

RETURN TO
Historical Research Division
AFI HCA
Maxwell AFB, AL 36112

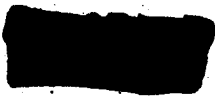
X

0 JUN 1989

EXEMPTED FROM 14 FEB 19
DECLASSIFICATION LAW EO 12958
REVIEW DATE _____ REVIEWER 61
REFER TO _____
EXEMPTION(S): ① 2 3 ④ 5 6 7 8 9



COMPLIANCE WITH 1986 AIR FORCE
NOTICE AUTOMATICALLY DECLASSIFIED
DATE 02/20/2010



DOCUMENT HISTORY OF SA/OS

~~CONFIDENTIAL~~

VOLUME

2

~~FOR OFFICIAL USE ONLY~~

Director
Aerospace Studies Inst
ATTN: Archives Branch
101 AFB, Alabama

R243.012-36
1955-1961
V.I. 2
1989

DOCUMENTS
78 to 182

Prepared by
S. A. Grassly

November 1971

DECLASSIFIED BY 604

HISTORY OFFICE
CHIEF OF STAFF

SPACE AND MISSILE SYSTEMS ORGANIZATION

~~FOR OFFICIAL USE ONLY~~

~~FOR OFFICIAL USE ONLY~~



DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

30 JUN 1989

~~CONFIDENTIAL~~

3-6466-19
00919623

[REDACTED]

DOCUMENT HISTORY OF SAMOS

1. Msg, WDG-5-6-E, 132330Z May 55.
2. Report of the Scientific Advisory Board Reconnaissance Panel on Reconnaissance from Satellite Vehicles, 28 May 56 (C/Gp3)
3. Msg, WDTR 9-1-E, 5 Sep 56.
4. Memorandum for Colonel Terhune (C/Gp3), LtCol Frederic C. E. Oder, subj: Report of Trip 18-21 September 1956, 27 Sep 56, w/atch.
5. Ltr, The Ramo-Wooldridge Corporation to LtCol F. C. E. Oder, subj: R-W Computer Developments, 8 Oct 56.
6. MFR, LtCol Quenten A. Riepe, subj: Operational Concept for WS 117L, 8 Oct 56.
7. Ltr (C/Gp3), LtCol Frederic C. E. Oder, thru AFPR Lockheed Aircraft Corp to Lockheed Aircraft Corporation, subj: Briefing on Advanced Electronic Ferret Reconnaissance System, 12 Oct 56.
8. DF, WDTR to WDO, Attn: Major Schiavo, subj: Briefing on Advanced Electronic Ferret Reconnaissance System, 12 Oct 56.
9. DF, WDTR to WDT, subj: Briefing on Advanced Electronic Ferret Reconnaissance System, 12 Oct 56.
10. Ltr (C/Gp3), LtCol Frederic C. E. Oder thru AFPRO to Lockheed Aircraft Corporation, subj: Use of Light Amplification Techniques in the Visual Reconnaissance Subsystem of WS 117L, 15 Oct 56.
11. Msg (C/Gp3), WDTR 10-6, 24 Oct 56.
12. Memo for Col Terhune and Gen Ritland (C/Gp3), subj: Reconnaissance Symposium at Fairchild Camera and Instrument Corporation, 29 Oct 56.
13. Ltr (C/Gp3), Simon Ramo, Executive VP Ramo-Wooldridge Corp, no subj, 29 Oct 56.
14. DF (C/Gp3), WDTR to WDO and WDT, subj: Operational Concept for WS 117L, 9 Nov 56.
15. MRS (DD Form 95), undated relating to above subject.

16. MRS (DD Form 95), Col Robert D. Bowers to Col Sheppard, 9 Nov 56.
 17. Memo for Col Terhune, WDT (C/Gp3), Col William A. Sheppard, WDO, subj: Operational Concept for WS 117L, 14 Nov 56.
 18. Excerpts from Committee Reports NAS-ARDC Study Group on Research and Development Objectives For the United States Air Force (C/Gp3), 1957.
 19. Memorandum for Colonel Terhune (C/Gp3), from MajGen B. A. Schriever, subj: ARS, 4 Feb 57.
 20. DF (C/Gp3), WDTR to WDT and WDG, subj: Intelligence Data Handling System Support for WS-117L, 20 Feb 57.
 21. Memo for Col Terhune (C/Gp3), from Col Frederic C. E. Oder, subj: Contractor Competition - WS 117L, 26 Feb 57.
 22. Memo for Colonel Terhune from Col Frederic C. E. Oder, subj: Proposal for WDD Management of 438L, 8 Mar 57.
 - 23.. DD Form 613 (C/Gp3), RDB Project Card, Short Title: VRSFARS117L, 2 Apr 57.
 - 24.. DD Form 613 (C/Gp3), RDB Project Card, Short Title: ERSSFARS, WS 117L, 2 Apr 57.
 - 25.. DD Form 613 (C/Gp3), RDB Project Card, Data Processing Subsystem for ARS, WS 117L, 2 Apr 57.
-
26. Ltr (C/Gp3), Brig Gen O. J. Ritland to MajGen H. H. Estes, Jr, Asst DC/Weapon System Detachment #1, Hq ARDC, Wright-Patterson AFB, subj: Coordination of WS-117L and WS-438L Intelligence Data Handling Functions, 26 Apr 57.
-
27. dupe - omitted
-
28. DF, WDFO to MCPTF, Mr. Rossbo, subj: Approval of a Feasibility Study, ca 1 May 57, w/1 Incl: Draft Statement of Work.
 29. Memorandum for Col Terhune (C/Gp3), WDTR, subj: Preparation of Preliminary Operational Concept for WS 117L, 23 May 57.
 30. Feasibility of Scientific Uses of IRBM and ICBM, Part 1, Summary of the Study, 3 Jun 57.
 31. Memo to Col Terhune, WDT, (C/Gp3), from Col Frederic C. E. Oder, signed Quanten A. Riepe, subj: WS 117L Preliminary Operational Concept, 25 Jun 57.
 32. Ltr, WDTR to BrigGen Donald P. Graul, Comdr RADC, no subj, 5 Sep 57.
 33. Memo for WDT from WDGE, Col J. L. Hamilton, subj: Visit by Brigadier General Donald P. Graul, Comdr, RADC, 16 Sep 57.

34. Msg, WDTR 10-15, 15 Oct 57.
35. Msg, RCK-1-47#, 102040Z Jan 58.
36. Ltr, RADC, BrigGen D. P. Graul, to Director of Procurement, RADC, subj: Source Selection, WS 117L, Subsystem I, 11 Jan 58.
37. Memorandum to General Schriever (C/Gp3), from WDTR sgd Col Charles H. Terhune, Jr, subj: Selection of Prime Contractor for Data Processing Subsystem, WS 117L, 15 Jan 58.
38. Msg, WDTR 1-6-E, 15 Jan 58.
39. Memo for Deputy Comdr, Weapon Systems, sgd Col J. L. Hamilton, subj: Survey of Research and Development in Support of USAF Intelligence and Reconnaissance Functions, 23 Jan 58, w/1 Incl: Ltr from Office of IG, USAF, Norton AFB, California, to Comdr, ARDC, same subj, undated.
40. DF, WDTR to WDT, WDGE, WDGA and WDSI, subj: Survey of Research and Development of USAF Intelligence and Reconnaissance Functions, 31 Jan 58.
41. Memo to General Schriever (C/Gp3), WDTR, sgd Col Charles H. Terhune, Jr, subj: Status of Prime Contractor Selection for WS 117: Data Processing Subsystem, 3 Feb 58.
42. Memorandum for Col Terhune, WDTR, sgd Col Frederic C. E. Oder, subj: R-W Participation in WS 117L, 14 Feb 58.
43. Memo for General Schriever (C/Gp3), WDTR, sgd Col Frederic C. E. Oder, subj: Preliminary Evaluation of ITEK Proposal, 18 Feb 58.
44. Memo for Col Leonard (C/Gp3), WDTR, sgd BrigGen O. J. Ritland, subj: Air Technical Information Center (AFCIN-4) Requirements in Support of WD 117L, 19 Feb 58.
45. Memo to Gen Ritland - WDGV, WDTR, sgd Col Charles H. Terhune, Jr, subj: Status of ARSIC Planning, 26 Feb 58.
46. DF (C/Gp3), MCPTA to MCPT, subj: Weekly Diary - 21 thru 27 Feb 1958, 27 Feb 58.
47. Ltr, WDIR, sgd BrigGen O. J. Ritland, subj: Request for Technical Intelligence Read-out and Processing Support for WS 117L, 25 Mar 58.
48. Weapon System 117L Program Status Report (C/Gp3), As of 15 Apr 58.
49. Weapon System 117L Program Status Report (C/Gp3), As of 15 May 58.
50. Memo for Gen Schriever (C/Gp3), WDTSRF, sgd Col Charles H. Terhune, Jr, subj: Status of Advanced Reconnaissance Systems Intelligence Center Planning, 30 Apr 58.

51. Weapon System 117L Program Status Report (C/Gp3), for Period 15 April to 31 May 1958.
52. Msg (C/Gp3),, WDTSR 6-17-E, 13 Jun 58.
53. Memo for Colonel Sheppard, WDGO (C/Gp3), WDI, sgd Col William E. Leonard, subj: Operating Agency for WS 117L, 26 Jun 58.
54. Weapon System 117L Program Status Report (C/Gp3), For Quarter Ending 30 Jun 58.
55. Msg (C/Gp3), WDGO-6-4, 020039Z Jul 58.
56. MFR (C/Gp3), WDG, sgd MajGen B. A. Schriever, subj: Operational Planning for WS-117L, 2 Jul 58.
57. Msg (C/Gp3), AFOOP-OC-R 53126, 102050Z Jul 58.
58. Ltr, WDTSR, sgd BrigGen O. J. Ritland, subj: Preliminary Operational Concept WS 117L, 15 Jul 58.
59. Msg (C/Gp3), WDTSR 7-25-E, 25 Jul 58.
60. Planning Document (C/Gp3), Draft by LtCol Schuyler, 28 Jul 58.
61. Weapon System 117L Program Status Report (C/Gp3), For Month Ending 31 Jul 58.
62. Memo for Colonel Curtin (C/Gp3), WDG, sgd MajGen B. A. Schriever, subj: WS-117L R&D Operations at Cooke Air Force Base, 6 Aug 58.
63. Msg (C/Gp3), AFCGM 056133, 21212Z Aug 58.
64. Weapon System 117L Program Status Report (C/Gp3), For Month Ending 31 Aug 58.
65. Memo for General Large (C/Gp3), WDGO, sgd MajGen B. A. Schriever, subj: Changes in WS-117L Schedules, 12 Sep 58.
66. Msg (C/Gp3), RDZGA 9-13-E, 161545Z Sep 58.
67. Ltr (C/Gp3), WDTSR, Sgd Col J. L. Hamilton, subj: Release of WS 117L Information to Foreign Nationals, 26 Sep 58.
68. Weapon System 117L Program Status Report (C/Gp3), Quarter Ending 30 Sep 58.
69. Msg (C/Gp3), DEF 949420, 102109Z Oct 58.
70. Msg (C/Gp3), WDG-11-8-E, 11 Oct 58.

71. Msg (C/Gp3), WDPF-10-1-E, 22 Oct 58.
72. Msg, RDQW-10-37-E, 232135Z Oct 58.
73. Sentry Program Status Report (S/Gp3), Month Ending 31 Oct 58.
74. Ltr (C/Gp3), WDQW, sgd MajGen B. A. Schriever, to Mr. Amron H. Katz, The RAND Corporation, no subj, 3 Dec 58.
75. Ltr (C/Gp3), WDZW, sgd MajGen B. A. Schriever to BrigGen Donald P. Gaul, Comdr, RADC, no subj, 3 Dec 58.
76. Sentry Program Status Report (S/Gp3), for November 1958, 10 Dec 58.
77. Msg (C/Gp3), WDW 12-25-E, 29 Dec 58.
78. Msg (C/Gp3, AFCIN 55022, 141543Z Jan 59.
79. ARPA Order No. 9-58 Amend No. 7, 19 Jan 59. (ARPA Order No. 9-58 and Amendments Nos 1 to 6 are contained in Document Volume I-1-3.)
80. Ltr (C/Gp3), WDW, sgd Col Richard D. Curtin for MajGen B. A. Schriever, to Asst CofS for Guided Missiles, Hq USAF, subj: WS 117L Program, 28 Jan 59.
81. Ltr (C/Gp3), WDW, sgd Col Richard D. Curtin for MajGen B. A. Schriever, to Comdr ARDC, subj: WS 117L Program, 30 Jan 59.
82. Msg (S/Gp3), AFCCM T. S. 3665, 051915Z Feb 59.
83. DOD Directive No. 5129.1, 10 Feb 59.
84. Ltr (C/Gp3), WDW, sgd BrigGen O. J. Ritland, to Asst CofS for Guided Missiles, Hq USAF, subj: WS 117L Program, 11 Feb 59.
85. Ltr (C/Gp3), WDW, sgd BrigGen O. J. Ritland, to Comdr ARDC, subj: WS 117L Program, 11 Feb 59.
86. Memorandum for the Secretary of the Air Force (C/Gp3), ARPA, sgd Roy W. Johnson, Director, subj: Policy Relating to the Official Identification of Projects DISCOVERER, SENTRY, and MIDAS, 12 Feb 59.
87. Ltr, AMC (SMAMA), sgd MajGen George E. Price, to Comdr AMC, subj: Support of Space Programs, 13 Feb 59.
88. Memorandum for the Commander, AFBMD, from ARPA, sgd Roy W. Johnson, subj: Status Report on Discoverer, Sentry and Midas Programs, 13 Feb 59.
89. ARPA Order No. 9-58 Amend No. 8, 15 Feb 59.
90. MFR, WDGE, subj: Call from Colonel Hart to Colonel Hamilton, 17 Feb 59.
91. Memo to WDW, Sgd R. D. Curtin, subj: ARPA Memos Attached, 17 Feb 59. (See Memo from ARPA, 13 Feb 59.)

92. Msg, RDZCW-20-2-36-E, 261932Z Feb 59.
93. Msg (C/Gp3), WDZW-2-17-E, 26 Feb 59.
94. Ltr (Uncl w/o Incl), WDWNS, sgd Brig Gen Ritland, to MajGen H. E. Watson, Dep Asst CofS for Intelligence, no subj: 27 Feb 59, w/1 Incl: WDWNS Memo for Gen Ritland (C/Gp3), 19 Feb 59.
95. Ltr, WDWNS sgd BrigGen Ritland, to Lockheed Aircraft Corporation, subj: Summary of AFBMD Review of WS llyL Drafting Practices, 17 Mar 59.
96. DOD Directive No. 5105.15 (FOUO), 17 Mar 59.
97. Ltr, WDG, sgd MajGen B. A. Schriever, to Comdr 1st Missile Division, subj: Support Requirements for the Sentry Program, 19 Mar 59.
98. Ltr (C/Gp3), AFDAT, sgd BrigGen H. A. Boushey, to Comdr, AFBMD, subj: Management of Sentry, 25 Mar 59.
99. DF, LBJ to LBG-2, subj: Weekly Diary - 20 thru 26 Mar 59, 26 Mar 59.
100. ARPA Order No. 9-58 Amend No. 9 (C/Gp3), 1 Apr 59.
101. Msg (C/Gp3), WDZW-3-32-E, 1 Apr 59.
102. ARPA Order No. 9-58 Amend No. 10 (C/Gp3), 3 Apr 59.
-
103. Memorandum for Deputies, Directors and Chiefs of Comparable Offices, from DAF, sgd MajGen Jacob E. Smart; subj: Responsibility for Space Projects, 6 Apr 59.
104. Ltr (C/Gp3), Hq 1st Missile Div, sgd MajGen David Wade, to AFBMD, subj: Support Requirements for the Sentry Program, ca 13 Apr 59.
105. ARPA Order No. 9-58 Amend No. 11 (C/Gp3), 14 Apr 59.
106. Sentry Monthly Program Progress Report (C/Gp3), 8 May 59.
107. Memo for the Secretary of the Air Force (C/Gp3), ARPA, sgd Roy W. Johnson, subj: ARPA Prder No. 9-58, SENTRY Project, 25 May 59.
108. Msg (C/Gp3), RDQGW-26-5-43E, 262100Z May 59.
109. Msg (C/Gp3), WDZW-5-31E, 28 May 59.
110. Msg (C/Gp3), AFCCM 51490, 291417Z May 59.
111. Msg (C/Gp3), AFDAT 52070, 052042Z Jun 59.

112. Ltr (S/Gp3), WDPCR, sgd BrigGen O. J. Ritland, to Director, ARPA, subj: SENTRY Monthly Program Progress Report, 31 May 59, 8 Jun 59.
113. Msg (S/Gp3), RDRCR-12-6-61-E, 122050Z Jun 59.
114. Msg (S/Gp3), WCG 30685-E, 121400Z Jun 59.
115. GO No. 54 ARDC 17 Jun 59.
116. Msg (C/Gp3), RDZGW-24-6-31E, 242105Z Jun 59.
117. ARPA Order No. 9-50 Amend No. 12, 1 Jul 59.
118. Ltr (S/Gp3), WDZWP, sgd MajGen O. J. Ritland to Hq USAF (AFDAT), subj: Transmittal of Development Plans, 18 Jul 59.
119. Ltr (S/Gp3), WDZWT, sgd Col Richard D. Curtin, to ARDC (RDZGW, Col Worthman, subj: Short Title: SRP, 18 Jul 59.
120. MFR (FAFEO), sgd LtCol George H. Mathews, subj: Telecon between Colonel Wikstrom and Lt Colonel Mathews this office, 24 Jul 59.
121. ARPA Order No. 9-60 Amend No. 13, 30 Jul 59.
122. MFR, WDG, subj: Telephone Call from General Schriever to General Ritland, 31 Jul 59.
123. Msg (S/Gp3), WDZGWG-31-7-38-E, 311600Z Jul 59.
124. Ltr (S/Gp3), ARDC, sgd LtGen B. A. Schriever, to General Thomas D. White, CofS, USAF, no subj, 1 Aug 59.
125. Ltr (S/Gp3), DAF, sgd Gen Curtis E. Lemay, to Comdr, ARDC, subj: Assignment of Operational Planning Responsibility, 5 Aug 59.
126. Msg (C/Gp3), DEP 963459, 070824Z Aug 59.
127. Ltr (S/Gp3), WDPCR, sgd Col Frederic C. E. Odeh for MajGen O. J. Ritland, to Director, ARPA, subj: SENTRY Program Progress Report for the Month of July 1959, 7 Aug 59.
128. Msg (C/Gp3), AFKPD-PL 63506, 132029Z Aug 59.
129. Ltr, WDG, sgd MajGen O. J. Ritland to BrigGen D. P. Graul, Comdr, RADC, subj: Assignment of Personnel at Denver Colorado, 17 Aug 59.
130. Msg (S/Gp3), WDI-8-8-E, 19 Aug 59.

131. Ltr (S/Gp3), WDZSO, sgd Col Harry L. Evans, to AC [SAC MIKE], subj: Interpretation of 5 August Letter from Vice Chief of Staff, 20 Aug 59. w/1 Atch: Sentry Operational Planning Procedures (S/Gp3)

132. Ltr (S/Gp3), DPL, sgd MajGen Charles B. Westover, to SAC MEKE, subj: Assignment of Operational Planning Responsibility, 21 Aug 59.
133. ARPA Order No. 9-60 Amend No. 14, 27 Aug 59.
134. Ltr (S/Gp3), DSSP, sgd Col John F. Batjer, subj: Interpretation of Letter from Vice Chief of Staff, 3 Sep 59.
135. SAMOS Program Progress Report as of 31 Aug 1959 (S/Gp3), 8 Sep 59.
136. Msg (S/Gp3), DEF 964914 from ARPA, 042209Z Sep 59.
137. Memorandum for Secretary of Defense (C/Gp4), from DAF, -no subj, 9 Sep 59, w/Atch 1 of 3 Atch: Memorandum for Secretary of the Air Force, (C/Gp4), subj: Transmittal of the Fiscal Year 1961 Budget Estimate, 9 Sep 59.
138. Ltr (S/Gp3), DSSP, sgd Col John F. Batjer, to SAC (DPL), subj: Assignment of Operational Planning Responsibility, 10 Sep 59.
139. Msg (S/Gp3), DEF 965117 from ARPA, 101736Z Sep 59.
140. Ltr (S/Gp3), LtGen B. A. Schriever to Gen Thomas D. White, no subj, 15 Sep 59.
141. Msg (S/Gp3), from CINCSAC, DPLBC 2477, 170031Z Sep 59.
142. Memorandum for The Chairman, Joint Chiefs of Staff (C/Gp4), subj: Coordination of Satellite and Space Vehicle Operations, 18 Sep 59.
143. Ltr (FOUO), from Hq USAF sgd Gen Curtis E. LeMay, to Comdr ARDC, subj: Air Force Responsibilities to Other Elements of the DOD for Space Systems, 21 Sep 59.
144. Agreement for Coordinated Peacetime Operation of the Pacific Missile Range, 22 Sep 59.
145. GO No. 207 ARDC 25 Sep 59.
146. ARDC Movement Order Nr 1, 4999th Data Processing Squadron, 30 Sep 59.
147. Msg (S/Gp3), AFDAT for BMD 78228, 302126Z Sep 59.
148. Msg (S/Gp3), CINCSAC DPLB 2999, 302245Z Sep 59.
149. Msg (S/Gp3), fm Hq USAF AFDAT 78900, 021502Z Oct 59.
150. Msg (S/Gp3), fm Comdr ARDC RDZGW-2-10-4E, 022000Z Oct 59.

151. Msg (S/Gp3), Hq USAF AFDAT 80589, 072157Z Oct 59.
152. ARPA Order No. 9-60 Amendment No. 15, 8 Oct 59.
153. Msg (S/Gp3), WDZT-10-11-E, 16 Oct 59.
154. Msg (S/Gp3), fm Comdr ARDC to AFBMD, 211035Z Oct 59.
155. Msg (S/Gp3), fm Hq USAF, AFCEM 85157, 231458Z Oct 59.
156. Msg (S/Gp3), fm ARDC RDRRB-23-31-E, 231715Z Oct 59.
157. Mission Statement 6594th Test Wing (S/Gp3), AFBMD (ARDC), 26 Oct 59.
158. Interoffice Correspondence (C/Gp3), STL, R. F. Mettler to MajGen O. J. Ritland, subj: Operating Concepts for Military Satellite Systems, 2 Nov 59.
159. Msg (S/Gp3), WDZSO-11-1-E, 3 Nov 59.
160. MFR (S/Gp3), subj: SAMOS, MIDAS and DISCOVERER Programs, 6 Nov 59.
161. Msg (S/Gp3), fm CINCSAC, DPL 4298, 060010Z Nov 59.
162. Ltr (S/Gp3), AFBMD (WDPCR), to Director ARPA, subj: SAMOS Program Report, 31 Oct 59, 9 Nov 59.
163. ARDC Form 111, subj: Advanced Reconnaissance System, 13 Nov 59.
164. Memorandum for the Secretary of the Air Force (S/Gp3), SOD, subj: Transfer of the SAMSO Development Program to the Department of the Air Force, 17 Nov 59.
165. Msg (S/Gp3), WDZF-11-6-E, 17 Nov 59.
166. Msg (S/Gp3), CINCSAC DPL 4985, 010130Z Dec 59.
167. ARPA Order No. 9-60 Amend No. 16 (C/Gp3), 3 Dec 59.
168. Ltr (C/Gp3), WDZ to STL (Dr. Mettler), subj: Operational Concept for Military Satellite Systems, 4 Dec 59.
169. Msg (C/Gp3), fm SAC DPLBC 5184, 042122Z Dec 59.
170. DOD Memorandum for the Assistant Secretary of Defense (Comptroller) (C/Gp3), 7 Dec 59.
171. Memorandum for the Secretary of the Air Force. (S/Gp3), subj: Intelligence System SAMOS, 7 Dec 59.

172. Ltr, WDZ, sgd MajGen O. J. Ritland to Mr. Donald W. Douglas, Jr, subj: Thor Boosters, 8 Dec 59.
173. Msg (C/Gp3), Fm Hq USAF, AFDAT 95614, 09009Z Dec 59.
174. Chronological Sequence of SAMOS Operational Employment Activities, (S/Gp3) 11 Dec 59.
175. Msg (S/Gp3), SAC Offutt AFB to CofS Hq USAF, VC 5540, 161725A Dec 59.
176. Msg (S/Gp3), SAF Offutt AFB to ARDC, VC 5541, 161725 Dec 59.
177. Ltr fm Comdr, ARDC to General Thomas S. Power, CINCSAC, no subj, 15 Dec 59.
178. Report (S/Gp3), subj: Principal Problems of Major Air Commands, 21 Dec 59.
179. Msg (S/Gp3), fm Hq USAF AFDAT 98212, 212141Z Dec 59.
180. Msg (S/Gp3), fm Hq USAF to SAC, AFCVC 98219, 212156Z Dec 59.
181. Msg (S/Gp3), fm CINCSAC, DPL 5919, 302300Z Dec 59.
182. Msg (S/Gp3), fm AFBMD to Hq ARDC, WDZF-12-14-E, 31 Dec 59.
183. Msg (S/Gp3), fm SAC to CofS, info: ARDC, VC 0206, 4 Jan 60.
184. Msg (S/Gp3), fm ADC to AFBMD, ADLPD-p-1, 041922Z Jan 60.
185. Msg (S/Gp3), fm ARDC to AFBMD, RDRRB-4-1-4E, 042120Z Jan 60.
-
186. Msg (C/Gp3), fm Hq USAF, AFDAT 61415, 072251Z Jan 60.
187. Ltr (S/Gp3), AFORQ-WB, to Members, Weapons Board, subj: Report of Weapons Board Meeting 60-1, 11 Jan 60.
188. Msg (S/Gp3), SAC to CofS USAF, VC 0706, 19 Jan 60.
-
189. Ltr, AFBMD (WDZ), to WDGV, subj: Visit of DOD Advisory Group on Electronics (Baker Committee), 27 Jan 60, w/o Atch 1 of 2 Atchs: Agenda.
190. Msg (S/Gp3), CINCSAC to Hq USAF, info: ARDC and AFBMD, VC 0847, 281620Z Jan 60.
191. Msg (S/Gp3), Hq USAF to Comdr ARDC, Info: Comdrs AFBMD, ADC, SAC, AMC, AFDAT 66936, 292335Z Jan 60.

192. Ltr (S/Gp3), WDZP to Hq USAF (AFDAT, subj: Transmittal of Discoverer, SAMOS and MIDAS Development Plans, 30 Jan 60.
193. Msg (C/Gp3), fm AFBMD to CofS, info: ARDC, WDZY-1-6-E, 1 Feb 60.
194. LMSD Report (S/Gp4), Suggested Thorad/Agens Combination for SAMOS Program, 11 Feb 60.
195. Msg (S/Gp3), fm Hq USAF, AFDAT 70703, 152057Z Feb 60.
196. Msg (S/Gp3), fm SAC MIKE to CINCSAC, DDS-2-1-E, 16 Feb 60.
197. Chronology (S/Gp3), 17 Feb 60.
198. Msg (S/Gp3), fm Hq USAF to AFBMD and ARDC, AFABF and AFDDP 73993, 271712Z Feb 60.
199. Ltr (S/Gp1), fm WZ to ARDC, subj: Joint French - U. S. Military Satellite Project, 29 Feb 60.
200. Current Status Report (S/Gp3), Feb 60.
201. Status Report - SAMOS (S/Gp3), Mar 60.
202. Memorandum for the Secretary of the Air Force (S/Gp3), subj: Intelligence System SAMOS, Apr 60. [Written 7 Dec 59]
203. Current Status Report (S/Gp3), Apr 60.
204. Ltr, ARDC, sgd MajGen James Ferguson to AFBMD, subj: User Participation, 12 Apr 60, w/1 Atch: Policy Statement.
205. Memorandum for Secretary of the Air Force (S/Gp3), sgd Herbert F. York, subj: SAMOS, MIDAS and DISCOVERER Research and Development Programs and Development/Operational Plans for SAMOS and MIDAS Programs, 20 Apr 60.
206. Ltr (S/Gp3), Lockheed Aircraft Corporation to AFBMD, subj: Augmented Re-Entry and Recovery Program, 19 May 60, w/1 Atch: Proposed Augmented Re-Entry & Recovery Program.
207. Msg (S/Gp3), fm AFBMD to ARDC, WDZY-4897, 24 May 60.
208. Ltr (S/Gp3), DAF (AFDST-AT) sgd LtGen Roscoe C. Wilson, subj: Exploitation of Initial SAMOS Data, 1 Jun 60.
209. Msg (S/Gp3), fm AFBMD to LMSD, Sunnyvale, Calif, WDZY-5271, 1 Jun 60.
210. Ltr (S/Gp3), ARDC (RDY), sgd MajGen James Ferguson, subj: Exploitation of Initial SAMOS Data, 14 Jun 60.
211. Briefing Charts - 1 June Guidance (Gen Wilson ltr).
212. Memorandum for Secretaries of the Army, Navy and the Air Force fm Secretary of Defense, subj: Coordination of Satellite and Space Vehicle Operations, 16 Jun 60.

213. Ltr (S/Gp3), fm CINCSAC to LtGen Bernard A. Schriever, Comdr ARDC, no subj, 16 Jun 60, w/1 Atch: CINCSAC Ltr to Gen Thomas D. White, 16 Jun 60.
214. Ltr (S/Gp3) fm USAF CofS Thomas D. White to Gen Thomas S. Power, CINCSAC, subj: SAMOS and MIDAS, 16 Jun 60.
215. Ltr (S/Gp3), fm Lockheed Aircraft Corp, to AFBMD, subj: Augmented Re-entry and Recovery Program, 20 Jun 60, w/1 Atch: Subcontract Work Statement, IMSD/362527.
216. Ltr (S/Gp3), AFCIN to AFORQ (Gen Smith), subj: Letter of Nonconcurrence, 21 Jun 60, w/o atchs.
217. Back-up Material for Secy Gates presentation to the President (S/Gp3), subj: SAMOS, 23 Jun 60.
218. Ltr (C/Gp4), SAC MIKE, AC, to Major Spindler, subj: SAMOS, 24 Jun 60.
219. Ltr (S/Gp3), sgd Gen Thomas S. Power, CinCSAC to Gen Thomas D. White, USAF CofS, no subj, 24 Jun 60.
220. Ltr (S/Gp3), sgd Gen Thomas S. Power, CINCSAC to LtGen Bernard A. Schriever, comdr ARDC, no subj, 24 Jun 60.
221. Ltr (S/Gp3), Hq USAF, AFCIN to DCS/D, subj: SAMOS, 24 Jun 60.
222. SSS (S/Gp3), fm AFDS-AT, sgd John L. Martin, Jr, subj: SAMOS, 27 Jun 60, w/o Atchs.
223. Ltr (S/Gp3), sgd Col Lowell E. May, Chairman, Satellite Intelligence Requirement Committee to Secretary, United States Requirements Committee, subj: Transmittal of Intelligence Requirements for Satellite Reconnaissance Systems of which SAMOS is an Example, 29 Jun 60, w/1 Atch: Proposed letter of SOD.
224. Supplemental Hq USAF Guidance to ARDC, SAC and ADC Concerning SAMOS (S/Gp3), 29 Jun 60.
225. Ltr (S/Gp3), fm Hq USAF, Office of CofS, AFCCS, to Gen Thomas R. Power, CINCSAC, subj: SAMOS, 29 Jun 60.
226. Ltr (S/Gp3), Hq USAF, AFDS-AT to Multiple Addresses, subj: SAMOS, 30 Jun 60, w/o Atchs.
227. Ltr (S/Gp3), Hq USAF, AFORQ-PN/Panel, to Reconnaissance Panel and SAMOS working Group Members, subj: Minutes of Joint Meeting of Reconnaissance Panel and SAMOS Working Group, 1 Jul 60, 1 Jul 60, w/4 Atchs of 5 Atchs: 1. Ltr fm Gen Wilson to ARDC, 1 Jun 60 (S); 2. Ltr fm Gen White to Gen Power, 29 Jun 60 (S); 3. Supplemental Guidance by Gen Strother (S); 4. Factors considered in Guidance Preparation (S).

228. Intelligence Requirements for Satellite Reconnaissance Systems of which SAMOS is an Example (S/Gp3), 5 Jul 60, w/o Atchs.
229. Ltr (S/Gp3), AFORQ-RN/Panel to Reconnaissance Panel and SAMOS Working Group Members, subj: Minutes of Joint Meeting of the Reconnaissance Panel and SAMOS Working Group, 6 Jul 60, 6 Jul 60.
230. Ltr (S/Gp3), AFORQ-RN/Panel to Reconnaissance Panel and SAMOS Working Group Members, subj: Minutes of Joint Meeting of the Reconnaissance Panel and SAMOS Working Group, 7 Jul 60, 11 Jul 60.
231. Msg (S/Gp3), fm Hq USAF to Comdr ARDC, info: Comdr AFBMD, 20 Jul 60.
232. Ltr, AFBMD (WDLPR-3, to WDLE-1, WDZ and WDG In Turn, subj: Request for Approval - PR-61-BMD-59, 25 Jul 60.
233. Ltr (S/Gp3), sgd Gen Thomas S. Power, to Gen Thomas D. White, CofS, subj: SAMOS, 26 Jul 60.
234. Special Order No. 540 AFBMD 27 Jul 60.
235. Ltr (S/Gp3), SAC MIKE (DSS, to WDZ, subj: SAMOS System Improvement, 29 Jul 60.
236. SO No. 562 AFBMD 4 Aug 60.
236. Ltr (C/Gp4), WDZ to Col Paul J. Heran, Chairman, Source Selection Board, E-6 SAMOS, 30 Jul 60.
237. Msg (S/Gp3), fm AFBMD to AFBMD Field Office, Patrick AFB, WDEY-2-3-1, 2 Aug 60.
239. Msg (S/Gp3), fm Hq AFBMD to 1st M&I Div, Vandenberg AFB, info: ARDC, WDLL 4-8-3, 4 Aug 60.
240. Msg (S/Gp3), fm Comdr, Hq AFBMD, to Comdr ARDC, WDG-6-8-20, 7 Aug 60.
241. Ltr, WDG to WDZ, subj: RAND Letter L-15001, w/1 Atch, Ltr RAND Corp, 29 Jul 60.
242. Ltr, WDG to Mr. Herschel J. Brown, VP and Gen Mgr, Lockheed Missile and Space Division, no subj, 10 Aug 60.
243. Ltr, AFBMD (WDZE), to WDA, subj Organizational Announcement, 10 Aug 60, w/2 Atch: 1. Symbol Listing for WDR, Space Security Reconnaissance; 2. Symbol Listing for WDZ, Space Programs.
244. SAMOS Launch Schedule Revisions (S/Gp3), 11 Aug Development Plan.
245. Ltr (FOUO), WDV to Col Evans (WDZ), subj: Issuance of RFP's on the SAMOS Second Source, 12 Aug 60, w/1 Atch: MFR, 12 Aug 60.

246. Ltr (C/Gp3), WDZ, sgd MajGen O. J. Ritland, to Dr. Ivan A. Getting, Pres, The Aerospace Corporation, subj: SAMOS Program, 12 Aug 60.
247. Ltr (S/Gp3), sgd Thomas D. White, CofS, to Gen Thomas S. Power, CINCSAC, subj: SAMOS, 17 Aug 60.
248. MFR (S/Gp3), AFARF-10, sgd Lewis C. Meyer, Ch, RD& Missile Div, Directorate of Budget, subj: SAMOS Revised Development Plan, 18 Aug 60.
249. MFR (S/Gp3), prepared by Maj. H. C. Howard, AFDS, subj: SAMOS Management Plan, 22 Aug 60, w/1 Atch: Changes to the Current Status Report SAMOS.
250. Ltr, AFCCS to Deputies, Directors and Chiefs of Comparable Offices (No. 10), subj: Briefings for Individuals outside of the Executive Branch of the Federal Government, 29 Aug 60.
251. Secretary of the Air Force Order No. 115.1, subj: Organization and Functions of the Office of Missile and Satellite Systems, 31 Aug 60.
252. Secretary of the Air Force Order No. 116.1, subj: The Director of the SAMOS Project, 31 Aug 60.
253. Memorandum for the Chief of Staff from Dudley C. Sharp, Secretary of the Air Force, 31 Aug 60, w/1 Atch: List of assigned personnel.
254. Organization and Functions of the Office of Missile and Satellite Systems, ca 31 Aug 60.
255. Status Report (S/Gp3), subj: SAMOS (WS 117M), 31 Aug 60.
256. SO No. 649 AFBMD 2 Sep 60.
257. Ltr (C/Gp4), WDRSC to WDZJS, subj: Thor Boosters for SAMOS Program, 6 Sep 60.
258. Revised FY 1961 and FY 1962 Communication Cost Estimate Budget Projects 840 & 850 - SAMOS (S/Gp3), 12 Sep 60.
259. Memorandum for the Secretary of the Air Force (FOUO), subj: Reconnaissance Satellite Program, sgd James H. Douglas, Acting SOD, 15 Sep 60.
260. Ltr, SAFMS-1, sig BrigGen Robert E. Greer, subj: Establishment of SAMOS Project Office, 15 Sep 60.
261. GO No. 96 ARDC (FOUO), subj: Discontinuance of 4999th Data Processing Squadron, 21 Sep 60.

262. Director of SAMOS and Deputy Commander Space Programs Organization, 22 Sep 60.
263. GO No. 40 DAF, subj: Abolishment of the Office of the Assistant Chief of Staff, Guided Missiles, 23 Sep 60.
264. Ltr, AFBMD (WDG), sgd BrigGen Harvard W. Powell, to Deputy Commanders, Deputy Chiefs of Staff, Chiefs of Special Staff Offices, Chiefs of Offices through Directorate Level and Commanders of AFBMD Subordinate Organizations, subj: Correspondence Pertaining to the SAMOS Project, 26 Sep 60.
265. Ltr (S/Gp3), SAFMS-IDP to WDGE, subj: Items for Inclusion in AFBMD Chronology for Period 1 Jan - 30 Jun 60, 23 Sep 60, w/o Atch.
266. SAMOS Directives and/or Guidance (S/Gp3), ca Oct 1960.
267. SAMOS Program Progress Report Month Ending 30 Sep 60 (RCS: DD-DR&E (M) 397, 10 Oct 60.
268. AFBMD News Release, subj: SAMOS I Fact Sheet, ca 11 Oct 60.
269. Msg from AFBMD to ARDC, WDLP-17-10-7, 18 Oct 60.
270. Draft News Release, 18 Nov 60.
271. Draft News Release, 21 Nov 60.
272. Draft News Release, 21 Nov 60.
273. Mission Statement, 6594th Test Wing, 29 Dec 60.
274. Chronology of Sentry and SAMOS Program 2 March 1959 to December 1960, (S/Gp3), Jan 61.
275. Ltr, Aerospace Defense Systems Office (ADC), ADSO to WDL, subj: Using Command Participation, 24 Jan 61, w/o Atch.
276. AFBMD News Release 61-18, ca 31 Jan 61.
277. AFBMD News Release 60-82, subj: SAMOS II Fact Sheet, ca 31 Jan 61.
278. Msg (C/Gp3), fm AFCCS to ARDC, AFCCS 87626, 092319Z Feb 61.
279. SO No. G-15, ARDC, 16 Feb 61.
280. Ltr (C/Gp4), WZJJS, to LBZST, subj: Procurement of 4 Thor Boosters, 14 Mar 61.

281. Ltr, sgf BrigGen Harvard W. Powell, to Comdr Pac Msl Rg, Point Mugu, Calif, subj: PMR Support of SAMOS and MIDAS Programs, ; 7 Apr 61.
282. Memorandum for the Secretary of Defense, Attn: BrigGen George S. Brown, (S/Gp3), subj: SAMOS Launch Report, 11 Sep 61.

CONFIDENTIAL

IC 450
78

RECEIVED
VDD ARS
ACTION *ADZU*

4 JAN 1978

INFO: *ADZU*

ADZU

0210
0210
0210
0210
0210

TO RADM/COMNAVFOR INGLEWOOD CALIF
FROM RADM/COMNAVFOR ANDRES AFB MD ATTN ROUTE

E S S E T//AFCEIN 50022

RE HQS MESSAGE-1-10-78 AND YOUR LETTER DATED 24 SEPTEMBER 1978 SUBJECT
RELEASE OF 117L INFORMATION TO FOREIGN NATIONALS. THE POLICY
POLICY REGARDING THE RELEASE OF ANY 117 L PROGRAM INFORMATION IS THAT
RELEASES WILL BE MADE TO FOREIGNERS, EXCEPT, DEPT EXCEPT, WHEN
SPECIFICALLY AUTHORIZED BY THE ASSISTANT CHIEF OF STAFF, INTELLIGENCE,
AND HEAD, ASSISTANT CHIEF OF STAFF, INTELLIGENCE WILL CONSIDER THE
RELEASE OF 117L INFORMATION TO FOREIGN NATIONALS ON A CASE BY CASE
BASIS IN ACCORDANCE WITH THE AFCEIN AND PERTINENT AF SECURITY REGUL-
ATIONS. FOREIGN NATIONALS ACCREDITED TO YOUR HQS WILL NOT BE PERMITTED

BACK TWO PAGES 322
ACCESS TO 117L INFORMATION UNLESS SPECIFICALLY AUTHORIZED TO RECEIVE
THIS INFORMATION BY AFCEIN. INSTANTIONS ON GERMINE ROUTINE OF INTELLI-
GENCE COLLECTION ASPECTS WILL BE FURNISHED THROUGH SEPARATE CHANNELS BY
AFCEIN-1A3.

BT
30/1604Z JAN 1978

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

0210

ACK REC

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

CONFIDENTIAL

SECRET

*WDSMC-1 51-128
y#6*



ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

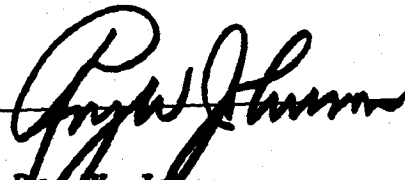
79

ARPA Order No. 9-58
Amendment No. 7

January 19, 1959 Date

TO: The Secretary of the Air Force
Washington 25, D. C.

ARPA Order No. 9-58, dated June 30, 1958, as amended, is hereby further amended to increase the fund availability from \$136,200,000 to a new total of \$148,200,000 under appropriation and account symbol "97X0113.002 Salaries and Expenses, Advanced Research Projects Agency, Department of Defense."


Roy W. Johnson
Director

Copy to: Commander, ARDC

[Handwritten signature]

[Faint stamp]

28 JAN 1959

SUBJECT: (U) WS 117L Program

DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED. DOD DIR 5200.10

TO: Assistant Chief of Staff for Guided Missiles
Headquarters, United States Air Force
Washington 25, D. C.

274

1. Transmitted herewith are the following four (4) AFEMD Development Plans: DISCOVERER Program, SENTRY Program, MIDAS Program, and CAROUSEL Program.

2. The first three (3) of these plans, DISCOVERER, SENTRY, and MIDAS, propose joint ARPA-Air Force funding. In each plan Air Force and ARPA cost are separately identified. The separation of the total program cost into Air Force cost and ARPA cost has been made in accordance with available guidance.

3. It must be emphasized that DISCOVERER and SENTRY Programs are interdependent programs and partial approval of either program will require reconsideration of both efforts. Further, in the interests of economy and efficiency, the MIDAS Program is based on the assumption that the proposed DISCOVERER and SENTRY Programs are approved in their entirety.

4. The fourth plan, the CAROUSEL Program, provides for complete Air Force funding. This program will utilize the facilities and recovery force of the DISCOVERER Program.

5. In the past year the WS 117L Program has been plagued with instability, inadequate or untimely decisions, or the lack of a decision at all. This instability culminated in the reorientation of this program in December 1958, which is the primary purpose of the submission of these new plans. Additionally, a serious funding problem has been encountered particularly in the present fiscal year. This problem is related to the incremental funding of the WS 117L Program on a month to month basis. This funding condition has been a major difficulty for the program and has been the primary reason for the submission of these new plans.

CONFIDENTIAL

6. In order to stabilize the program and initiate contractual actions for the continuation of the program it is requested that expeditious action be taken to accomplish the following:

- a. Immediate release of the remaining fiscal year 1959 funds.
- b. Early coordinated Air Force and ARPA approval of joint programs.
- c. Early Air Force approval of Project Carousel.

RICHARD D. CURTIN
Colonel, USAF

R. A. SCHRIEVER
Major General, USAF
Commander

- 4 Incls:
- 1. ~~DISCOVERER-Cys 1 thru 5~~
(S) WDPP-59-10
 - 2. ~~SENTRY-Cys 1 thru 5~~
(S) WDPP-59-11
 - 3. ~~MIDAS-Cys 1 thru 5~~
(S) WDPP-59-12
 - 4. ~~CAROUSEL-Cys 1 thru 5~~
(S) WDPP-59-13

Cy. Furnished;
Commander, ARDC

CONFIDENTIAL

JAN 30 1959

WDZW

SUBJECT: (U) WS 117L Program

TO: Commander
Air Research and Development Command
Andrews Air Force Base
Washington 25, D. C.

DOWNGRADED AT 10 YEAR
INTERVALS, BUT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

296

1. Four new development plans; DISCOVERER, SENTRY, MIDAS and CAROUSEL; describing the reoriented WS 117L Program have been forwarded directly to the Assistant Chief of Staff for Guided Missiles, Headquarters, USAF. This action has been taken in order to meet the requirements of the Headquarters, USAF, imposed presentation schedule for these plans.

2. This schedule requires that presentations be given to the Air Staff on 2 February 1959 and to the Advanced Research Projects Agency on 3 February 1959.

3. ARDC representatives will be present at the Air Staff briefing and a limited number of copies of these four plans will be delivered to them at that time.

4. Normal distribution will be made to your headquarters immediately upon completion of the reproduction of the plans.

5. The first three (3) of these plans, DISCOVERER, SENTRY, and MIDAS, propose joint ARPA-Air Force funding. In each plan Air Force and ARPA costs are separately identified. The separation of the total program cost into Air Force cost and ARPA cost has been made in accordance with available guidance.

6. It must be emphasized that DISCOVERER and SENTRY programs are interdependent programs and partial approval of either program will require reconsideration of both efforts. Further, in the interests of economy and efficiency, the MIDAS program

CONFIDENTIAL

CONFIDENTIAL

~~CONFIDENTIAL~~

... provides for some ...
... This program will utilize the facilities ...
... of the DISCOVERY Program.

... the past year the NS-117L Program has been plagued ...
... instability, inadequate or untimely decision, or the lack of ...
... a decision at all. This instability culminated in the reorientation ...
... of this program in December 1958, which is the primary purpose for ...
... the submission of these new plans. Additionally, a serious funding ...
... problem has been encountered particularly in the present fiscal ...
... year. This problem is related to the incremental funding of the ...
... NS-117L Program on a month to month basis. This funding condition ...
... has made an otherwise difficult job more difficult and has been ...
... the cause of considerable concern within AFEMD and its contractors.

9. In order to stabilize the program and initiate contractual ...
... actions for the continuation of the program, Air Force Headquarters ...
... has been requested to take expeditious action to accomplish the ...
... following:

- a. Immediate release of the remaining fiscal year 1959 ...
... funds.
- b. Early coordinated Air Force and ARPA approval of ...
... joint programs.
- c. Early Air Force approval of Project Carousel.

Copy Furnished:
Assistant Chief of Staff
for Guided Missiles, Hq USAF,
Washington 25, D. C.

RICHARD D. CURTIN
Colonel, USAF

E. A. SCHRIEVER
Major General, USAF
Commander

~~CONFIDENTIAL~~

WDZW dh(30 Jan 59) 1812

WDZW 59-97

~~CONFIDENTIAL~~

RECEIVED
WDD ARDC
ACTION _____

10/230 ✓ 82
10/12
5 Feb 59

~~SECRET~~

5 FEB 1959 20 31
INFO: _____

Classification Changed To
~~SECRET~~
By Mr. J. R. T. W. A. F. M. N. 38798
Authority Of 20664 59
Date 23 Oct 59
Initials J. Reed, J. T. S. C. O.

PP RUMER
DE RUMER 377
P 9519152
FM HQ USAF WASH DC
TO RJEZFF/COMARDC ANDREWS AFB MD
RUMER/CINCSAC OFFUTT AFB OHANA NEBR
INFO RUMER/COMAFMD INGLEWOOD CALIF
BT

~~TOP SECRET~~/FROM AFGCN T.S. 3665
REFERENCE AFGCN TS 3366 AND AFGCN 3393 TO COMARDC,
WHICH ARE SUPERSEDED AND SHOULD BE DESTROYED IN ACCORD-
ANCE WITH AFR 205-1 UPON RECEIPT OF THIS MESSAGE.

THIS MESSAGE INF FOUR (4) PARTS.
PART I. PURSUANT TO PRESIDENTIAL DIRECTIVE, ALL
US SPACE SATELLITES MUST BE ADVERTISED AS BEING SOLELY
FOR PEACEFUL PURPOSES. IT IS ACCEPTED, HOWEVER, THAT WE
MUST DEVELOP A CAPABILITY TO USE SPACE FOR RECONNAISSANCE
OR OTHER MILITARY PURPOSES AND SEEK CONGRESSIONAL SUPPORT

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~SECRET~~

DOWNGRADED AT
INTERVALS; NOT AUTO-
DECLASSIFIED. DOD DIR

PAGE TWO RJEZQ 377
FOR DOING SO. THE PROGRAMS DESIGNED AS WS-117L AND/OR
SENTRY HAVE PREVIOUSLY BEEN SUPPORTED AS MILITARY PRO-
GRAMS AND ADVERTISED AS RECONNAISSANCE SATELLITES.
PART II. MR. JOHNSON, DIRECTOR OF ADVANCED RESEARCH
PROJECTS AGENCY, ADVERTISED THAT PROJECT DISCOVERER AND
PROJECT MIDAS ARE FOR PEACEFUL PURPOSES. EVERY FIRING
INTO SPACE, AS WELL AS ARDC'S FACILITIES AND SUPPORT OF
THESE PROGRAMS MUST BE ASSOCIATED WITH DISCOVERER, MIDAS
OR OTHER PROJECTS DECLARED TO BE FOR PEACEFUL PURPOSES.
IN VIEW OF THIS, HQ USAF IS FORMULATING A COVER PLAN FOR
ALL OUR SPACE ACTIVITIES OF A MILITARY NATURE, THIS
ENTAILS, AMONG OTHER THINGS, ADVERTISING ARDC AS BOTH
DEVELOPER AND OPERATOR. THE LATEST PROGRAMMING DOCUMENTS
WILL INDICATE ARDC AS THE COMMAND TO ACTIVATE THIS
SYSTEM. OUR INTENT TO MAN THIS SYSTEM WITH SAC PERSONNEL
AS WELL AS ARDC PERSONNEL WILL NOT BE INDICATED, NOR
WILL OUR INTENT EVENTUALLY TO TRANSFER THE ENTIRE SYSTEM
TO SAC.

PART III. THE 15 SEPTEMBER 1958 ARE DEVELOPMENT
PLAN, OF WHICH THE SENTRY OPERATIONAL ANNEX IS A PART.

CONFIDENTIAL

~~SECRET~~

028

**SPECIAL HANDLING REQUIRED
NOT RELEASABLE TO FOREIGN NATIONALS**

PAGE THREE RJEZHQ 377

WAS APPROVED IN PRINCIPLE BY THE AFMAG ON 16 OCTOBER 1958.
LETTER FROM THIS HQ TO CINCSAC DATED 1 DEC 58, ENTITLED
SENTRY, INITIAL OPERATIONAL CAPABILITY, CONCURRED IN
THE COMMANDER-IN-CHIEF'S PROPOSAL FOR THE OCTOBER 1961
INITIAL OPERATIONAL CAPABILITY (IOC) FOR WS-117L. THIS
PROPOSAL WAS ESSENTIALLY IDENTICAL TO THE 15 SEPT 58
OPERATIONAL ANNEX. THE FOLLOWING IS QUOTED FROM THE
REFERENCED LETTER: "BASED ON THE NATIONAL NEED TO
OBTAIN WARNING AND OTHER INTELLIGENCE INFORMATION AT
THE EARLIEST PRACTICAL DATE, THIS HEADQUARTERS CONCURS
WITH YOUR PROPOSAL FOR AN OCTOBER 1961 INITIAL OPERA-
TIONAL CAPABILITY FOR WS-117L. PENDING REVIEW AND
APPROVAL BY THE DEPARTMENT OF DEFENSE, ACTIONS REQUIRED
TO PROGRAM FOR THE PROCURE ADDITIONAL
VEHICLES WILL BE ACCOMPLISHED BY THIS HEADQUARTERS."

PART IV. IN REGARD TO REFLECTION OF THE SENTRY
OPERATIONAL PROGRAM IN THE ARS DEVELOPMENT PLAN CURRENTLY
BEING REVISED, ATTENTION IS INVITED TO THE FOLLOWING
CATEGORIES OF INFORMATION WHICH WILL BE CLASSIFIED TOP
SECRET WITH DISSEMINATION ON THE STRICTEST NEED-TO-KNOW

299



SECRET

CONFIDENTIAL

PAGE FOUR RJEZHQ 377
BASIS:

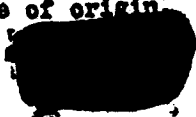
- A. THAT WITHIN THE MILITARY, SAC WILL BE THE EVENTUAL USER AND OPERATOR.
- B. ALL PROGRAMMING AND PLANNING FOR AN IOC.
- C. THE DATE THAT A DEVELOPMENT SATELLITE WILL HAVE A POTENTIAL INTELLIGENCE GATHERING CAPABILITY.
- D. THE DATE THAT US WILL OBTAIN AN OPERATIONAL CAPABILITY.

THE DIFFICULTIES OF WORKING WITH A DEVELOPMENT PLAN CLASSIFIED TOP SECRET ARE RECOGNIZED, HOWEVER, IT IS CONSIDERED FEASIBLE TO PREPARE A BASIC ARS DEVELOPMENT PLAN CLASSIFIED NO HIGHER THAN SECRET, EVEN THOUGH THE OPERATIONAL ANNEX MUST BE CLASSIFIED TOP SECRET. IT IS DESIRED THAT THE REVISED DEVELOPMENT PLAN BE PREPARED ALONG THESE LINES AND WITHIN THE SECURITY PARAMETERS INDICATED ABOVE.

BT

05/19 18Z FEB RJEZHQ

Reproduction of this document in whole or in part is prohibited except with permission of the office of origin.



SECRET

CONFIDENTIAL

NNNN

DOWNGRADED AT 12 YEAR INTERVALS; NOT AUTOMATICALLY DECLASSIFIED. DOD DIR 5200.10

THIS DOCUMENT CONSISTS OF ... 1 ... PAGES. COPY NO. 3... OF ... COPIES OF ... SERIES.

INTQSL ////
SVLO

UNCLASSIFIED

83

February 10, 1959
NUMBER 5129.1



AdmAsst., S/D

Department of Defense Directive

SUBJECT **Director of Defense Research and Engineering**

I. GENERAL

Pursuant to the authority vested in the Secretary of Defense and the provisions of the National Security Act of 1947, as amended, including the Department of Defense Reorganization Act of 1958, the Director of Defense Research and Engineering shall have responsibilities, functions and authorities as prescribed herein.

II. RESPONSIBILITIES

The Director of Defense Research and Engineering is the principal adviser and staff assistant to the Secretary of Defense in the following functional fields:

1. Scientific and technical matters
2. Basic and applied research
3. Research, development, test and evaluation of weapons, weapons systems and Defense material
4. Design and engineering for suitability, producibility, reliability, maintainability, and materials conservation

III. FUNCTIONS

Under the direction, authority and control of the Secretary of Defense, the Director of Defense Research and Engineering shall supervise all research and engineering activities in the Department of Defense and shall perform the following functions in his assigned fields of responsibility:

Feb 10, 59
5129.1

operation, will eliminate unnecessary duplication, or will contribute to improved military preparedness.

10. Recommend to the Secretary of Defense appropriate funding for research, development, test and evaluation, including allocations from the Emergency Fund, Department of Defense.
11. Keep the Department of Defense informed on significant trends in scientific research relating to national security and recommend measures to assure continuing progress.
12. Exercise administrative direction of the Weapons Systems Evaluation Group and assure its responsiveness to the needs of the Joint Chiefs of Staff and the Office of the Secretary of Defense for operations analysis.
13. In coordination with the Assistant Secretary of Defense (International Security Affairs), engage in programs for assistance to friendly countries in military research and development and in the interchange of related scientific and technical information.
14. Such other duties as the Secretary of Defense assigns.

IV. RELATIONSHIPS

A. In the performance of his functions, the Director of Defense Research and Engineering shall:

1. Coordinate actions as appropriate, with the military departments and other Department of Defense agencies having collateral or related functions in the field of his assigned responsibility.
2. Maintain active liaison for the exchange of information and advice with the military departments and other Department of Defense agencies.
3. Consult with the Joint Chiefs of Staff on the inter-action of research and development and strategy.

307 rec review

Feb 10, 59
5129.1

3. Obtain such reports and information (in accordance with provisions of DOD Directives 7700.1 and 5158.1) and assistance from the military departments and other Department of Defense agencies as may be necessary to the performance of his assigned functions.

B. Other authorities specifically delegated by the Secretary of Defense to the Director of Defense Research and Engineering in other directives will be referenced in an inclosure to this directive.

VI. ABOLITION AND TRANSFER

A. The position of Assistant Secretary of Defense (Research and Engineering) is hereby abolished and all personnel, functions (including the administrative direction of the Weapons Systems Evaluation Group) and records of the Office of the Assistant Secretary of Defense (Research and Engineering) are transferred to the Office of the Director of Defense Research and Engineering as of the effective date of this directive.

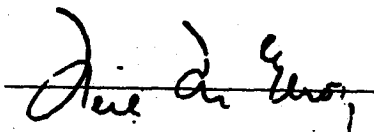
B. All directives, instructions, memoranda, delegations of authority or other issuance not canceled by this directive containing the title of Assistant Secretary of Defense (Research and Engineering) are hereby changed to Director of Defense Research and Engineering.

VII. CANCELLATION

DOD Directive 5129.1 dated March 18, 1957 is hereby canceled.

VIII. EFFECTIVE DATE

This directive is effective upon publication.



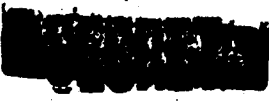
Secretary of Defense

Inclosure - 1

Feb 10, 59
5129.1 (Incl 1)

**References to Other Authorities Specifically Delegated by the
Secretary of Defense to the Director of Defense Research and
Engineering in Other Directives**

1. Authority to act for the Secretary of Defense in matters pursuant to Executive Order 9913 pertaining to the termination of OSRD as contained in DOD Directive 5128.6 dated 9 August 1954.



~~CONFIDENTIAL~~

OFFICE OF THE
WILL ENTER OFFICE
SYMBOLS IN THE
"TO" BLOCK IN
ORDER OF DESIGNS
NATION

PERSONS CONCERNED
WILL BE IDENTIFIED
AND ENTERED IN
APPROPRIATE BLOCK

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

TO:

NAME:

DATE:

1. In the past year the WB LTR Program has been plagued with... This instability culminated in the reorientation... Additionally, a serious funding problem has been encountered particularly in the present fiscal year. This problem is related to the incremental funding of the WB LTR Program on a month to month basis. This funding condition has made an otherwise difficult job more difficult and has been the cause of considerable concern within AFMS and its contractors.

6. In order to stabilize the program and initiate contractual actions for the continuation of the program it is requested that expeditious action be taken to accomplish the following:

- a. Immediate release of the remaining fiscal year 1959 funds.
- b. Early coordinated Air Force and ARPA approval of joint programs.

SIGNED

O. J. RITLAND
Brig. Gen., USAF
Vice Commander

3 Incls:

Check for 3 a from 8131 to 8133

Copy furnished:
Comdr, AEDC
WDP
WDI



DOD DIR 5200.10

~~CONFIDENTIAL~~

| | |
|-------|-----------|
| TO: | WDZ |
| NAME: | Schenner |
| DATE: | 11 Feb 59 |
| TO: | WDZ |
| NAME: | WDP |
| DATE: | 11 Feb 59 |
| TO: | WDZ |
| NAME: | WDP |
| DATE: | 11 Feb 59 |
| TO: | WDZ |
| NAME: | WDP |
| DATE: | 11 Feb 59 |
| TO: | WDZ |
| NAME: | WDP |
| DATE: | 11 Feb 59 |
| TO: | WDZ |
| NAME: | WDP |
| DATE: | 11 Feb 59 |

| | | | |
|-------------------|----------|------------|----------------|
| OFFICE OF ORIGIN: | WDZ | TYPE: | di (11 Feb 59) |
| DICTIONATOR: | MAJ Ford | PHONE NO.: | 1816 |

| |
|--------------------|
| OFFICIAL FILE COPY |
| RECORD |

| | |
|---------------------|-----------|
| TEMPORARY | PERMANENT |
| DATE OF DISPOSITION | |

CONFIDENTIAL

DECLASSIFIED 000 01 2000

MEMORANDUM FOR THE SECRETARY OF DEFENSE
SUBJECT: [Illegible]

1. [Illegible text]

2. [Illegible text]

3. [Illegible text]

4. [Illegible text]

5. [Illegible text]

6. [Illegible text]

CONFIDENTIAL
17816
WDZM

2
21 Feb 59

WDZM

CONFIDENTIAL

Assistant Chief of Staff
for Guided Missiles, HQ USAF

O. J. RITLAND
Brig. Gen. USAF
Vice Commander

SIGNED

Programs. Early coordinated Air Force and AFSA approval of joint

and immediate release of the remaining fiscal year 1959 funds.

Following the release of the remaining fiscal year 1959 funds, it has been requested to take expeditious action to accomplish the actions for the continuation of the program, Air Force Headquarters in order to stabilize the program and initiate contractual

agreements with AFSA and the contractors. This funding condition has made an already difficult job more difficult and has been the cause of considerable

on a number of other programs. This funding condition has made an already difficult job more difficult and has been the cause of considerable

been encountered particularly in the present fiscal year. This program is being continued in the present fiscal year for the purpose of the program. Additionally, a serious funding problem has

CONFIDENTIAL

~~SECRET~~

~~CONFIDENTIAL~~ 85

DOWNGRADED AT 12 YEAR
INTERVALS: NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

-11 FEB 1959

Director of WS 117L
ATTN: WDEW

SUBJECT: (U) WS 117L Program

TO: Commander
Air Research and Development Command
Andrews Air Force Base
Washington 25, D. C.

1. Three (3) new development plans, DISCOVERER, SENTRY, and MIDAS, describing the reoriented WS 117L Program, have been forwarded directly to the Assistant Chief of Guided Missiles, Headquarters, USAF. This action has been taken in order to meet the requirements of the Headquarters, USAF, imposed presentation schedule for these plans.
2. Normal distribution will be made to your headquarters immediately upon completion of the reproduction of the plans.
3. These development plans propose joint ASPA-Air Force funding. In each plan Air Force and ARPA costs are separately identified. The separation of the total program cost into Air Force cost and ARPA cost has been made in accordance with available guidance.
4. Briefings on these programs were given to Headquarters, USAF and ARPA during the period 29 January to 4 February 1959. These plans have been drawn up to reflect the Air Force-ARPA agreed funding levels for SENTRY and DISCOVERER and the Air Force recommendations for funding of MIDAS. At the direction of Headquarters, USAF certain costs are not identified in these plans. Separate funding action will be required in some cases.
 - a. Advance planning (design) funds for Military Construction Program (MCP) items have not been included. The required sums are: FY 58 - \$900,000. (already provided), FY 59 - \$827,000. formerly on ARPA Order 41-59, and \$937,000. in P-313 for MIDAS.
 - b. Operations and maintenance costs and other support items are not shown. These will be included in the appropriate Annual Financial Plans.

DOWNGRADED AT 12 YEAR
INTERVALS: NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~SECRET~~

~~CONFIDENTIAL~~

FORM 50-149
Cy 5 of 8

~~CONFIDENTIAL~~

5. It must be emphasized that DISCOVERER and SENTRY Programs are interdependent programs and partial approval of either program will require reconsideration of both efforts. Further, in the interests of economy and efficiency, the MIDAS Program is based on the assumption that the proposed DISCOVERER and SENTRY Programs are approved in their entirety.

6. In the past year the WS 117L Program has been plagued with instability, inadequate or untimely decision, or the lack of a decision at all. This instability culminated in the reorientation of this program in December 1958, which is the primary purpose for the submission of these new plans. Additionally, a serious funding problem has been encountered particularly in the present fiscal year. This problem is related to the incremental funding of the WS 117L Program on a month to month basis. This funding condition has made an otherwise difficult job more difficult and has been the cause of considerable concern within AFMID and its contractors.

7. In order to stabilize the program and initiate contractual actions for the continuation of the program, Air Force Headquarters has been requested to take expeditious action to accomplish the following:

- a. Immediate release of the remaining fiscal year 1959 funds.
- b. Early coordinated Air Force and ARPA approval of joint programs.

SIGNED

O. J. RITLAND
Brig. Gen., USAF
Vice Commander

Copy furnished:
Assistant Chief of Staff
for Guided Missiles, Hq USAF
WDP

~~CONFIDENTIAL~~

WDZW 21(11 Feb 59)
Maj Ford 1616



ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

~~CONFIDENTIAL~~ **CONFIDENTIAL** 86
WDC

FEB 12 1959

MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE

SUBJECT: Policy Relating to the Official Identification of Projects
DISCOVERER, SENTRY, and MIDAS.

Reference is made to the series of briefings, conferences, and other discussions relating to the reorientation of the subject projects as a result of which it has been agreed that the several elements of WS-117L should be separately identified and development continued on the basis of individual missions as distinguished from blanket priority assigned to WS-117L.

There is continuing evidence that the nature of these arrangements is not fully understood throughout the departments concerned. This has resulted in some confusion and a tendency, both in public and classified correspondence, to associate the several projects with each other.

It is considered that a separate identification of the projects is essential to our space effort and that the facts relating to these several projects should be disseminated within appropriate channels throughout the several departments and agencies having an interest therein.

It would be appreciated if the contents of this memorandum could be so disseminated in order that the projects identified as DISCOVERER and MIDAS may stand alone and without farther reference to SENTRY, or WS-117L.

Program definitions are as follows:

DISCOVERER

Project DISCOVERER is an open-ended series of satellite launchings utilizing initially the Thor IRBM as a basic booster, intended to carry out certain vehicle tests, bio-medical flights, and recovery experiments. Initial flights involve the development of engineering techniques, components, and systems. Upper stages will be used along with the boosters for these flights. The orbital life will vary from short periods to long periods, the orbits will vary in altitude, and the initial satellite in orbit will weigh approximately 1,300 pounds. The DISCOVERER series will be launched initially from the Pacific Missile Range, California, into near polar orbits. A number of these

~~CONFIDENTIAL~~

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

SecDef Cont. No. 5-238
WDC

~~CONFIDENTIAL~~

~~SECRET~~

satellites are intended to be directed out of orbit for recovery on the earth. Initial recovery operations will be conducted in air or at sea north of the Hawaiian Islands. Tracking and/or data acquisition stations will be located in California, Alaska, Hawaii, and on shipboard south of the Pacific Missile Range.

SENTRY

523
Project SENTRY involves a series of satellite launchings, utilizing initially the Atlas ICBM with an upper stage that will employ both film recovery and film readout techniques for the purpose of conducting visual and ferret reconnaissance. The SENTRY satellites will be launched initially from the Pacific Missile Range, California, into near polar orbits. This series of firings is mission-oriented, even during its R&D phase, with boosters and upper stages designed to provide orbits at various altitudes, orbital life, and trajectories, depending upon the specific intelligence objective to be met. Both recovery readout and electronic techniques are under development in this program.

MIDAS

Project MIDAS involves the priority development of a satellite-based, infra-red sensing system designed to provide maximum warning of missile launchings or other strategic attacks against the United States.

/s/ Roy W. Johnson

Roy W. Johnson
Director

Copies furnished:

→ Maj. Gen. B. A. Schriever, USAF, AFBMD
Col. [REDACTED] USAF, JCS

2

~~CONFIDENTIAL~~

~~SECRET~~

WDG-6

DECLASSIFIED AT 3 YEAR INTERVALS
EXCEPT AFTER 12 YEARS
(DOD USE 52002)

126-5

Minimum Support of Space Program

To: Commander
Air Materiel Command
Wright-Patterson Air Force Base
Ohio



CONFIDENTIAL

[13 Feb 1959]



1. Experience in support of the W-117, has given us an insight into some of the peculiarities of space programs. Space programs which may be a responsibility of the Advanced Research Projects Agency (ARPA) or the National Aeronautics Space Agency (NASA) present a requirement for legislation which is unique in Air Materiel Command experience. Such programs are more demanding on legislation than is apparent from a first consideration, and the legislative agencies' participation in such programs will be much earlier than is usually the case with Aircraft.

2. The ground environment for space programs can be extensive. This ground environment can include various types of operational sites around the world or in remote northern locations. The sites have an extensive range of equipment which includes communications, radio, television, telemetry, radar, command, computers of various types, fuelers, launchers, testbeds, recovery equipment and ground support equipment.

3. A high percentage of the equipment in the ground environment will be Government Purchased Equipment (GPE) common or standard Department of Defense (DOD). This is probably more true during Research and Development (RD) than during an operational phase as we know it today. This will probably be true in NASA projects as well as ARPA projects.

4. The above is borne out by the W-117, MB program. There are various existing sites set up with a range of equipment as indicated in paragraph 2. A high percentage of this equipment is GPE. NASA as Logistic Support Manager (LSM) is functioning in support of W-117, MB ground environment. Approved lists of GPE are forwarded to NASA where NASA takes action to acquire this equipment from the Ordnance Class Managers (OCMs) together with a range of initial spares for operation. Follow on requisitions are also forwarded to the LSM at NASA for action. At present we go to the OCM for fill but as we gain consumption experience we will keep a range of spares on hand at NASA. There are some sites which require maintenance of GPE, and I am encouraging the use of maintenance capabilities in maintaining this equipment rather than relying on contractor potential. There is a current



~~SECRET~~

59SM 01632 M

CONFIDENTIAL

In view, _____, Subj: Support of Space Program

example where some GIN in Alaska is to be collected. I have a number of business departments in Alaska that does such work as Air Force installation, and it would be an unnecessary cost to pay a contractor to make up a team and send them to Alaska to do the job. A policy of making these teams is necessary because there will continue to be requirements for these type maintenance of contractor operated GIN as existing also where we have a capability.

5. MAA will have a requirement for a logistics agency early in 1964 as to the time with the W-117. The AGS is in a particularly good position to provide this logistic assistance. The work required assistance is in equipment administration, production and quality control because even MAA contracts will be negotiated with contractors under MAA equipment. This area should fall in line as a normal course of events. The next area is in accomplishing the type of supply and maintenance action we are now accomplishing on the W-117.

6. I believe that we should provide MAA logistic support, and I think it is time for us to request them with AGS capabilities and I think the experience and experience in support of MAA space programs. In view of the experience that I have had with situations such as will conduct MAA, subject to your approval I will conduct MAA activities and develop a relationship for AGS logistic management of MAA projects.

GEORGE E. PRICE
Major General, USAF
Commander

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

CONFIDENTIAL

59SM 01632

~~CONFIDENTIAL~~



88
NOT LOGGED

**ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.**



FEB 13 1959

ms

**MEMORANDUM FOR THE COMMANDER, AIR FORCE BALLISTIC
MISSILE DIVISION, ARDC, INGLEWOOD**

**SUBJECT: Status Report on DISCOVERER, SENTRY, and MIDAS
Programs**

Your program status report for the month ending January 31, 1959, concerning the DISCOVERER, SENTRY, and MIDAS Programs, refers to difficulties in program stability and funding, in paragraph 5 thereof. Without reviewing here all the correspondence, telegrams, and deadlines established by ARPA, I should like the record to be clear that changes in program direction were made several months ago and came as a result of the Department of Defense evaluating and changing the technical objectives of the program.

The most recent BMD Development and Funding Plans to meet these objectives were dated January 30, 1959, but were in fact received in ARPA on February 12. When the technical objectives were re-defined in December, it was not expected to take this long to obtain a development program. We shall review it and, if appropriate, approve it in the next few days.

Concerning the funding, \$136,200,000 was made available by September 25 out of a total program of \$215 million. This is 63 percent of the funds for the year. I do not believe this can be called funding on a month-to-month basis.

Since September, we have met specific requests for funds by the Department of the Air Force. Again, upon approval of the recently received development plan, full funding for fiscal year 1959 will be made available.

Roy W. Johnson
Director

LEG
DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~CONFIDENTIAL~~

cc: Secretary of the Air Force
Commander, ARDC

REF ID: A66552 - 59-01278

-7-2-52



ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

WDGE H
alch

ARPA Order No. 9-58 ✓
Amendment No. 8 ✓

February 16, 1959 Date

TO: The Secretary of the Air Force
Washington 25, D. C.

The program objectives and related funding for the SENTRY program as presented to ARPA February 4, 1959, are, in general, ✓ approved.

Accordingly, ARPA Order No. 9-58, dated June 30, 1958, as amended, is hereby further amended to decrease the fund availability from \$148,200,000 to a new total of \$96,600,000 under appropriation and account symbol "97X0113.002 Salaries and Expenses, Advanced Research Projects Agency, Department of Defense."

The Development and Funding Plan, dated January 30, 1959, pertaining to the SENTRY program, is being reviewed and specific comments relating thereto will be provided for further program guidance.

Roy W. Johnson
Director

Copy to: Commander, ARDC

90

JPM

17 February 1950

MEMO

MEMO/INFORM

SUBJECT: Call from Colonel Hart to Colonel Hamilton

Colonel Hart asked whether NSD would reply to the 13 February memo from Mr. Johnson to General Schriever. Colonel Hamilton stated that NSD would get a list of facts and send the list to the Air Secretary who has received a copy of the memo. The Secretary will then have the facts and will be able to take this matter up if he so desires.

bae

copy furnished:

NSD

NSA ✓

*OK
CURTIN
ACTION*

J

WDJ INTEROFFICE MEMORANDUM

91

SUBJECT: ARPA Memos attached

17 Feb.

TO:
FROM: WDW
DATE: 19 Feb

1. On the 13 Feb. '59 Memo ref. Status Report on Discover, Sentry, Midas take the following

action:

Inasmuch as Mr. Johnson sent a copy of his memo to us to the Secty Air Force, we will prepare and send to Sec. AF an information memo which will "close the loop" for the record and include (a) We are not replying to ARPA (b) Info for you is only to put the record to you (Sec AF) of actual facts etc etc.

2. On the Recovery Plan for Discover, prepare a full reply referencing the "lost TWX" and repeating again for Sec AF the updated facts in this matter, to include whether we need ARPA help.

3. Please expedite action.

RDW

NOT LOGGED

92

WDS ARDC
ACTION W O Z W
25 FEBRUARY 55

REF: W D Z H WDT
W D G E WDP

ARDC ADDRESS AFM HQ
AFWD LOS ANGELES CALIFORNIA

UNCLASSIFIED-20-2-55-2, ATTN: COL WEL, COL CURTIS, COL
AND COL. ON HAMILTON. REFERENCE IS MADE TO MEMORANDUM FROM
JANUARY, DIRECTOR OF AF, TO THE COMMANDER AFWD DATED 13 FEBRUARY
AND SUBJECT: "STATUS REPORT DISCOMBINATION, AND REAS PROGRAMS."
RE TELEPHONE CONVERSATION BETWEEN MAJOR POC, WDC AND LT COL
WEL, AFWD, ON 20 FEBRUARY 1955. A COPY OF REFERENCED MEMORANDUM
WAS PROVIDED TO THE COMMANDER, ARDC. THE COMMANDER, ARDC REQUESTS
THAT A FACT SHEET BE PREPARED COVERING THE CIRCUMSTANCES WHICH GEN-
ERATED THIS MEMORANDUM AND THAT COPIES OF THE FACT SHEET BE FURNISHED
TO THE SECRETARY OF THE AF, THE CHIEF OF STAFF, AND THE COMMANDER,
AFWD. REQUEST THIS INFORMATION BE PROVIDED BY 26 FEBRUARY 1955.

URGENT FEB 21 1955

PLS ACK 1 MSG

REC'D 1 MSG TU

747 2-2-152

~~SECRET~~

OC-1107
93

~~CONFIDENTIAL~~

FEB 28 03 35 '59

Discover ✓
Sentry

PRIORITY X

COMDR AFMID (HEADQUARTERS) LOS ANGELES, CALIFORNIA
SECRETARY OF THE AIR FORCE, WASH D. C.
COMAF, HQ USAF, WASH D. C.
COMANDC ANDREWS AFB MARYLAND

URGENT FROM WDEM 2-17-E FOR THE SECRETARY OF THE AIR FORCE; FOR
GENERAL WHITE CHIEF OF STAFF; FOR GENERAL ANDERSON COMANDC. REFERENCE
MEMORANDUM FROM MR JOHNSON, DIRECTOR ARPA, TO COMDR AFMID, SUBJECT:
STATUS REPORT ON DISCOVERER, SENTRY AND MIDAS PROGRAMS, DTD 13 FEB 59.
COPIES OF THE MEMO WERE PROVIDED TO THE SECRETARY OF THE AIR FORCE
AND TO COMANDC. THE MEMORANDUM TAKES ISSUE WITH STATEMENTS CON-
CERNING PROGRAM INSTABILITY AND FINANCIAL FUNDING WHICH WERE MADE
BY AFMID IN THE MILITARY SATELLITE PROGRAM STATUS REPORT FOR THE
MONTH ENDING 31 JAN 59. COMDR AFMID DOES NOT BELIEVE THE MEMO-
RANDUM REQUIRES A REPLY. AFMID HAS, SUBSEQUENT TO THE MEMO, RECEIVED
FULL PROGRAM APPROVAL AND FUNDING FOR THE FY 59 SENTRY AND DISCOVERER
PROGRAMS. HOWEVER, THE FOLLOWING FACT SHEET IS SUBMITTED IN
EXPLANATION OF THE STATEMENTS MADE BY COMDR AFMID IN THE REFERENCED

16
24
FEB 59

WDEM

DOWNGRADED AT 12 YEAR
INTERVALS. NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~SECRET~~

~~CONFIDENTIAL~~

W02W 59-211

~~SECRET~~

~~CONFIDENTIAL~~

COMER AFEND (REDACTED) LOS ANGELES, CALIF

STATUS REPORT:

I. CHRONOLOGY

A. CHRONOLOGY OF SENTRY/DISCOVERER PROGRAMS

- 322
1. 30 JUNE 58 ARPA ORDER 9-58 RELEASED 22.7 MILLIONS FOR WS 117L PROGRAM.
 2. 1 JULY - DEVELOPMENT PLAN PUBLISHED. TOTAL REQUIREMENT 197.9 FOR FY 59.
 3. 17 JULY 58 AMENDMENT 1 TO ARPA ORDER 9-58 INCREASED AVAILABLE FUNDS TO 30.7 MILLIONS, ADDED WORK TO 1 JULY DEVELOPMENT PLAN
 4. 29 JUL 58 MEMO ARPA TO USAF CONFIRMS 30.7 MILLIONS AND STATES BALANCE OF FY 59 PROGRAM OF 215 MILLIONS CONSISTING OF 197.9 PLUS 8 ADDITIONAL THOR/117L FLIGHTS AT 18.0 WILL BE MADE AVAILABLE UPON CONGRESSIONAL OR BOB ACTION.
 5. 30 JUL 58 TWX WDCB 7-12-E AFEND TO ARPA REQUESTED RELEASE OF 40.0 MORE (TOTAL 70.7) TO COVER OBLIGATIONS THRU 30 SEP 58.
 6. 4 AUG 58 AMENDMENT 2 TO ARPA ORDER 9-58 RELEASED 20.0 FOR TOTAL OF 50.7.
 7. 15 AUG 58 TWX WDCB 8-9-58 AFEND TO ARPA REQUESTED 20.0 NEEDED BY 1 SEP 58 .
 8. 25 AUG 58 AMENDMENT 3 TO ARPA ORDER 9-58 INCREASED TO TOTAL BY 20.0 TO 70.7
 9. 15 SEP 58 - SENTRY DEVELOPMENT PLAN REVISED. TOTAL COST 231.2 IN FY 59.

WDZW 59-211

dh

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

COMER AFEND (HEDAWC) LOS ANGELES, CALIFORNIA

10. 22 SEP 58 - TWX WDCB 9-21-E AFEND TO ARPA
REQUESTED RELEASE OF TOTAL FY 59 PROGRAM BUT NOT LESS THAN 85.0
HEREBY BY 1 OCT 58.

11. 25 SEP 58 - TWX DEF 948618 ARPA TO BID INCREASED
FY 59 FUNDING TO 136.2 MILLIONS. CONFIRMED BY AMENDMENT 4 TO ARPA
ORDER 9-58.

12. 16 NOV 58 ARPA ORDER 48-59 ESTABLISHED DISCOVERER
AS SEPARATE FROM WS 117L (SENTRY) PROGRAM.

13. 5 DEC 58 ARPA DIRECTED REORIENTATION OF SENTRY/
DISCOVERER PROGRAMS TO REDUCE COST AND CHANGE SOME OBJECTIVES.

14. 19 DEC 58 TWX WDCB 12-3-E AFEND TO ARPA REQUESTED
FY 59 TOTAL FUNDS NOT LATER THAN 10 JAN 59.

15. 8 JAN 59 TWX WDCB 1-3-E AFEND TO ARPA FOLLOW-UP
ON MESSAGE WDCB 12-3-E. WORK STOPPAGE IF ADDITIONAL FUNDS NOT
RELEASED BY 20 JAN 59.

16. 21 JAN 59 - AMENDMENT 7 TO ARPA ORDER 9-58 IN-
CREASED AMOUNT AVAILABLE TO 148.2 MILLIONS

17. 30 JAN 59 REVISED SENTRY AND SEPARATE DISCOVERER
DEVELOPMENT PLANS PUBLISHED. COMBINED TOTAL FY 59 215 MILLIONS.

18. 16 FEB 59 - AMENDMENT 8 TO ARPA ORDER 48-59 9-58
(SENTRY) REDUCED AMOUNT FROM 148.2 TO 96.6. CONCURRENTLY, AMENDMENT
1 TO ARPA ORDER 48-59 (DISCOVERER) RELEASED 104.3. PROGRAM TOTAL
OF 200.9 EXCLUDING FACILITIES. FACILITIES ON ARPA ORDER 41-59 ADJUSTED
BY AMENDMENT 2 FROM 9.827 TO 9.0. ARPA PROGRAM TOTAL ALL ORDER
209.9. THIS IS FULL FY 59 APPROVAL OF ARPA FUNDING FOR SENTRY AND

~~CONFIDENTIAL~~

WDEN 59-211

~~SECRET~~

~~CONFIDENTIAL~~

COMER, AFEMD (HEADARC) LOS ANGELES, CALIFORNIA

DISCOVERER.

B. CHRONOLOGY ON MIDAS PROGRAM.

1. 15 SEP 58 SENTRY DEVELOPMENT PLAN DELETED IN DETECTION OF ICBM FROM SENTRY PROGRAM AT ARPA DIRECTION.
2. 17 SEP 58 ICBM ATTACK ALARM SUPPLEMENTAL DEVELOPMENT PLAN PUBLISHED BY AFEMD.
3. 10 OCT 58 AFEMD INFORMED HQ ARDC THAT 1.855 MILLIONS REQUIRED TO CONTINUE SATELLITE INFRARED ICBM ATTACK ALARM SYSTEM 15 OCT THRU 15 DEC 58, PENDING DECISION ON PROGRAM.
4. 24 OCT 58 HQ USAF PROVIDED 1.855 AS REQUESTED FOR PROPOSED ATLAS-BOOSTED IR PROGRAM.
5. 5 NOV 58 ARPA ORDER 38-59 ESTABLISHED MIDAS (MISSILE DEFENSE ALARM SYSTEM) R&D PROGRAM RECOMMENDING THOR-BOOSTED FLIGHTS. FUNDED .75 MILLIONS FOR NOV 58 THRU JAN 59.
6. 15 DEC 58 HQ USAF PROVIDED 1.5 MILLIONS FOR 15 DEC 58 THRU 15 JAN 59 FOR ATLAS BOOSTED PROGRAM.
7. 15 JAN 59 HQ USAF FUNDED 1.5 FOR 15 JAN THRU 15 FEB FOR ATLAS BOOSTED MIDAS PROGRAM.
8. 30 JAN 59 MIDAS DEVELOPMENT PLAN PUBLISHED BY AFEMD AND BRIEFED TO ARPA AND HQ USAF. TOTAL FY 59 FUNDING REQUESTED 37.2 MILLIONS ATLAS-BOOSTED FLIGHTS NOT THOR.
9. 13 FEB 59 AFEMD ASKED HQ USAF FOR 4.75 TO CARRY MIDAS AS DEFINED IN 30 JAN 59 DEVELOPMENT PLAN 15 FEB THRU 15 MAR 59.
10. STATUS AS OF 25 FEB 59 - TOTAL FUNDS ~~REQUESTED~~ *utilized*

~~CONFIDENTIAL~~

~~SECRET~~

~~SECRET~~

~~CONFIDENTIAL~~

COMER, AFEMD (HEDARDC) LOS ANGELES, CALIFORNIA

FY 59 MIDAS - ARPA .750 FROM ARPA ORDER 38-59, .4 FROM ARPA ORDER 9-58 PRIOR TO DELETION OF EFFORT UNDER SENTRY ON 15 SEP 58, FOR A TOTAL OF 1.150; AIR FORCE 4.855 COMMITTED, 3.355 OBLIGATED. TOTAL ALL SOURCES FY 59 6.005. EFFORT FOR 15 FEB THRU 15 MAR 59 IS NOT YET FUNDED.

520
II. THE ARPA MEMORANDUM POINTED TO THE FACT THAT AFEMD DEVELOPMENT PLANS DATED 30 JAN 59 WERE NOT RECEIVED AT ARPA UNTIL 12 FEB 59. ACTUALLY, THE COMPLETED PLANS WERE HANDCARRIED AND BRIEFED TO HQ ARDC, HQ USAF, AND ARPA DURING THE PERIOD 26 JAN - 4 FEB 59. CERTAIN FUNDING CHANGES WERE DIRECTED DURING THIS COORDINATION CYCLE. REVISED BOOKS WERE PUBLISHED ON 11 FEB AND DELIVERED TO HQ ARDC, HQ USAF, AND ARPA ON 12 FEB 59. BY CUSTOM, BALLISTIC MISSILE DEVELOPMENT PLANS ARE DATED ONLY AS OF THE 15th AND 30th OF THE MONTH. ACCORDINGLY, THE REVISED PLANS CARRY THE DATE OF 30 JAN 59.

III. THE ARPA MEMORANDUM OBJECTS TO THE TIME REQUIRED TO OBTAIN A NEW DEVELOPMENT PROGRAM. THE NEW OBJECTIVES WERE DEFINED TO AFEMD BY ARPA DURING THE FIRST WEEK IN DECEMBER 1958. A THOROUGH CONTRACTOR AFEMD REVIEW INCLUDING BOTH TECHNICAL AND FINANCIAL ANALYSIS OF THE ENTIRE REVISED PROGRAM WAS COMPLETED AND PUBLISHED, AS NOTED ABOVE, BY 30 JAN 59.

IV. IN SUMMARY, THE STATEMENTS MADE BY AFEMD IN THE MILITARY SATELLITE PROGRAM STATUS REPORT FOR 31 JAN 59 ARE BELIEVED TO BE FULLY SUBSTANTIATED BY THE ABOVE HISTORY OF ACTIONS TAKEN. AT PRESENT, DISCOVERER AND SENTRY ARE FUNDED FOR FY 59. MIDAS REMAINS

~~CONFIDENTIAL~~

WDEM 59-211

WDEM

~~SECRET~~

~~SECRET~~

COSEN, AFWD (NEBARDC) LOS ANGELES, CALIFORNIA

~~CONFIDENTIAL~~

UNRECEIVED AND IS CONTINUING ON A MONTH-TO-MONTH BASIS, PRINCIPALLY
WITH AIR FORCE FUNDING.

~~CONFIDENTIAL~~

WDM

~~SECRET~~

WDZ W 59-211

~~CONFIDENTIAL~~

CONFIDENTIAL

741

WDZWS 59-174

27 FEB 1959

Major General H. B. Watson
Dep Asst Chief of Staff for Intelligence
Headquarters, United States Air Force
Washington 25, D. C.

Dear General Watson:

Mr. Les Rosenzweig called me last month and discussed your concern about Rand Report RM-2012, in particular, whether or not Air Force Ballistic Missile Division was acquainted with the study and if the Rand people are on the right path.

My people have looked into this and I find they are well aware of the report, and although not in complete agreement with some of the figures, agree in principal with the findings. I have attached a copy of a memorandum reviewing RM-2012 which might be of interest to you and Les.

If we can be of any further assistance please don't hesitate to call.

Sincerely,

SIGNED

O. J. RITLAND
Brigadier General, USAF
Vice Commander

1 Incl:
WDZWS Memo for Gen
Ritland, 2 pgs (S)
WDZW 59-174

When inclosures are withdrawn the classification of this correspondence will be down graded to Secret in accordance with AFR 205

WDZWS lkg-16 Feb 59
Maj Wienberg 278

WDZW

WDZW 59-174
of 3 of 3

~~CONFIDENTIAL~~

CONFIDENTIAL

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

19 FEB 1959

WDZNS

MEMORANDUM FOR GENERAL RITLAND

SUBJECT: (U) Review of Rand Research Memorandum 2012, 12 Nov 1957.

1. The Rand Research Memorandum RM-2012 entitled "A Family of Recoverable Reconnaissance Satellites (U)" dated 12 November 1957, describes a family of reconnaissance satellites which would provide both early and continuing photographic reconnaissance capability in augmentation of the WS 117L program. The systems proposed differ substantially from the basic 117L concept involving only a readout capability:

- a. They would use a spin-stabilized payload stage.
- b. They would use a transverse panoramic camera of essentially conventional design, fixed to spin with the final stage, which scans across the line of flight.
- c. The entire payload would be recovered.

2. AFEMD and particularly the 117L Project Office is familiar in detail with the report. They have had the recovery payload concept under study and consideration since the spring of 1957, and have worked intimately with the Rand representatives and the material in RM-2012 in preparing the Air Force development proposals for an early reconnaissance capability that were made to the OSD committee entitled "Advisory Group for Special Capabilities", chaired by Dr. Homer J. Stewart in the fall 1957 and early 1958.

3. Appendix J to RM-2012, entitled "On the Information Delivered", is a simple technical comparison of the potential information gathering rates of recovery satellites versus readout satellites. It points out that:

- a. readout satellites have a natural information gathering rate limitation which is determined by the number and location of ground readout stations and the total time the satellites are in line of sight contact with these stations.
- b. no such readout limitation exists for the recovery satellites and hence their potential for collecting information against some increment of time is considerably higher. (Not taken into account in the analysis are the practical problems of recovery reliability, collecting such detailed information about uninteresting areas, and the relative costs when considering the need for timely information return against active life span of the system required for efficient employment.)

Done!

WDZNS 59-174
Cy 1 of 6

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

4. In summary:

a. The report is considered entirely valid. Although we do not agree completely with the method and the exact numerical findings used in the Appendix J comparison we concur completely in the conclusion that recoverable satellites can collect and return many more bits of information per unit of time than can readout systems.

b. There should be an optimum mix of recovery and readout satellite systems. The latter should be employed on a long life basis, as presently planned, to keep check on selected areas and things, and provide flexibility for selection and rapid response between request and receipt of the information. The recovery systems should be used on a periodic basis to collect volume data in detail which has long term usefulness and is comparatively insensitive to response time.

R. Curtin

RICHARD D. CURTIN
Colonel, USAF
Deputy Commander
Military Space Systems

~~SECRET~~

~~CONFIDENTIAL~~

WIZW 59-174
Cy 1 of 6



95

**AIR FORCE BALLISTIC MISSILE DIVISION
HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
UNITED STATES AIR FORCE
Air Force Unit Post Office
Los Angeles 45, California**

In reply address both communication and envelope to:

17 MAR 1959

Director, Satellite Systems

ATTN: WZWS

SUBJECT: (U) Summary of AFEMD Review of WS 117L Drafting Practices

TO: Lockheed Aircraft Corporation
Missiles and Space Division
ATTN: Mr. W. M. Hawkins
3251 Hanover Street
Palo Alto, California

1. On 17 and 18 February, an Air Force Ballistic Missile Division (AFEMD) Drawing Procedures Survey Team conducted a comprehensive review of all aspects of the WS 117L drafting practices and procedures within the Lockheed Missiles and Space Division (DMSD). The purpose of this survey was to investigate the drawing practices and procedures at DMSD for acceptable conformance with Air Force standards. Contractor personnel responsible for drafting functions assisted the Team by furnishing oral presentations.

2. The findings of this review reveal the following major deficiencies which, unless corrected, will seriously impede subsequent phases of the WS 117L Program. The AFEMD recommends that DMSD initiate the necessary corrective action in these specific areas:

a. Procedures documents, such as the Drafting Practice Manual (DPM) and Standard Practice Procedures (SPPs), are incomplete. The DPM is not in complete consonance with the requirements of Military Specification MIL-D-5028B, as required in Contract No. AF 04(647)-97.

b. Published procedures are not being complied with, and a check-back method is not in existence which would tend to insure compliance with the DPM and SPPs.

c. The numbers of draftsmen and drawing checkers, particularly checkers, assigned are not sufficient to support the drawing and checking functions.

d. Incorporation of Engineering Orders into drawing revisions is not being accomplished in a timely manner. This possibly may be due to the shortage of draftsmen and checkers mentioned in c above.

3. Comments of a minor nature have been avoided as it is felt that they will automatically be overcome when correction of the deficiencies listed above are complete. It is requested that INSD advise AFEMD by 31 March 1959 of the contemplated corrective action and expected date of completion.

4. AFEMD desires to assist the contractor in every way possible in this area. Members of the Survey Team will be available for consultation.

G. I. Rutland

G. I. RUTLAND
Maj. Gen., USAF
Vice Commander

DGP

file ARPA 96

"FOR INFORMATION ONLY"

March 17, 1959
NUMBER 5105.15

AdAsst., S/D



Department of Defense Directive

SUBJECT Department of Defense Advanced Research Projects Agency

I. GENERAL

Pursuant to the authority vested in the Secretary of Defense and the provisions of the National Security Act of 1947, as amended, including the Department of Defense Reorganization Act of 1958, an Advanced Research Projects Agency is hereby established as an operating research and development agency of the Department of Defense under the direction, authority and control of the Secretary of Defense.

II. ORGANIZATION AND RESPONSIBILITY

The Advanced Research Projects Agency will be separately organized within the Department of Defense under a Director of Advanced Research Projects appointed by the Secretary of Defense. The Agency will be responsible for basic and applied research and development for such advanced projects as the Secretary of Defense assigns. The assigned projects of the Agency will be subject to the supervision and coordination of the Director of Defense Research and Engineering in the same manner as those of the military departments and will be conducted in accordance with the priorities established by the Secretary of Defense.

III. FUNCTIONS

Under the direction and control of the Director of Advanced Research Projects, the Agency will perform the following functions within its assigned field of responsibility:

1. Engage in those advanced research projects assigned by the Secretary of Defense.

332

- 330
2. Arrange for the performance of and supervise the work connected with assigned advanced projects by the military departments, other Government agencies, individuals, private business entities or educational or research institutions, giving consideration to the primary functions of the military departments.
 3. Recommend to the Secretary of Defense, after consultation with the Director of Defense Research and Engineering and the Joint Chiefs of Staff, the assignment of advanced projects to the Agency.
 4. Keep the Secretary of Defense, the Director of Defense Research and Engineering, the Joint Chiefs of Staff, the military departments and other DOD agencies informed, as appropriate, on significant new developments, break-throughs and technological advances within assigned projects and on the status of such projects in order to facilitate early operational assignment.
 5. Such other functions as the Secretary of Defense assigns.

IV. RELATIONSHIPS

- A. In the performance of its functions, the Agency shall:
1. Coordinate actions, as appropriate, with the military departments and other DOD agencies having collateral or related functions in the field of its assigned responsibility.
 2. Maintain active liaison for the exchange of information and advice in the field of its assigned responsibility with the military departments, other DOD agencies and appropriate research and development agencies outside the Department of Defense, including private business entities, educational or research institutions or other agencies of Government.
 3. Make full use of established facilities in the Office of the Secretary of Defense, military departments and other DOD agencies rather than unnecessarily duplicating such facilities.

Mar 17, 59
5105.15

B. Officials of the Office of the Secretary of Defense, military departments and other DOD agencies shall provide support, within their respective fields of responsibility, to the Director of Advanced Research Projects as may be necessary to carry out the assigned responsibilities and functions of the Agency.

V. AUTHORITIES

A. The Director of Advanced Research Projects, in the assigned field of responsibility of the Agency, is hereby specifically delegated authority to:

1. Place funded work orders with the military departments or other DOD agencies, or directly with subordinate activities of the military departments, after clearance with the Secretary of the department concerned.
2. Enter into agreements with other Government agencies for basic and applied research and development work connected with assigned advanced projects.
3. Authorize the allocation, transfer or expenditure of funds made available to the Agency for assigned advanced projects.
4. Establish for the Agency and with the military departments and other research and development activities such procedures as are required in connection with work being performed for the Agency consistent with policies and instructions governing the Department of Defense.
5. Acquire or construct such research, development and test facilities and equipment as are required to carry out his assignments and as may be approved by the Secretary of Defense in accordance with applicable statutes.

B. Other authorities specifically delegated by the Secretary of Defense to the Director of Advanced Research Projects in other directives will be referenced in an inclosure to this directive.

235

VI. PROCEDURE

Project assignments to the Advanced Research Projects Agency will be made by the Secretary of Defense upon recommendation by the Director of Defense Research and Engineering, in accordance with Section 7 of Public Law 85-325, as amended by the Department of Defense Reorganization Act of 1958 (Public Law 85-599).

Announcements of the assignment of projects to the Advanced Research Projects Agency will be made from time to time by numbered inclosures to this directive.

VII. SUPPORT

Such personnel, facilities and funds as the Secretary of Defense deems necessary will be made available to the Advanced Research Projects Agency for the performance of its assigned responsibilities.

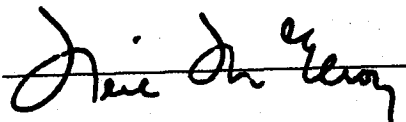
VIII. CANCELLATION

DOD Directive 5105.15, dated February 7, 1958, and DOD Directive 3200.5, dated May 19, 1958, are hereby canceled. ~~Inclo-
sures to DOD Directive 3200.5 will be continued in effect pending
appropriate revision at the earliest practicable date to make them
consistent with the provisions of this directive.~~

*Deleted
See
Change 1
attached*

IX. EFFECTIVE DATE

This Directive is effective upon publication.


Secretary of Defense

5105.15 (Incl 1)
Mar 17, 59

Reference to Other Authorities Specifically Delegated by
the Secretary of Defense to the Director
of Advanced Research Projects Agency
in Other Directives

No other authorities have been specifically delegated by the Secretary of Defense to the Director of Advanced Research Projects Agency as of the date of this directive. Any future specific delegations will be referenced in an inclosure to this directive.

TABLE OF CONTENTS

Project Assignments

| <u>Project Designation</u> <u>(Short Title)</u> | <u>Inclosure</u> <u>No.</u> |
|--|--------------------------------|
| DISCOVERER..... | 2 |
| NOTUS..... | 3 |
| TRANSIT..... | 4 |
| TRIBE..... | 5 |
| SUZANO..... | 6 |
| DEFENDER..... | 7 |
| PRINCIPIA..... | 8 |
| PONTUS..... | 9 |
| LONGSIGHT..... | 10 |
| (Classified)..... | 11 |
| (Classified)..... | 12 |
| (Classified)..... | 13 |
| (Classified)..... | 14 |
| (Classified)..... | 15 |

5105.15
Incl 2 - Jun 8, 59

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Military Research and Development Short Title: DISCOVERER

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation and systems development to attain at the earliest practicable date the following objectives:

- a. The achievement of orbital capability of a large satellite vehicle.
- b. The development of techniques and data for operational military satellite systems.
- c. The recovery of biomedical and other data through the utilization of a suitable re-entry capsule.
- d. The execution of nonrecoverable advanced engineering tests.
- e. Such other objectives as may be directed from time to time.

3. Specific Provisions or Instructions:

Approval by DDR&E will be required for work beyond the study phase.

5105.15
Incl 3 - Jun 8, 59

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Space Vehicle/Missile Communications Short Title: NOTUS

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation and systems development to obtain at the earliest practicable date a family of satellite borne communications repeaters which will provide a global military communications system. This system will be capable of meeting military requirements for communications of high reliability, security and large capacity under conditions of natural or man-made interference.

3. Specific Provisions or Instructions:

Approval by DDR&E will be required for work beyond the study phase.

5705.15
Incl 4 - Jun 8, 59

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Space Vehicle/Missile Navigation Short Title: TRANSIT

2. Project Description:

The Advanced Research Projects Agency on behalf of the Department of Defense, will undertake research, experimentation, and systems development to obtain at the earliest practicable date an astro-geodetic navigation capability based on satellite or other space vehicle applications which is capable of satisfying the operational requirements of the various services and commands.

3. Specific Provisions or Instructions:

Approval by IDR&E will be required for work beyond the study phase.

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Space Launching Vehicles

Short Title: TRIBE

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation and systems development to obtain at the earliest practicable date a continuing family of advanced military space vehicles capable of satisfying the needs for space missions as may be determined by the Secretary of Defense from time to time. The guidance, stabilization and control components necessary to the satisfactory performance of each vehicular system shall be included in the scope of this assignment. The Director, Advanced Research Projects Agency will insure that the requirements of the various services and commands for similar equipment for use in other military programs are incorporated in the tasks undertaken.

3. Specific Provisions or Instructions:

Approval of TDR&E will be required for work beyond that included in the National Vehicle Program of the NASC.

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Space Platform

Short Title: SUZANO

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation and systems development to obtain at the earliest practicable date a space platform which will provide an orbital base for advanced space missions. Initially, this project assignment will be directed toward the demonstration of the feasibility of such an operational base.

3. Specific Provisions and Instructions:

Approval of DR&E will be required for work beyond the study phase.

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Space Vehicle/Missile Defense

Short Title: DEFENDER

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation, development and systems feasibility demonstrations to obtain technologically advanced defenses against extra-atmospheric offensive vehicles including space vehicles and ballistic missiles. It is intended that this project be pointed toward the exploration of fundamental phenomena; the development of new systems concepts; and the application of new techniques as opposed to development and refinement of authorized defense systems which will be the responsibility of the Military Departments.

3. Specific Provisions or Instructions:

None.

5105.15
Incl 8 - Jun 8, 59

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Space Vehicle/Missile Solid
Propellant Chemistry

Short Title: PRINCIPIA

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation and development to obtain at the earliest practicable date solid propellants having specific impulses at least 10-20 per cent higher than other propellants now under development for operational application. This assignment shall include the supporting research necessary to demonstrate effective use of the new propellants to include methods of control of burning, cooling, thermal insulation and heat resistant materials. The project is intended to accommodate the requirements for significantly improved solid propellants for the several U.S. surface, air or missile programs.

3. Specific Provisions or Instructions:

The detailed work program undertaken will be consistent with the national materials research program.

340

PROJECT ASSIGNMENT TO ARPA

1. Project Designation:

Materials

Short Title: PONTUS

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake research, experimentation and development to obtain at the earliest practicable date a major improvement in structural and power conversion materials required to satisfy the military requirements of the several U.S. surface, air or missile programs. In the case of structural materials, this assignment shall include super strength materials, radiation resistant materials and materials intended for very high temperature service. In the field of power conversion, this assignment includes materials for thermoelectric devices and for electric and electronic circuitry capable of operation at high temperatures.

3. Specific Provisions or Instructions:

The detailed work program undertaken will be consistent with the national materials research program.

ADVANCED RESEARCH PROJECTS Agency
Washington 25, D. C.

ARPA Order No. 9-58
Amendment No. 9

April 1, 1959 Date

TO: The Secretary of the Air Force
Washington, D. C.

1. Revised procedures for preparation of reports required by ARPA from BMD on progress of work performed under ARPA Order No. 9-58, dated June 30, 1958, as amended, are set forth in Attachment No. 1 to this Amendment. These reports represent ARPA's foreseeable requirements for reporting under this Order.

2. The following rescissions are hereby made:

✓ a. ARPA memorandum for the Secretary of the Air Force, dated June 18, 1958, subject: Military Reconnaissance Satellite Progress Report, is rescinded in entirety.

✓ b. ARPA memorandum for the Commanding General, Ballistic Missiles Division, Air Research and Development Command, and Inclosure 1 thereto, dated July 15, 1958, subject: Military Reconnaissance Satellite Report, are rescinded in entirety. ✓

✓ c. ARPA memorandum for the Commanding General, Ballistic Missiles Division, Air Research and Development Command, dated September 18, 1958, subject: Distribution of Reports Concerning ARPA Projects. The first, second and last paragraphs and Inclosure No. 1, thereto, are rescinded.

d. ARPA memorandum for the Commander, Air Force Ballistic Missile Division, and Inclosure 1, thereto, dated December 23, 1958, subject: Format for the December 31, 1958, Military Satellite Program Progress Report, are rescinded in entirety.

3. Distribution of AFBMD reports required by ARPA on work performed under ARPA Order No. 9-58 to agencies within

DOWNGRADED AT 12 YEAR
INTERVALS, NOT AUTOMATICALLY
DECLASSIFIED DOD DIR 5200.108

Upon receipt of Attachment No. 1

CONFIDENTIAL

**ARPA Order No. 9-58
Amendment No. 9**

USAF will be decided by AFBMD in consonance with established
USAF procedures. Requests for copies of these reports by agencies
outside USAF will be referred to ARPA for approval.

Ray W. Johnson
Ray W. Johnson
Director

1 Incl:
Attachment No. 1

Copy to: Commander, ARDC

Copy furnished:
WDC
WDX
WDT
WDC
WDGFH
WDSFR
WDPP
WDPC
LBF
WDP ✓

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

Attachment No. 1

ARPA Order No. 9-58
Amendment No. 9

PREPARATION OF REPORTS

I. Monthly Progress Report

355
a. Narrative Section. A letter report will be submitted by AFBMD giving a narrative account of work performed under ARPA Order No. 9-58. The letter report will cover work performed each month with the exception of the last month (March, June, September and December) of each calendar quarter. The quarterly progress report prescribed below will be submitted in lieu of the letter report for the last month of each calendar quarter. The initial letter report under this directive will be for the month of April 1959. Letter reports will be submitted in quadruplicate to the Director, Advanced Research Projects Agency, and are due within 10 days following the month reported.

The report will be in letter form, preferably not exceeding three pages, and will present a brief narrative summary of progress during the reporting period. Each report should make specific reference to the following topics: (1) technical status, (2) problems encountered, (3) work schedules, and (4) action required by ARPA. Photographs and illustrative material will be submitted as appropriate. The ARPA Order number, name of contractor, date of contract, contract number, amount of contract, and title of the project should be stated in the heading of each report.

b. Milestone Section. Instructions for preparation of a milestone progress report, which requires use of a standard format in reporting actual progress against planned progress in accomplishing major milestones, will be issued at a later date.

II. Quarterly Progress Report

The purpose of the quarterly progress report is to provide the President and the Secretary of Defense and their staff with periodic summary information by which they may be kept informed of overall progress and results in certain of the satellite projects.

Frequency and Due Date. The quarterly progress report will be prepared for submission to the President each calendar quarter and will show a summary of progress and significant events during

~~CONFIDENTIAL~~

the quarter. The report should reach ARPA no later than the 11th of the month following the close of the quarter reported. When the 11th falls on a non-workday, the report will be due the following workday. The initial report under this directive will be for the quarter ending March 31, 1959.

Content. The quarterly progress report will cover the progress, special achievements, problems encountered, schedules and overall status of the program. It is essential that the content be carefully organized and that the material is presented briefly, clearly and concisely.

Format.

PART A. Brief of Progress During the Quarter. The brief should not exceed one-half page in length and should present the outstanding highlights of progress and status of the program.

PART B. Topical Summary. The topical summary consists of a series of summary headings, each of which is followed by a summary paragraph or paragraphs. The summary paragraphs are not limited in number but generally should not exceed 15 lines in length. Each paragraph should be abstracted in a marginal heading appearing at the left margin opposite the first line of the paragraph. All elaborative detail should be relegated to Part C and reference noted thereto, as appropriate. Suggested summary headings for the SENTRY Project are:

SENTRY PROJECT

SENTRY FLIGHTS

Flight I
Flight II, etc.

FACILITIES AND SITES

Launch
Tracking

GENERAL

Auxiliary Power Subsystem
Visual Reconnaissance Subsystem

GENERAL (continued)

Ferret Reconnaissance Subsystem
(Certain basic subsystem hardware for the SENTRY Project presently being developed under the DISCOVERER Project will be reported under the DISCOVERER Project and reference made thereto.)

These headings may be revised or added to by the preparing agency from time to time, as appropriate.

PART C. Descriptive Detail. All detailed description and back-up information considered necessary to the completeness of the report will be confined to Part C. Examples are description and layout of tracking stations, map sketches of location of facilities, and details of design and testing of equipment. A glossary sheet listing standard equipment and systems terminology and specifications should be included.

Photographs and Sketches. Photographs and sketches selected to show progress of the work and depict development of equipment should accompany each report. To facilitate printing, photographs and sketches will be in black-and-white glossy finish on 8X10-1/2-inch paper. Each photograph should contain some commonly known object to indicate scale and be clearly captioned.

General. The quarterly progress report will be assembled with those of other satellite projects into a single Department of Defense Military Satellite Program Progress Report and transmitted to the President. It is desired that the format of the report to the President be carefully followed in preparing the report for your project to enable ARPA to print and transmit the consolidated report to the White House with minimum rewriting and editing delay.

III. Semiannual Technical Summary Report

A technical summary report will be prepared semiannually for periods ending June 30 and December 31 of each year. The report will present a concise and factual discussion of technical findings and accomplishments during the period. Six copies of the report

Attachment No. [REDACTED]

ARPA Order No. 9-58
Amendment No. 2

will be submitted to the Director, Advanced Research Projects Agency, and are due within 30 days following the close of the report period. Upon completion of the project, a final report will be submitted summarizing the entire project. The final completion report will be submitted in lieu of the regular semiannual report to reach the Director, Advanced Research Projects Agency, within 60 days following project completion. The ARPA Order number, name of contractor, and title of the project should be stated in the heading of each report.

356

SECRET

101
CONFIDENTIAL

Sentry ✓
X Midas
X Discoverer

MEMORANDUM

I **AF**

MEMO, AFHQ (AFHQ) 100 ADDRESS, CALIFORNIA

COM, AFHQ, WASHINGTON, D. C.

101
W.D.E. Read me file

SECRET FROM HQ AFHQ FOR AFHQ. INFO FOR HQ/D, REFERENCE YOUR
MEMO DATED 11 FEBRUARY 1954, DATED 27 MAR 54, IS REPRODUCED
HEREIN FOR THE INFORMATION OF THE MEMBERS OF THE AFHQ AND DISCOVERER
FROM A GENERAL, OPERATIONAL AND TECHNICAL POINT OF VIEW. YOUR
PROGRAMS SHOULD BE CONSIDERED JOINTLY WITH THE FOLLOWING QUALI-
FICATIONS: A. SECRET, DISCOVERER AND MIDAS ARE INTERDEPENDENT
PROGRAMS WITH SECRET FORMING THE KEY STONE OF THE WHOLE. SEPARATION
OF SECRET FROM DISCOVERER AND MIDAS WOULD DESTROY THE BASIC TECHNICAL RELATIONSHIPS BETWEEN
THE PROGRAMS. B. OPERATIONAL SEPARATION MUST NOT IN ANY WAY
CHANGE THE ORGANIZATIONAL POSITION AND RESPONSIBILITIES OF AFHQ FOR THE
SECRET PROGRAM. C. A CLEARLY WORKABLE AGREEMENT BETWEEN THE USAF AND
THE AFHQ MUST BE CONSIDERED PRIOR TO THE SEPARATION WITH REGARD TO
FUNDING FOR THE OPERATION OF COMMON SUPPORT FACILITIES. AS THE RESULT
OF THE REVISIONS OF THE 117L PROGRAM MANY OF THE ACTIONS REQUIRED
TO ACCOMPLISH THE SEPARATION HAVE BEEN TAKEN. THE OPTION TIME TO

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

4 of 5

1
2
3
4
5

2A

Major J. Ford, Major, USAF/CI

122

1

2

SECRET

~~CONFIDENTIAL~~

... THE NEGOTIATIONS WOULD BE ON 30 JUNE 1959 AT THE CONCLUSION
OF THE CURRENT CONTRACT PERIOD. IF THE NEGOTIATION IS DEEMED TO SUCCEED
ON 6 APRIL 1959 AS THE RESULT OF YOUR NEGOTIATIONS, ANOTHER
... WILL BE AVAILABLE TO REPLY TO YOUR REQUEST IN THE FOLLOW-ON
CONTRACT NEGOTIATIONS...

REF: Answer to Gen Boushey's letter of inquiry as to feasibility of separating SEVER
from MIDAS and DISCOVERER from a budgetary, contractual and technical point view.

ADDITIONAL BACKGROUND:

In memo for Cdr AFEND, subj: Re-Definition of WS 117L, ARPA 10 Sep 58, Mr.
Johnson proposed that the use of the term WS 117L be abandoned and the term SEVERITY be
applied only to operational capabilities. Mr. Johnson stated that the assignment of
different terminology to the various programs of 117L was desirable for reasons of
budget justification and program management.

In a letter to Mr. Johnson, ARPA, 9 Oct 58, Gen Schriever expressed a strong
opposition to the proposed redefinition, stating in effect that the Weapon System
approach and resulting integrated management provided the most effective method of
approach.

Mr. Johnson in a letter to Gen Schriever dated 20 Oct 58 explained that he felt
memo of 10 Sep had been misunderstood to the degree that his proposed redefinition was
for budget purposes only and did not imply a change in management.

Ralph J. Ford
RALPH J. FORD
Major, USAF

6103

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~ 102
COPY

COPY

ADVANCED RESEARCH PROJECTS AGENCY
Washington 25, D. C.

9-58

OPM

ARPA Order No. 9-58
Amendment No. 10

April 3, 1959 Date

100

TO: The Secretary of the Air Force
Washington 25, D. C.

*will add - see
Amendment # 11
14 Apr 59*

The Development and Funding Plan, dated January 30, 1959, for the SENTRY program, is hereby approved to the extent it pertains to payload programs of visual readout, visual recovery, and ferret readout.

Further program guidance will be in accordance with paragraph 4 of the basic Order.

for /s/ J. E. Clark
/t/ Roy W. Johnson
Director

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

WDZW-80, Series A
Cy 1 of 25

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

SOPT

**DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
UNITED STATES AIR FORCE
WASHINGTON, D. C.**

Handwritten notes and signatures:
A. T. S.
J. E. Smart
WS 11/76

6 April 1959

MEMORANDUM FOR DEPUTIES, DIRECTORS AND CHIEFS OF COMPARABLE OFFICES

SUBJECT: Responsibility for Space Projects

1. Memorandum from the Assistant Vice Chief of Staff, 4 March 1958, subject: "Space Projects Involving ICBM/IRBM Components," is rescinded. Responsibility for coordinating within the Air Staff and monitoring all USAF space activities and related advanced technology, including satellite, space, and boost glide development programs, is assigned to the Director of Advanced Technology, DCS/Development.
2. The responsibility for coordination of Air Staff action on the Sentry, Discoverer, and Midas Programs is, therefore, transferred from the Assistant Chief of Staff for Guided Missiles to the Director of Advanced Technology, DCS/Development, effective this date. However, the Assistant Chief of Staff for Guided Missiles will coordinate the requirements for ballistic missile resources needed for support of space programs, including boosters, static test facilities, and range and launch facilities.
3. Air Staff offices will accord space matters the same priority of attention as is given to ballistic missile matters. To insure expeditious action on these programs, all satellite and space projects will be administered in the most direct manner possible, including direct contact between Headquarters USAF (AFCOM remains the primary office of contact) and Ballistic Missile Division, ARDC.

JACOB E. SMART
Major General, U. S. Air Force
Assistant Vice Chief of Staff

~~CONFIDENTIAL~~

**HEADQUARTERS 1ST MISSILE DIVISION
UNITED STATES AIR FORCE
VANDENBERG AIR FORCE BASE, CALIFORNIA**

APR. 104
C 13 APR 1959

C

SUBJECT: Support Requirements for the Sentry Program (U)

**TO: AFEMD
AF Unit Post Office
Los Angeles 45, Calif**

1. Reference is made to: (U)

a. Letter from Commander, AFEMD, Subject as above, dated 19 March 1959. (U)

b. SAC Headquarters Message, C-3859, Personal from Power to Wade and Schriever, dated 13 April 1959. (U)

2. Headquarters, 1st Missile Division will provide the fullest possible support to AFEMD Programs in this area. In accordance with reference 1b above, it requested that AFEMD requirements for support in the Vandenberg/Point Arguello/Pacific Missile Range area be submitted directly to Headquarters, 1st Missile Division. Details of the Sentry support required and that to be provided are being developed by the 1st Missile Division Staff in conjunction with the AFEMD Field Office at Vandenberg. In general it appears that total Sentry support can be provided from Vandenberg Air Force Base resources except for Metric Photography and R.F. Radiation Monitoring. (S)

3. Requirements which are determined, in conjunction with the AFEMD Field Office at Vandenberg Air Force Base, to be a Department of the Navy responsibility will be forwarded to the Pacific Missile Range by Headquarters, 1st Missile Division. (S)

DAVID WADE
Major General, USAF
Commander

Copies furnished:
SAC
Offutt AFB, Nebr
AFEMD Field Office
Vandenberg AFB, Calif

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~SECRET~~

~~CONFIDENTIAL~~

WAC-46

~~SECRET~~

~~CONFIDENTIAL~~

105

ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

ARPA Order No. 9-58
Amendment No. 11

April 14, 1959 Date

JM

TO: The Secretary of the Air Force
Washington 25, D. C.

Amendment No. 10, dated April 3, 1959, to ARPA Order
No. 9-58 is hereby restated to correct a typographical omission.

"The Development and Funding Plan, dated January 30,
1959, for the SENTRY program, is hereby approved to the extent
it pertains to payload programs of visual reconnaissance
readout, visual reconnaissance recovery, and ferret readout.

"Further program guidance will be in accordance with
paragraph 4 of the basic Order."

R. W. Johnson
Roy W. Johnson
Director

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~CONFIDENTIAL~~

~~SECRET~~

09-98770

5105.15
Incl 10 - Jun 8, 59

PROJECT ASSIGNMENTS TO ARPA

1. Project Designation:

Space Vehicle/Missile Studies and Short Title: LONGSIGHT
Systems Analyses

2. Project Description:

The Advanced Research Projects Agency, on behalf of the Department of Defense, will undertake a series of studies and systems analyses in the space vehicle/missile field to obtain, on a continuous basis, recommendations to the Secretary of Defense as to projects which should be initiated within the Department of Defense to satisfy future military requirements of the various services and commands. This assignment shall include unorthodox and creative studies aimed well beyond normal product improvement and such tasks as the Guideline Identification Program for Anti-missile Research (GLIPAR) currently being conducted in the Ballistic Missile Defense field. Also, these studies will include detailed review of proposals of an advanced research nature which may be submitted by various agencies for support by the Department of Defense from time to time.

3. Specific Provisions or Instructions:

None.

File ARPA

DEPARTMENT OF DEFENSE DIRECTIVES SYSTEM TRANSMITTAL

391

NUMBER

5105.15 - Ch 1

DATE

17 MAR 59
June 15, 1959

DISTRIBUTION

5100

ATTACHMENTS

file w/ basis 17 mar 59

1. Inclosure 1A, Table of Contents of Project Assignments
2. Inclosures 2 through 10 to DoD Directive 5105.15

INSTRUCTIONS FOR RECIPIENTS

The following pen and page changes to DoD Directive 5105.15, "Department of Defense Advanced Research Projects Agency," March 17, 1959, have been authorized:

PEN CHANGE AND CANCELLATIONS

Page 4, Section VIII:

Delete the second sentence which continued in effect the eight Projects previously assigned to ARPA by Inclosures 1 through 8 to DoD Directive 3200. 5, dated May 19, 1958. Those project assignments are superseded and cancelled by the attached revised assignments.

PAGE ADDITIONS

1. Insert attached Inclosure 1A, "Table of Contents of Project Assignments". The classified project assignments listed thereon are being distributed by separate DoD Transmittal on a "Need to Know" basis.
2. Insert attached Inclosures 2 through 10, - Project Assignments to ARPA, which were approved by the Deputy Secretary of Defense on June 8, 1959.

Maurice W. Roche

MAURICE W. ROCHE
Administrative Secretary

WHEN PRESCRIBED ACTION HAS BEEN TAKEN, THIS TRANSMITTAL SHOULD BE DESTROYED.

106 1

PREVIOUS EDITIONS ARE OBSOLETE

6007

17 March 1959

SUBJECT: (S) Support Requirements for the Sentry Program

**TO: Commander
1st Missile Division
Vandenberg AFB, California**

1. Attached is a copy of the total range support requirements for the Sentry Program to be conducted on the Pacific Missile Range. The document includes both the logistic and technical range support requirements as currently identified. Since the program is to be based on Vandenberg AFB and will operate from the Point Arguello launch sites, the logistic requirements have been further subdivided to take into account base prerogatives and previously programmed facilities. The technical range support requirements are considered to be within the purview of the Pacific Missile Range. Each requirement has been specifically identified as applicable to 1st Missile Division or to the Pacific Missile Range.

2. These requirements must be established with support agencies now to meet the current budget cycle since the lead time for the program is very short. It is understood that review by your staff is in process. Your comments are requested on an urgent basis.

SIGNED

**B. A. SCHRIEVER
Major General, USAF
Commander**

1 Incl:
Cy 32 of WS 1175
Test Rqmts for PSM
(S)

B. Glasby

WDGEV
Col Cody

Cy 4 of 1
WD-59-00804

When inclosures are withdrawn the classification of this correspondence will be down graded to Unclass in accordance with AFR 205-1

~~SECRET~~

~~CONFIDENTIAL~~ 98

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

MAR 25 1959

*OK 28 MAR 59
W DZ FOR
IMMEDIATE ACTION
RE #3.
OK*



AFDAT

SUBJECT: (U) Management of SENTRY

TO: Commander
Air Force Ballistic Missile Division
Air Force Unit Post Office
Los Angeles 45, California

1. During the course of an Armed Forces Policy Council meeting on 26 February 1959, Mr. McElroy reiterated his previous position that ARPA exists to take care of those projects (a) which are not identified with a specific military requirement, (b) which relate to the primary functions of two or more of the Military Services, and (c) which, for other reasons, are better handled by an agency other than one of the Military Services.

2. At the same meeting the Under Secretary of the Air Force asked if the time was appropriate for the SENTRY program to be returned to the Air Force for management. The Secretary of Defense stated that he would consider this matter if brought to his attention at a later date.

3. This headquarters is taking action to bring this subject to Mr. McElroy's attention by 6 April 1959. In support of this objective it is requested that the Ballistic Missile Division advise this headquarters as soon as possible if it is feasible, from a budgetary, contractual and technical point of view, for BMD to handle SENTRY separate from MIDAS and DISCOVERER.

FOR THE CHIEF OF STAFF:

H. A. Boushey
H. A. BOUSHEY
Brigadier General, USAF
Director of Advanced Technology
DCS/Development

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~SECRET~~

~~CONFIDENTIAL~~

100-49

DISPOSITION FORM

Subsystem I (Data Processing) DEI (UNCL)

Form DEI was held in Subsystem I (Data Processing) equipment at the R-W facility in Denver, Colorado, 18 March 1959. This was the initial display of the data processing concept wherein data is processed from receipt of information through data link communications through master processing and converters through photo interpretation to final indexing. Principal contractors involved were R-W and ITR, who are administered contracts under RADC. Representatives from BMD, RADC, ARDC, BMD, and USAF were in attendance.

Production Status of Thor Boosters in Support of WS 117L (UNCL)


LASD was furnished a production status report of WS 117L Thor boosters for use on the Discoverer program. This report contained Thor unit numbers and availability date of each unit at Vandenberg AFB. No apparent incompatibility with the WS 117L firing requirements existed.

BMC Management Survey of Lockheed (UNCL)

Consideration is being given to another visit of the Management Survey Team to Lockheed for the purpose of reviewing the manner in which the suggestions originally made by the team are being carried out. A definite date for this visit by the team has not been established.

Approval of Midas Development Plan (UNCL)

Advance information has been received from ARP that approval of the Midas Development Plan is impending. In the interim ARP has given an indication of the funds which will be made available upon such approval and something of the desired nature of the program. Upon the basis of this data, ITR is contemplated to prepare a letter through the AOC to furnish such guidance to the contractor. The contractor is in the midst of preparing a proposal for Midas. The negotiation will commence shortly. The above mentioned guidance on data and negotiation will be cost proposals are revised to reflect the new input.


JAMES S. SLAY
Lieutenant Colonel, USAF
Director of WS 117L

~~CONFIDENTIAL~~

any
106

**AIR FORCE BALLISTIC MISSILE DIVISION
HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
UNITED STATES AIR FORCE
Air Force Unit Post Office
Los Angeles 45, California**

**Assistant for Programming
WDPCR**

8 May 1959

SUBJECT: SENTRY Monthly Program Progress Report

**TO: Director
Advanced Research Projects Agency
Washington 25, D. C.**

1. This report covers progress during the month of April 1959 in the SENTRY Program, directed by ARPA Order 9-58, prime contractor Lockheed Missile Systems Division. The funding in Fiscal Year 1959 for the SENTRY Program is \$109 millions in accordance with the 30 January 1959 Development Plan. A summary list of contractors is contained in Tab 3, Section I of the Development Plan.

2. TECHNICAL STATUS

a. As a result of the Air Force Ballistic Missile Division's instructions to the Lockheed Missile Systems Division for the reorientation of the SENTRY Program, Lockheed presented to the Air Force Ballistic Missile Division and the Advanced Research Projects Agency, on 27 April, the SENTRY Reorientation Program Preliminary Analysis and Planning for New Work (LMSD-445134). This document and the presentation outlined the Lockheed technical approach to the reorientation of SENTRY as directed by ARPA. The outstanding differences in the reoriented program as compared with the previous SENTRY Program included the following:

- (1) Elimination of three ATLAS-boosted flights.
- (2) Elimination of the six inch Pioneer Visual Reconnaissance System.
- (3) Deletion from the SENTRY Program of the THOR-boosted flights (DISCOVERER).
- (4) Deletion from the SENTRY Program of the Infra-red Reconnaissance Program (MIDAS).
- (5) A general advancing of flight dates.

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

WDPCR-59-33
Copy 47 of 46 Copies

~~CONFIDENTIAL~~

TRA

JUN 11 1959

~~CONFIDENTIAL~~

- (6) The addition of a recovery capsule capability.
- (7) Providing for a mapping payload (E-4).
- (8) Providing for a high resolution visual payload (E-5).

(10) The addition of a high resolution electronic readout visual capability.

b. As part of the reoriented program, it is planned to make the first three SENTRY flights dual payload flights. This dual payload will include the ferret F-1 system and components of the E-2 readout development.

c. The visual reconnaissance system to be used as part of the dual visual-ferret payload to test certain E-2 components is being built. Assembly of the flight test models will begin in May 1959. Redesign of some payload components is in progress to permit proper functioning of both visual and ferret systems in the dual configuration.

d. A laboratory test run of the E-2 system was conducted in April. A photo record was processed and read out, transmitted through the data link simulator, reconstructed on the ground reconstruction equipment, and reassembled by the 18 1/2 inch reassembly printer. Resolution of the reassembled record was in excess of ten lines per millimeter.

e. Two twelve-ounce 70mm film-web test packages were installed in DISCOVERER flight test vehicle 1020, scheduled for launch in May. The packages will determine the effect of space environment radiation on photographic emulsions. Nuclear pellicles sensitive to all known charged particles were combined with the film-web samples. This will permit correlation of the observed damage with the responsible radiation.

f. A SENTRY personnel and training conference was held at the Air Force Ballistic Missile Division under joint auspices of AFBRD and the Air Training Command, with Lockheed participating. The conference sought to develop personnel and training concepts for military personnel to man the SENTRY system in operational phases.

WDPCR-59-33

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

g. The Air Force Ballistic Missile Division was briefed on 3 April concerning a factory-to-flight operational sequence for use of SNAP Ia nuclear power in the SENTRY Program. The plan is based on use of minimum nuclear power system accessory equipment and facilities. This concept was tentatively approved by the Air Force Ballistic Missile Division. It was then used as the basis for a development plan for a SNAP Ia power system, which is nearly completed. The plan provides the scheduling and costing required for flights 5 and 7 in the SENTRY Program (November 1960 and February 1961, respectively). The units will be flight tested to establish reliability and perform as backup to the solar photovoltaic APU.

3. PROBLEMS ENCOUNTERED

No problems of significance have been encountered during the period covered by this report.

4. WORK SCHEDULES

a. Design of the E-2 payload (both engineering and service test models) is essentially complete. The development model of the 36 inch focal length lens camera is being fabricated, and the lens has been completed.

b. A mechanical model of F-1 vehicle equipment is being prepared for use in environmental tests of the F-1 shipping container. Power distribution and monitoring points in the second F-1 prototype were checked out satisfactorily with the prototype ground checkout console.

c. Detailed structural design was started on the SENTRY Program dual-payload configurations, incorporating the E-1 and F-1 payloads and wideband data link antenna. Preliminary configuration drawings of recoverable capsules to contain the high resolution and mapping cameras were completed.

5. ACTION REQUIRED BY ARPA

There are no items in the SENTRY Program at this time which require ARPA action.

WDPCR-59-33

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

6. FACILITIES

a. Observations by Air Force Ballistic Missile Division field personnel indicate that the construction of the launch complex #1 at Point Arguello is behind schedule. This was brought to the attention of the Eleventh Naval District, the construction agency. They advised that action has been taken to attempt to bring the facility back on schedule to meet present beneficial occupancy dates.

b. Bids were opened for the Tracking and Data Acquisition Station, New Boston, New Hampshire, on 28 April. Construction is scheduled to be completed to meet a need date of June 1960.

c. Construction of Increment #1 of the Development Control Center, Sunnyvale, California, began in April and is scheduled to be completed in December 1959. Design of Increment #2 will begin in May 1959.

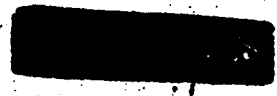
Copies furnished:
See attached list

R. J. Ritland for

O. J. RITLAND
Brig. Gen., USAF
Commander

WDPCR-59-33

~~CONFIDENTIAL~~



[REDACTED]

~~CONFIDENTIAL~~

DISTRIBUTION

| | |
|--|----|
| Advanced Research Projects Agency | 6 |
| Headquarters, United States Air Force | 12 |
| Commander, Air Research & Development Command | 2 |
| Commander-in-Chief, Strategic Air Command | 1 |
| Commander, Air Force Cambridge Research Center | 1 |
| Commander, Air University Library | 1 |
| Commander, Rome Air Development Center | 2 |
| Commander, Wright Air Development Center | 1 |
| Air Force Ballistic Missile Division (Hq ARDC) | 13 |
| Ballistic Missiles Center (Hq AMC) | 4 |
| Assistant CINCSAC (SAC MIKE) | 2 |

~~CONFIDENTIAL~~

[REDACTED]

~~CONFIDENTIAL~~

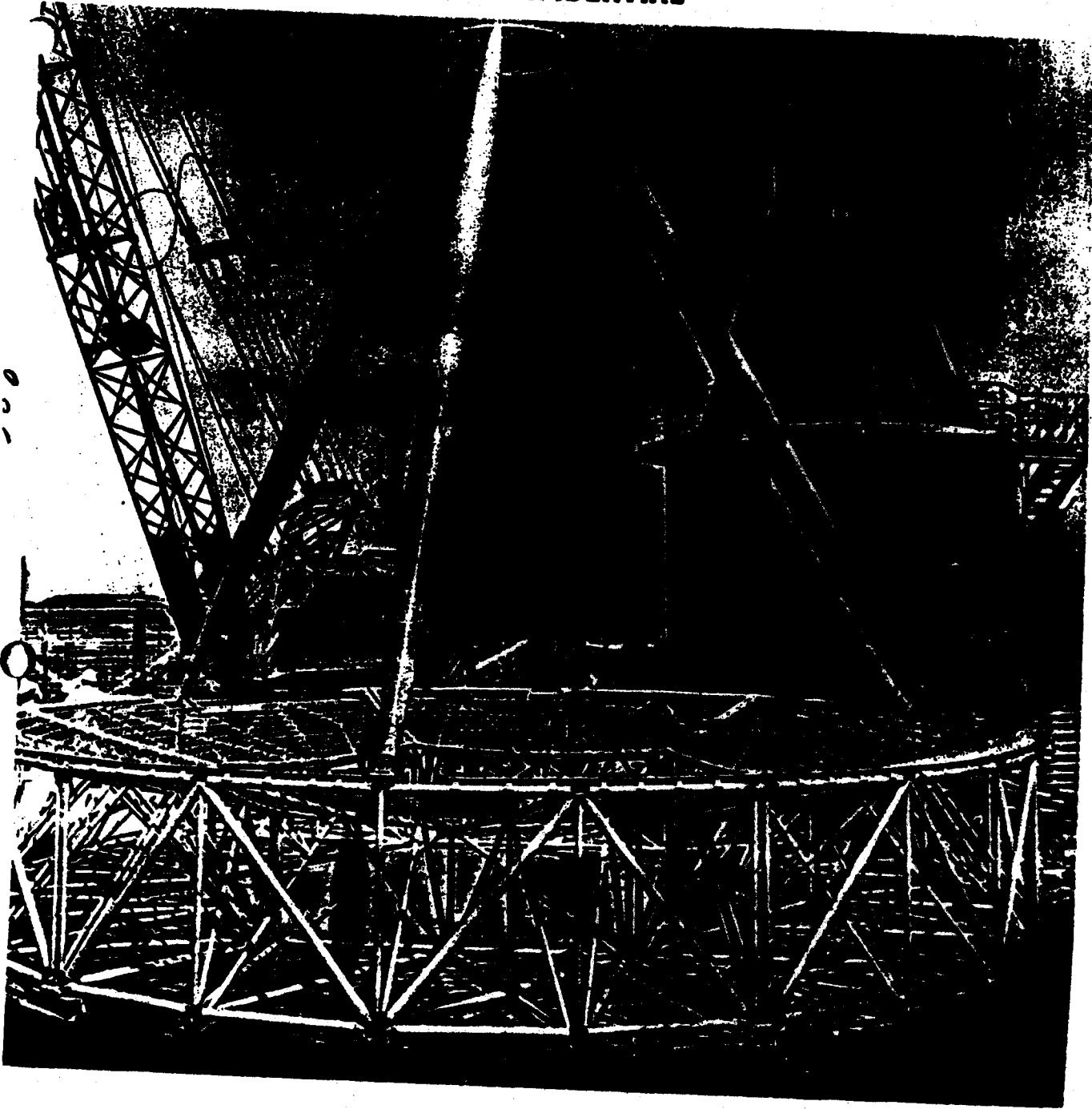


Figure 6. Photo Confidential

Caption Confidential

Weapon System 117L tracking station, Kaena Point, Hawaii. In the foreground is the TLM-18 tracking antenna, prior to erection on its steel and concrete base. Construction of the station is on schedule and the station is expected to be fully ready to participate in the initial SENTRY launch 6 December.

(WDPCR-58-3)

~~CONFIDENTIAL~~



SECRET
ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

CONFIDENTIAL

107
MAY 28, 1959

MEMORANDUM FOR THE SECRETARY OF THE AIR FORCE

SUBJECT: ARPA Order No. 9-58, SENTRY Project

Amendment No. 11, dated April 14, 1959, to ARPA Order No. 9-58, specifies that the SENTRY development program is approved to the extent that it pertains to payload programs of visual reconnaissance readout, visual reconnaissance recovery, and ferret readout.

The SENTRY Monthly Program Progress Report, dated May 8, 1959, issued by the Air Force Ballistic Missile Division, discloses that a mapping payload was a part of the reoriented SENTRY program. You are advised that mapping is not an ARPA approved or authorized part of the SENTRY program as reoriented. All work and contracts for mapping objectives utilizing ARPA SENTRY funds shall be terminated immediately.

/s/ Roy W. Johnson

Roy W. Johnson
Director

cc: Cdr., ARDC
AFEMD, ARDC

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED: DOD DIR 5200.10

CONFIDENTIAL

CONFIDENTIAL

27 MAY 1959

INFO

WDCE
WAT

216

ANDREWS AFB MD
LOS ANGELES CALIF

FROM REICV-26-5-4JE. AFMND CLM UDEW, COLONEL ODER
FOLLOWING MEMORANDUM FROM MR. R. W. JOHNSON IS QUOTED FOR YOUR
INFORMATION. QUOTE. SUBJECT CLM ARPA ORDER NO. 9-58, SENTRY PROJECT
ORDER NO. 11, DATED APRIL 14, 1959, TO ARPA ORDER NO. 9-58,
CERTIFIES THAT THE SENTRY DEVELOPMENT PROGRAM IS APPROVED TO THE
EXTENT THAT IT PERTAINS TO PAYLOAD PROGRAMS OF VISUAL RECONNAISSANCE
RECOVERY, VISUAL RECONNAISSANCE RECOVERY, AND PHOTO RECONNAISSANCE
RECOVERY.
THE SENTRY MONTHLY PROGRAM PROGRESS REPORT, DATED MAY 8, 1959,
ISSUED BY THE AIR FORCE BALLISTIC MISSILE DIVISION, DISCLOSES THAT
MAPPING PAYLOAD WAS A PART OF THE REORIENTED SENTRY PROGRAM.

NOT REQUIRED EXCEPT PRIOR
TO CRYPTIC & ENCRYPTION—PHYSICALLY RE-
MOVE ALL INTERNAL REFERENCES BY DATE-TIME
GROUP PRIOR TO DECLASSIFICATION."

216 RJEZFF 216

YOU ARE ADVISED THAT MAPPING IS NOT AN ARPA APPROVED OR AUTHORIZED
PART OF THE SENTRY PROGRAM AS REORIENTED. ALL WORK AND CONTRACTS
FOR MAPPING OBJECTIVES UTILIZING ARPA SENTRY FUNDS SHALL BE TER-
MINATED IMMEDIATELY. UNQUOTE.

24/21072 MAY RJEZFF

[Handwritten signatures and scribbles]

DOWNGRADED AT 12 YEAR
INTERVALS, NC, AUTOMATICALLY
DECLASSIFIED. JOD DIR 5200.10

CONFIDENTIAL

OC 3000
into [signature]
189

CONFIDENTIAL MAY 28 21 54 '59

SECRET

INFO, APO (WARDS) LOS ANGELES, CALIFORNIA

INFO, APO (WARDS) BALTIMORE, MARYLAND

INFO, HQ USAF, WASHINGTON, DC

INFO, WADS, WRIGHT-PATTERSON AFB, OHIO

SECRET FROM WHEW-5-31-B FOR RUCOF COL WORTSON. INFO FOR HQ USAF
AFSA, AFSA, AFSA, AFSA, AFSA; INFO FOR WADS WCLR COL WALLACE.
THIS MESSAGE IS SIX PARTS. PART ONE: REFERENCED YOUR RUCOF-26-5-43B
WHICH CONTAINS AN ARPA MEMORANDUM DATE UNSPECIFIED, REFERRING TO ARPA
ORDER 9-58, AMENDMENT NO. 11, DTD 14 APR 58 AND WHICH ADVISES QUOTE
THAT MAPPING IS NOT AN ARPA APPROVED OR AUTHORIZED PART OF SECRETY
PROGRAMS AND REITERATES UNQUOTE AND DIRECTS THAT QUOTE ALL WORK AND
ACTIVITIES FOR MAPPING OR SIMILAR UTILIZING ARPA SECRETY FUNDS SHALL BE
DISCONTINUED IMMEDIATELY UNQUOTE. PART TWO: IT SHOULD BE NOTED THAT
THE REFERENCED ARPA ORDER 9-58 AMENDMENT NO. 11, APPROVED THE SECRETY
DEVELOPMENT PLAN 30 JAN 59 QUOTE TO THE EXTENT IT PERTAINS TO . . .
VISUAL RECONNAISSANCE RECOVERY UNQUOTE. THE 30 JAN DEVELOPMENT PLAN

28
MAY 79

WHEW-404
2 of 2

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

Frederic G. R. Odey, Col USAF/dl

1822

SIGNED

HARRY L. EVANS

SECRET

SECRET

CONFIDENTIAL

FOUO

~~SECRET~~

COMER, AFZAD (BEARDO) LOS ANGELES

~~CONFIDENTIAL~~

**SENT TO DEAF WITH INFO TO COMEF AND PRESIDENTIC
DEVELOPMENT PLAN TO THIS END. REF YOU WANTED.**

97

INZIM

VIDE-104
of 2

~~SECRET~~

[REDACTED]

CONFIDENTIAL

CONFIDENTIAL

29 May 1959

INTO
110

OPK

AFHQ
AFHQ
AFHQ
AFHQ

THIS MESSAGE THIS HEADQUARTERS AFHQ 3100, 3
AND AFHQ MESSAGE WHP-2-30-E, 6 MARCH 1959.
THIS HEADQUARTERS REFERENCED ABOVE APPROVED
ACTIVATION ORDERS FOR SENTRY WING AND SUBORD
ON AN UNCLASSIFIED BASIS WITH THE
6304TH DATA PROCESSING SQUADRON.
FURTHER DIRECTED THAT ACTIVATION OF 6304TH BE
THE FACTORS REGARDING LOCATION AND CLASSIFICATION

2/4

PAGE TWO RJEHQ 399
OF THIS SQUADRON HAVE BEEN RESOLVED. DESIRE YOU ACTIVATE
THE 6304TH DATA PROCESSING SQUADRON AT THE EARLIEST
PRACTICABLE DATE IN CONFORMANCE WITH CURRENT PROGRAMMING
DOCUMENTS. ACTIVATION ORDERS FOR THIS UNIT CAN BE
UNCLASSIFIED PROVIDED NO REFERENCE TO MISSION OR
CAPABILITIES IS INCLUDED. UNIT MANNING DOCUMENTS,
MANPOWER REQUIREMENTS TABLES AND ALL PERSONNEL
EXEMPTIONS SHOULD BE CLASSIFIED AS INDICATED IN
PART B, YOUR MESSAGE, REFERENCED ABOVE.

10/10/59 RJEHQ

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

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

SECRET

CONFIDENTIAL

59-1947
59-1947
CPT

SECRET
AIR FORCE BALLISTIC MISSILE DIVISION
HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
UNITED STATES AIR FORCE
Los Angeles 45, California

CONFIDENTIAL

112

REPLY TO
ATTN OF: WDPCR

8 June 1959

SUBJECT: SENTRY Monthly Program Progress Report, 31 May 1959

TO: Director
Advanced Research Projects Agency
Washington 25, DC

1. This report covers progress during the month of May 1959 in the SENTRY Program, directed by ARPA Order 9-58, prime contractor Lockheed Missile Systems Division. The funding in Fiscal Year 1959 for the SENTRY Program is \$109 millions in accordance with the 30 January 1959 Development Plan. A summary list of contractors is contained in Tab 3, Section 1, of the Development Plan.

2. TECHNICAL STATUS

a. The first flyable visual (E-1 components) reconnaissance package for the dual payload is being assembled. This payload contains several refinements over the initial flight version, particularly in readout, instrumentation and control. Included in the components test package configuration will be a completely redesigned processor, web supply and take-up system, and film transport.

b. Preliminary photographs taken through the E-1 lens using the simulated F-1 payload configuration indicate the feasibility of operation through a restricted field of view.

c. The experimental model of the E-2 payload was modified to incorporate presoaked web processing. Functional evaluation testing over a five-day period was satisfactory.

d. Installation and evaluation of the ground reconstruction electronics, repeater kinescope, and operating console was completed at Eastman Kodak.

WDPCR-59-47
Copy 46 of 48 Copies

CONFIDENTIAL

JUN 11 1959

~~CONFIDENTIAL~~

e. In the F-1 system development, a torque-balancing motor was added to the modified MR 100 tape recorder being used to store intercept data. This motor reduces the unbalanced torque of the recorder to a value well within acceptable limits.

f. Improved antenna test facilities, designed for performing composite antenna pattern tests and checking inhibition, were installed at Airborne Instruments Laboratory. Installation tests were completed successfully. All of the ground items for in-flight calibration (including truck vans and radar training vans) were delivered to AIL.

g. Work has been initiated for the design and fabrication of the digital display equipment for the evaluation and command console in the F-2 ground data handling equipment.

h. The vehicle equipment and configurations for the F-3 systems have been determined. Two each of two configurations, F-3A and F-3B, will be flown. F-3A equipment capabilities will be:

[REDACTED]

(2) 100 kc bandwidth analog recording.

[REDACTED]

F-3B equipment capabilities will be:

[REDACTED]

(2) Capability of using 6 Mc analog recorder.

[REDACTED]

~~CONFIDENTIAL~~

The choice of F-3 capabilities has been made to: (a) satisfy national intelligence objectives, (b) satisfy limitations imposed by proposed flight schedules and necessary lead times required, and (c) provide the greatest equipment capability consistent with the funding allowed for this portion of the program.

878

i. In the SENTRY effort related to retrieval of photographic film and/or cameras from orbit, tentative designs have been made of three different recoverable capsules. Computer runs are being made to solve equations of motion, problems concerning accuracy of trajectory, mechanical limits, etc. The designs include the use of tractor-type retro-rockets to be extended and spun without imparting spin motion to the capsule. Retro-rockets and heat shields are jettisoned before recovery to reduce weight. Cameras in the recoverable capsules will be commanded from the ground. Camera power will be furnished by the satellite APU. It has not yet been decided whether both camera and film will be retrieved. Devices to be carried on the recoverable capsule include an acquisition beacon, recorder, and telemetry system to relay information on acceleration, temperature, ablation, etc., during re-entry. The satellite will have a useful life of approximately 30 days. It is intended that the capsule will impact within a 30 mile diameter circle. Work statements have been prepared for the capsule propulsion, heat shield and velocity integrator and are being prepared for the parachute and air recovery system.

j. The possibility of using a reaction wheel for orbital attitude control is being investigated. Preliminary specifications for the pitch motor were determined, and limit cycle operation was studied on an analog computer. Three-axis control by means of reaction wheels in pitch and roll with a constant-momentum wheel coupling roll and yaw also is being studied. An alternate method of orbital attitude control involving low-impulse reaction jets is also being considered.

3. PROBLEMS ENCOUNTERED

No problems of significance have been encountered during the period covered by this report.

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

4. WORK SCHEDULES

a. The ultra-clean assembly area at Eastman Kodak Company is nearing completion. Installation of air monitoring equipment was completed.

b. Eastman Kodak Company has let a contract for fabrication of operational models of primary-record cameras (E-2 components), with first delivery scheduled for August 1959.

c. A considerable amount of design work has been completed on the developmental model E-2 payload, and fabrication has been started on most components.

d. Construction of visual reconnaissance system test and operational areas at Vandenberg is proceeding on schedule.

R. J. RITLAND for

O. J. RITLAND
Brig. Gen., USAF
Commander

Copies to:
See attached Distribution

~~SECRET~~

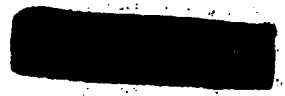
~~CONFIDENTIAL~~



~~CONFIDENTIAL~~

DISTRIBUTION

| | |
|-------------------|----|
| BQ USAF (AFSCM-A) | 18 |
| ARDC | 2 |
| SAC (DORQ) | 1 |
| AFCC (CRZT) | 1 |
| RADC (RCOI) | 2 |
| WADC (WCLOT) | 1 |
| AU (AUL-9436a) | 1 |
| BPC | 4 |
| SAC MIKE | 2 |
| AFEMD | 15 |



~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

15 60287 113

RECEIVED
ACTION AFM W02W/P0P
W02W/P0P

12 JUN 1953 23 28

INFO W02E
W02E
W02E
(W02E)



DM

INFO
RJEKFF 116
RJEKFF 116
RJEKFF 116

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

INFO ARMS ANDREWS AFB MD
INFO WASH DC/COM USAF WASH D C
INFO WASH DC/COM LOS ANGELES CALIF
INFO WASH DC/COM WPAFB OHIO
INFO WASH DC/COM WASH 25 D C
INFO WASH DC/COM WASH 25 D C

INFO WASH DC/COM WASH 25 D C
ACTION FOR AFBAT, INFO FOR AFBD; WANG; HQ USAF (AFDR) AND (AFDRQ).
SUBJECT: ADVANCED PHOTO CHARTING SUB-SYSTEM, REFERENCE MESSAGE FROM
AFBD DATED 2 JUNE 53, PART THREE. THIS DEVELOPMENT WAS
ORIGINALLY SUBMITTED AND APPROVED AS A PART OF THE APPLIED RESEARCH
PROGRAM AND FUNDED UNDER 7607 WITH 100 SERIES FUNDS. DELETION OF
SENTRY FROM SENTRY PROGRAM DOES NOT RELIEVE AFBD OF RESPONSIBILITY OF
DEVELOPING TECHNIQUES IN ITS APPLIED RESEARCH PROGRAM. THIS DEVELOP-
MENT IS JUSTIFIED UNDER TR 122 AND FURTHER SUPPORTS JCS STAFF DIRECTIVE
JCS 1666/66 AND COR 80 ADDENDUM 4. AS A MAPPING TOOL, THIS SUB-SYSTEM

PAGE TWO RJEKFF 116
MAY BE UTILIZED IN EITHER BOOST GLIDE VEHICLES SUCH AS DYNASOAR
OR IN HIGH ALTITUDE AIRCRAFT. ALTHOUGH THE LOSS OF SENTRY AS
THE VEHICLE WILL DELAY AN EXTREMELY DESIRABLE IMPLEMENTATION OF
THE SUB-SYSTEM, IT DOES NOT DETRACT FROM NEED TO CONTINUE SUB-SYSTEM
DEVELOPMENT AS ORIGINALLY PLANNED. IT IS PROPOSED THAT THE
DEVELOPMENT OF SUB-SYSTEM BE CONTINUED WITH REWRITE OF FORM 171 TO
REMOVE APPLICATION TO SENTRY AS THE VEHICLE. TO STOP THIS DEVELOP-
MENT WILL SERIOUSLY RETARD THE APPLIED RESEARCH PROGRAM IN AREA OF
7607 RECONNAISSANCE. NO FUNDS WOULD BE RECOVERABLE UNDER THIS
PROPOSED COURSE OF ACTION AND REDUCTION OF THE SUB-SYSTEM IS NOT
CONSIDERED FEASIBLE. IT IS REQUESTED THAT NO ACTION BE INITIATED
WHICH WILL DELAY THIS DEVELOPMENT AND RESULT IN DELAYED DELIVERY
OR OTHERWISE FOR FUND OVER-RUN ON THE EXISTING CONTRACT. NO USAF
DIRECTION IS REQUESTED AT EARLIEST MOMENT.

12/1652 JUN RJEKFF



DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

383

THE THREE RJEBSQ SXA
PROGRAM AND DESIGN OF DR. JAMES BAKER, WHO IS THE WORLD
LEADING AUTHORITY ON OPTICS IN THIS COUNTRY. DR. BAKER HAS
BEEN CONSISTENT ON THIS PROGRAM AND IT IS
THE OPTICAL ASPECTS OF THE WORK PROGRAM WITHOUT
AS THESE ITEMS ARE CRITICAL LONG LEAD TIME ITEMS.
DR. BAKER HAS INDICATED THAT THIS EFFORT REPRESENTS HIS
PERSONAL INVESTMENT IN MILITARY OPTICAL PROGRAMS AS HE INTENDS TO
Pursue OTHER EMPLOYMENT. THE MAPPING AND CHARTING PROGRAM
SET UP BY THE DEPT OF DEFENSE SHOULD THEREFORE RELY ON THIS
PROGRAM AND ITS CONTINUITY. THE PROGRAM IS INTENDING TO PROVIDE
THE TECHNICAL SUPPORT REQUIRED FOR THE SUBSYSTEM DEVELOPMENT.
ALTHOUGH THE MAPPING AND CHARTING PROGRAM HAS BEEN ORIENTED
FOR SATELLITE USE, THE PROGRAM IS CAPABLE TO SUPPORT SLIDE TYPE
VEHICLES WITH ADDITIONAL INSTRUMENTAL CONTROLS. THE
NAVIGATION, STABILIZATION, ETC. THE PRODUCTS OF THE SUBSYSTEM
ARE COMPATIBLE WITH ALL EXISTING OR PROPOSED METHODS OF GROUND
DATA REDUCTION AND HANDLING BY ANY CARTOGRAPHIC AGENCY. IN
CONCLUSION A CONTINUANCE OF THIS DEVELOPMENTAL PROGRAM INDEPENDENT

PAGE FOUR RJEBSQ SXA
OF ANY SPECIFIC VEHICLE, WILL PROVIDE THE DEPT OF
DEFENSE WITH AN URGENTLY NEEDED AND MOST ADVANCED CARTOGRAPHIC
CAPABILITY FOR WORLD WIDE CHARTING.
SINCE THIS IS AIR FORCE MONEY AND NOT ARPA MONEY, AND INASMUCH
AS IT COMES UNDER AN APPROVED TTPD AND GOR, IT IS RECOMMENDED
THAT THE EFFORT BE CONTINUED AS NOW UNDER CONTRACT.

R/2249Z JUN RJEBSQ

DECLASSIFIED DOD DIR 5200.10
AUTOMATICALLY
DATE 11/15/98

~~CONFIDENTIAL~~

HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
United States Air Force
Andrews Air Force Base
Washington 25, D. C.

Call 6/15
6594
A Beech

17 June 1959

SECTION

REORGANIZATION OF 50TH AIR FORCE BAND. I
IDENTIFICATION, ORGANIZATION AND ASSIGNMENT OF USAF UNITS. II

I. REORGANIZATION OF 50TH AIR FORCE BAND.

1. Effective 15 June 1959, the 50th Air Force Band is reorganized at Eglin Air Force Base, Florida under Air Research and Development Command Unit Manning Document Number 58A-540-6139 with a capability as cited in O/T 86137, 1 February 1958, paragraphs 1 and 2, Part I (Part IIA); strength one (1) warrant officer and nineteen (19) airmen. This strength represents the total of the composition as cited in Part II of the O/T.

2. Personnel will be furnished by the Commander Air Research and Development Command.

3. For equipping purposes, the above is a Category D unit and is authorized Unit Essential Equipment as listed in column 3A of MEAL and T/A 1-21 items in the Unit Mission Equipment column of the Unit Authorization List. Unit Mission Equipment column of the Unit Authorization List will be prepared in conformance with paragraphs 3b and c, Air Force Regulation 67-96 and paragraph 2, Section 6, Volume XXI, Air Force Manual 67-1. Variable items, T/A 1-21 and MEAL, will be based on Unit Manning Document strength of unit. Base Support Equipment, as listed in column 3B of MEAL, is authorized in Unit Support Equipment column of Unit Authorization List. Unit is authorized additional equipment in Unit Support Equipment column of Unit Authorization List in conformance with paragraph 3d, Air Force Regulation 67-96 and paragraph 3, Section 6, Volume XXI, Air Force Manual 67-1. The authorization of Base Support Equipment in the Unit Support Equipment column of the Unit Authorization List does not allow requisitions for Base Support Equipment items when a T/A item is on hand or on requisition which serves the same function as the Base Support Equipment item. Neither will it allow T/A allowances to duplicate Base Support Equipment Allowances.

4. Authority: Department of the Air Force Letter Cite: AFORD 160a, 22 May 1959, Subject: Reorganization of the 50th Air Force Band.

II. IDENTIFICATION, ORGANIZATION AND ASSIGNMENT OF USAF UNITS.

1. Effective 1 July 1959, the following United States Air Force units are designated and organized under Air Research and Development Command Unit Manning Documents at the locations indicated, and assigned to the 655th Test Wing:

see I
60259A2

| <u>UNIT DESIGNATION</u> | <u>UNIT MANNING DOCUMENT NUMBER</u> | <u>LOCATION</u> | <u>UNIT AUTHORIZATION LIST NUMBER</u> |
|---------------------------------|-------------------------------------|--|---------------------------------------|
| 6594th Data Processing Squadron | 6594-820-4345 | Lowry Air Force Base, Denver, Colorado | 6594 4345A |
| 6596th Instrumentation Squadron | 6596-820-1765 | Vandenberg Air Force Base, California | 6596 1765A |

*Redesignated
all 50 # 59
ARDC 1959
discontinued
1 Oct 1960
all 50 # 6
ARDC 1960*

2. Personnel will be furnished by the Commander Air Research and Development Command.

3. Equipment is authorized, effective 1 July 1959, under Unit Authorization List Number cited above.

4. Authority: Air Force Regulation 20-27, 15 September 1959.

FOR THE COMMANDER:



W. J. [Name]
Colonel, USA
Director Administrative Services

DISTRIBUTION:

- APOC (20)
 - Comdr, 584th AF Band, Eglin AFB, Fla (10)
 - AFEMD (20)
 - 6594th Test Wing (20)
 - Comdr, 6594th Data Processing Sq (10)
 - Comdr, 6596th Instrumentation (10)
 - AFEMD Fld Off #3, Lowry AFB, Denver, Colo (3)
 - AFEMD Fld Off, PO Box 1657, Vandenberg AFB, Calif (3)
 - Comdr, Lowry AFB, Denver, Colo (5)
 - Comdr, Eglin AFB, Fla (5)
 - RDE (2) RDSPMP (2) RDSO (15) RDSOH (2) RDSM (2) RDSP (2)
 - RDSPHO-03 (2) RDCS (2) RDZOW (2) RDEH (2) APOCOP-1-S (2)
 - AFQGM (2) AFOOP (2) RDAO (3) RDCAO (4) RDQPO (8) Attn: Capt Smith
 - Actng & Fin Div, 1100th Sup Gp, Bolling AFB, 25, D. C. (4)
 - Dir Admin Serv, The Pentagon, Wash 25, D. C. (2)
- *A* DISTRIBUTION

~~CONFIDENTIAL~~

24 Jun 59

WDEW

WDGE

WD

116

IC6905

WD

wdge

7. PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY 8 ENCRYPTION. PHYSICALLY RE-MOVE ALL INTERNAL REFERENCES BY DATE-TIME GROUP PRIOR TO DECLASSIFICATION.

ARMED ARMS AMMUNITION AND NO
MORE ARMED LOS ANGELES 45 CALIF

~~CONFIDENTIAL~~ LORRY/DA/C/21E, ATEN CLN VEE, WDEW, WDEW
RE: REQUEST FOR YOUR INFORMATION AND ACTION IS A MESSAGE.
RE: ARPA, DATED 24 JUNE 1959. QUOTE. CONFIDENTIAL CITY DEY.
RE: FROM S&D ARPA S&D JOHNSON PARA INITIAL ARPA FY 1960 BUDGET
EXAMINATIONS INDICATE THE FOLLOWING ANNUAL AMOUNTS SHOULD BE.
AS GUIDANCE IN SCHEDULEING THE WORK CLN /1/ SENTRY \$12,000,000.
AMOUNT IS BASED ON DEFERRING, PENDING AN ARPA PROGRAM REVIEW,
A PORTION OF THE PROGRAM UTILIZING A RECOVERABLE SYSTEM. /2/
RECOVERER \$21,000,000 FOR COMPLETION OF THE EXTENSION OF THE SERIES.
RE: MIDAS \$12,000,000 OF ARPA FUNDS. IT IS ASSUMED THAT \$26.9

386

TWO RJEKFF 246
MILLION OF AF FUNDS AS SHOWN IN REVISED DEVELOPMENT PLAN WILL BE
AVAILABLE AT SUCH TIME AS PH

IF II IS APPROVED. PARA OTHER PROGRAM
REQUIREMENTS ON ARPA ARE SUCH THAT NO INCREMENT IN ADDITION TO THE ABOVE
MAY BE COUNTED ON AND THEREFORE IT IS IMPERATIVE THAT YOU CONTRACTOR
STAY WITHIN THE AMOUNTS AVAILABLE. YOU ARE REQUESTED TO
REVISIT REVISED DEVELOPMENT AND FUNDING PLANS BASED ON THE ABOVE
AMOUNTS AS SOON AS POSSIBLE ARPA PROJECT STAFF WILL VISIT AND FOR
PROGRAM REVIEW IN NEAR FUTURE. PARA PENDING PASSAGE OF APPROPRIATION
APPORTIONMENT FY 1960 FUNDING WILL BE ON A MONTHLY BASIS.
THE AMOUNT FOR EACH MONTH JULY AND AUGUST FOR ACH PROJECT.
NOTE.

2154Z JUN RJEKFF

~~CONFIDENTIAL~~

DOWNGRADED AT 12 YEAR
INTERVAL; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

ARMED ARMS FOR THE MISS



ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

117

ARPA Order No. 9-60
Amendment No. 12
Project Code No. 2100

July 1, 1959 Date

TO: The Secretary of the Air Force
Washington 25, D. C.

ARPA Order No. 9, dated June 30, 1958, as amended,
is hereby further amended to increase the fund availability from
\$96,600,000 to a new total of \$118,200,000 under appropriation
and account symbol "97X0113.002 Salaries and Expenses,
Advanced Research Projects Agency, Department of Defense."

John E. Clark
John E. Clark
Rear Adm., USN
Acting Director

1023 707 12 64 S: #2
RECEIVED

102

~~CONFIDENTIAL~~ 118

~~CONFIDENTIAL~~

Memorandum of Development Plans

JUL 18 1959

Mr. WWP (Army)
Mr. WWP (AF)

WWP

1. Memorandum (under separate cover) is transmitted with attached Research Institute Study (RIS) instructions (re: attached RIS title HQ-1000, dated 24 June 1959) and five (5) copies of each of the following documents:

a. Revised Study Development Plan, dated 15 July 1959.

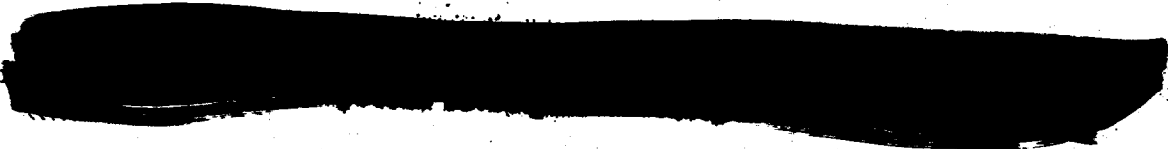
b. Revised Monthly Release Alarm System (MRAS) Development Plan, dated 15 July 1959.

c. Revised Funding Program, dated 15 July 1959, to the Macomber Development Plan, dated 30 April 1959.

2. The most significant change contained in the new Study Plan is the AFMS proposal for Air Force support of the Study recovery reconnaissance signals development. In the AFMS instructions cited in paragraph 1 above, AFMS was instructed to defer work on the Study recoverable signals development due to AFMS fund requirements for other AFMS programs in FY 1960. The AFMS provided a figure of \$12,000,000 for FY 1960 for the Study Program. This amount is \$5,000,000 less than the previously agreed upon figure. The impact of this action by the AFMS on the capability of the Study program to satisfy key intelligence requirements in the critical 1961-1962 time period is discussed in the Development Plan. In order to prevent a serious program delay, the plan proposes Air Force support to permit the uninterrupted continuation of the recovery signals development.

3. With regard to the new AFMS Development Plan the following points are important:

388



~~CONFIDENTIAL~~

WWP 60
4 4 44

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIRECTIVE

COUNTY OF ...
11/19

ILLEGIBLE

120

~~FOR AIR FORCE EYES ONLY~~

MEMORANDUM FOR RECORD

24 July 1959

SUBJECT: Telecon between Colonel Wikstrom and Lt Colonel Mathews this office


169

1. Colonel Wikstrom called 23 July and advised that a JCS split position had been reached relative to the space and satellite programs. The Army and Navy papers recommended that SAMOS go to the Army; that communications and satellite programs go to the Navy; and, that the remaining approved programs go to the Air Force. Additionally, the Army and Navy recommended that an astronautic center be established under a JCS command.

Note

2. The Air Force is now preparing a position which will include the high points of Colonel Curtis' letter to General Schriever and his letter to Colonel Brown. The 1st Missile Division will keep this office informed.

3. Colonel Wikstrom advised that we would be furnished a copy of their response to Admiral Monroe's letter concerning the programming support for the WS-117L.


GEORGE H. MATHEWS
Lt Colonel, USAF

~~FOR AIR FORCE EYES ONLY~~

atek 3



**ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.**

121
VDE

**ARPA Order No. 9-60
Amendment No. 13
Project Code No. 2100**

July 30, 1959 **Date**

**TO: The Secretary of the Air Force
Washington 25, D. C.**

392

ARPA Order No. 9, dated June 30, 1958, as amended, is hereby further amended to increase the fund availability from \$118,200,000 to a new total of \$135,600,000 under appropriation and account symbol "97X0113.002 Salaries and Expenses, Advanced Research Projects Agency, Department of Defense." These funds provided as requested for continuation of work during August 1959.

John E. Clark
**John E. Clark
Rear Adm., USN
Acting Director**

cc: Commander, ARDC

WFO

MEMORANDUM FOR THE RECORD

21 July 1960
1400

Copy - 62 Curtin
61 O'Fallon
61 Spangher
61 Hambrick
1122

SUBJECT: Telegrams Call from General Schriever to General Eiland

1. Into meeting ^{held} General Schriever discussed a number of problems relating to the Air Staff and AUSA with Dr. Charlyk. He Charlyk also had some discussions with Dr. York and the AUSA programming the financial situation of the above programs and also the program which involves the Army.

2. A group is to be set up next week in the Pentagon to review all the past problems and actions on those programs as related to funding. Dr. York, Charlyk, and someone from HQ USAF will compose the group of three looking into this. Some other items discussed between Dr. Charlyk and General Schriever were (1) administrative procedures as they relate to space programs and (2) problem in the Air Staff as well as in OSD where a large number of agencies are getting into the act and issuing us instructions.

3. General Schriever would like a run-down on the problem areas which were included in the paper left with him by Colonel Curtin and suggested that certain things be done which will lead to our being in a position to take some action with General ~~York~~ and Dr. Charlyk the week after next, the week of the 16th of August, possibly culminating with a meeting with Dr. York.

4. The following schedule was reviewed:

a. 10 August - In the morning, General Schriever is to be briefed on space management, administrative procedures, etc. Also, he wants to be brought up to date on the questions asked on these other items. In the afternoon, Mr. Gates will be briefed.

b. 11 August - Briefing to General Anderson in Dayton on both Dyna program and ballistic missile.

c. 12-13-14 August - In those three days, General Schriever hopes to get this presented in the Pentagon and reach some decisions on our problems.

393

Curtin/O'Fallon

O'Fallon

10

stated that there will probably be no action taken on this with the ADP situation is cleared up. The work they want in that section, General Behrman was optimistic for a decision. He stated that one of the things to do is encourage efforts and really move in on it the work they want. Colonel Oiler mentioned that the RAEV's people may also be involved in log with Dr. Charlyk and General Wilson want Tuesday and get into this up with them.

6. On the program which changed its name recently, General Behrman advised that he had gotten some very disturbing inputs about the way in which this program has been managed; that all kinds of directions are being received from different places. He had received some additional information that they have given instructions about the relationship between Lockheed, GE, and the other outfit which are quite different from the arrangements which we have. His point here was that this is the time that he should be paid for on these things. He feels that problems of this nature are so complicated and complex that they should be handled and resolved at the proper level. In this case, he stated that the management is so close to the same thing we are already doing on the Discreet program management-wise with the Discreet program and point out the deficiencies in this latter approach both from the standpoint of management problems of bringing new people into the act and also what this does in the way of jeopardizing security. He considers this to be an excellent opportunity to point up how wrong ADBA is to try to divide these programs up among the services. He wants a full and complete story on this one in order to be able to present a real strong case to Dr. Charlyk and then to Dr. York.

7. Three Inspections at Vandenberg. General Behrman expressed his deep concern over this situation and was assured that General Milford has it in hand.

THE DEFERRAL OF THE RECOVERY RECONNAISSANCE CAPSULE FOR THE REASONS STATED IN PARAGRAPHS ABOVE.

~~CONFIDENTIAL~~

PAGE FOUR RJEZFF 13C

6. THE INDECISION AND CONFLICTING INSTRUCTIONS MENTIONED ABOVE HAVE SERIOUSLY EFFECTED OUR PROGRAM. THESE EFFECTS MAY BE SUMMARIZED AS FOLLOWS: (A)

A. DEFERRAL OF THE RECOVERY RECONNAISSANCE CAPSULE REDUCES THE CAPABILITY OF SENTRY TO MEET ALL INTELLIGENCE REQUIREMENTS IN THE CRITICAL TIME PERIOD OF 1961-1962.

B. DEFERRAL OF THE PROGRAM NOW ELIMINATES THE TIME ADVANTAGES GAINED TO DATE BY OUR STRENUOUS EFFORTS.

C. THE DEFERRAL ACTION WILL BE SET IN THE LOSS OF A LARGE UNDETERMINED AMOUNT OF MONEY WHICH HAS BEEN EXPENDED IN PURSUANCE OF THIS PROGRAM TO DATE.

D. OUR AERIALY DIFFICULT TASKS MADE EVEN MORE DIFFICULT BY THE CONSEQUENT EFFECT UPON THE MOODS OF THE PERSONNEL, BOTH MILITARY AND CONTRACTOR, ENDEAVORING TO ACCOMPLISH THIS IMPORTANT WORK.

7. IT IS RECOMMENDED THAT THE MATTERS BE BROUGHT TO THE ATTENTION OF THE ARPA WITH A REQUEST THAT THE APRIL 1959 APPROVAL REMAIN IN EFFECT AND THAT EVERY EFFORT BE MADE TO PROVIDE GREATER PROGRAM STABILITY IN THE FUTURE. SHOULD THE ARPA DECIDE TO CONTINUE THE RECOVERY PROGRAM, IT IS RECOMMENDED THAT THE ARPA IMMEDIATELY SUPPORT THIS URGENT DIRECTION.

BT
38 18 10Z JUL 1 1977

PLS CF FOR ONE
50 FIRST

LINE 5 OF PAGE
AND
LINE 8 OF PAGE

RECOVERY RECONNAISSANCE CAPSULE
RECOVERY RECONNAISSANCE CAPSULE

~~CONFIDENTIAL~~

Om's

Senior Judge (m)

~~SECRET~~

~~CONFIDENTIAL~~

124

HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
WRIGHT PATTISON AIR FORCE BASE
WRIGHT-PATTISON AIR FORCE BASE
WRIGHT-PATTISON AIR FORCE BASE

1 AUG 1959

General Thomas D. White
Chief of Staff
United States Air Force
Washington 25, D.C.

Dear General

1. I am gravely concerned over certain events which have taken place in the SENTRY Program as the result of instructions recently received from the Advanced Research Projects Agency (ARPA). Specifically, we have been directed by the ARPA to defer development of the SENTRY reconnaissance recovery capsule. The ARPA's stated reason for the deferral was a lack of the necessary funds to meet our previously agreed upon funding level due to the funding requirements of other ARPA projects.
2. These instructions have effectively returned the program structure and development objectives to the same point that they were some seven months ago. Also, they have negated to a large measure the expenditure of funds and prodigious efforts which have been directed toward the accomplishment of the goals of the reoriented SENTRY Program.
3. The primary purpose of reorienting the SENTRY Program was to insure that the capabilities developed in the SENTRY Program would satisfy USAF intelligence requirements. These consolidated and coordinated requirements were transmitted to the ARPA by letter from General Walsh to Mr. Johnson. As a result of General Walsh's letter, the Air Force was directed by the ARPA, in early December 1958, to reorient the SENTRY Program. Included as a part of this reoriented program was the development of the SENTRY recovery reconnaissance capsule with a target date for the first flight in early 1961.
4. I received the reorientation instructions in mid December 1958 while Commander of AFROD, and we immediately, on a crash basis, began the planning required to accomplish the reorientation. A new development plan, dated 30 January 1959, was presented to the ARPA in early February 1959, presenting our plan for the reorientation. In my considered opinion, the program defined by the new plan represented a sound, realistic, and well

398

Handwritten notes:
at 9 to 10
10/1/59

UPGRADED AT 12 YEAR
AUTOMATICALLY
AFROD, AIR 5200AD

~~CONFIDENTIAL~~

69-11901

~~CONFIDENTIAL~~

balanced development program. Initial approval of this plan was given by the ARPA on 3 April 1959. Following this approval a detailed briefing of the analysis of the new work generated by the reorientation was given to the ARPA at AFHQ on 27 April 1959. Due to the pressure of time, work was initiated on the new program following the 3 April approval.

5. In May 1959, without other notification or consultation, ARDC (AFHQ) was directed by the ARPA to terminate all work on the mapping payload for the SEMRY recovery program. On 24 June 1959, the ARPA directed deferral of the SEMRY recovery reconnaissance capsule for the reasons stated in paragraph 1, above.

6. The indecision and conflicting instructions mentioned above have seriously effected our program. These effects may be summarized as follows:

a. Deferral of the recovery reconnaissance capsule reduces the capability of SEMRY to meet Air Force intelligence requirements in the critical time period of 1961-1962.

b. Deferral of the program now eliminates the time advantages gained to date by our strenuous efforts.

c. The deferral action will result in the loss of a large undetermined amount of money which has been expended in pursuance of this program to date.

d. Our already difficult task is made even more difficult with the consequent effect upon the morale of the personnel, both military and contractor, endeavoring to accomplish this important work.

7. It is recommended that these matters be brought to the attention of the ARPA with a request that the 3 April 1959 approval remain in effect, and that every effort be made to provide greater program stability in the future. Should the ARPA decline to continue the recovery program, it is recommended that the Air Force immediately support this urgent development.

Original signed:
B. A. SCHRIEVER

B. A. SCHRIEVER
Lieutenant General, USAF
Commander

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

125

DEPARTMENT OF THE AIR FORCE
OFFICE OF THE CHIEF OF STAFF
UNITED STATES AIR FORCE
WASHINGTON, D. C.

5 AUG 1959

400

~~SECRET~~ (S) Assignment of Operational Planning Responsibilities

TO: Commander
Air Research and Development Command
Andrew Air Force Base
Washington 25, D. C.

1. (S) The Strategic Air Command is designated as the Command responsible for operational planning for employment and control of the Advanced Reconnaissance Satellite System, WS 117-1 (S).
2. (S) The Air Research and Development Command, in collaboration with the Strategic Air Command, will provide assistance, as necessary, to develop the capability to exploit the system to its fullest and at the earliest possible date.
3. (S) It is recognized that during the research and development phase the Advanced Reconnaissance Satellite System will have operational potential; therefore, in addition to the above instructions, the Strategic Air Command will be responsible for processing data obtained from all reconnaissance satellites and for providing information and data necessary to the continued development and improvement of the WS 117-1 system.
4. (S) In consideration of current national policies regarding the use of space the following basic classification criteria is established with respect to the Advanced Reconnaissance Satellite System, WS 117-1 (S).
 - a. The specific purposes and effectiveness of reconnaissance satellites will be classified TOP SECRET.
 - b. Strategic Air Command procedures for operational planning and employment purposes will be classified TOP SECRET.

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOWNSIDE 5208.10

~~CONFIDENTIAL~~

W.D.G. 11-3

~~CONFIDENTIAL~~

Letter to AFSS, subject (Unclassified) Assignment of Operational Planning Responsibility (Cont)

c. Strategic Air Command activities reflecting programming, mission control, receipt of data, data processing or dissemination of data will be classified SECRET.

d. Operational readiness or capabilities will be classified SECRET.

e. All other research and development planning activities leading toward the development of an intelligence surveillance satellite capability and command assignment will be classified SECRET or in accordance with the NS 117-1 Classification (Rev. AFSS), dated 15 March 1959.

f. Dissemination and/or distribution of information relating to the program will be limited to those individuals having an official need to know and who contribute directly to the support of the program. Release of information through public resources will be in accordance with existing policies and directives.

5. (UNCLASSIFIED). All previous instructions contrary to these are hereby rescinded.

6. (UNCLASSIFIED). An identical letter has been forwarded to the Strategic Air Command.

7. (UNCLASSIFIED). This letter is classified SECRET because it pertains to a program of vital importance to National Defense.

Signature
ARTHUR E. LEAHY
Major General, U.S. Air Force
Chief of Staff

cc: ✓ AFSS

M D C E

2

1323 VNC -2 VHK: 18

RECEIVED

CONFIDENTIAL

C
O
P
Y

~~CONFIDENTIAL~~

126

7 AUG 1959

07/0824Z Aug

~~CONFIDENTIAL~~ CITE DEP 963459 FROM ARPA SGT CLARK. EFFECTIVE IMMEDIATELY SUBJ PROGRAM IS REDESIGNATED SAMOS. PURPOSE OF NEW DESIGNATION IS TO IDENTIFY RECONNAISSANCE PROGRAM WITH INNOCUOUS NAME THAT DOES NOT RPT NOT HAVE MISSION ASSOCIATION. SAMOS NAME IS UNCLASSIFIED. SAMOS USED IN CONJUNCTION WITH RECONNAISSANCE SATELLITE PROGRAM ALSO UNCLASSIFIED. HOWEVER, ATTENTION IS INVITED TO FACT THAT INTELLIGENCE PROGRAMS MUST BE PROTECTED AS SUCH. ALL PUBLIC STATEMENTS OTHER THAN SIMPLE CONFIRMATION THAT SENTRY HAS BEEN REDESIGNATED SAMOS WILL BE CLEARED WITH ARPA. ALL INFORMATION RELATIVE TO SCHEDULES IS CLASSIFIED. WITHIN CLASSIFIED CHANNELS EVERY EFFORT WILL BE MADE TO REDUCE PROGRAM DATA ACCESS AND TO RESTRICT PROGRAM INFORMATION TO A RIGID NEED TO KNOW BASIS. STRICT ADHERENCE TO THESE MEASURES MUST BE EFFECTED. POSITIVE ACTION UNDER APPROPRIATE SECURITY REGULATIONS AND DIRECTIVES WILL BE TAKEN RELATIVE TO UNAUTHORIZED RELEASES. THIS INFORMATION SHOULD BE DISSEMINATED THOROUGHOUT THE DEPARTMENT OF DEFENSE AND TO ALL PERTINENT AGENCIES AND CONTRACTORS.
07/0824Z AUG

402

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DCD DIR 5200.10

~~CONFIDENTIAL~~

WDZSS-27

~~SECRET~~

~~CONFIDENTIAL~~

127

Handwritten signature

AIR FORCE BALLISTIC MISSILE DIVISION
HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
UNITED STATES AIR FORCE
Air Force Unit Post Office
Los Angeles 45, California

REPLY TO
ATTN OF: WDFCR

7 August 1959

SUBJECT: SENTRY Program Progress Report for the Month of July 1959

Continued on Samos

TO: Director
Advanced Research Projects Agency
Washington 25, DC

405

1. This report covers progress during the month of July 1959 in the SENTRY Program, directed by ARPA Order 9 (Project Code No. 2100). Prime contractors are Lockheed Missile and Space Division and Thompson-Ramo-Wooldridge Corporation (data handling portion of the program). Fiscal Year 1959 funding was \$105.6 millions; Fiscal Year 1960 funding is \$143.7 millions. A summary list of contractors is given in Tab 3, Section 1, of the Development Plan.

2. TECHNICAL STATUS

a. Visual Reconnaissance System

(1) E-1 Payload - Component assembly will be complete and the first flyable prototype payload will be ready for final assembly on 1 August. Component testing will be completed during August. The thermal model high altitude temperature simulation tests revealed an unexplained temperature distribution. The model has been redesigned and will be tested late in August.

(2) E-2 Payload - Component assembly was completed and final assembly of components on the developmental model structure is nearing completion. Tests are being conducted on the completed 36-inch, f/4 lens and the film and web transport mechanism. Fabrication of the two-speed processor has been started. Design of the prototype (flight) model is complete and fabrication of the first flight package is approximately 30 percent complete.

DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

Copy 48 of 52 Copies
WDFCR-58

~~SECRET~~

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

b. Ferret Reconnaissance System

(1) F-1 Payload Development - The following models are in various stages of completion and testing:

- (a) Mechanical model - simulates size and weight of various components.
- (b) P-1 Model - first electrical prototype.
- (c) P-2 Model - second prototype.
- (d) Deliverable Models - three types, S-1, S-2, S-3.

(2) F-2 Payload Development - Design and hardware progress is compatible with flight program schedules as follows:



- (d) Data analyzer circuit boards - in electrical test.
- (e) Power supply (12 volt) - precision trim resistors being added as result of test.
- (f) Power supply (160 volt) - ripple problems revealed by test being solved.
- (g) Magnetic amplified power supply breadboard (-200 to -300 volt) - electrical tests satisfactory except for ripple in output.
- (h) Power supply (-200 to -300 volt) - minor regulation problems being corrected.
- (i) Power and control assembly - in fabrication. Problems exist in cable dressing and packaging due to large number of wires required.
- (j) Redundant data analyzer - automatic reset circuit being designed.



~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

c. Ground Equipment Development

LMSD component test and checkout area is nearing completion. Installation of equipment will start in August. Assembly of the E-1 prototype test console and fabrication of the E-2 test console were completed in July. The 240-inch collimator was completed on 1 July, and fabrication of the 144-inch vertical collimator prototype is nearing completion. Prototype ground reconstruction electronic equipment for the E-2 payload video signal will be assembled and preliminary testing completed by 1 August. The F-1 prototype subsystem checkout console was delivered to LMSD in mid-July. Acceptance testing of the first deliverable F-1 console was completed and the unit delivered to LMSD one week ahead of schedule.

d. Nuclear Auxiliary Power Supply

LMSD report 44505, dated 15 July, contains requirements for developing and operating the special accessory equipment and facilities associated with the integration and use of radioisotopic and reactor-type nuclear auxiliary power systems applicable to the SENTRY Program. An auxiliary power supply briefing was presented to the Air Force Ballistic Missile Division Field Office Representative at Vandenberg Air Force Base by LMSD.

e. Studies

(1) Haller, Raymond and Brown's sixth quarterly report presented a summary of work conducted on the multiple intercept problem; and discussed mathematical intercept models, radar order-of-battle models, and statistical intercept models. Results are given of the refined multiple intercept probability calculations for the first few priority frequency bands. A signal density model, centered on Moscow, is presented for 1965. The model, extending 1,650 nautical miles, includes, in addition to ground-based emitters, "transient" emitters (such as shipborne and various classes of airborne). The report also describes progress in establishing an advanced system analysis program.

(2) An LMSD analytical study of read-in and read-out rates for various orbital altitudes, inclination angles, and receiving station configurations has been completed.

f. Facility Construction

(1) Development Control Center - Construction of the first increment will be completed by December 1959. Final plans for the second increment have been completed and are ready for contract advertisement.

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

(2) Launch Complex No. 1, Point Arguello - Beneficial occupancy dates have been rescheduled for the blockhouse to 15 August 1959 and Stand No. 1 to 1 October 1959.

(3) Tracking and Data Acquisition Station, New Boston, New Hampshire. Construction is on schedule, with completion scheduled on an incremental basis from February to September 1960.

3. PROBLEMS ENCOUNTERED

408
Work on the recoverable capsule portion of the SENTRY program was deferred in accordance with an ARPA directive received late in June 1959. The deletion or continued deferment of this portion of the program precludes the attainment of an intelligence collecting capability necessary to fulfill the requirements of the program as reoriented and redirected by ARPA in December 1959. This problem was discussed with ARPA at the Development Plan briefings on 24 July. The problem has been explained as being budgetary and was created by a reduction of \$25 millions from the total of \$160 millions established by ARPA during the February Development Plan review. This fund total was used by the Air Force as a budgetary basis of support planning as well as for the development and programming efforts for SENTRY work levels for Fiscal Year 1959 and planning for Fiscal Year 1960. Receipt of this reduction so late in the fiscal year will have a deleterious effect upon the stable and efficient conduct of the program.

4. WORK SCHEDULES

Reported under TECHNICAL STATUS (Section 2) as related to fabrication, assembly, testing, etcetera.

5. ARPA ACTION REQUIRED

a. Authorization to continue the recoverable capsule portion of the program in accordance with original schedules.

b. Re-establish ARPA funding at the \$160 millions level as contained in the January 1959 Development Plan, approved by ARPA in April 1959.

J. J. RYLAND
J. J. RYLAND
Major Gen., USAF
Commander

Copies to:
See attached Dist List .

~~CONFIDENTIAL~~

~~SECRET~~

DISTRIBUTION

407

| | |
|--|----|
| Advanced Research Projects Agency | 7 |
| Headquarters, United States Air Force | 12 |
| Commander, Air Research & Development Command | 2 |
| Commander-in-Chief, Strategic Air Command | 1 |
| Commander, Air Force Cambridge Research Center | 1 |
| Commander, Rome Air Development Center | 2 |
| Commander, Wright Air Development Center | 1 |
| Air Force Ballistic Missile Division (Hq ABDC) | 18 |
| Ballistic Missiles Center (Hq AMC) | 3 |
| Assistant CINCSPACE (SAC MIKE) | 2 |
| Air University Library | 1 |

WDPCR-58

1
~~SECRET~~

~~CONFIDENTIAL~~

178

13 August 1959



COPY TWX

Reps to 10 8052 RE 8308

408

R 132029Z
 FM HQUSAF
 TO RJWZEK/AFEMD INGLEWOOD CALIF
 INFO RJEZFF/ARDC ANDREWS AFB MD
 PT
 //CONFIDENTIAL//FROM AFKPD-PL 63506
 REFERENCE AFEMD WDZS S-I-E 13 AUG 59 NOTAL. OSD MESSAGE DEF
 963459 REPRESENTS OFFICIAL CHANGE OF NAME OF PROGRAM FROM
 SENTRY TO SAMOS AND SUPERSEDES HQ USAF MESSAGE AFKPD-PL
 61355. AS SUCH YOU WILL COMPLY WITH GUIDANCE CONTAINED IN
 OSD MESSAGE.
 PT
 13/2030Z AUG RJEZHQ

1959

NNNN

May 58 - Renamed Sentry from WS117L

DOWNGRADED AT 12 YEAR
 INTERVALS; NOT AUTOMATICALLY
 DECLASSIFIED. DOD DIR 5200.10

~~CONFIDENTIAL~~

139

17 AUG 1950

General G. P. Orin

Dear General Orin:

1. I was pleased to receive your recent letter discussing the assignment of two SAC officers to guide the research and development effort on Subsystem I at Denver, Colorado. This management action is considered as being very timely and appropriate and one which will provide clear direct lines for managing and technically directing the program under contract.

2. The SMTM Directorate is presently working with your representatives and those of Thompson Ramo Wooldridge Corporation to determine the desirable procedure and plan to more expeditiously provide a working capability at the Offutt Air Force Base location in response to recent direction from Generals Wilson and LeMay. This action will undoubtedly lighten the training and pseudo operational role of the Denver Laboratory and permit concentration on the important advanced research and development aspects.

3. I will keep you completely informed of the progress of this action as it materializes.

Sincerely

O. J. RITLAND
MAJOR GENERAL, USAF
COMMANDER

CONFIDENTIAL

dm 130

COPY

PRIORITY TWX FROM COMDR AFBMD

19 AUG 59

**TO: COFS HQ USAF
OSAF WASH DC
INFO: ARDC ANDREWS AFB MD**

SECRET FROM WDI-8-8-E HQ USAF FOR AFCGM AND AFOCE. PERSONAL FROM RITLAND TO MINTON AND GREER. OSAF FOR SAFFM ATTN MR. TURNER. ARDC FOR SCHRIEVER. SUBJECT IS RETENTION OF 23.4 MILLION DOLLARS IN AF FY 60 MCP FOR SENTRY AND MIDAS FACILITIES. IT IS UNDERSTOOD THAT THE HAC HAS RECOMMENDED TRANSFER OF REQUESTED AMOUNT TO ARPA IN FY 60 BUDGET. IT IS URGED THAT RECLAMA WITH SENATE COMMITTEE BE MADE TO RETAIN FUNDS IN AF FOR FOLLOWING REASONS: (1) IT IS A FACT THAT THE SERVICE OR AGENCY HAVING CONTROL OF EXISTING TEST, DEVELOPMENT AND OPERATIONAL FACILITIES HAS ADVANTAGEOUS COMPETITIVE POSITION FOR ASSIGNMENT OF FUTURE PROGRAMS INVOLVING USE OF THESE FACILITIES, (2) "ULTIMATE OWNERSHIP" OF FACILITIES FINANCED FROM ARPA FUNDS IS VESTED IN THAT AGENCY. ACCORDINGLY THIS AF ADVANTAGE IS LOST IF FACILITY PROJECTS ARE FINANCED THRU ARPA. (3) SIGNIFICANT PART OF FY 60 MCP FOR SENTRY AND MIDAS PROVIDES FOR PHYSICAL ADDITIONS TO EXISTING AF FINANCED FACILITIES. DUAL OWNERSHIP AND CONFUSED MANAGEMENT CONTROL WILL RESULT FROM THIS SITUATION. (4) MAJOR PORTION OF FY 60 SPACE FACILITY PACKAGE IS IN SUPPORT OF OPERATIONAL PHASE OF SENTRY AND MIDAS PROGRAMS. ARPA OWNERSHIP, WITH POSSIBLE LATER DIVERSION OF SUPPORT TO OTHER PROGRAMS, WOULD BE DAMAGING TO SYSTEMS OPERATION. PARA. PROTECTION OF AF INTERESTS IN FUTURE SPACE WORK AND ASSURANCE OF NEEDED CONTROL OF TEST AND OPERATIONAL FACILITIES IN SUPPORT OF CURRENT SPACE PROGRAMS REQUIRES THAT PROGRAMMED FUNDS REMAIN IN THE AF FY 60 BUDGET. THE PLAN TO APPROPRIATE FACILITY FUNDS THRU ARPA WILL HAVE FAR REACHING IMPLICATIONS ON FUTURE AF MISSIONS IN THE SPACE FIELD. YOUR PROMPT AND CAREFUL CONSIDERATION OF THIS REQUEST IS RECOMMENDED.

Copies to WDIO, WDIZ, WDZ

Prepared by WDI

/S/ GENERAL TERHUNE

**DOWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10**

CONFIDENTIAL

WDI-59-53

~~CONFIDENTIAL~~

The system will be designed to provide the user with a means of identifying and tracking the status of the system. The system will be designed to provide the user with a means of identifying and tracking the status of the system. The system will be designed to provide the user with a means of identifying and tracking the status of the system.

The system will be designed to provide the user with a means of identifying and tracking the status of the system. The system will be designed to provide the user with a means of identifying and tracking the status of the system. The system will be designed to provide the user with a means of identifying and tracking the status of the system.

4. Paragraph 4

(a) Efforts to which mission was accomplished and recommended.

(b) Exact location of target intercept as well as recording ability requirements.

(c) Location of vehicle to improve aiming and tracking capability requirements.

(d) Evaluation of the adequacy of each photo interpretation parameter as contrast and noise.

(e) Detailed reporting, in accordance with AFMSS forms, of the effectiveness of all operating elements of Subpart I.

(1) Since SAC will be in a unique position to evaluate the effectiveness of the system during processing of the data base, SAC should provide the following types of feedback information to AFMSS in order to support the continued development and improvement of the ENHANCED SYSTEM.

5. Paragraph 5

(2) AFMSS should program payload in accordance with specific SAC requirements.

Phase II. The SAC should be made available to SAC for processing data following flight 3 of Phase II. The SAC should be made available to SAC for processing data following flight 3 of Phase II. The SAC should be made available to SAC for processing data following flight 3 of Phase II.

(1) AFMSS and SAC have a mutual responsibility for developing a capability for intelligence exploitation of the system early in Phase II.

6. Paragraph 6

The system will be designed to provide the user with a means of identifying and tracking the status of the system. The system will be designed to provide the user with a means of identifying and tracking the status of the system. The system will be designed to provide the user with a means of identifying and tracking the status of the system.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

(3) Our conclusion, apart from the specification of SAC's role mentioned in paragraphs in and is shown, is that the AIMS/SAS mode of operation to date remains essentially unchanged.

2. We believe that the 5 August 1977 letter calls for minor revision to the present agreement. A proposed revision is attached for your review and comment.

403
HARRY L. EVANS,
Colonel, USAF
Asst Deputy Commander
Military Space Systems

1 Atch
Security Operational Planning Procedures
(SECRET), WMSO-10

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

SECRET OPERATIONAL PLANNING PROGRAM

1. This agreement between SAC and ASEC for the development of a SECRET operational capability requires that it function under the cover of an ASEC R&D program. This agreement is based on policies expressed in the USAF Vice Chief of Staff's letters dated 1 December 1958 and 5 August 1959.

2. For the purpose of this agreement, the life cycle of the SECRET System is considered in four phases. These are:

- a. Phase I Development
- b. Phase II Development with potentially useful intelligence information.
- c. Phase III Operational readiness with continued developmental activities. This phase is planned to begin in October 1961 and continues during the duration of the cover period.
- d. Phase IV Operational

PART I

GENERAL

1. The position of the U.S. on the use of outer space has been publicly announced as "exploration of outer space for peaceful and scientific purposes". ASEC is charged with the responsibility of developing space vehicles which can explore outer space for peaceful purposes as well as to accomplish military objectives.

DCWNGRADED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

4/5

2. It is mutually agreed that, during the cover plan period, AUMS will be both the developer and operator. However, during this period, SAC and AUMS will participate in all matters affecting operational planning for future SSMRY military operations in accordance with the responsibilities outlined in Parts III and IV of this agreement. The organization and procedures established for accelerated program approval and implementation will be continued. All operational plans and programs will continue to show SAC as the planned eventual user. Throughout the development/operational period (Phases II and III) Air Force military personnel will be phased into the program and trained at a rate commensurate with the development program.

3. It is agreed by the Strategic Air Command and the Air Research and Development Command that this document sets out their mutual understanding of the responsibilities of both commands for the implementation of the USAF directive to develop an operational capability.

4. Changes to this agreement may be required from time to time and may be proposed by either command. Such changes as are mutually accepted shall become a part of this agreement. Proposals desired by either command and not agreeable to both may be referred to HQ USAF for resolution and possible inclusion as part of this agreement.

PART II

GENERAL

1. Furnish SAC all useful intelligence information resulting from the developed operation programs, Phases II and III, at the earliest possible date.

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

2. Develop a military capability to employ the SENEY System at the earliest feasible date.

3. Develop a military capability to receive, process and prepare for dissemination, all intelligence data, at Offutt Air Force Base.

~~SECRET~~

OPERATIONAL REQUIREMENTS

A. ANDS (AFNS) will:

1. Develop maximum military operational capability at the earliest feasible date to meet the requirement of approved operational plans.

2. Man key positions in the SENEY operational program in accordance with the Memorandum of Understanding between SAC-ANNS and USAF, dated 2 April 1957 and Hq SAC message (IS) DP 271384, 13 March 1959.

3. Activate all units necessary to operate SENEY facilities.

4. Program for the manning and training of military personnel for these units on the earliest feasible time schedule.

5. Command, administer, and exercise control over the system until command of the SENEY System is transferred to SAC.

6. Launch operational vehicles to provide intelligence coverage in accordance with requirements and specific direction from Hq USAF through Hq SAC.

7. Transmit all reconnaissance data from tracking and registration or processing stations direct to SAC.

8. In coordination with SAC, publish an operational plan in accordance with AFS 3-47 for the benefit of the agencies requiring this guidance.

416

~~SECRET~~

~~CONFIDENTIAL~~

SECRET

CONFIDENTIAL

9. Include, where technically possible, SAC requirements and analysis of operations in AFSSM development plans.

10. Provide for SAC participation and coordination in the review of the initial OPI and subsequent revisions as outlined in letter, HQ USAF subject: Evaluation of Qualitative Operational Requirements Information (OQRI) dated 17 July 1978.

11. Coordinate with SAC on additions or deletions of major functions in unit manning documents.

12. AFSSM will negotiate base support agreements with other commands and/or service agencies in support of SENTRY Program in accordance with AFR 11-4 and/or other applicable directives.

13. Plan, program, design and construct all technical and support facilities required to provide fully operational units at SENTRY locations.

14. Plan, program, design, construct and equip the Technical Operational Control Center and Intelligence Processing Center at Offutt Air Force Base.

15. Plan, develop, program, design and construct the communications data and control circuits between Offutt Air Force Base facilities and those in other areas to provide a complete operational capability.

16. Provide for SAC coordination on:

- a. Master plans for being where operational facilities are located.
- b. Real Estate planning reports for operational SENTRY sites.
- c. Concept, preliminary and final construction drawings for all SENTRY operations support facilities.

CONFIDENTIAL

~~SECRET~~

~~CONFIDENTIAL~~

- 418
17. Include SAC with voting membership on site selection and architect-engineer selection panels.
 18. Establish a Weapon System Planning Group (WSPG) to assist in accomplishing program objectives.
 19. Provide SAC with a list and clearance status of AFSS personnel who are considered to have a need-to-know.
 20. Provide all public/press releases relative to the program.
 21. Retain full executive management responsibility as defined and assigned in paragraph 1c and 2c of AFR 20-10, 24 November 1958.
 22. Obtain concurrence from Hq SAC prior to reassignment of any key personnel furnished by SAC.

B. SAC will:

1. Continue planning toward becoming the eventual operator and user of the system and provide operational planning data to AFSSD.
2. Eliminate personnel to man key positions in the SENTRY operational program in accordance with the Memorandum of Understanding between SAC-AFSSD and USAF, dated 2 April 1957 and Hq SAC message WF 871384, 13 March 1959.
3. Coordinate with AFSSD on training of SENTRY personnel to insure adequate training standards, progress and effectiveness.
4. In coordination with Hq USAF, provide AFSSD with reconnaissance activities and intelligence coverage requirements.
5. Evaluate, exploit, and disseminate all intelligence provided from this program.
6. Participate as a member of the SENTRY WSPG.

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

7. Assist AFMND, when specifically requested, in negotiating base support agreements with other agencies and/or services agencies in support of SENTRY program in accordance with AFI 11-4 and/or other applicable directives.

8. Provide support facilities and base rights, as necessary, to support the program and project operations at VAEB and other Air Force Bases or any SAC controlled base.

9. Accomplish necessary timely actions to support AFMND installation responsibilities outlined in Part IIIA above.

10. Provide AFMND with a list and clearance status of SAC personnel who have a need-to-know.

11. Obtain concurrence from Hq AEDC prior to reassignment of any key personnel furnished by AEDC.

PART IV

SECURITY

As directed by Hq USAF letter dated 5 August 1979, all SAC participation in SENTRY operational planning, employment and data processing will be classified as SECRET. All elements of SENTRY information will be limited to individuals and activities who have a need-to-know and contribute directly to the program.

~~CONFIDENTIAL~~

~~SECRET~~

~~SECRET~~

CONFIDENTIAL 1-1
132

HEADQUARTERS STRATEGIC AIR COMMAND
UNITED STATES AIR FORCE
OFFUTT AIR FORCE BASE, NEBRASKA



any
same

21 AUG 1959

REPLY TO
ATTN OF: DPL

SUBJECT: Assignment of Operational Planning Responsibility (U)

TO: SAC MIKE
AF Unit Post Office
Los Angeles 45, Calif

420

1. This headquarters is in receipt of letter from Vice Chief of Staff, Headquarters USAF, which changes operational planning responsibility and basic classification criteria of the Sentry Program. This letter is quoted in part for your information and guidance: (S)

QUOTE: 1. (SECRET). The Strategic Air Command is designated as the Command responsible for operational planning for employment and control of the Advanced Reconnaissance Satellite System, WS 117-L (SENTRY).

2. (SECRET). The Air Research and Development Command, in collaboration with the Strategic Air Command, will provide assistance, as necessary, to develop the capability to exploit the system to its fullest and at the earliest possible date.

3. (SECRET). It is recognized that during the research and development phase the Advanced Reconnaissance Satellite System will have operational potential; therefore, in addition to the above instructions, the Strategic Air Command will be responsible for processing data obtained from all reconnaissance satellites and for providing information and data necessary to the continued development and improvement of the SENTRY system.

4. (SECRET). In consideration of current national policies regarding the use of space the following basic classification criteria is established with respect to the Advanced Reconnaissance Satellite System, WS 117-L (SENTRY).

CONTINUED AT 12 YEAR
INTERVALS; NOT AUTOMATICALLY
DECLASSIFIED. DOD DIR 5200.10

929

CONFIDENTIAL

~~CONFIDENTIAL~~

a. The specific purpose and effectiveness of reconnaissance satellites will be classified TOP SECRET.

b. Strategic Air Command association for operational planning and employment purposes will be classified SECRET.

c. Strategic Air Command activities reflecting programming, mission control, receipt of data, data processing, or dissemination of data will be classified SECRET.

d. Operational readiness or capability dates will be classified SECRET.

e. All other research and development or planning activities leading toward the development of an operational reconnaissance satellite capability and command assignment will be classified SECRET or in accordance with the WS-117-L Classification Guide, AFBMD, dated 15 March 1959.

f. Dissemination and/or distribution of information relating to the program will be limited to those individuals having an official need to know and who contribute directly to the support of the program. Release of information through public resources will be in accordance with existing policies and directives.

5. (UNCLASSIFIED). All previous instructions contrary to these are hereby rescinded.

6. (UNCLASSIFIED). An identical letter has been forwarded to the Air Research and Development Command.
END OF QUOTE.

2. This headquarters interprets paragraph 4a of above quoted letter to mean that purpose and effectiveness of each specific reconnaissance satellite will be classified Top Secret. (S)

3. Classification assigned by this correspondence deletes the requirement for a Space System Access Roster, therefore, all copies of this roster should be removed from files and destroyed. (S)

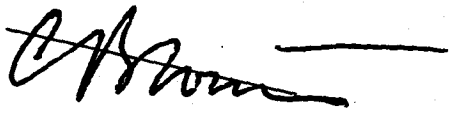
~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

4. The above actions will require development and publication of the SAC Sentry Preliminary Operational Plan. Request you prepare a draft of this plan and forward to this headquarters for staffing and finalization by 10 September 1959. Additional actions required by this change in policy are being developed and will be forthcoming in the near future.

5. This letter classified SECRET because it pertains to a program of vital importance to the National Defense.

FOR THE COMMANDER IN CHIEF:



CHARLES B. WESTOVER
Major General, USAF
Director of Plans

422

~~CONFIDENTIAL~~

~~SECRET~~



ADVANCED RESEARCH PROJECTS AGENCY
WASHINGTON 25, D. C.

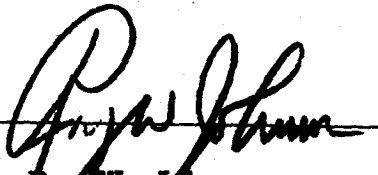
WDG
133

ARPA Order No. 9-60
Amendment No. 14
Project Code No. 2100

August 27, 1959 **Date**

TO: The Secretary of the Air Force
Washington 25, D. C.

ARPA Order No. 9, dated June 30, 1958, as amended, is hereby further amended to increase the fund availability by \$12,000,000 from \$135,600,000 to a new total of \$147,600,000 under appropriation and account symbol "97X0113.002 Salaries and Expenses, Advanced Research Projects Agency, Department of Defense." This increase provides funds for the continuation of work through September 1959.


Roy W. Johnson
Director

cc: Commander, ARDC

423

446002

DECLASSIFIED
INTERVALS NOT ALTERNATE
UPGRADED AT 12 YEAR

CONFIDENTIAL

COORDINATION SHEET

| | | |
|-----------------|-----------|--|
| TYPYST INITIALS | PERMANENT | |
| | TEMPORARY | |

1. A copy of attached letter was sent dated 25 August 1959 and discussed with interested staff agencies. It was decided that Headquarters SAC would furnish a reply.

2. In view of the opinion that the Strategic Air Command's first step in mounting the operational planning responsibility is to prepare a detailed operational plan. This plan to cover in detail the following items of the SAC Operational Program commencing October 1961:

- Concept of command and operational control.
- Organization and manpower requirements.
- Communications and electronics requirements.
- Logistics concepts.
- Direct and indirect support facility requirements.
- Intelligence concept of operation and requirements.
- Other items deemed appropriate.

3. Since a questionnaire operational report is possible during the SAC phase of the program (prior to October 1961), it is suggested that an Intelligence exploitation plan be prepared to cover the operational aspects of the SAC phase. The operational plan will cover only the Intelligence concept of operation post October 1961.

4. When the Operational Plan receives SAC Staff approval, it is recommended the existing SAC/AFMID agreement be dissolved.

JOHN Z. BAKER
Colonel, USAF
Assistant Commander in Chief

[Handwritten signature]

[Handwritten initials]

424

Investigation of letter from Vice Chief of Staff

[Handwritten notes]
3 Sep 59
Typist 2 Sep 59

| | | | | |
|-------------------------|------|--|--|--|
| ORIGINATOR COORDINATION | | | | |
| DATE | 13/1 | | | |

~~CONFIDENTIAL~~ 135

**AIR FORCE BALLISTIC MISSILE DIVISION
HEADQUARTERS
AIR RESEARCH AND DEVELOPMENT COMMAND
UNITED STATES AIR FORCE
Air Force Unit Post Office, Los Angeles 45, California**



8 Sep 59 *act*

REPLY TO
ATTN OF: WDPGR

SUBJECT: SANDS Program Progress Report, 31 August 1959

TO: Director
Advanced Research Projects Agency
Washington 25, DC

1. This report covers progress during the month of August 1959 in the SANDS Program, directed by ARPA Order No. 9 (Project Code No. 2100). Prime contractors are Lockheed Missile and Space Division and Thompson-Ramo-Wooldridge Corporation (data handling equipment). Fiscal year 1959 funding was \$105.6 millions; tentative fiscal year 1960 funding is \$135.0 millions. A summary list of contractors is given in Tab 3, Section I of the Development Plan. During this month the program was redesignated from SENTRY to SANDS.

2. TECHNICAL STATUS

a. Visual Reconnaissance Readout System

(1) A Study of the possible use of a wide angle lens in the E-1 payload for cloud photography indicated a high degree of feasibility. The capability of photographing a 300-mile wide swath (with a ground resolution of 400 feet) could be incorporated in the first flyable E-1 components test payload.

(2) Final versions of the subsystem specifications for all E-1 airborne and ground equipment were completed by the contractor and will be submitted to AFED.

b. Ferret Reconnaissance System

(1) Inhibit action tests were continued on the first service test model F-1 payload.

The second service test model was tested in the high altitude temperature simulator. Test results are being analyzed to determine the most desirable range of skin temperatures for optimum equipment temperature on orbit. The proper temperature can then be obtained by design of skin coatings.

(2) More advanced electronic reconnaissance systems, capable of providing answers to specific intelligence requirements, are being

WDPGR-66

~~CONFIDENTIAL~~

Cy No. 50 of 55 Cys.

~~CONFIDENTIAL~~

(3) An operational analysis was made of the ratio of readout to readin time to determine what percent of time over potential enemy territory could be usefully recorded without overtaxing readout capabilities. The use of Vandenberg AFB, Ottumwa, and New Boston for readouts would permit approximately a 75 percent readout to readin ratio.

c. Reliability requirements for the auxiliary power specifications were written, and a detailed study of the specifications for the proportional gas control valve was made.

426
3. PROBLEMS ENCOUNTERED

No significant problems were encountered during this reporting period.

4. WORK SCHEDULES

a. E-1 Prototype Payload - Component testing and final assembly were completed and final acceptance testing is scheduled to begin 15 September.

b. E-2 Engineering Model Payload - The payload readout equipment was assembled, tested and operated successfully as a complete system. This system was connected to the ground reconstruction electronics via the data link simulator and a final reassembled film record was obtained.

c. E-2 Prototype Payload - Fabrication of the first flyable payload is 50 percent complete.

d. E-1/E-2 Ground System Operating Equipment - Assembly of the prototype ground reconstruction electronics equipment (GRE) was completed and auxiliary GRE equipment is undergoing test and modification. The E-1/E-2 prototype primary record camera is undergoing preliminary testing prior to final acceptance tests. The prototype primary record processor is complete and acceptance tests are underway.

e. The F-1 vehicle equipment to be flown with the E-1 payload was completely assembled, aligned and checked out. Final systems tests with the ground checkout equipment are nearing completion.

f. F-1 Equipment - Checkout was completed on the first

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

prototype subsystem checkout console was delivered to Lockheed for use in the type testing of the second service test model payload in the high altitude temperature simulator chamber.



h. F-2A Ground Support Equipment - Component fabrication of prototype models 1 and 2 of the checkout console are 80 percent complete and assembly of components is 40 percent complete. Final assembly of the service test model console was completed on 21 August and systems testing is 50 percent complete.

i. F-2B Prototype Payload - Design is nearing completion and fabrication is 50 percent complete. Subassembly testing has begun.

j. F-3 Prototype Payload - Design is nearly complete and fabrication and assembly has begun on various components of the first prototype payload. This payload is based on the F-2 design and includes increased electronic reconnaissance capability.

k. Communications - Checkout of the first command package prototype for the Command Decoder-Sequencer Programmer was completed. Three of the planned five or six memory units were completed, and a fourth is 70 percent complete. Unit 1 of the clock package has undergone successful bench checkout, temperature test, and operational test in the high altitude temperature simulator chamber. The intermediate storage unit mockup is complete and ready for checkout.

l. Excellent progress is being made in the facilities construction at the New Boston Tracking and Data Acquisition Station. The walls of the UHF Receiver Building are up, the Angle Tracker Building is nearly complete, and work has begun on the Data Acquisition and Processing Building. The major difficulty is the slowness of excavation due to the extreme amount of rock encountered, requiring considerable blasting.

5. ARPA ACTION REQUIRED

No ARPA action is required at this time.

R. J. Curtiss for

G. J. RITLAND
Maj Gen, USAF
Commander

Copies to:
See attached Distribution

WDPCR-66

~~CONFIDENTIAL~~

