB Columbus, Ohio	SAC	166th (Non-AI)	F84E	630,850		303,750			1/
	23	Logan Intl Aprt Boston, Mass	ANG	101st (AI)	F94A/B	523,125		405,000			2/
	24	Mansfield Muni Aprt Mansfield, Ohio	ANG	164th (Non-AI)	F84E	630,850		303,750			2/
	25	McGuire AFB (Ft Dix) Wrightstown, N. J.	MATS	141st (Non-AI)	F86A	470,812		270,000	168		1/
	26	New Castle Co Aprt Wilmington, Del	ADC	142d (Non-AI)	F86A	470,812		270,000	168		1/
	27	Newark Airport Newark, N J	ANG	119th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	28	Niagara Falls Muni Aprt Niagara Falls, N Y	ADC	136th (AI)	F94A/B	523,125		405,000			1/
	29	O'Hare Intl Aprt Chicago, Ill	ADC	108th (Non-AI)	F84F	759,500		303,750		168	1/
	30	O'Hare Intl Aprt Chicago, Ill	ADC	168th (Non-AI)	F84F	759,500		303,750		168	1/
	31	Philadelphia Intl Aprt Philadelphia, Pa	ANG	103d (Non-AI)	F84F	759,500		303,750		168	2/ 3/

APPENDIX 1
ANNEX C
OPLAN 5-55
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	UNIT	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
						JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
	a		b	c	d	e	f	g	h	i	j
E A D F	32	Philadelphia Intl Aprt Philadelphia, Pa	ANG	117th (Non-AI)	F84F	759,500		303,750		168	2/ 3/
	33	Schenectady Co Aprt Schenectady, N Y	ANG	139th (AI)	F94A/B	523,125		405,000			2/
	34	Spaatz Field Reading, Pa	ANG	148th (Non-AI)	F51D	100,750 4/		303,750			2/
	35	Standiford Field Louisville, Ky	ANG	165th (Non-AI)	F51D	100,750 4/		303,750			2/
	36	Syracuse AFS Syracuse, N Y	ADC	138th (AI)	F94A/B	523,125		405,000			1/
	37	T F Green Aprt Providence, R I	ANG	152d (Non-AI)	F84D	630,850		303,750			2/
	38	T C Imeson Jacksonville, Fla	ANG	159th (Non-AI)	F80C	620,000		303,750			2/
	39	Travis Muni Aprt Savannah, Ga	ANG	158th (Non-AI)	F84D	630,850		303,750			2/
	40	Traux Field Madison, Wisc	ADC	176th (AI)	F89B	1,085,000	202,500				1/
	41	Weschester Co Aprt White Plains, N Y	ANG	137th (AI)	F94A/B	523,125		405,000			2/

	LINE	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
						JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
		a	b	c	d	e	f	g	h	i	j
C A D F	42	Buckley Field Denver, Colorado	ANG	120th (Non-AI)	F80C	620,000		303,750			2/
	43	Brooks AFB San Antonio, Tex	ConAC	182d (Non-AI)	F51D	100,750 4/		303,750			1/
	44	Capital Aprt Springfield, Ill	ANG	170th (Non-AI)	F84F	759,500		303,750		168	2/ 3/
	45	Cheyenne Muni Aprt Cheyenne, Wyo	ANG	187th (Non-AI)	F80C	620,000		303,750			2/
	46	Des Moines Muni Aprt Des Moines, Iowa	ANG	124th (Non-AI)	F80C	620,000		303,750			2/
	47	Duluth Muni Aprt Duluth, Minn	ADC	179th (AI)	F94A/B	523,125		405,000			1/
	48	Great Falls Muni Aprt Great Falls, Mont	ANG	186th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	49	Gtr Peoria Muni Aprt Peoria, Ill	ANG	169th (Non-AI)	F51D	100,750 4/		303,750			2/
	50	Hector Aprt Fargo, N Dak	ANG	178th (AI)	F94A/B	523,125		405,000			2/
	51	Hensley Field Grand Prairie, Tex	ConAC	181st (Non-AI)	F80C	620,000		303,750			1/

APPENDIX I
ANNEX C
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	LINE	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
						JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
	a		b	c	d	e	f	g	h	i	j
C A D F	52	Holman Field St Paul, Minn	ANG	109th (AI)	F94A/B	523,125		405,000			2/
	53	Houston Muni Aprt Houston, Texas	ANG	111th (Non-AI)	F80C	620,000		303,750			2/
	54	Kirtland AFB Albuquerque, N M	ARDC	188th (Non-AI)	F80C	620,000		303,750			1/
	55	Lincoln AFB Lincoln, Nebr	SAC	173d (Non-AI)	F80C	620,000		303,750			1/
	56	McConnell AFB Wichita, Kans	ATC	127th (Non-AI)	F80C	620,000		303,750			1/
	57	Salt Lake City Muni Aprt Salt Lake City, Utah	ANG	191st (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	58	Sioux City Muni Aprt Sioux City, Iowa	ADC	174th (Non-AI)	F80C	620,000		303,750			1/
	59	Sioux Falls Muni Aprt Sioux Falls, S Dak	ANG	175th (AI)	F94A/B	523,125		405,000			2/
	60	Sky Harbor Muni Aprt Phoenix, Arizona	ANG	197th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	61	Tulsa Muni Aprt Tulsa, Okla	ANG	125th (Non-AI)	F80C	620,000		303,750			2/
	62	Will Rogers Field Oklahoma City, Okla	ANG	185th (Non-AI)	F80C	620,000		303,750			2/

	LINE	LOCATION	COMD JURIS-DICTION (Base)	ANG-FIS UNIT DESIG-NATION	TYPE ACFT	REQUIREMENTS					NOTES
						JET POL (Gal)	20 MM HEI (Rnd)	50 CAL API M-8 (Rnd)	120 GAL PYLON (Set)	230 GAL PYLON (Set)	
		a	b	c	d	e	f	g	h	i	j
W A D F	63	Fresno Air Terminal Fresno, Calif	ANG	194th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	64	Geiger Field Spokane, Wash	ADC	116th (Non-AI)	F86A	470,812		270,000	168		1/
	65	Gowen Field Boise, Idaho	ANG	190th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	66	Ontario Intl Aprt Ontario, Calif	ANG	196th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	67	Portland Intl Aprt Portland, Oregon	ADC	123d (Non-AI)	F86A	470,812		270,000	168		1/
	68	Reno Muni Aprt Reno, Nevada	ANG	192d (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	69	San Fernando Valley Muni Aprt Van Nuys, Calif	ANG	115th (Non-AI)	F86A	470,812		270,000	168		2/ 3/
	70	San Fernando Valley Muni Aprt Van Nuys, Calif	ANG	195th (Non-AI)	F86A	470,812		270,000	168		2/ 3/

(CONTINUED NEXT PAGE)

REMARKS:

1. JET POL (column e) to be held in AMC Terminal Storage (Ref AFL 67-44).

2. Maintain at each base sufficient AVLUBES to support the total thirty (30) day AVFUEL requirement based on the factor .067% of the gross fuel requirement.

3. NOTES: 1/ Ammunition (column g) and Auxiliary Fuel Tanks (column h), if applicable, to be maintained on base (column a) at all times for D-Day issue to ANG unit (column c).

2/ Ammunition (column g) to be maintained at Support Base at all times IAW "Storage and Delivery Plan", App 2, this Annex, for delivery to ANG Base.

3/ Auxiliary Fuel Tanks (column h) to be retained in AMC Depot storage for post D-Day shipment to the ANG Base (Ref par 4 b (4), this Annex).

4/ Requirement is for 100/130 AVGAS.

APPENDIX 2

TO

ANNEX C

AMMUNITION STORAGE AND DELIVERY PLAN

1. GENERAL:

a. This Appendix establishes procedures and outlines responsibilities for the storage, delivery and/or issue of combat ammunition to those ANG squadrons not located on Air Force installations. The end position desired is to actually preposition total requirements on ANG bases and is being pursued through three phases enumerated below:

Phase I. Initial selection of an AF installation nearest the ANG base as best possible choice after considering all AF installations in the area (this Appendix).

Phase II. Consideration and selection of other military type installations when such selection would result in earlier D-Day delivery of combat ammunition.

Phase III. Storage on ANG base.

2. RESPONSIBILITIES:

a. Major Air Commands and Air Defense Forces having bases designated as ammunition support bases (column a) will insure that:

(1) Quantities of ammunition specified (column b) is requisitioned and maintained in storage for ready delivery and/or issue to ANG units designated (column d).

(2) Ammunition support bases notify this headquarters and ANG units concerned when ammunition is in place.

(3) Ammunition support bases establish and maintain pre D-Day liaison with ANG units being supported to insure that delivery and/or pick-up responsibilities set forth in this Annex will be accomplished as specified.

(4) Adequate delivery plans are developed and maintained in current status at support bases.

3. AMMUNITION STORAGE AND DELIVERY PLAN:

The following storage and delivery schedule was developed with USAF approval through coordination with major commands concerned. The ultimate goal is to preposition all war reserve requirements on the sites being occupied by ANG units. The general concept outlined in this Appendix will remain in effect until a permanent solution is achieved. Support bases and major commands will be notified as arrangements are completed to store ammunition on ANG bases and will be furnished instructions for movement of ammunition to the appropriate ANG location.

(Refer to next page.)

Column a -- Base of Major Command designated to maintain ninety (90) day war reserve requirement of combat ammunition marked for the appropriate ANG Fighter Squadron (column d) and effect delivery of quantity (column e) to location (column f) within the time indicated (column g).

Column h -- Quantity of combat ammunition to be picked up by the appropriate ANG unit (column d) at designated ammo support base (column a) within twelve (12) hours after notification. EXCEPTION: "xxxx" in columns e and g indicates non-delivery by support bases. In these cases ANG units will, upon receipt of notification initiate immediate action to pick up initial quantity (column h).

Column i -- Quantity of combat ammunition to be picked up by the appropriate ANG unit (column d) not later than D + 5 days.

	LINE	SUPPORT BASE & LOC (On-load-point)	AMMUNITION STORAGE & DELIVERY ~~DATA~~							
			AMMO TO BE STORED		ANG UNIT (MARKED FOR)	QTY TO BE DEL	DESTINATION (Off-load-point)	MAX-DEL TIME (hrs)	INITIAL QTY TO BE PICKED UP	BALANCE TO BE PICKED UP
			QTY	TYPE						
		a	b	c	d	e	f	g	h	i
EADF	1	Andrews AFB (MATS) Camp Springs, Md	270,000	Cal 50	104th FIS	50,000	Harbor Field Baltimore, Md	6 hrs	25,000	195,000
	2	Bakalar AFB (ConAC) Columbus, Ind	303,750	Cal 50	163rd FIS	50,000	Baer Field Ft Wayne, Ind	3 hrs	25,000	228,750
	3	Bakalar AFB (ConAC) Columbus, Ind	303,750	Cal 50	113th FIS	50,000	Hulman Field Terre Haute, Ind	6 hrs	25,000	228,750
	4	Bakalar AFB (ConAC) Columbus, Ind	303,750	Cal 50	165th FIS	50,000	Standiford Field Louisville, Ky	6 hrs	25,000	228,750
	5	Clinton Co AFB (ConAC) Wilmington, Ohio	303,750	Cal 50	167th FIS	50,000	Kanawha Co Aprt Charleston, W Va	2 hrs	25,000	228,750
	6	Grenier AFB (MATS) Manchester, N H	405,000	Cal 50	101st FIS	50,000	Logan Intl Aprt Boston, Mass	12 hrs	25,000	330,000

	LINE	SUPPORT BASE & LOC (On-load point)	AMMUNITION STORAGE & DELIVERY DATA: AMMO TO BE STORED QTY	AMMO TO BE STORED TYPE	ANG UNIT (MARKED FOR)	QTY TO BE DEL	DESTINATION (Off-load point)	MAX-DEL TIME (hrs)	INITIAL QTY TO BE PICKED UP	BALANCE TO BE PICKED UP
		a	b	c	d	e	f	g	h	i
EADF	7	Griffiss AFB (AMC) Rome, N Y	405,000	Cal 50	139th FIS	50,000	Schenectady Co A Schenectady, N Y	8 hrs	25,000	330,000
	8	Hunter AFB (SAC) Savannah, Ga	303,750	Cal 50	158th FIS	xxxx	Travis Muni Aprt Savannah, Ga	xxxx	75,000	228,750
	9	Moody AFB (ATC) Valdosta, Ga	303,750	Cal 50	159th FIS	50,000	T C Imeson Aprt Jacksonville, Fla	3 hrs	25,000	228,750
	10	New Castle Co Aprt (ADC), Wilmington, Delaware	303,750	Cal 50	103rd FIS	25,000	Philadelphia Intl Aprt, Philadelphia, Pa	4 hrs	50,000	228,750
	11	New Castle Co Aprt (ADC), Wilmington, Delaware	303,750	Cal 50	117th FIS	25,000	Philadelphia Intl Aprt, Philadelphia, Pa	4 hrs	50,000	228,750
	12	Olmstead AFB (AMC) Middletown, Pa	303,750	Cal 50	148th FIS	50,000	Spaatz Field Reading, Pa	2 hrs	25,000	228,750
	13	Otis AFB (ADC) Falmouth, Mass	303,750	Cal 50	152nd FIS	50,000	T F Green Aprt Providence, R I	6 hrs	25,000	228,750
	14	Pope AFB (TAC) Fort Bragg, N C	270,000	Cal 50	156th FIS	50,000	Douglas Field Charlotte, N C	6 hrs	25,000	195,000
	15	Selfridge AFB (ADC) Mt Clements, Mich	202,500	20 MM	107th FIS	xxxx	Detroit Wayne Maj Aprt, Romulus, Mich	xxxx	48,000	154,500
	16	Selfridge AFB (ADC) Mt Clements, Mich	202,500	20 MM	171st FIS	xxxx	Detroit Wayne Maj Aprt, Romulus, Mich	xxxx	48,000	154,500

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	LINE	SUPPORT BASE & LOC (On-load point)	AMMO TO BE STORED		AMMUNITION STORAGE & DELIVERY DATA				INITIAL QTY TO BE PICKED UP	BALANCE TO BE PICKED UP
			QTY	TYPE	ANG UNIT (MARKED FOR)	QTY TO BE DEL	DESTINATION (Off-load point)	MAX-DEL TIME (hrs)		
		a	b	c	d	e	f	g	h	i
EADF	17	Selfridge AFB (ADC) Mt Clements, Mich	202,500	20 MM	172nd FIS	30,000	Kellogg Field Battle Cr, Mich	6 hrs	18,000	154,500
	18	Shaw AFB (TAC) Sumter, S C	303,750	Cal 50	157th FIS	50,000	Congaree Air Base Eastover, S C	6 hrs	25,000	228,750
	19	Stewart AFB (ADC) Newburgh, N Y	405,000	Cal 50	137th FIS	25,000	Westchester Co Aprt, White Plains, N Y	4 hrs	50,000	330,000
	20	Stewart AFB (ADC) Newburgh, N Y	270,000	Cal 50	119th FIS	25,000	Newark Aprt Newark, N J	8 hrs	50,000	195,000
	21	Westover AFB (SAC) Chicopee Falls, Mass	303,750	Cal 50	118th FIS	xxxx	Bradley Field Windsor Locks, Conn	xxxx	75,000	228,750
	22	Westover AFB (SAC) Chicopee Falls, Mass	405,000	Cal 50	131st FIS	xxxx	Barnes Muni Aprt Westfield, Mass	xxxx	75,000	330,000
	23	Wilkins AF Sta (AMC) Shelby, Ohio	303,750	Cal 50	164th FIS	50,000	Mansfield Muni Aprt, Mansfield, Ohio	4 hrs	25,000	228,750
	24	Wright Patterson AFB (AMC), Dayton, Ohio	303,750	Cal 50	162nd FIS	50,000	Dayton Muni Aprt Vandalia, Ohio	1 hr	25,000	228,750
	25	Youngstown Muni Aprt (ADC), Youngstown, Ohio	303,750	Cal 50	112th FIS	50,000	Akron-Canton Aprt Canton, Ohio	6 hrs	25,000	228,750

	LINE	SUPPORT BASE & LOC (On-load point)	AMMUNITION STORAGE & DELIVERY DATA: AMMO TO BE STORED QTY	AMMO TO BE STORED TYPE	ANG UNIT (MARKED FOR)	QTY TO BE DEL	DESTINATION (Off-load point)	MAX-DEL TIME (hrs)	INITIAL QTY TO BE PICKED UP	BALANCE TO BE PICKED UP
		a	b	c	d	e	f	g	h	i
CADF	26	Chanute AFB (ATC) Rantoul, Ill	303,750	Cal 50	170th FIS	50,000	Capital Aprt Springfield, Ill	3 hrs	25,000	228,750
	27	Chanute AFB (ATC) Rantoul, Ill	303,750	Cal 50	169th FIS	50,000	Gtr Peoria Muni Aprt, Peoria, Ill	3 hrs	25,000	228,750
	28	Ellington AFB (ATC) Houston, Tex	303,750	Cal 50	111th FIS	50,000	Houston Muni Aprt Houston, Tex	6 hrs	25,000	228,750
	29	F E Warren AFB (ATC) Cheyenne, Wyo	303,750	Cal 50	187th FIS	50,000	Cheyenne Muni Aprt Cheyenne, Wyo	2 hrs	25,000	228,750
	30	Great Falls AFB (SAC) Great Falls, Mont	270,000	Cal 50	186th FIS	xxxx	Great Falls Muni Aprt, Great Falls Mont	xxxx	75,000	195,000
	31	Hill AFB (AMC) Ogden, Utah	270,000	Cal 50	191st FIS	50,000	Salt Lake City Muni Aprt, Salt Lake City, Utah	5 hrs	25,000	195,000
	32	Lowry AFB (ATC) Denver, Colorado	303,750	Cal 50	120th FIS	50,000	Buckley Field Denver NAS Denver, Colorado	4 hrs	25,000	228,750
	33	Minn-St Paul Intl Aprt (ADC), Minneapolis, Minnesota	405,000	Cal 50	178th FIS	50,000	Hector Aprt Fargo, N D	12 hrs	25,000	330,000

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	LINE	SUPPORT BASE & LOC (On-load point)	AMMUNITION STORAGE & DELIVERY DATA: AMMO TO BE STORED QTY	AMMO TO BE STORED TYPE	ANG UNIT (MARKED FOR)	QTY TO BE DEL	DESTINATION (Off-load point)	MAX-DEL TIME (hrs)	INITIAL QTY TO BE PICKED UP	BALANCE TO BE PICKED UP
		a	b	c	d	e	f	g	h	i
CADF	34	Minn-St Paul Intl Aprt (ADC), Minneapolis, Minnesota	405,000	Cal 50	109th FIS	xxxx	Holman Field St Paul, Minn	xxxx	75,000	330,000
	35	Sioux City Muni Aprt (ADC), Sioux City, Ia	303,750	Cal 50	124th FIS	25,000	Des Moines Muni A Des Moines, Iowa	10 hrs	50,000	228,750
	36	Sioux City Muni Aprt (ADC), Sioux City, Ia	405,000	Cal 50	175th FIS	25,000	Sioux Falls Muni A Sioux Falls, S D	6 hrs	50,000	330,000
	37	Tinker AFB (AMC) Okla City, Okla	303,750	Cal 50	125th FIS	50,000	Tulsa Muni Aprt Tulsa, Okla	6 hrs	25,000	228,750
	38	Tinker AFB (AMC) Oklahoma City, Okla	303,750	Cal 50	185th FIS	50,000	Will Rogers Field Okla City, Okla	3 hrs	25,000	228,750
	39	Williams AFB (ATC) Chandler, Ariz	270,000	Cal 50	197th FIS	50,000	Sky Harbor Muni A Phoenix, Ariz	2 hrs	25,000	195,000

	LINE	SUPPORT BASE & LOC (On-load point)	AMMUNITION STORAGE & DELIVERY DATA: AMMO TO BE STORED QTY	AMMO TO BE STORED TYPE	ANG UNIT (MARKED FOR)	QTY TO BE DEL	DESTINATION (Off-load point)	MAX-DEL TIME (hrs)	INITIAL QTY TO BE PICKED UP	BALANCE TO BE PICKED UP
		a	b	c	d	e	f	g	h	i
WADF	40	Castle AFB (SAC) Merced, Calif	270,000	Cal 50	194th FIS	xxxx	Fresno Air Term Fresno, Calif	xxxx	75,000	195,000
	41	Mountain Home AFB (SAC), Mountain Home, Idaho	270,000	Cal 50	190th FIS	xxxx	Gowen Field Boise, Idaho	xxxx	75,000	195,000
	42	Norton AFB (AMC) San Bernadino, Calif	270,000	Cal 50	196th FIS	50,000	Ontario Intl Aprt Ontario, Calif	2 hrs	25,000	195,000
	43	Oxnard AFB (ADC) Oxnard, Calif	270,000	Cal 50	115th FIS	25,000	San Fernando Muni Aprt, Van Nuys, Calif	6 hrs	50,000	195,000
	44	Oxnard AFB (ADC) Oxnard, Calif	270,000	Cal 50	195th FIS	25,000	San Fernando Muni Aprt, Van Nuys, Calif	6 hrs	50,000	195,000
	45	Stead AFB (ATC) Reno, Nevada	270,000	Cal 50	192nd FIS	50,000	Reno Muni Aprt Reno, Nevada	2 hrs	25,000	195,000

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UNCLASSIFIED

ANNEX D
TO
OPERATIONS PLAN 5-55

MOBILIZATION ASSIGNMENTS FOR ANG UNITS

UNCLASSIFIED

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ANNEX D
TO
OPERATIONS PLAN 5-55

MOBILIZATION ASSIGNMENTS FOR ANG UNITS

(This assignment list supersedes all previous assignment lists. Assigned aircraft were taken from the USAF PX57-1, Project Aircraft Inventory, dated January 1955, as amended.)

	TYPE ACFT	LOCATION
EASTERN AIR DEFENSE FORCE		
a. 101st Ftr Intcp Wg (AI)		Bangor, Maine
1. 132nd FIS	F-94 A/B	Bangor, Maine
2. 134th FIS	F-94 A/B	Ethan Allen AFB Winossiki, Vt.
3. 133rd FIS	F-94 A/B	Manchester, N.H.
b. 102nd Ftr Intcp Wg (AI)		Boston, Mass.
1. 101st FIS	F-94 A/B	Boston, Mass.
2. 131st FIS	F-94 A/B	Westfield, Mass.
c. 107th Ftr Intcp Wg (AI)		Niagara Falls, N.Y.
1. 136th FIS	F-94 A/B	Niagara Falls, N.Y.
2. 137th FIS	F-94 A/B	White Plains, N.Y.
3. 138th FIS	F-94 A/B	Syracuse, N.Y.
4. 139th FIS	F-94 A/B	Schnectady, N.Y.
d. 128th Ftr Intcp Wg (AI)		Madison, Wis.
1. 126th FIS	F-89C	Milwaukee, Wis.
2. 176th FIS	F-89B	Madison, Wis.
e. 127th Ftr Intcp Wg (AI)		Romulus, Mich.
1. 107th FIS	F-89C	Romulus, Mich.
2. 171st FIS	F-89C	Romulus, Mich.
3. 172nd FIS	F-89C	Battle Creek, Mich.
f. 103rd Ftr Intcp Wg (Non-AI)		Hartford, Conn.
1. 118th FIS	F-84D	Windsor Locks, Conn.
2. 152nd FIS	F-84D	Providence, R.I.

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	TYPE ACFT	LOCATION
g. 108th Ftr Intcp Wg (Non-AI)		Newark, N.J.
1. 119th FIS	F-51D	Newark, N.J.
2. 141st FIS	F-86A	McGuire AFB, N.J.
h. 111th Ftr Intcp Wg (Non-AI)		Philadelphia, Pa.
1. 103rd FIS	F-84F	Philadelphia, Pa.
2. 117th FIS	F-84F	Philadelphia, Pa.
i. 112th Ftr Intcp Wg (Non-AI)		Harrisburg, Pa.
1. 146th FIS	F-84F	Coraopolis, Pa.
2. 147th FIS	F-84F	Coraopolis, Pa.
3. 148th FIS	F-51D	Reading, Pa.
j. 113th Ftr Intcp Wg (Non-AI)		Andrews AFB, Md.
1. 121st FIS	F-86E	Andrews AFB, Md.
2. 104th FIS	F-86E	Baltimore, Md.
3. 142nd FIS	F-86E	New Castle, Del.
k. 116th Ftr Intcp Wg (Non-AI)		Marietta, Ga.
1. 128th FIS	F-84D	Marietta, Ga.
2. 157th FIS	F-80C	Eastover, S.C.
3. 158th FIS	F-84D	Savannah, Ga.
4. 159th FIS	F-80C	Jacksonville, Fla.
l. 123rd Ftr Intcp Wg (Non-AI)		Louisville, Ky.
1. 165th FIS	F-51D	Louisville, Ky.
2. 156th FIS	F-86A	Charlotte, N.C.
3. 167th FIS	F-51D	Charleston, W.Va.
m. 126th Ftr Intcp Wg (Non-AI)		Chicago, Illinois
1. 108th FIS	F-84F	Chicago, Illinois
2. 168th FIS	F-84F	Chicago, Illinois
n. 121st Ftr Intcp Wg (Non-AI)		Columbus, Ohio
1. 112th FIS	F-51D	Canton, Ohio
2. 162nd FIS	F-84E	Vandalia, Ohio
3. 164th FIS	F-84E	Mansfield, Ohio
4. 166th FIS	F-84E	Columbus, Ohio

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		TYPE ACFT	LOCATION
o.	122nd Ftr Intcp Wg (Non-AI)		Fort Wayne, Indiana
1.	113th FIS	F-80C	Terre Haute, Indiana
2.	163rd FIS	F-80C	Fort Wayne, Indiana

CENTRAL AIR DEFENSE FORCE

a.	133rd Ftr Intcp Wg (AI)		St. Paul, Minn.
1.	109th FIS (Non-AI)	F-51D	St. Paul, Minn.
2.	175th FIS	F-94A/B	Sioux Falls, S.D.
3.	178th FIS	F-94A/B	Fargo, N.D.
4.	179th FIS	F-94A/B	Duluth, Minn.
b.	132nd Ftr Intcp Wg (Non-AI)		Des Moines, Iowa
1.	124th FIS	F-80C	Des Moines, Iowa
2.	173rd FIS	F-80C	Lincoln, Neb.
3.	174th FIS	F-80C	Sergeant Bluffs, Iowa
c.	136th Ftr Intcp Wg (Non-AI)		Dallas, Texas
1.	111th FIS	F-80C	Houston, Texas
2.	181st FIS	F-80C	Dallas, Texas
3.	182nd FIS	F-51D	San Antonio, Texas
d.	137th Ftr Intcp Wg (Non-AI)		Oklahoma City, Okla.
1.	125th FIS	F-80C	Tulsa, Okla.
2.	127th FIS	F-80C	Wichita, Kansas
3.	185th FIS	F-80C	Oklahoma City, Okla.
e.	140th Ftr Intcp Wg (Non-AI)		Denver, Colorado
1.	120th FIS	F-80C	Denver, Colorado
2.	187th FIS	F-80C	Cheyenne, Wyoming
3.	188th FIS	F-80C	Albuquerque, N.M.
f.	186th FIS (Non-AI)	F-86A	Great Falls, Mont.
g.	191st FIS (Non-AI)	F-86A	Salt Lake City, Utah
h.	197th FIS (Non-AI)	F-86A	Phoenix, Arizona
i.	170th FIS (Non-AI)	F-84F	Springfield, Ill.
j.	169th FIS (Non-AI)	F-51D	Peoria, Ill.

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	TYPE ACFT	LOCATION
WESTERN AIR DEFENSE FORCE		
a. 142nd Ftr Intcp Wg (Non-AI)		Spokane, Wash.
1. 116th FIS	F-86A	Spokane, Wash.
2. 123rd FIS	F-86A	Portland, Oregon
3. 190th FIS	F-86A	Boise, Idaho
b. 144th Ftr Intcp Wg (Non-AI)		Hayward, Calif.
1. 192nd FIS	F-86A	Reno, Nevada
2. 194th FIS	F-86A	Fresno, Calif.
c. 146th Ftr Intcp Wg (Non-AI)		Van Nuys, Calif.
1. 115th FIS	F-86A	Van Nuys, Calif.
2. 195th FIS	F-86A	Van Nuys, Calif.
3. 196th FIS	F-86A	Ontario, Calif.

SMITH
MAJOR GENERAL

OFFICIAL:

Charles R. Bond Jr

CHARLES R. BOND, JR.
Colonel, USAF
Acting Deputy Chief of Staff/Operations

[redacted]

[redacted]

ANNEX E
TO
OPERATIONS PLAN 5-55

AIR NATIONAL GUARD

[redacted]

[redacted]

ANNEX E
TO
OPERATIONS PLAN 5-55

AIR NATIONAL GUARD

TASK ORGANIZATIONS:

4th Weather Squadron - Lt Colonel R. A. Taylor

12th Weather Squadron - Lt Colonel B. F. Forster

19th Weather Squadron - Lt Colonel E. J. Cartwright

1. GENERAL:

a. The 3d Weather Group is under the operational control of the Air Defense Command and is responsible for providing all weather support required by ADC units. Weather flights attached to ANG units having a mobilization assignment to ADC will be mobilized simultaneously with the units to which they are attached, and assigned to the 3d Weather Group.

2. MISSION: To insure immediate and effective utilization of ANG weather flights which have mobilization assignments to the 3d Weather Group.

3. TASKS FOR SUBORDINATE UNITS AND ANG WEATHER FLIGHTS:

a. Weather Squadrons will:

(1) Prepare plans for the M-Day employment of ANG units.

(2) Provide assistance to ANG weather flights in preparing alert plans.

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(3) Advise and assist ANG weather flights in their training programs, including annual field training. Such training will be conducted in conformance with appropriate ConAC Training Directives.

(4) Provide for presentation of weather and air defense orientation lectures at ANG drill periods.

SMITH
MAJOR GENERAL

OFFICIAL:

Russell K. Pierce Jr.

RUSSELL K. PIERCE, JR.
Colonel, USAF
Staff Weather Officer

[redacted]

ANNEX E
OPR PLAN 5-55
1 July 55

[redacted]

APPENDIX 1
TO
ANNEX E

Weather flights having mobilization assignments to 3d Weather Group will be assigned as follows:

12th Weather Squadron

101st Forecasting Flight, Boston, Mass.

104th Ltd Forecasting Flight, Baltimore, Md.

107th Ltd Forecasting Flight, Romulus, Mich.

119th Forecasting-Observing Flight, Newark, N.J.

121st Forecasting Flight, Washington, D.C.

126th Ltd Forecasting-Observing Flight, Milwaukee, Wisc.

131st Forecast Flight, Westfield, Mass.

146th Forecasting Flight, Coraopolis, Pa.

148th Ltd Forecasting Flight, Reading, Pa.

152nd Forecasting Flight, Providence, R.I.

156th Forecasting Flight, Charlotte, N.C.

157th Forecasting-Observing Flight, Eastover, S.C.

163rd Forecasting Flight, Fort Wayne, Ind.

164th Forecasting Flight, Mansfield, Ohio

165th Forecasting Flight, Louisville, Ky.

167th Forecasting Flight, Charleston, W. Va.

19th Weather Squadron

111th Forecasting Flight, Houston, Tex.

125th Forecasting Flight, Tulsa, Oklahoma.

127th Ltd Forecasting-Observing Flight, Wichita, Kan.

181st Forecasting Flight, Dallas, Tex.

182nd Forecasting Flight, San Antonio, Tex.

4th Weather Squadron

116th Forecasting Flight, Spokane, Wash.

195th Ltd Forecasting-Observing Flight, Van Nuys, Calif.

196th Ltd Forecasting Flight, Ontario, Calif.

APPENDIX 1, ANNEX E
OPR PLAN 5-55
1 July 55

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[redacted]

ANNEX F
TO
OPERATIONS PLAN
SERIAL NO. 5-55

[redacted]

UNCLASSIFIED

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

ANNEX F
TO
OPERATIONS PLAN 5-55

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

COMDR ADC

DATE-TIME GROUP	SECURITY CLASSIFICATION UNCLASSIFIED	
PRECEDENCE FOR:	ACTION FLASH	INFORMATION
[X] BOOK MESSAGE	[X] ORIGINAL MESSAGE	
[ ] MULTIPLE ADDRESS	CRYPTOPRECAUTION [ ] YES [X] NO	
REFERS TO MESSAGE:		
IDENTIFICATION	CLASSIFICATION	

TO: COMDR CADF GRANDVIEW AFB MO
COMDR EADF STEWART AFB N Y
COMDR WADF HAMILTON AFB CALIF

INFO: COMDR 9TH ADIV (DEF) GEIGER FLD WASH
COMDR 25TH ADIV (DEF) MCCHORD AFB WASH
COMDR 26TH ADIV (DEF) ROSLYN AFS, N Y
COMDR 27TH ADIV (DEF) NORTON AFB CALIF
COMDR 28TH ADIV (DEF) HAMILTON AFB CALIF
COMDR 29TH ADIV (DEF) GREAT FALLS AFB MONTANA
COMDR 30TH ADIV (DEF)WILLOW RUN AFS MICH
COMDR 31ST ADIV (DEF) FORT SNELLING, MINN
COMDR 32ND ADIV (DEF) SYRACUSE AFS N Y
COMDR 33RD ADIV (DEF) TINKER AFB OKLA
COMDR 34TH ADIV (DEF) KIRTLAND AFB N M
COMDR 35TH ADIV (DEF) DOBBINS AFB GA

(UNCLASSIFIED) ADOOT-B3_____________. Mob ANG units IAW ADC OPLAN 5-55.

SECURITY CLASSIFICATION	PAGE 1 OF 1 PAGES
UNCLASSIFIED	

DRAFTER'S NAME (and signature, when required)

RELEASING OFFICER'S SIGNATURE

SYMBOL | TELEPHONE | OFFICIAL TITLE

DD FORM 1 MAY 49 173 REPLACES WD AGO FORM 11-160, 15 JUN 1945, AND WD AGO FORM 0000, 1 APR 1946, WHICH MAY BE USED.

AF-ADC-COLO. SPRINGS, COLO.

Will be confirmed in Standard Publication Form under paragraph 3a, ADCSM 5-3 YES NO

Prepared by__________

Telephone__________

Date__________

COORDINATE WITH COLITHO PENCIL ONLY

ANNEX F
OPR PLAN 5-55
1 July 1955

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AIR DEFENSE COMMAND

STUDY

ON

PROJECT LAMPLIGHT

REPORT

10 MAY 1955

HQ AIR DEFENSE COMMAND
ENT AIR FORCE BASE
COLORADO SPRINGS, COLO.

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F-27915

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HEADQUARTERS
AIR DEFENSE COMMAND
ENT AIR FORCE BASE
Colorado Springs, Colorado

AIR DEFENSE COMMAND "PROJECT LAMPLIGHT" STUDY GROUP

1. INTRODUCTION.

a. The purpose of the Air Defense Command Study Group was to review the recommendations of the "Lamplight Project" and to arrive at an Air Defense Command position with respect to those recommendations. The Final written report of "Project Lamplight" was received in Air Defense Command Headquarters on 25 April 1955 and simultaneously with receipt, Air Defense Command Headquarters was requested by Air Force Headquarters to firm up an Air Defense Command position on the "Lamplight" recommendations and be prepared to present this position to Air Force Headquarters on 10, 11 and 12 May 1955.

b. The Plans and Requirements Directorate of Air Defense Command, received information from Plans personnel at Headquarters USAF that the meeting will be an informal, working level committee which will be headed by Brigadier General Matheny. Air Defense Command will not make a formal presentation. However, in this folder, we have the Air Defense Command position.

c. Background of "Project Lamplight" as quoted in the Final Report: Project "Lamplight" composed a group of distinguished civilian and military men who were gathered together by Massachusetts Institute of Technology under the sponsorship of the U. S. Navy, to study the Seaward Extensions of the Land Based Air Defense System. "The compatibility of the continental system with the navalforces extending it seaward, and the related mechanization of data handling, were the specific problems which led to the formation of "Project Lamplight". Communications were considered a crucial factor in the solution of these problems." The scope

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of the original problem was enlarged to include a more or less overall study of the continental air defense system and what specific force levels and deployments should constitute the system. The participation was broadened to include the other services. The accepted national intelligence estimates were used as the basis for the enemy threat and the Air Defense Command Requirements Plan 54-60 was used as a departure point for a defensive system. The group attempted to show in its study, how a better defense could be obtained for the same budgetary limit as that proposed by the Air Defense Command Requirements Plan. This proposed increased effectiveness was generally achieved by eliminating the long range interceptor and the long range interceptor missiles and substituting therefore, increased seaward contiguous cover and more medium range interceptors and short range missiles. The "Lamplight" study group, however, state in this report that the Air Defense Command Requirements Plan is a good plan, which if realized by 1960, should provide a much higher level of effectiveness than exists to-day. The "working group" at Air Defense Command has approached the analysis of the report in a positive manner. We concur in those "Lamplight" recommendations which are consistent with sound military judgement and which will give this country a better defense. We actively support those equipment improvements which will provide better weapons which can in turn be integrated into the weapons system. We intend to give further analysis to this report and the special "study group" at Air Defense Command which is re-evaluating our defensive deployment will continually consider the "Lamplight Recommendations"in the study and formulation of the Continental Air Defense Command 55-65 Requirements Plan. There

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are some "Lamp Light Recommendations" which are not feasible from an Air Defense Command position. There are some inaccuracies in the report, which were they known to the "Lamp Light" group, would probably have resulted in different recommendations. In this report when ADC indicates concurrence with a particular Lamp Light recommendation it is indicating concurrence with the action proposed. In nearly every case ADC has already initiated action for these equipment improvements and ADC is merely reaffirming its position.

d. Our method of study of "Lamp Light"is as follows: There are sixteen chapters in the "Lamp Light report." Chapter 1 is a "Summary" of the entire report, the details of which are contained in the other chapters. Chapter 15 covers "War Gaming and Systems Analysis," and Chapter 16 describes the "History of the Lamp Light Project." The remaining chapters are fairly specific, covering such things as "Identification Procedures," "Communications," "Ground Environment," etc. The analysis of each chapter was performed by the Air Defense Command staff agency having primary interest in the subject matter of the chapter, with coordination by other staff agencies as required.

e. The results were then presented to the Air Defense Command Council for approval and/or any required changes. Major General Frederic H. Smith, Vice Commander of Air Defense Command, was present at this meeting. In determining this final Air Defense Command position, we have kept in mind possible changes in the Air Defense Command 54-60 Requirements Plan that should be incorporated in the new 55-65 Requirements Plan.

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2. Chapter 2 - Airborne Early Warning and Control Radars

a. Lamplight Recommendation:

It has been recommended that a major effort be directed to modify, or design as necessary, an aircraft capable of carrying an antenna 30' x 8' at an on-station altitude of 20,000', with a cruising speed not to exceed 170 knots.

(1) ADC position: Concur with this recommendation. Altitude limitations of the present RC-121C&D aircraft is 17,000' with a rotadome installed to carry the recommended antenna.

(2) CONAD and/or ADC action taken to date: This command provided the Director of Requirements, HQ USAF on 23 January 1955, our comments to a General Operational Requirement for an AEW&C Support System that closely parallels the above recommendations. In addition, this command has submitted to HQ ARDC general parameters for development of an improved AEW&C vehicle as early as June 1954.

(3) What remains to be done and by whom: It is recommended that HQ ARDC initiate a program to make available, a vehicle suitable to evaluate

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the above-recommendations.

b. Lamplight Recommendation:

That present AEW&C search radars be modified to UHF and the height-finder radars be converted to C-band (4,000-6,000 mcs) beginning in 1956. Further, that a 4 Megawatt UHF search radar, and a 5 Megawatt, S-band (1550-5200 mcs) radar be developed for operation in the 1958-60 time period.

(1) ADC position. Concur in these recommendations providing test results confirm operational performance of the recommended radars.

(2) CONAD and/or ADC action taken to date: Same action as taken for recommendation a. above.

(3) What remains to be done and by whom: It is recommended that HQ ARDC determine the suitability of the above-recommendations to meet Air Defense requirements.

(4) Remarks: The time period for modification of the AN/APS-20 and the AN/APS-45 radars in 1956, and the design of a high-powered UHF search radar and an S-band stacked-beam radar in the 1958-60 time period appears optimistic.

c. Lamplight Recommendation:

That the research and development effort to

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to minimize as well as measure clutter at a variety of wavelengths be continued together with a large scale study of the land clutter problem.

(1) ADC position: HQ USAF General Operational Requirement, AD-3c, for an Airborne Early Warning and Control Support System, establishes this command's position for a clutter-free radar in the earliest time period.

(2) CONAD and/or ADC action taken to date: No action required.

(3) What remains to be done and by whom: That HQ ARDC continue the research and development effort to provide a clutter-free radar in an early time period.

d. SUMMARY:

It is felt that the above recommendations should be accepted by the USAF as general guidance for further research and development effort required to realize an effective AEW&C program.

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3. Chapter 3. AIRCRAFT -- Intercept and Fire Control Radar.

a. LAMPLIGHT RECOMMENDATION: "As the only available interim solution to the problem of inadequate low-altitude performance of AI radar, we recommend a maximum effort to have the APG-43 continuous-wave X-band radar operational in the shortest possible time. Operational studies with this radar are required to determine optimum tactics."

(1) ADC position: Concur with development for possible application to LRIX-2. Nonconcur with retrofit of F-102A/B, IF-101A.

(2) CONAD and/or ADC action taken to date: ADC requirement for fire control systems to provide capability at all altitudes has been stated in operational requirements for medium and long-range interceptors and interceptor missiles, and in ADR 54-60.

(3) What remains to be done and by whom: Headquarters USAF/ARDC should evaluate this development and its ability to meet our stated requirements.

(4) Remarks:

(a) The particular features of the APG-43 radar require an attack from the forward hemisphere of the target. A great deal of operational testing and improvements to the ground environment must be accomplished to provide

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the control capability required of this tactic, particularly at low altitude.

(b) It appears that the problems of using a wing-pod/nose antenna installation will become more difficult as we progress through the various planforms of our future aircraft; e.g., F-101, F-102, and F-103. Further, it is believed that the MG-10 and MX-1179 Systems will result in higher overall capability; we do not endorse any plan to retrofit F-102A/B and IF-101A.

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(c) The 10% range accuracy stated may be minimally acceptable with a guided air-to-air rocket but would not suffice for an unguided rocket; e.g., Ding Dong.

b. LAMPLIGHT RECOMMENDATION: "We recommend the development, with high priority, of a high-power large-antenna, S-band AI radar. We visualize a peak power of one megawatt, a recurrence frequency of 1,000 to 2,000 CPS, an antenna aperture larger than 40 inches, and double-delay MTI with provisions for eliminating blind speeds. An immediate study program is suggested toward modification or design of interceptor aircraft capable of carrying antennas of the necessary size."

(1) ADC Position: Air Defense Command does not concur with the use of an "S-band only" radar for AI.

(2) CONAD and/or ADC Action Taken to Date: ADC requirement for fire control systems to provide combat capability at all altitudes has been stated in operational requirements for medium and long-range interceptors and interceptor missiles, and in ADR 54-60.

(3) What Remains to be Done and By Whom: See remarks below.

(4) Remarks:

(a) As proponents of the weapon system concept of development, we feel that design of AI radar must be a function of over-all systems requirements and design. In our efforts to achieve the highest probabilities of kill of targets at altitude, a long accepted design requirement has been for very accurate resolution in azimuth, elevation and range. We feel the X-band radar is the most

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acceptable solution to these requirements and results in a useable antenna size. The "state of the art" in engine, airframe and radome design has precluded great enlargements in antenna size and will undoubtedly be a limiting factor in the period 1955-60.

(b) Though ultimate solution of weapon systems requirements may result in enlargement of present antennas, research may reveal other solutions, less penalizing in size, which will provide the over-all operational capabilities. ARDC should initiate and/or continue research to develop the necessary frequency band, antenna design and power output radar system combinations to fulfill our stated requirements.

c. LAMPLIGHT RECOMMENDATION: "We recommend that research and development programs be established on pulse-doppler radar design. Adequate high- and low-altitude performance may be obtainable with an S-band radar emitting 25-KW 2-microsecond pulses from a four-foot antenna at a recurrent frequency of 25,000 CPS."

(1) ADC Position: Concur.

(2) CONAD and/or ADC Action Taken To Date: ADC requirement for fire control system to provide combat capability at all altitudes has been stated in operational requirements for medium and long-range interceptors and interceptor missiles, and in ADR 54-60.

(3) What Remains to be Done and By Whom: ARDC should continue research and development to provide a suitable operational system.

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(4) Remarks:

(a) The problems stated previously in adopting S-band and four-foot antennas apply to this recommendation.

d. LAMPLIGHT RECOMMENDATION: "As a possible means of improving the inadequate low-altitude performance of conventional X-band AI radars, we recommend research on displaced-phase-center antennas."

(1) ADC Position: Concur.

(2) CONAD and/or ADC Action Taken to Date: ADC requirement for fire control systems to provide combat capability at all altitudes has been stated in operational requirements for medium and long-range interceptors and interceptor missiles, and in ADR 54-60.

(3) What Remains to be Done and By Whom: ARDC should initiate and/or continue research and development of a system of this type.

(4) Remarks: It appears that certain technical problems will require resolution to provide an operationally suitable system. Among these are, precise interceptor speed control required and the close delineation of range at which a target may be detected as a function of the distance the antennas are displaced.

e. LAMPLIGHT RECOMMENDATION: "To reduce the side lobe levels of AI radar antenna installations, we recommend research and development on lens and slot antennas."

(1) ADC Positon: Concur.

(2) CONAD and/or ADC Action Taken to Date: ADC requirement for fire control systems to provide combat capability at all

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altitudes has been stated in operational requirements for medium and long-range interceptors and interceptor missiles, and in ADR 54-60.

(3) What Remains to be Done and by Whom: ARDC should initiate and/or continue research and development to determine the optimum use of the specialized antennas and their applications to ADC weapons systems.

(4) Remarks: None.

f. LAMPLIGHT RECOMMENDATION: "We recommend studies of the fundamental properties of clutter at wavelengths other than X-band. Information is needed particularly on average cross-sections or unit areas, and on the widths of clutter spectra."

(1) ADC Position: Concur.

(2) CONAD and/or ADC Action Taken To Date: None required.

(3) What Remains to be Done and by Whom: ARDC should initiate and/or continue studies in this area for possible applications to fire control system radar development.

(4) Remarks: None.

g. GENERAL COMMENTS ON CHAPTER 3.

(1) We acknowledge a Soviet capability for low-altitude attack and our inability at present to counter same. However, in our assessment of the over-all threat, we feel that an equally serious problem is posed by the high-altitude, high-speed bomber, and by bombers taking advantage of night and weather. Until it is determined conclusively that weapon systems must be designed for specific threats, or particular capabilities thereof, we will continue to require versatility of our weapon systems.

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(2) It is felt that, in the approach to designing any weapon system to combat a threat, extreme care must be taken to insure the compatability and orderly integration of all elements and components which make up the complete weapon system. The Lamplight approach suggests that the low altitude and high altitude attack requirements have not been considered concurrently.

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4. Chapter 4 - Surface-to-Air Radars

a. Lamplight Recommendation:

For the near term we recommend, as the basic GCI radar for the long-range sites, the modified FPS-3/ GPA-27 set.

(1) ADC position: Concur. The GPA-27 is the radar improvement which is in the most advanced state of development today.

(2) CONAD and/or ADC action taken to date: A formal USAF program has been established at ADC's request to provide a complete nation-wide system of this type radar. The initial increment is being procured with FY-55 funds.

(3) What remains to be done and by whom: Further procurement and installation must be undertaken by AMC.

(4) Remarks: The GPA-27 program is being implemented on a "crash" basis. The first GPA-27 is scheduled to be in operation by mid-1956, with the U.S.-wide network to be operational by end-1957.

b. Lamplight Recommendation:

We recommend a long-term program aimed at reducing the jamming threat by frequency tunability and diversity, and by using very large antennas and a very high power output.

(1) ADC position: Concur. Tunability, frequency diversity, and high power output has been

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accepted by this command as a logical and practical means of reducing the jamming threat.

(2) CONAD and/or ADC action taken to date: ADC has advised ARDC that these features should be incorporated in radars now under development and also in those to be developed in the future.

(3) What remains to be done and by whom: ARDC must take appropriate action to insure that these features are incorporated in radars of the future.

(4) Remarks: In addition to the antenna jamming features mentioned in this recommendation, ADC desires that further research and development be undertaken for other antenna jamming techniques, such as area desensitizing, blankers, strobing techniques, etc.

c. Lamplight Recommendation:

To provide frequency diversity, we recommend a radar ensemble that occupies altogether 10 frequency bands. Each type of radar (long-range, GCI, gap-filler, height finder, etc.) is to be represented by several frequencies, each radar is to be tunable, and new frequency bands are proposed at 600 and 900 Mcps.

(1) ADC position: Concur in the use of several frequency bands. Frequency diversity is accepted as a practical means of reducing the

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jamming threat.

(2) CONAD and/or ADC action taken to date: ADC and ARDC have agreed on the establishment of a specific development program to provide a network of radars operating in several frequency bands.

(3) What remains to be done and by whom: ARDC must develop a radar package consisting of equipment operating in several bands. The package must be evaluated and ADC must establish an official program for the use of these radars.

d. Lamplight Recommendation:

For long-range radar sites- the most critical areas- we recommend the use of at least three control radars of very high power with very large antennas capable of operating at limited range against barrage jammers delivering several watts per megacycle. Adjacent sites would not use the same three frequencies.

(1) ADC position: Concur. The capability of the air defense system to operate properly in the presence of jamming would be appreciably increased if more than one control radar were at each site.

(2) CONAD and/or ADC action taken to date: ADC has constructed studies to evaluate the use of more than one control radar at a single site, including a visit by ADC representatives to

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[redacted] England to evaluate installations of this type.

(3) What remains to be done and by whom: ARDC must establish a radar development project based on this concept. ADC must continuously evaluate its radar planning, and program additional equipment when the state of the art permits.

(4) Remarks: This concept would necessitate the use of a video switching unit which would permit the instantaneous selection of video information from any of the radars. Such a unit exists in the U.K., and a similar item must be developed by the USAF.

e. Lamplight Recommendation:

For each site, we recommend at least two height finders similarly diversified in frequency.

(1) ADC position: Concur. The use of two separate height finders at a radar site is a recognized requirement.

(2) CONAD and/or ADC action taken to date: An official program to provide two high power AN/FPS-6 radars for each heavy radar site has been established.

(3) What remains to be done and by whom: In its frequency diversity program, ARDC plans to develop a height finder radar in a band differing from that of the present AN/FPS-6. ADC must establish a formal requirement for this new

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[redacted] height finder when the development has progressed to the proper state.

f. Lamplight Recommendation.

We recommend tests to determine whether height-finding radars are able to obtain elevation angle on a jamming signal.

(1) ADC position: Concur. The technique of using height finder radars for anti-jamming purpose is a recognized and accepted requirement.

(2) CONAD and/or ADC action taken to date: In the ECM training program of this command, investigation of this technique is being made.

(3) What remains to be done and by whom: ADC must develop and implement appropriate operating procedures when this technique has been proven.

g. Lamplight Recommendation:

To permit the use of listening techniques for raid evaluation, we recommend that height finders be designed so that repetition rates of 1500 cps or more can be employed.

(1) ADC position: Concur that investigations be made to determine the feasibility of this use of height finders. Adequate and rapid means of accurate raid assessment is a recognized need of the air defense system.

(2) CONAD and/or ADC action taken to date: The

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Lincoln Laboratory has conducted research on the use of height finders for raid evaluation and has provided this command with reports on the progress they have achieved.

(3) What remains to be done and by whom. Further investigation of this technique must be accomplished by the appropriate research and development agencies.

(4) Remarks: Listening techniques have not been utilized by this command. The reports from Lincoln Laboratory have not yet provided evidence that the raid evaluation problem has been completely solved.

h. Lamplight Recommendation:

At each gap-filler site, we recommend the use of two radar transmitters with automatic changeover. These two transmitters would operate on the same frequency, but adjacent sites would use different bands.

(1) ADC position: Concur. Dual channel gap-filler radars with automatic changeover is an accepted requirement.

(2) CONAD and/or ADC action taken to date: An official USAF program has been established to provide dual channel radars with automatic switchover for the gap-filler sites. ADC and ARDC have agreed that frequency diversity must be provided in the gap-filler program.

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(3) What remains to be done and by whom: Implementation of the gap-filler program must be accomplished as now planned and ARDC must develop gap-filler radars which will operate in different bands from the presently programmed set.

i. Lamplight Recommendation.

We recommend that each site be provided with a capacity for listening to jammers to obtain precision azimuth data. Correlation techniques must be developed to permit unambiguous determination of target positions.

(1) ADC position. Concur in principle. The use of listening devices together with correlation techniques is recognized as an acceptable method of determining the target position of jammers.

(2) CONAD and/or ADC action taken to date: Only limited and non-conclusive evaluation of these techniques has been made by this command.

(3) What remains to be done and by whom: Appropriate research and development command conduct investigations on the use of available or projected equipment for this purpose. ADC must assist in the evaluation of this equipment.

j. Lamplight Recommendation:

We recommend that picket ships carry two main radars, a 600 Mcps set using a 45 x 25 foot antenna, and a

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1200 Mcps stacked-beam search and height-finding set using a similar antenna mounted back-to-back with the first. A C-band height finder is desirable for auxiliary use.

(1) ADC position: Concur in the principle that improved radars are required for picket ships. The picket ships do not provide the required radar coverage with their present radar configuration.

(2) CONAD and/or ADC action taken to date: None.

(3) What remains to be done and by whom: CONAD will advise COMNAVFOR of the specific coverage required of the picket ships by letter.

(4) Remarks: CONAD is not in a position to either indorse or refute the recommendations for the specific radars mentioned in the Lamplight Study. The use of 600 and 1200 Mc bands, stacked-beam and height-finding sets, C-band height finders, and a 45 x 25 foot antenna, are matters that must be evaluated by Naval research and development agencies.

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k. Lamplight Recommendation:

For radars for early information lines, frequency diversity and extreme power are less important, but we recommend that later installations take advantage of recent advances in automatic-alerting radar design to provide enhanced coverage and greater freedom from false alarms.

(1) ADC position: Concur. There is a recognized need for the two features contained in this recommendation.

(2) CONAD and/or ADC action taken to date: ADC, together with appropriate research and development commands, has initiated an investigation of the use of automatic alerting systems and have established certain specific test projects for this purpose.

(3) What remains to be done and by whom: The tests now under way must be completed and a thorough evaluation of the results made jointly by ADC and the research and development commands. When development of the new items has reached a satisfactory state, ADC must establish formal requirements of these items.

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5. Chapter 5 - Fluttar Detection Systems

a. Lamplight Recommendation:

Further investigation and development of detection systems such as Fluttar to complement early warning radar information.

(1) ADC Position: Concur. Further investigation and development of detection systems such as Fluttar should be continued. Such systems should possess refinements and improvements which will provide more accurate information about:

(a) Height and position.

(b) Raid size.

(c) Direction and speed.

(d) Any additional data which can be used for identification purposes.

Fluttar type early warning systems must be less complex than conventional type radar systems. This means that the Fluttar system must retain simplicity of design, be capable of continuous and unmanned operation, and have a high degree of reliability in communications as well as detection. The operation of Fluttar as early warning devices must be designed to operate over land, water, and extremes of climatic conditions.

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Development and research for early warning systems are considered to be essential to Air Defense, but not to receive priority over combat zone systems.

(2) CONAD and/or ADC action taken to date: This command submitted to HQ ARDC in August 1954, general parameters for improvements in Doppler type systems as a priority research and development item.

(3) What remains to be done and by whom: It is recommended that the ARDC, Lincoln Laboratories, and the Defence Research Board of Canada, continue investigations and development of Fluttar type detection systems.

(4) Remarks: This command has continually supported research agencies by providing test vehicles and operational guidance for the improvement of Doppler systems.

b. Lamplight Recommendation:

Research on, and development of, the use of Fluttar nets to obtain target position, course and speed, as well as height.

(1) ADC position: As stated in the Lamplight Report, the use of Fluttar links, with each giving a measure of track, speed and height

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[redacted] at a given point would appear to have considerable promise, however, insufficient study has been given to the proposals.

(2) CONAD and/or ADC action taken to date: This command has provided operational guidance to research and development agencies through participation in systems Engineering Groups concerned with implementation and improvements in Fluttar type systems.

(3) What remains to be done and by whom: It is recommended that the feasibility of using Fluttar nets as recommended be thoroughly investigated through further research and development.

(4) Remarks: This command has continually supported research agencies by providing test vehicles and operational guidance for the improvement of Doppler systems.

c. Lamplight Recommendation:

Investigation of the use of Fluttarprints (forward-scatter target diffraction patterns) to distinguish between different aircraft, single and multiple targets, birds and other sources of false alarms.

(1) ADC position: Concur in the further investigation of the use of Fluttarprints as a procedure to aid in the recognition

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of types and number of targets. This is a development area, and investigations should be conducted simultaneously, and in conjunction with other research and development for improved Fluttar type detection systems.

(2) CONAD and/or ADC action taken to date:

No action required.

(3) What remains to be done and by whom:

It is recommended that Lincoln Laboratories and the Defence Research Board of Canada continue investigations in this area.

d. Lamplight Recommendation:

Further investigations leading to the elimination of requirement in Fluttar systems for transmission of a reference signal over a separate propagation path.

(1) ADC position:

This command feels that this is a research and development area and further investigation and tests should be conducted to determine the feasibility of proposals designed to reduce the limitation on longer Fluttar links.

The prime consideration in a proposal for longer Fluttar links is again that such systems must retain simplicity of design, be

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capable of continuous and unmanned operation, and have a high degree of reliability in communications as well as detection.

(2) CONAD and/or ADC action taken to date:

No action required.

(3) What remains to be done and by whom:

It is recommended that the ARDC, Lincoln Laboratories, and the Defence Research Board of Canada continue investigations in this area.

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2. Chapter 6 - Communications

a. Lamplight Recommendation: Within Line-of-Sight - Near Term. Recommends that the COSMOS recommendations be carried out to improve present UHF Communications Systems.

(1) ADC position: Concur with recommendation to improve existing UHF equipment.

(2) CONAD and/or ADC action taken to date: ADC is continuously striving to improve its communications systems and is working closely with ARDC and AMC on modifications to equipments.

(3) What remains to be done and by whom: ADC is presently following in general the above recommendations.

b. Lamplight Recommendation: Within-Line-of-Sight - Long Term. Recommends exploration of the feasibility of utilizing tropospheric scatter with omnidirectional antennas for fleet operationand UHF.

(1) ADC position: Concur. ADC concurs in any improvement to the communication art.

(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: Negative.

c. Lamplight Recommendation: Recommend that Centipede time division voice communications system be developed for possible use in the UHF band.

(1) ADC position: Concur. This system has possibilities and can be used in air defense.

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(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: Recommend ARDC evaluate Centipede for possible future use in air defense.

(4) Remarks: Centipede as described in Chapter 6 pertains to fleet use. This system could be used in the SAGE System to improve the planned A/G/A voice and data communications system.

d. Lamplight Recommendation: Recommends the improvement in design and installation of Low Frequency communications equipment.

(1) ADC position: Concur. ADC can foresee no requirement for low frequency point to point communications; however, we concur in any improvements to the communication art.

(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: Negative.

e. Lamplight Recommendation: High Frequency Sky Wave. Recommends that single sideband, multichannel type for mobile use be developed. That frequency diversity be used with single sideband teletype.

(1) ADC position: Concur. ADC could possibly use this type transmission for radioteletype communication with the outer AEW&C aircraft.

(2) CONAD and/or ADC action taken to date: ADC has stated in the SAGE Operations

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Plan that radioteletype to picket ships and outer AEW&C aircraft will be used.

(3) What remains to be done and by whom: Recommend ARDC evaluate this type communication for possible airborne radioteletype.

f. Lamplight Recommendation: High Frequency Ground Wave. Recommend that single sideband teletype be used in frequency range of 2 to 10 mcs, and proper antenna design be used.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: ADC has presently programmed for single sideband equipment to replace its present HF point to point equipment.

(3) What remains to be done and by whom: No further action necessary.

g. Lamplight Recommendation: Ionospheric - Scatter Communication. Recommend experiments be conducted to test feasibility of using narrow band low-power with ionospheric scatter.

(1) ADC position: Concur. Present ionospheric scatter requires high power.

(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: Recommend that the Air Force support tests of this nature for future use.

h. Lamplight Recommendation: Meteor Communications - JANET. Recommends a research program to determine feasibility of this type communication.

(1) ADC position: Concur.

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(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: Recommend ARDC evaluate JANET for Air Force future use.

i. Lamplight Recommendation: Tropospheric Scatter Communication. Recommend a program to test scatter with omnidirectional fleet communications at UHF. Also that low-power equipment be developed.

(1) ADC position: Concur. ADC concurs in all improvements to the communication art. There is no known requirement for omnidirectional scatter in air defense.

(2) CONAD and/or ADC action taken to date: ADC plans to use tropospheric scatter as a communications means to Texas Towers and in the DEW Line Project.

(3) What remains to be done and by whom: Lincoln Laboratory is presently conducting extensive tests with tropospheric scatter systems and ADC is kept informed as to their progress.

(4) Remarks: Tropospheric scatter is nothing new to air defense or the communications industry. NEAC has been operating a tropospheric system in their air defense for the past two years. Recommend that Lamplight Committee obtain information from NEAC on their system.

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7. Chapter 7. Data Processing.

a. Lamplight Recommendation: It has been recommended that a 200 mile video link or Rafax link be established as data processing equipment for AEW aircraft.

(1) ADC Position: Concur. This system would make possible the collection of a single composite air picture from many dispersed radars. Under the concept of contiguous radar coverage the development of this system is considered practical and necessary.

(2) CONAD and/or ADC action taken to date: A general operational requirement has been submitted to USAF.

(3) What remains to be done and by whom: It is recommended that Hq ARDC continue a research program to improve the desired objective as enumerated in the above recommendation.

b. Lamplight Recommendation: It has been recommended that a beam-splitting or fine-grain-data equipment be developed to replace the former equipment in AEW&C aircraft.

(1) ADC Position: Concur. Improved target definition, especially in asmuith, would be the major achievement gained in this development. Accuracy and pin point definition is considered highly essential in air defense

(2) CONAD and/or ADC action taken to date: GOR has been submitted to USAF and was concurred in for research and development.

(3) What remains to be done and by whom: It is recommended that Hq ARDC continue a research and development program for this equipment, and for the installation of this equipment as recommen-

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ded by Lamplight in AEW&C aircraft.

c. Lamplight Recommendation: That air-intercept computer facilities be developed for AEW&C aircraft.

(1) ADC position: Concur. Under optimum test conditions controllers have been determined to be only 60% effective in bringing about a tally-ho, not a splash, and under field conditions this figure is considerably lower. A development of electronic aids to improve intercept tracking and control is considered highly essential.

(2) CONAD and/or ADC action taken to date: ADC has submitted a GCR to USAF. Studies and computer development programs have been initiated by the Navy Bureau of ships, Bureau of Aeronautics and by Hq ARDC.

(3) What remains to be done and by whom: It is recommended that Hq ARDC contact the Navy Bureau of ships and the Bureau of Aeronautics for furtherance in research and development of this equipment.

d. Lamplight Recommendation: That means must be developed to send height information to the surface vessel automatically.

(1) ADC position: Concur with the desirability for the equipment improvement but do not concur with concept for conducting the air battle. See Remarks below.

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(2) CONAD and/or ADC action taken so far: GOR has been submitted to USAF.

(3) What remains to be done and by whom: It is recommended that Hq ARDC continue research and development to improve long rangs transmission of data and data handling for use within AEW&C aircraft.

(4) Remarks: With reference to Figure 7-2. The concept of operation for off-shore defense does not coincide with the SAGE Operation Plan, in that the committee recommended that AEW&C aircraft use picket ships for relay of surveillance information and that picket ships report into a Shore Command, where over-all analysis and evaluation is made. This Shore Command is not the direction center of a sub-sector in SAGE. ADC's concept is that the first line of AEW&C will relay video information through Texas Towers to the SAGE direction center, and the outer AEW&C and picket ships will report by radioteletype direct to the direction center. UHF voice communications will be provided between the AEW&C and picket ships for liaison and control purposes. A future possibility of relaying video from the outer ring of AEW&C through a picket ship direct to the SAGE direction center would appear in line with our concept of operations, when communications have developed to that point.

e. Lamplight Recommendation: Recommendation has been made for the acquisition of three dimensional scan radar, furtherance of surface-to-air data link program, and the development of

an air-to-air data link.

(1) ADC Position: Concur. Development in these fields are essential to supplement the automatic data processing system now being developed.

(2) CONAD and/or ADC action taken so far: FPS-7(Three dimensional radar) has been developed; surface-to-air data link program and its development is under research by ARDC.

(3) What remains to be done and by whom: Recommend that ARDC continue a research and development program for furtherance in the Lamplight Recommendation.

f. Lamplight Recommendation: It has been recommended that improvements and developments in navigational equipment be accomplished. Equipment included was an airborne digital navigation computer for interceptors and AEW&C aircraft, Loran, Doppler speed-measuring radar, and free gyros for aircraft.

(1) ADC Position: Concur. Improvement and/or development of this equipment will enhance the seaward-extension air defense system

(2) CONAD and/or ADC action taken to date: ADC has stated the requirement for better and improved navigational systems to USAF and research and development has been initiated by Hq ARDC.

(3) What remains to be done and by whom: Recommend that Hq ARDC continue research and development on the equipment mentioned in Lamplight recommendation.

8. Chapter 8 - Identification

a. Lamplight Recommendation: The present IFF system cannot be trusted to distinguish friend from foe. However, with new digital techniques, it is possible to develop cryptographic coding which would be practical for a secure system. We therefore recommend a program to provide military planes with such a system.

(1) ADC position: Concur. ADC is presently doing this.

(2) CONAD and/or ADC action taken to date: ADC has established a requirement for and is monitoring the development of a secure electronic system for use in ground-to-air identification.

(3) What remains to be done and by whom: The OST of the Selective Identification Feature (SIF), the equipment being developed as a result of ADC's requirement, is scheduled to begin approximately 1 June 1955.

b. Lamplight Recommendation: The identification of incoming commercial scheduled overseas flights, of particular importance during the cold war, can be satisfactorily accomplished with code-word techniques. To prevent an enemy from inducing the code reply from a plane and then substituting himself for it, the pilot should reply only when within about 10 miles of a predetermined position. We recommend study of the requirements that this procedure places on the navigation system.

(1) ADC position: Concur with use of a code word as a means of performing identification along the Distant Early Warning Line (DEW) and as an adjunct to the Multiple Corridor

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Identification System. Do not concur with the requirement for a reply within 10 miles of a predetermined position. One of the outstanding advantages in the use of a code word is that the using pilot is not required to be within a limited time and distance tolerance. The requirement to be within limited tolerances is one of the greatest disadvantages of the present flight plan identification system.

(2) CONAD and/or ADC action taken to date: ADC and RCAF-ADC jointly have developed an operational concept for the land portion of the DEW line which includes identification by means of code words. The same system will be applied to the Mid-Canada Line.

(3) What remains to be done and by whom: The two commands will monitor the effectiveness of the code word used to accomplish identification along these lines.

(4) Remarks: ADC is planning to incorporate the code word in MCIS when accurate Direction Finding (DF) equipment is made available. The command is now monitoring the development of DF/strobe equipment (AN/GRA9) for use in identifying aircraft approaching the United States from overwater.

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c. Lamplight Recommendation: Identification of overseas flights would be facilitated by use of the CAA safety beacon with the full 64 codes. This beacon would also be useful for extended radar tracking and safety of planes. We therefore recommend the use of this beacon with not less than 64 codes.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: ADC has indorsed the installation of the air traffic control safety beacon and recommended the installation of same with 64 codes in civil carriers.

(3) What remains to be done and by whom: The Air Transport Association of America is initiating the necessary action to obtain approval for incorporating 64 codes in the safety beacon and expediting installation of same in civil carriers.

d. Lamplight Recommendation: It is difficult to prevent an enemy from "attaching" himself to a friendly plane in such a manner that they cannot be resolved by search radars. Examination of the radar echo with an A-scope will assist. Also, improved all-around visual viewing would assist a pilot in preventing such a tactic as well as giving additional safety. We recommend development work toward these improvements.

(1) ADC position: Concur with reservations.

(2) CONAD and/or ADC action taken to date: ADC has attempted through continuing efforts to eliminate such situations by implementing

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training programs, increasing procedural requirements pertaining to air traffic and establishing requirements for refined equipment.

(3) What remains to be done and by whom: ADC must continue training effort.

(4) Remarks: It is highly improbable that the enemy would attempt a sneak attack by attaching an aircraft to a friendly. It would be extremely difficult, if not impossible, for the Russians to make rendezvous with significant numbers of penetrating friendlies. In small numbers such a tactic would be most unlikely since it would be the tip-off for launching SAC.

e. Lamplight Recommendation: We recommend increased effort on obtaining a satisfactory solution to the identification of interceptor by interceptor. Pending a solution of this problem, greater responsibility for identification will have to be placed on the surface organization that controls the interceptors.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: ADC through ARDC is monitoring the development of an electronic system for use in air-to-air identification.

(3) What remains to be done and by whom: Further research and development must be accomplished under ARDC cognizance. The OST of such a system is programmed for commencement during 4th Quarter FY 1956.

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f. Lamplight Recommendation: To prevent unauthorized interrogation, we need the establishment of suitable doctrine for the use of the IFF on-off switch. For the near term, provisions are recommended by which, at the pilot's option, the IFF response can be interrupted in a manner to prevent a homing run by an enemy missile. For the long term, we recommend research toward new IFF systems that are not vulnerable to unauthorized interrogation.

(1) ADC position: Do not concur in establishing an IFF "on-off" doctrine. The IFF beacon as installed in present day interceptors is not as suitable for homing by a homing missile as is the airborne fire control radar signal. Tentatively concur in research toward new IFF systems which are not vulnerable to unauthorized interrogation. We really don't believe that enemy IFF homing missiles are a problem in the time period under consideration.

(2) CONAD and/or ADC action taken to date: The Air Defense Command has not established a doctrine to control IFF response.

(3) What remains to be done and by whom: ARDC should investigate the problem of unauthorized interrogation of IFF systems and airborne fire control radar systems. We will also stay abreast of SAC investigations in this area.

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g. Summary: In general, ADC concurs with Lamplight recommendations in Chapter 8 with the exception of Mark X IFF and its SIF modification as being insecure. Actually, this statement is not made in Chapter 8, but is found in the summary of the chapter in Chapter 1. This command has not been so advised in any previous correspondence or documents. We are relying on this equipment and its associated code key to play a paramount role in the identification function in a hot war.

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9 Chapter 9 - Defense Against Electronic Countermeasures.

a Lamplight Recommendation: Recommend continuous exercises of air defense system operation in the presence of realistic ECM

(1) ADC position: Concur. This type of continuous exercise is deemed mandatory to maintain a state of training among the various facets of the air defense system that will enable some degree of operation in the presence of hostile ECM.

(2) CONAD and/or ADC action taken to date. ADC has established a requirement for aircraft and equipment to provide the recommended type of exercises. Techniques for evaluation of the system in the presence of ECM and distribution of the results have been incorporated in ADCM 101-1.

(3) What remains to be done and by whom: Approval of the requirement for suitable aircraft and equipment by USAF and award of contract.

b. Lamplight Recommendation: Recommend development of means for limiting reports issued from each radar site and to include jammer bearing data.

(1) ADC position: Concur in principle. The angular position of jamming targets is desirable if such information will assist in completing an intercept.

(2) CONAD and/or ADC action taken to date: Operational SOP's are currently extant

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to accomplish this action in the manual system.

(3) What remains to be done and by whom: Further research by appropriate research and development agencies.

(4) Remarks: Investigation should be conducted as to whether information gleaned from this type of operation will materially assist the intercept operation in the presence of multiple jamming signals and/or sweep jamming or barrage jamming.

c. Lamplight Recommentation: Recommend provisions for DF-overlay computations.

(1) ADC position: Concur in principle. Information of this type is desirable if it will materially assist the intercept operation.

(2) CONAD and/or ADC action taken to date: ADC has operationally tested a manual D/F system and found it unsuitable.

(3) What remains to be done and by whom: Further investigation by the appropriate research and development agencies. RADC is currently working on this problem.

(4) Remarks: Investigation should include the manpower and economic feasibility of such a system.

d. Lamplight Recommendation: Recommend that AI radar be modified to permit angular tracking on jammers.

(1) ADC position: Concur. This modification is required to give interceptors a limited capability in the presence of jamming.

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(2) CONAD and/or ADC action taken to date: ADC has initiated a requirement for this capability.

(3) What remains to be done and by whom: Hughes Aircraft Company is currently doing development work on this subject.

e. Lamplight Recommendation: Recommend that the ground radar system include operation at 3 or 5 cm.

(1) ADC position: Do not concur. Past experience has indicated that ground search radars operating in this frequency band are of limited operational value.

(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: It has been indicated in the past that weather attenuation at these frequencies seriously limit the operational value of a search radar operating in this spectrum.

f. Lamplight Recommendation: Recommend that feasibility of two-site correlation radar be explored for passive location of jammers.

(1) ADC position: Concur in principle. Information of this type is desirable if it will materially assist the air defense effort.

(2) CONAD and/or ADC action taken to date: ADC is monitoring the activities of RADC on this subject.

(3) What remains to be done and by whom.

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Further investigation by the appropriate research and development agencies.

(4) Remarks: Investigation should consider the economic feasibility of such a system in light of the degree of increased capability provided the air defense system.

g. Lamplight Recommendation: Recommend study of multiple-sensing installations in interceptor aircraft.

(1) ADC position. Concur.

(2) CONAD and/or ADC action taken to date: Requirements have been submitted to provide this capability.

(3) What remains to be done and by whom: Further research by responsible research and development agencies.

(4) Remarks: Aircraft weight and space limitations and possible decreased performance should be considered in this investigation.

h. Lamplight Recommendation: Recommend the study of passive range determination from an interceptor.

(1) ADC position: Concur in principle. Capability is desirable if proved feasible.

(2) CONAD and/or ADC action taken to date: Negative.

(3) What remains to be done and by whom: Further research by cognizant research and development agencies.

(4) Remarks: Investigation of this subject

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should include a determination of the interceptor's capability to perform these maneuvers at combat altitude.

i. Lamplight Recommendation: Recommend modification of transmitter-tube specifications and procurement, and broadband design of RF and antenna components.

(1) ADC position: Concur. Tunability and diversity have been accepted as a logical and practical means of reducing the jamming threat

(2) CONAD and/or ADC action taken to date: ADC has advised ARDC that the features should be incorporated in radars now under development and also in those to be developed in the future

(3) What remains to be done and by whom: Appropriate research and development commands to conduct further research on the use of these techniques.

j. Lamplight Recommendation: Recommend the use of narrow beams with low sidelobes, and of stacked beams.

(1) ADC position: Concur. This concept has been accepted by this command as a means of reducing jamming threat.

(2) CONAD and/or ADC action taken to date: ADC approved programs include radars of this type.

(3) What remains to be done and by whom: Further development by appropriate research and development commands on narrow beam and stacked beam radars.

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(4) Remarks: Close supervision of this concept is required to insure that it will not reduce operational performance under non-jamming conditions.

k. Lamplight Recommendation: Recommend extremely high output power.

(1) ADC position: Concur in concept. ADC has accepted the use of high output power as a means of combating active jamming.

(2) CONAD and/or ADC action taken to date: ADC approved future radars have a considerably higher power output than those presently in use.

(3) What remains to be done and by whom: Further development by appropriate research and development commands to determine the specific techniques to be used in such radars in order to accomplish adequate ranging.

l. Lamplight Recommendation: Recommend study of specific fixes against particular types of jammers.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: A requirement for this action has been established.

(3) What remains to be done and by whom: WADC and RADC, the cognizant research agencies, are currently working on this problem. Based on their findings appropriate operational requirements will be established.

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m. Lamplight Recommendation: Feasibility studies are recommended on methods of reducing the vulnerability of communications systems.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: General requirements for the best available anti-jamming capability in our ground radars have been established.

(3) What remains to be done and by whom: Work is presently being done along these lines by our research agencies.

n. Lamplight Recommendation: To reduce the vulnerability of our missiles to enemy countermeasures, we recommend studies of spoof-proof guidance links.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: ADC requirements stipulate that guidance links must be highly invulnerable to countermeasure; tests have been requested.

(3) What remains to be done and by whom: ARDC should continue research, development, and appropriate testing in this area.

o. Lamplight Recommendation: To reduce the vulnerability of our missiles to enemy countermeasures, we recommend studies of high power commands.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: Requirements have been established for one KW (and eventually 10 KW) amplifiers, directional transmitting antennas, and BROFICON.

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(3) What remains to be done and by whom: ARDC should continue efforts to apply these facilities to the missile-guidance link.

p. Lamplight Recommendation: To reduce the vulnerability of our missiles to enemy countermeasures, we recommend studies of diversity in fuzing methods.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: Our requirements for warhead fuzing stipulate invulnerability to ECM.

(3) What remains to be done and by whom: ARDC should initiate and/or continue investigations in this area.

(4) Remarks: Care must be taken not to degrade the basic functions of the fuzing system in order to achieve anti-jamming capability.

q. Lamplight Recommendation: To reduce the vulnerability of our missiles to enemy countermeasures, we recommend studies of multiple-sense target trackers.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: Our requirements specify:

(a) A jammer homing mode for radar seekers.

(b) A diversity of sensing methods for the interceptor missile arsenal.

(3) What remains to be done and by whom: ARDC should conduct research, development, and production refinement to achieve this capability.

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(4) Remarks: Feasibility of multiple sensing other than normal radar and jammer homing should be carefully examined for each individual seeker system. Care should be taken that the reliability of the system is not degraded by over-complexity.

r. Lamplight Recommendation: To reduce the vulnerability of our missiles to enemy countermeasures, we recommend studies of simultaneous lobing.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: None required.

(3) What remains to be done and by whom: ARDC should initiate and/or conduct appropriate research in this area.

s. Lamplight Recommendation: To reduce the vulnerability of our missiles to enemy countermeasures, we recommend studies of missiles capable of homing on jammers.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: We have stated a requirement for improved performance of the interceptor missile seeker systems. Included in this requirement is the ability to home on jamming signals, Doppler, "look-through" infrared seeking, air-to-air IFF, increased seeker range, and positive target discrimination.

(3) What remains to be done and by whom:

(a) ARDC should continue development to perfect the jammer homing mode for standard missiles.

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(b) A comprehensive study should be made to determine the desirability of special purpose missiles to home on jamming signals.

(4) Remarks: The desirability of a guided missile whose only capability is to home on jamming signals is highly questionable. This must be an additional capability over and above the basic design concept, such as radar or infrared principles.

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10. CHAPTER 10. AIRCRAFT AND WEAPONS.

a. LAMPLIGHT RECOMMENDATION: "Mount a noise source in a target airplane, modify an AI radar as necessary to insure tracking of that source, and determine angular accuracy obtainable. Such test flights should be combined with limited kinematical studies. A number of companies appear to be in a position to do this almost immediately."

(1) ADC Position: We do not concur that a test made in this manner would provide early data of any value, without a prior study.

(2) CONAD and/or ADC Action Taken to Date: In order to fulfill ADC's requirement for a jammer homing capability, ARDC is developing an attenuator that will enable an AI radar to obtain accurate angular information on a jamming signal source.

(3) What Remains to be Done and By Whom: Before any testing is performed, a comprehensive theoretical study should be made to determine the value of this technique in realistic tactical situations.

(4) Remarks: This technique, even if theoretically possible, faces formidable practical considerations. Unless it can promise consistently successful intercepts at the altitudes at which we expect to fight, and for the predicted bomber and interceptor performances, a testing and development program would not be justified. Range obtained by this method is "past-range," and two sets of maneuvers would be required to obtain rate of closure and present-range.

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Corrections for maneuver time and displacement would be necessary, and any change in speed or course by the bomber would render the information useless.

b. LAMPLIGHT RECOMMENDATION: "Develop and build an experimental computer based on results of a. above."

(1) ADC Position: Concur, contingent upon the successful outcome of the study recommended in a. above.

(2) CONAD and/or ADC Action Taken to Date: None.

(3) What Remains to be Done and By Whom: ARDC should initiate action to develop such a computer if studies and testing so indicate.

(4) Remarks: None.

c. LAMPLIGHT RECOMMENDATION: "Conduct studies of modifications to existing air-to-air missile systems toward the objective of using noise jamming signals for determination of range and direction."

(1) ADC Position: Concur.

(2) CONAD and/or ADC Action Taken to Date: ADC has stated a requirement that all air-to-air guidance systems be highly invulnerable to ECM.

(3) What Remains to be Done and By Whom: ARDC should continue studies and development in this area to determine the feasibility of the use of noise jamming signals for determination of range and direction, and the compatibility of varied modifications with other guidance system capabilities such as infrared and radar seeking.

(4) Remarks:

(a) We consider it highly desirable that the Falcon guided air rocket have the capability of pursuing a collision

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course on a target whether it is guided by the normal radar echo or by jamming signal from the target.

(b) It does not appear feasible for a guidance system to compute range from a jamming signal due to the strict flight time and maneuverability limitations of the guided air rocket.

d. LAMPLIGHT RECOMMENDATIONS: "Conduct studies of modifications to existing air-to-air missile systems to install infrared receivers in systems not now having them."

(1) ADC Position: Concur.

(2) CONAD and/or ADC Action Taken to Date: This Headquarters has pushed for infrared capability in Falcon seekers, fire control systems and "look-through" capability for interceptor missile seeker systems since early 1952.

(3) What Remains to be Done and By Whom: Nothing. All the air rockets in question have an infrared receiver capability.

(4) Remarks: None.

e. LAMPLIGHT RECOMMENDATION: "Conduct studies of modifications to existing air-to-air missile systems to install fuzes satisfactory in the presence of countermeasures."

(1) ADC Position: Primary ADC air-to-air missile (Falcon) has contact fuze. Concur that electronic fuzes should be designed to be invulnerable to countermeasures.

(2) CONAD and/or ADC Action Taken to Date: None. Falcon is Contact Fuzed.

(3) What Remains to be Done and By Whom: See remarks.

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(4) Remarks: The recommendation does not apply to the prime ADC air-to-air missile (Falcon) which is detonated by contact rather than electronic means. ARDC and the Navy should initiate studies to determine if the fuzing system of the USAF Bird-Dog rocket and Navy missiles (Sidewinder, Sparrow, etc.) can be designed to function satisfactorily in the presence of countermeasures.

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11. Chapter 11 - Systems Design Objectives.

a. Lamp Light Recommendations: None.

(1) ADC Position: Not applicable.

(2) CONAD and/or ADC action taken to date: Not applicable.

(3) What remains to be done and by whom: Not applicable.

(4) Remarks: Not applicable.

b. Summary of Chapter: Chapter 11 is somewhat different from the other chapters in the study in that it contains only a general outline of basic concepts of air defense which dictate system design objectives. There are no recommendations contained at the end of this chapter, hence only a general summary is made here. The lead paragraphs of the chapter state that Project Lamp Light has accepted and indorsed the general concept of national defense which says that we will rely basically and primarily on the deterrent powers of a long range striking force and a strong tactical air force deployed according to plans for a common defense of the entire western world, with these offensive forces supported by a third force based in and around North America, in accordance with joint United States - Canadian plans, the force designed for defense and comprising antiaircraft, manned and unmanned all-weather fighter-type aircraft, and a system of electronic and other means of observing, collecting, and disseminating information regarding plans and operations of any potential enemy.

The chapter further points out that in light of this concept improvements recommended in the study are limited to extensions and improvements of the present air defense system, together with increased participation in air defense

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by U.S. and Canadian Naval forces. It also points out that consideration should be given to capability in the American Far East Air Forces, the Alaskan Air Command and the European Air Forces to quickly and thoroughly neutralize appropriate elements of the Russian Long Range Air Army; that this should be the primary mission of these air forces and that this field of action should not be considered as a separate entity from either continental air defense or retaliatory action.

The remainder of the chapter deals with the accepted National Intelligence Estimate of the Soviet threat, possible courses of war, measures of effectiveness, levels of defense, rules of engagement and early information gathering, all in a general manner requiring no comment by ADC. These items all point up the overwhelming need for increased information in regard to what direction the enemy is pointing his efforts. The intelligence we get from our defense system is designed only to put the existing system into operation. We need more information on which to base the design, size, deployment and employment of our defense system.

ADC is in agreement with factors outlined in this chapter.

[redacted]

12. Chapter 12 - The Contiguous Air Defense Zone.

a. Lamp Light Recommendation: Development of the capability to establish an extended contiguous defense zone.

(1) ADC position: Concur with the proposal to extend the contiguous defense zone but do not concur with Lamp Light's proposal for conducting the air battle in this zone. Lamp Light proposes that the contiguous system be operated separately from the shore based system with the air battle being conducted by the individual picket ships utilizing ship board data processing systems and reporting into Navy shore control stations. ADC's firm position is that the radar information from the off shore Texas Towers, picket ships and AEW&C aircraft should be fed back into the shore based SAGE system and that this shore based SAGE system should conduct the air battle in the contiguous zone, under CONAD operational control. This will preclude a break in the responsibility for the air battle and will mean that one commander, CINCONAD, will be responsible for the air battle throughout the entire combat zone. As an interim measure, until SAGE is installed and operational, the air battle will of necessity have to be conducted from the individual picket ships and AEW&C aircraft. However, this is considered by ADC as only an interim measure

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measure, and we believe that all planning, research, and development must be primarily aimed toward conducting the contiguous air battle by the SAGE system with a backup capability available in the picket ships and AEW&C aircraft for controlling weapons. Further discussion of this subject is contained in comments on the remaining recommendations in this chapter.

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and NAVFORCONAD must establish a requirement through CNO for the additional picket ships required.

(c) The present program to provide contiguous cover and the new proposals for further extension must be expedited at all levels.

(d) Development and procurement of equipments, programmed and new, as outlined in previous Lamp Light Report chapters and concurred in by ADC, must be expedited.

(e) CONAD must develop a firm detailed organizational and operational plan for the operation of the northern and seaward extensions of the contiguous system. This is required prior to a final determination as to what equipment will be required in the operation of the contiguous system.

(4) Remarks: Lamp Light proposes high altitude coverage off the East Coast to a distance of 1400 nautical miles and all altitude coverage to a distance of 1000 miles. They further propose all altitude coverage to a distance of 700 nautical miles off the West Coast. They propose to do this with 32 ships (16 on station) and 105 AEW&C aircraft (21 airborne) off the East Coast and 10 ships (5 on station)

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and 90 AEW&C aircraft (18 airborne) off the West Coast. This is a total of 42 picket ships and 195 AEW&C aircraft. Performance of both picket ships and AEW&C aircraft is presumed to be greatly improved over present equipment. CCNAD is presently programmed for 16 picket ships and 100 AEW&C aircraft to provide extension of the contiguous cover. Tests of picket ship and AEW&C radar have indicated that present equipment is not able to achieve desired results. Since extension of coverage will simply involve more of the same type equipment it is obviously important that the performance of this type equipment be vastly improved as recommended in previous chapters of the study. It is also necessary that development, procurement and installation, in picket ships and AEW&C aircraft, of improved equipments for passing data, controlling weapons, displaying the air situation, etc., must be concurrent with the extension of the contiguous cover in order that this contiguous cover will be of value in fighting the air battle.

b. Lamp Light Recommendation: Recommend that picket ships and aircraft used to extend contiguous cover to seaward be equipped to: (a) Detect, identify and control aircraft in the seaward approaches; (b) Detect, identify and transmit surveillance data on surface ships and submarines.

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(1) ADC position: As regards (a) above, ADC concurs with the detection and control proposal, the control to be used in picket ships and AEW&C aircraft in the interim period until SAGE is operational and as a backup capability after SAGE is operating. ADC policy is that identification will be done on the shore (eventually by the SAGE System), although a backup capability should be present in the picket ship. It is a CONAD-ADC position that the contiguous radar cover should be tied into a shore based SAGE system and that the contiguous air battle be conducted by the shore based SAGE system with a backup capability present in the picket ships and AEW&C aircraft. As regards (b) above ADC concurs with this as a secondary requirement providing it does not interfere with the primary mission of air defense.

(2) CONAD and/or ADC action taken to date: ADC has established the requirement for picket ships and AEW&C aircraft to detect and control aircraft. A firm determination has not been made on identification procedures in contiguous cover at this time. No specific action has been taken on providing a surface and subsurface detection and identification capability for picket ships and AEW&C aircraft.

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(3) What remains to be done and by whom:

(a) CONAD must develop a firm operational plan for the contiguous system so that the level of detection, identification and control to be performed by the picket ships and the AEW&C aircraft can be determined.

(b) ADC and NAVFORCONAD should examine the desirability and feasibility of combining the functions of air, surface and subsurface detection, identification and transmission of surveillance data. If determined desirable and feasible necessary operational plans should be prepared.

(c) ARDC should emphasize the research and development program to improve the off shore contiguous cover designed to (a) insure that the off shore contiguous cover can be tied into the SAGE system and (b) that a proper picket ship or platform is provided equipped with adequate equipment to properly carry out the contiguous radar mission. The YAGR is not necessarily this type of ship. (See remarks below.)

(4) Remarks: We feel that the YAGR type of picket ship is not sufficient for our

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purposes and that a continental defense vessel (perhaps an Armstrong platform type) as recommended by Lamp Light should be constructed to do this job. It is believed that the program to provide off shore extension of contiguous radar cover has unnecessarily lagged and that Air Force research and development should be pushed to solve this problem rather than continue to depend on purely naval forces and effort. Such research and development should all be directed toward tie-in of the off shore extension with the shore based SAGE system.

c. Lamp Light Recommendation: Development of AEW and AEW&C aircraft systems of greatly improved performance by 1960.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: This improved performance has been recommended by ADC.

(3) What remains to be done and by whom: Positive action by all agencies, particularly ARDC and the manufacturers to insure attainment of improved capability.

(4) Remarks: Lamp Light's AEW&C improvement proposal envisions an aircraft capable of flying at 20,000 to 25,000 feet with radar searching from the surface to 65,000 feet; no sea, land or ice clutter, 360° search; size of antenna 30 to 40

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feet; detection distance 200 miles minimum. ADC concurs with this requirement.

d. Lamp Light Recommendation: To provide additional capability, on the contiguous zone, against high altitude targets, between 60,000 and 80,000 feet by 1960, recommend the use at very short ranges of high altitude missiles. Also recommend providing jump-up capability in air-to-air missiles to be launched from both medium and long range interceptors.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: ADC has established a requirement for land based short range missiles of type recommended (NIKE B). CONAD or ADC have not established a requirement for ship based weapons of this type. ADC has established requirement for jump-up capability in air-to-air missiles.

(3) What remains to be done and by whom:

(a) CONAD (NAVFORCONAD) should investigate the feasibility of using high altitude ship based missiles.

(b) ARDC should continue its investigations regarding jump-up capability with a view toward incorporating this capability in manned interceptors at the earliest date.

(4) Remarks: Chapter 12 uses "contiguous zone" and "combat zone" somewhat interchangeably. In the above recommendation it is believed that the contiguous cover

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referred to is the off-shore contiguous cover.

e. Lamp Light Recommendation: To improve kills in local defense areas recommend research and development toward a low altitude capability and an anti-ASM capability in our short range surface-to-air missiles.

(1) ADC position: Concur.

(2) CONAD and/or ADC action taken to date: ADC has established an all altitude requirement for all weapons. A specific requirement for an anti-ASM capability in the SRM's has not been established, however this is being pursued by the Army research and development people.

(3) What remains to be done and by whom:

(a) More definitive information (perhaps from ATIC) regarding type of ASM to be expected.

(b) Maximum effort by development agencies to provide recommended capability.

(4) Remarks: None.

f. General Comments on Chapter 12.

(1) The IF-101B has been introduced in the Lamp Light Study as one of our ADR 54-60 Plan weapons. This is in error. The LRIX-1 was the weapon considered as the long range interceptor. Very recently, Headquarters USAF has approved procurement of 17 squadrons (406 aircraft of the IF-101) for introduction into the ADC

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inventory beginning in FY 58. This weapon is significantly inferior to the IF-101B.

(2) It was stated that the F-102 will have the capability to carry three Ding Dongs. This is in error. The aircraft can only carry two maximum.

(3) It appears that the kill capability given the F-102, even with three Ding Dongs, is smaller than our analyses indicate. Conversely, the kill capability given the IF-101B is higher than our analyses indicate.

(4) Lamp Light indicates that the Canadian CF-105 interceptor will be available by 1960. Most recent information indicates that it will be introduced into the inventory no sooner than late CY 61.

(5) There exist other obvious discrepancies in characteristics of the varied interceptors of the ADR 54-60 Plan.

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13. Chapter 13. The Remote Air Defense Information Zone Information Gathering: Barriers 1955-1958.

a. Lamplight Recommendations: 1 We recommend extension of the DEW Line by using programmed AEW aircraft and pickets on continuous patrol from Hawaii to Kodiak Island, and from Argentia to the Azores, with periodic patrols to close the gap from Cape Dyer to Cape Farewell.

(1) ADC Position: Concur. Reference Chart 13-1. The probability of detecting the enemy decreases when the limited forces are extended in a longer line. Although this does not meet the military characteristics for detection, the enemy's problems are increased to plan an attack route.

(2) Action taken to date: The ADC position has been expressed verbally to Hq USAF and Department of Navy in conferences. This requirement has not been submitted in written form.

(3) What remains to be done and by whom: ADC must submit this recommendation to the Navy for consideration

b. Lamplight Recommendation: 2. To provide earlier information on high-altitude penetrations through the area north of Hudson Bay, we recommend that alarm radars of the Sentinel type be installed at the Joint Canadian-U.S. Arctic Weather Stations.

(1) ADC Position: Non-concur. See Chart 13-4. The ADC concept is to extend the combat zone outward from the surface to maximum altitude of radar capability. The warning lines are employed as a system to provide information on unfriendly aircraft.

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Detection lines must be capable of identifying all aircraft penetrations. This group of radars do not possess the capability of detecting aircraft at all levels of flight or perform the identification function.

(2) CONAD and/or ADC Action taken to date:

No requirement has been submitted.

(3) What remains to be done and by whom:

None.

1957-1960

c. Lamplight Recommendation: To prevent end runs, provide more warning-time, and improve low-altitude detection, we recommend:

(1) Extension of the land barrier along the Aleutian chain to Adak.

(2) Extension of the DEW coverage by gap fillers in the radar chain from Kodiak to Cape Lisburne.

(3) A radar station at Holsteinborg (Greenland), and a picket ship in the Davis Strait.

(4) Investigation of the possibility of closing the gap across the Davis Strait with long Fluttar links.

(5) A radar station in King Christian IX Land (East Greenland) and four manned radar stations on the Greenland ice cap.

(6) Four radar stations in Iceland.

(7) At least one radar station in the Faeroes.

(8) One picket ship between Iceland and the Faeroes.

(9) Redeployment of AEW aircraft in the Atlantic as required for contiguous cover. In the Pacific, investigation of the feasibility of basing AEW aircraft on Midway to substitute a [redacted] for the previous

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Hawaii-Kodiak line.

(1) ADC Position: See Chart 13-3 and 13-1, and Goal Chart. Specific ADC position on above recommendations:

(a-1) Non-concur for Continental Air Defense purposes.

(b-2) Concur with location but not method.

(c-3) Concur.

(d-4) Concur.

(e-5) Non-concur for Continental Air Defense purposes.

(f-6) Non-concur for Continental Air Defense purposes.

(g-7) Non-concur for Continental Air Defense purposes.

(h-8) Non-concur for Continental Air Defense purposes.

(i-9) Concur on redeployment of AEW aircraft in the Atlantic. Non-concur on basing AEW aircraft at Midway due to non-concurrence of DEW line to this point.

The ADC located the DEW Line as follows: (See Goal Chart). Hawaii by Sea Wing to Kodiak Island integrated with the Alaskan radar system; across the northernmost practical part of Canada to Cape Dyer; across Davis Strait to Greenland, thence southward to Cape Farewell, Greenland; Cape Farewell by Sea Wing to the Azores.

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ADOPR message number 1854, dated 22 October 1954 to Hq USAF further states ADC position to be that this line is the maximum distance the warning line is to be located from the Combat Zone. This position was affirmed on 15 December 1954 in ADOPR message 3075. This message also indicated that lines located at greater distances were unacceptable for Air Defense of Continental United States.

(2) CONAD and/or ADC Action taken to date:

The Joint Chiefs of Staff have approved the DEW line from Hawaii to Cape Dyer. This segment of the line is located according to ADC recommendation.

On 19 February 1955, Hq USAF and Navy representatives agreed to submit a split decision to the JCS. The Air Force position is as proposed by the Air Defense Command. The Navy position follows the Greenland, Iceland-Faeroes and England Line. The split decision was submitted to the Air Force Chief of Staff in early March. Status of this report is unknown.

(3) What Remains to be done and by whom:

The Chief of Staff, USAF, must submit the report to the JCS for consideration.

(4) Remarks:

(a) Inter-hemispheric and polar DEW lines may have value to other

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[redacted]

services or JCS Commands in North America. The ADC policy on these lines is that dollars and resources required would be more valuable if used to supplement the Combat Zone system.

(b) The additional warning information provided by the Lines is not reliable enough to derive unequivocal warning. For example, the effort and ease the enemy can spoof these lines diminishes their value. At such time as the DEW line is in and operating and the contiguous zone has been completed ADC will consider additional warning lines that meet the criteria of cost vs effectiveness.

(c) The ADC plan for the DEW Line location will permit a logical line surveillance extension to prevent the enemy from planning end-running tactics. Previous planning and concept indicated that the Combat Zone would be completely encircled or designed to prevent end running. For example, the Azores terminus would be extended to Puerto Rico and the Hawaii terminus to Marshall Islands or California coast.

1960-1965 Time Period

d. Lamplight Recommendation:

(1) To provide information that will permit interception in the remote zone, we recommend AEW aircraft

patrols from the Aleutians north to the Pole, thence to Northern Scotland.

(2) We recommend the establishment of radar stations in Northern Greenland for the defense of Thule and for the completion of an additional complete barrier from Cape Parry to Iceland.

(1) ADC position: Non-concur on both recommendations as to information and use for defense of Continental United States. Reference Chart 13-4.

The AEW patrol over the pole is not feasible with present equipment. We are recommending the development of radars and communications that may permit an operation of this type and magnitude in the appropriate time period.

The defense of Thule is not presently in the mission of Air Defense Command. The barrier from Cape Parry to Iceland is not acceptable for Continental Air Defense purposes until such time as the basic early warning system which has been proposed by ADC is developed and operating.

(2) CONAD and/or ADC action taken to date: As indicated in recommendation c above.

(3) What remains to be done and by whom: No action considered necessary at this time. ADC planners will keep abrease of developments and arctic operations to determine appropriate time to initiate programs of this type.

e. Lamplight Recommendation: Information: General Surveillance. For the Ocean Areas, we recommend that ocean shipping be organized into a general surveillance system in the North Atlantic and Pacific Oceans as rapidly as possible. Subsidiary recommendations towards this end are: (1) That tests of the communications processes be initiated at once, and improvements undertaken where necessary; (2) that such radars as are available, both surface- and air-search types, be employed as soon as the system is organized; (3) that as an interim measure, radars of the An/TPS-1D and SRa types be installed in selected classes of ships; (4) that the development and installation of more suitable radars be carried out within 18 to 24 months; (5) that one U.S. controlled Ocean Station Vessel be reactivated in the North Atlantic and that two such be activated in the Pacific; (6) that radars and, in certain cases, communication centers be installed on such islands as Sable, Bermuda, Azores, Midway, Wake, etc., as parts of the ocean areas general surveillance system; (7) that the fishing fleets operating well off the northeast coast of North America be organized into a type of Ground Observer Corps using where practical radars of the Chipmunk type.

(1) ADC position: Concur in principle for oceanic air surveillance but not to the magnitude that Lamplight proposes. Improvements in communications and radars for seaward extension of air defense is considered necessary as indicated in Chapters 2 and 7.

Further study by CONAD will be undertaken to determine the feasibility of organizing the allied ocean shipping into

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Air Defense system for North America. At this time ADC is not prepared to accept or reject this proposal. The following factors must be considered vs the contemplated effectiveness: cost, organizational and supervisory effort required by such a system, reliability of the information procured and the value of such a system when international relations deteriorate to the point where shipping is curtailed.

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(2) CONAD and/or ADC action taken to date: Concept for Continental Air Defense for this period is under study.

(3) What remains to be done and by whom: ADC must develop this concept, operational plan and develop the specific programs for air defense in the Early Warning Zone and overwater Continental Combat Zone.

f. Lamplight Recommendation: General Surveillance for Land Areas: We recommend: (1) That the Canadian authorities be invited to consider the installation of a general surveillance system in Northern Canada, in a manner which will complement the DEW and Mid-Canada Lines and plans for high altitude radar cover. (2) That radars of low information rate and low manning requirements such as the Chipmunk, Super Chipmunk, Sentinel, and a smaller-antenna type of Sentinel, be further developed and exploited. (3) That further study be given to methods proposed for filling the Hudson Bay, Davis Strait, and other water or pack-ice gaps. (4) That the use of Chipmunk type radars in the Alaskan GOC be commenced. (5) That the principle of using all military and governmental outposts as radar data sources be further considered in possible extensions such as Greenland and the Bering Sea. (6) That the possible exploitation of military and commercial transport aircraft as radar data sources for general surveillance be further examined. (7) That the number of codes available on the ANDB beacon be increased to 62 and its use by all transoceanic traffic be encouraged.

(1) ADC Position: Reference Figure 13-9. Non-concur on proposed concept and

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deployment of radar for Continental Air Defense. Concur in the development of the small radar but not of high priority. Specifically:

(a) The radar proposed for the area between the Mid-Canada and DEW Lines (land portion) are not, to a great degree, essential to the present concept of air defense of North America. The current philosophy for Continental Air Defense is to expand the Combat Zone. That is, radar coverage from the near surface to maximum height of radars capability, consistent with system requirements. The capability to track enemy aircraft as far from the target is recognized. However, this capability must be coordinated with weapon development, and planned air battle.

(b) Concur in development of low information rate and low manning requirements radars. The concept of present early warning system are now complete or ideally situated. It is considered necessary to continue development of these items in order to improve and conceive new concepts of early warning systems.

(c) Non concur. The proposal to fill Hudson Bay and Davis Strait and other

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water or pack-ice gap is not considered completely essential to Continental Air Defense requirements. See paragraph f7(1)(a) above for ADC Concept.

(d) ADC Position is not applicable. Alaska area another JCS Command. We only establish our operational requirements to Alaska Air Command for Air Defense data.

(e) Concur in principle but not for immediate implementation of radars at all government outposts. The radar data from these sources would not be integrated into the the organized system for warning information. Presently there is no method of determining the Air Defense value for chance enemy sightings. Consideration of a program of this type will be evaluated for inclusion in the 1955-65 ADC Requirements Plan.

(f) Non-concur to the proposal for possible exploiting of military and commercial transport aircraft as radar data sources. This was an idea by the Lamplight Group. Present radar and communication equipment deficiencies preclude even the concept stage for Continental Air Defense purposes in this time period.

(g) Concur with the proposal to increase the codes in the ANDB beacon for

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Continental Air Defense purposes. Chapter 8 establishes the ADC position relative to identification.

(2) CONAD and/or ADC action taken to date: The Canadian and U. S. Air Defense Commands have established a planning group to review the Air Defense requirements and plans for defense of the two countries.

(3) What remains to be done and by whom: The ADC concept for expansion of the Combat and Early Warning Zones is concluded to be sound by the Lamplight group. Expansion of these zones are expressed current documents or planning proposals.

Part 2. The Remote Air Battle.

a. Lamplight Recommendation: "We recommend the development of a long-range interceptor radar system comprising both UHF and S-band radars. Detailed experiments of both radars against low-flying targets over land and sea are recommended to see if this system can be improved."

(1) ADC Position: We do not concur with this recommendation.

(2) CONAD and/or ADC Action Taken to date: The ADC requirement for a long range interceptor fire control system was designed to support the intended function of the long range interceptor in consonance with projected ADC requirements.

(3) What Remains to be done and by Whom:

[redacted]

[redacted]

Headquarters USAF/ARDC should initiate and/or continue action in accordance with procedures outlined in AFR 80-30 to support the Air Defense Command LRIX requirements.

(4) Remarks:

(a) The long range interceptor system outlined in the Lamplight study is contingent upon the adoption of the extended contiguous cover proposal The effectiveness of the B-47/UHF-S -Band radar/long range air-to-air missile weapon system is predicated upon the capabilities of this ground environment and technological advances in radar and air-to-air missile areas. Further, we believe that the B-47/LRI weapons system will not be available by 1960 or be as effective as alleged in the time period considered.

(b) We contend that our design philosophy for the LRIX will result in a higher defense level, when employed with the ground environment outlined in ADR 54-60, than the B-47 employed in the Lamplight environment; further, we believe that the LRIX we propose will be more effective in the Lamplight system than the B-47 LRIX.

(c) The search radar specifications outlined (200 nautical miles search range)

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approach AEW&C proportions as does the concept.

b. Lamplight Recommendation: "We recommend the development of long-range air-to-air missiles with jump-up and jump-down capabilities."

(1) ADC Position: See remarks below.

(2) CONAD and/or ADC Action Taken to Date: GOR's have been submitted for future medium range and long range interceptors (LRIX-1 and LRIX-2). The armament requirements are to be determined in a logical and orderly manner in accordance with AFR 80-30 procedures.

(3) What Remains to be done and by Whom: ARDC should initiate and/or continue action in accordance with AFR 80-30 to fulfill the requirements of the GOR's.

(4) Remarks:

(a) We have stipulated our future requirements in the GOR's for the medium range and the long range interceptors.

(b) It is felt that the weapons systems philosophy should be adhered to. Specifically with regard to armaments, these should be determined as a result of weapon system design studies, similar to those which will be completed by ARDC in accordance with AFR 80-30. It has not been determined at this time that the long-range air-to-air missile is the solution to either the medium or long range interceptor weapon system armament problem.

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(c) ADC has stated requirements that the FALCON and DING DONG fire control systems have the capability of directing snap-up, climbing, and zoom attack techniques.

c. Lamplight Recommendation: "For earliest introduction of the weapon system, we recommend modificiation of the B-47E aircraft to carry a large antenna radar and missiles

(1) ADC Position: Non-concur

(2) CONAD and/or ADC Action Taken to Date: GOR's have been submitted for the LRIX-1 and design studies have been recommended for an LRIX-2 in accordance with AFR 80-30,

(3) What Remains to be Done and by Whom: ARDC should initiate and/or continue efforts in accordance with AFR 80-30 to define the characteristics of the LRIX-2.

(4) Remarks: Prior to initiating design studies for an LRIX-2, or revising the characteristics of the LRIX-1, the extent and capabilities of the ground environment must be defined. The results of the design studies might not indicate that a large interceptor with air-to-air long-range missiles is the optimum system. It is felt that we must await the results of these design studies before establishing firm component requirements.

d. Lamplight Recommendation: "We recommend that the employment of modified B-58 or Navy P6M-1 aircraft, or the development of a new high speed, long range interceptor aircraft, be reviewed by the USAF. If high cruise speed shows a sufficient pay-off in the air defense roles, we recommend that a new long range interceptor be programmed for later introduction

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into the air defense system."

(1) ADC Position: In general, we do not concur with this recommendation. (See remarks below)

(2) CONAD and/or ADC Action Taken to Date: See paragraphs 13a(4), 13b(4) and 13c(4) above.

(3) What Remains to be Done and By Whom: See paragraphs 13a(3), 13b(3) and 13c(3) above.

e. General Remarks on Chapter 13.

(1) There appears to be an inconsistency in the interpretation by Lamplight of the LRIX mission as a function of time. The characteristics outlined for the B-47 LRIX appear to be incompatible with the B-58 or Navy P6M-1 or new high-speed long range interceptor aircraft, i.e., AEW&C search radar, aircraft performance, and armament requirements.

(2) The recommendation pertaining to the B-58 or Navy P6M-1 indicates uncertainty about the B-47 LRI concept and appears to have been put in as a badge. Lamplight seems to admit that more study is needed on this B-47 concept.

(3) In consonance with the ADC future concept of operation (1960 through 1965) we have submitted our requirements for a long-range interceptor. The variance in philosophy between Lamplight and ADC is evident and is much more fundamental than just the fact that the contiguous cover has been extended -- i.e., the employment of slow bomber type aircraft as aerial platforms for large high performance air-to-air missiles, AEW&C search radar.

(4) ADC does not now agree that manned

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interceptors cannot be expected to keep abreast of the bomber threat. ARDC technical agencies should immediately assess the "state of the art" to determine the validity of this Lamplight opinion.

(5) In summary, only after a detailed generalized weapon system study can the characteristics of the future long-range interceptor (LRIX-2) or revision to the long-range interceptor (LRIX-1) now being selected for development, be determined. It is felt that the Lamplight analysis is too cursory and inconclusive to proceed with the B-47/LRI weapon system recommended.

14. Chapter 14 - Defense Against the Seaborne Threat.

a. Lamp Light Recommendation: Recommend the establishment of 600 mile wide contiguous sea surveillance zones off our coasts, supported by remote surveillance lines to provide early information.

(1) ADC position: Concur with the contiguous sea surveillance if operation of same does not interfere with the primary mission of air defense. The remote surveillance lines are not a subject for comment by ADC.

(2) CONAD and/or ADC action taken to date: None.

(3) What remains to be done and by whom: CONAD (ADC and NAVFORCONAD) determination as to whether or not it is feasible to include surface and subsurface detection, identification and reporting as an added function of the AEW&C aircraft and the picket ships.

(4) Remarks: None.

b. Lamp Light Recommendation: Recommend the development, implementation and activation of sea surveillance systems in which digital computers are used to correlate data from radars, radio direction finders and underwater sound detectors with sail plans, ship reports and tables of ships characteristics. The resulting information on position, course, speed and identity of all vessels is to be displayed in a summary plot for command purposes.

(1) ADC position: Navy items. No comment. It is understood that these are shore based sea surveillance centers.

(2) CONAD and/or ADC action to date: None.

(3) What remains to be done and by whom: ADC investigation as to whether or not tie-in to the Navy Sea Surveillance Centers is desirable for exchange of information.

(4) Remarks: None.

c. Lamp Light Recommendation: Recommend that a program of conclusive experiments be undertaken without delay to determine whether ground wave radar at about 2 mcps can provide continuous tracking of all surface vessels within several hundred miles of the shore line.

(1) ADC position: No comment. Navy requirement.

(2) CONAD and/or ADC action taken to date: Not applicable.

(3) What remains to be done and by whom: Not applicable.

(4) Remarks: None.

d. Lamp Light Recommendation: Recommend an energetic program of oceanographic research particularly in the North Atlantic where remote surveillance lines are needed.

(1) ADC position: No comment. Navy requirement.

(2) CONAD and/or ADC action taken to date: Not applicable.

(3) What remains to be done and by whom: Not applicable.

(4) Remarks: None.

e. Lamp Light Recommendation: Recommend the development of passive long range sonic detectors for

installation at or near picket ships, passive sonic detectors for deployment in shallow water, and active long range low frequency sonic detectors to meet the threat of the silent submarine.

(1) ADC position: No comment except that installation of gear on picket ships and location of picket ships for sea surveillance purposes should have second priority to gear and location required for carrying out the air defense mission.

(2) CONAD and/or ADC action taken to date: None.

(3) What remains to be done and by whom: Not applicable.

(4) Remarks: None.

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15. Chapter 15 - Air Defense Systems and Their Evaluation.

a. Lamplight Recommendation: Not applicable.

(1) ADC position: See "Remarks"

(2) CONAD and/or ADC action taken to date: Studies in process on air defense system concepts and their evaluation on a cost-effectiveness basis. Also studies in process on such items as optimum contiguous coverage vs. fighter range and commitment distance.

(3) What remains to be done and by whom: Complete studies of concepts and evaluation of likely concepts by CONAD combined study group. Attempt to optimize on a cost-effectiveness basis and revise plan.

(4) Remarks: The evaluation of defense systems by the Lamplight group included the application of two main methods. The first was map exercises. This technique should not be confused with the ADC war-gaming techniques for estimating kill effectiveness. The map exercises, as performed by Project Lamplight, were not carried through to the point of estimating bomber kill. General qualitative statements were derived from the map exercise phase of the evaluation. It was concluded from this phase of the analysis:

(a) SAC warning needs were satisfied by both the Lamplight and the ADR 54-60 systems.

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(b) Small sneak attacks could be ruled out if SAC implements plans to disperse.

(c) A strong attack in force is desirable from the enemy's point of view against a strong air defense system.

Also from the map exercises a qualitative feeling for the deployment and employment of defense weapons was obtained. The ADC opinion is that the map studies and their results were handled satisfactorily.

The second method of evaluation was the use of mathematical models to estimate the number of bombers the enemy would have to send against each of the defense systems studied in order to kill 15 million people. Urban population centers were chosen as primary targets. Evacuated SAC bases were assumed to be of little interest to the enemy. Therefore the measure of defense system effectiveness was the number of bombers needed to achieve a fixed level of damage; the more bombers required, the better the level of defense. The chart, Fig 15-2, page 15-7, Vol. IV, shows a comparison of the number of bombers required to achieve a 15-megadeath damage level as a function of cost. The curves were obtained by scaling up and down from the basic cost which was taken as that of the ADR 54-60 plan. A relative cost of 1.0 is equal to the total

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cost of the ADR 54-60 plan or about 42.1 billions of dollars. The cost of the ADR 54-60 plan less Bomarc, which was not considered operational in the 1960 period, is shown by the triangles on the chart.

The conclusions drawn by the Evaluation Group were:

(a) The modified 1960 system proposed by Lamplight will provide somewhat better defense at a comparable cost than the system proposed in ADR 54-60. This is indicated on referenced chart.

(b) The use of decoys by the enemy could double his effectiveness.

(c) A defense capability against enemy air-to-surface missiles could double defense effectiveness.

(d) Comparison of the basic Lamplight system with and without the remote air battle defense capability shows no great disparity between the two situations. Qualitative arguments, such as those based on the deterrent value of a remote air battle capability, led to statements indicating that Lamplight favored the development of this capability.

The last three conclusions were supported by other charts in Vol. IV.

Recent ADC studies agree in general

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with these conclusions with certain reservations. These are discussed throughout the ADC comments.

Because of the short time available thus far for appraising the mathematical models themselves, only the more basic model has been examined in detail. Certain approximations were used, the effects of which are not known precisely; however, it is highly probable that errors introduced were small. Certain simplifications in the model were introduced which may have biased the results in favor of the defense. Offsetting these were such assumptions as two-battle random weapon assignment, which would seem to degrade defense effectiveness somewhat. ADC will study the mathematical methods more thoroughly since they are of interest. They represent a quick application with minor differences in principle of one of ADC's concepts of evaluation.

In general, the evaluation techniques are considered adequate for the purpose at hand, and about as refined as could be expected in the time available to the Lamplight group.

ADC has examined the inputs used in applying the model in the Lamplight evaluation. Several areas of uncertainty exist in such items as kill probabilities, aircraft performance, and other system component

performance. The values selected are of the same general magnitude as those estimated by ADC, provided that necessary effort is applied to the improvement of equipment such as the low altitude ground and AI fire control radars. The Lamplight assumption in the latter case was that pulse doppler AI radar will be perfected in this time period. No account was taken of possible degradations which would occur in the event that evasive tactics were employed by the enemy. Enemy countermeasures were handled qualitatively by assuming that our component performance would remain constant or even be improved through the exploitation of counter-countermeasures. Since the defense systems considered involved roughly the same number and types of weapons, errors in weapon capability would result in secondary errors in the relative effectiveness of the systems examined.

While the evaluation provided a means of comparing the relative merits of one system over another within the limits imposed by the input data and the approximations made in the mathematical model, it did not provide a means of determining how near any system or part thereof approached

the optimum. The evaluation of ADR 54-60 air defense system disclosed a loss in system efficiency mainly caused by the lack of sufficient contiguous radar coverage. The extent of contiguous radar cover proposed by Project Lamp Light did not take into account an optimum mission for the long range interceptor, but instead was based on the maximum range capabilities of the F-101 interceptor. Other rather important inadequacies of the Lamp Light study included non-optimization of the location of the various defense elements of the system; inadequate study of the distribution of funds among the various available weapons; the inconsistencies in the form of optimistic weapon performance in the 1960 period in evaluating the remote air battle and its contribution to the overall effectiveness of the system. The input data used in the evaluation of the remote battle is subject to greater uncertainties than in the contiguous battle case, since nearly all of the elements that go into the remote interceptor system are yet to be developed. It seems somewhat inconsistent to throw out the Bomarc in the basic study and still include a remote interceptor capability in the 1960 period when examining the contributions that could result from a remote air battle capability.

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The research and development programs proposed by Project Lamplight have been covered previously. Those concurred in by ADC appear to be worthy of emphasis since they will be valid for any system of air defense that we finally select.

Before ADC accepts some of the air defense system concepts and recommendations proposed by Project Lamplight (e.g., 1400 miles contiguous cover on the east coast), certain further studies are in order. There is a need now for optimizing parts of the air defense system. This could be made possible by perfecting improved fast evaluation methods being developed and by completion of studies now being made by the command. Basic important work is being carried on by the CONAD study group now examining all likely defense concepts and systems. A study is being made of the compatibility of interceptor range, radar coverage, and interceptor commitment distance, in an effort to throw light on the optimum radar coverage and design specifications for interceptors. The end result ADC wishes to achieve is as near an optimum air defense system as possible on a cost-effectiveness basis.

Someone must still determine what level of defense we should have as our goal.

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16. Chapter 16. CONCLUSIONS.

The recommendations of the "Lamplight" study were of two different and distinct types. The recommendations pertaining to equipment improvement are rather clear cut and ADC concurs with the majority of these recommendations and indorses to Headquarters United States Air Force, that research, development and implementation should proceed on a priority schedule. The other type of a recommendation is of the more intangible type which is not completely supported as to operational feasibility at this time. The Air Defense Command study group has taken a firm position on some of the recommendations and ideas of this type presented. On others we believe that further study and overall systems evaluation is necessary before the Air Defense Command position can be firmly stated. These ideas and others, will be considered by the Continental Air Defense Command study group which is presently studying the Continental Air Defense problem, and those which are applicable will be incorporated into the CONAD 55-65 Requirements Plan. An example of this is the need for extending seaward the SAGE system and expanding the contiguous radar coverage so that the LRIX can be utilized on the seaward flanks to its design capability. The amount of seaward contiguous cover cited in the ADC 54-60 Requirements Plan was based not only upon what was required for the 1960 time period, but upon what was thought possible for achievement. The Air Defense Command ultimate requirement was never intended to be limited to 475 miles off the East Coast and 250 miles off the West Coast and we further believe we must proceed in an orderly manner from the coastline seaward.

The study is another in a series that points up the fact that to provide an ultimate system requires more money,

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time and materials than is presently allotted for Air Defense purposes. The Air Defense Command Study Group feels that the "Lamplight" goals are impossible of achievement without a much higher degree of defense mobilization in some segments of the aircraft and electronics industry. The development on the "Lamplight" systems proposed appear to be compressed in time and simplified in implementation.

The study has highlighted to Air Defense Command, the following areas for additional study:

a. The extension seaward of the continental capability.

b. The remote air battle and tactics for use of the LRIX.

c. We feel that a detailed generalized weapon system studies for future air defense weapons should be vigorously pursued to include such ideas as feasibility of the missile platform which launches long range airborne missiles up or down from aircraft.

d. Best weapons deployment to fully utilize the future capability of the SAGE System.

Another and a very obvious conclusion, is that there is a need for the establishment of a priority procedure which will determine in what areas and upon what projects Research and Development should put priority emphasis. It is impossible to work on all projects at once with equal emphasis and additional guidance is needed for the Research and Development Command as to what projects Air Defense Command desires emphasis be placed upon.

The final conclusion is that Project "Lamplight" has not altered the basic concept of Air Defense, but has suggested some fresh ideas for consideration.

THE END

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