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14 November 1958

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TO : Commander ARDC
Commander AFMD
Commander ADC
Commander AMC
Commander MATS
Commander Alaskan Air Command
CINCPACAF

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File Corona

SUBJECT: Support Directive for Project DISCOVERY.

- REFERENCES: (a) Message from Hq USAF, cite [redacted] dated 20 June 1958.
- (b) Advanced Reconnaissance System Development Plan, Sentry Program, 15 September 1958. Unclassified title: Air Force Ballistic Missile Division Advanced Reconnaissance System (WS-117L).
- (c) Advanced Reconnaissance System Development Plan, Sentry Operational Annex, 15 September 1958. Unclassified title: Air Force Ballistic Missile Division WS-117L Advanced Reconnaissance System Development Plan - Operational Annex.
- (d) Air Force Ballistic Missile Division Operations Order 2-58, 26 August 1958.
- (e) Air Force Ballistic Missile Division Operations Order 3-58, 15 September 1958.

1. Background

a. Project DISCOVERY has recently been established by the Advanced Research Projects Agency. The United States Air Force has been directed by ARPA to serve as the executive agent on all matters pertaining to this project. This responsibility is further delegated to the Air Force Ballistic Missile Division (AFMD). Since AFMD has the responsibility for establishing WS-117L and for its integration into the Air Force inventory at the earliest possible date, much of

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the data to be derived from this project will have significant carry-over value to WS-117L.

b. An early objective of WS-117L is the creation of an operating system capable of launching and handling orbiting satellites. ^{THIS ACCOMPLISHMENT} ~~THIS~~ ^{ENHANCED} will be ~~accomplished~~ through this preliminary program using Thor-boosted vehicles. The primary objectives of Project DISCOVERY are to:

(1) Accelerate the achievement of a satellite system as directed by the President.

(2) Achieve public recognition of United States technical capability through the earliest possible launch of a heavy weight satellite.

(3) Achieve early, detailed and comprehensive testing of a vehicle essentially the same as the Atlas-boosted vehicle, its airframe propulsion and auxiliary power as well as valuable experience in checkout and launching.

(4) Gain essential experience in the control functions necessary after orbit is entered including complex computer processing of orbit predictions and programming and commanding from the ground the required functions of the satellite.

(5) Organize and train an effective industry/Air Force satellite operation team which must operate on a worldwide basis for successful R & D and operational employment of Atlas-boosted satellites.

(6) Provide a different technical approach as insurance against unforeseen technical problems in Atlas satellite-to-ground data links.

(7) Provide essential data and experience in controlled re-entry and capsule recovery. A large amount of operational recovery experience of this and other kinds is essential prior to any extensive use of human crews in space.

(8) Develop an early capability in the Vandenberg AFB Pacific Missile Range for satellite operations. For the next several months the Thor vehicle will be the only extensive operational user of this facility. An early shake-down will greatly increase the reliability and pay-off of later programmed launches.

(9) Develop methods and equipment for the collection of timely data on the bio-medical and geophysical aspects of relatively low orbital altitudes. These factors are of essential relevance to early military use of space.

c. Nineteen Thor-boosted vehicles are planned and will be launched from Vandenberg AFB. The first launch is scheduled for 6 December 1958 with launches continuing throughout calendar year 1959.

2. Special Instructions

a. The responsible and cognizant office within Headquarters USAF will be the Office of the Assistant Vice Chief of Staff.

b. Substantial support will be required from other commands as indicated in paragraphs below. All commands are enjoined to provide the highest priority support from within their resources at the expense of lesser priority efforts.

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(1) The Air Force Ballistic Missile Division (ARDC) will:

- (a) Exercise complete authority and control over all aspects of the program, including operational control of all units attached for operations during the implementation of this Order.
- (b) Establish sites for launch, tracking, data reception and command generation to meet requirements.
- (c) Establish an Operational Control Center to facilitate the over-all direction and control of flight test operations.
- (d) Establish a Launch Control Center to direct launch site and maintain cognizance of the vehicle status and all launch site equipment.
- (e) Organize, equip and train an aerial recovery force to meet requirements of capsule recovery from orbit. The unit will consist of nine specially modified C-119J aircraft.
- (f) Insure adequate tenancy agreements with other commands to support this program.
- (g) Provide accounting for all funds in connection with this program.

(2) Headquarters Air Defense Command will organize and provide a suitable unit operating C-121 aircraft to participate in all test and recovery phases of this program and meet requirements of AFMD. An immediate requirement exists for one aircraft and a high qualified crew to meet test phase requirements. Total aircraft requirements will not exceed four aircraft and may be reduced as the program progresses.

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(3) Headquarters Alaskan Air Command will provide required support for tracking and transmission stations within their command jurisdiction.

(4) Headquarters Pacific Air Forces will provide required support for tracking station in Territory of Hawaii, with logistics and administrative support to the aerial recovery force after deployment to Hickam Air Force Base.

(5) Air Materiel Command will provide logistic support to include procurement, maintenance and supply services in accordance with priorities and precedences assigned to the WS-117L program. Support will be provided through procedures established at the Ballistic Missile Center, AMC, Inglewood, California.

(6) Military Air Transport Service will:

(a) Provide airlift requirements established by AFBMD in accordance with priority assigned this program.

(b) Provide adequate meteorological data and services to insure forecasts at points designated by AFBMD.

(c) Study and provide support relative to possible Air Rescue requirements.

(7) Arrangements are being made for the Commander, Pacific Naval Forces to provide surface ships, as required for the recovery phase, to support recovery and related communications operations and to provide technical supply and maintenance support to RC121 aircraft if required. The activity of the ships will be under the operational

control of the Recovery Force Commander during actual or training recovery operations.

(8) In accordance with established operating practice the Commander, Naval Air Missile Test Center will support AFBMD requirements for the implementation of this program.

3. General Instructions *in the supply and precedence rating of 1-1 as assigned to Project recovery and will be initiated in a forthcoming memorandum to the appropriate OPs.*

~~a.~~ The supply and precedence rating of 1-1 which has been assigned to WS-117L and as indicated in current OPU's will apply and may be used by all services and agencies in direct support of this program, *pending the further instructions of Project Recovery.*

b. It is anticipated that information from this program will have significant military application. Therefore, special security procedures will be necessary. These procedures will be passed to the concerned agencies by AFBMD as appropriate. In the absence of such supplements normal AFR 205-1 procedures will apply. ~~This directive will not be reproduced.~~

c. All commands are authorized and encouraged to communicate directly with each other as is necessary on all matters affecting the support of this program. The operating level point of contact at AFBMD is Air Force Ballistic Missile Division, Box 262, Inglewood, California, Attn: WD2W, Telephone, Spring 6-1444, Ext. 2751. All commands are requested to supply AFBMD with a working level point of contact.

JACOB E. SMART
Major General, USAF
Assistant Vice Chief of Staff

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