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DRAFT/ [redacted] sec/24 June 1959

MEMORANDUM FOR THE DIRECTOR, CENTRAL INTELLIGENCE AGENCY

SUBJECT: Technical Control of the ARGON Program

In accordance with conversations among representatives of ARPA, the Central Intelligence Agency, and the Department of the Army, this memorandum defines the scope of ARPA technical control of the ARGON Program through the CIA, and ARPA relationships to program contractors to be utilized by the CIA.

ARPA technical guidance and control will be provided through its Technical Operations Division. _____ has been designated ARPA Project Manager and _____ as Assistant Project Manager.

Through ARPA Order No. _____ arrangements have been initiated to establish within the Army Map Service a technical staff to support ARPA project management. This technical staff will be responsive to the ARPA Project Manager and will contribute its initiative and competence to the CIA and to its contractors through, or in accord with the direction of, the ARPA Project Manager.

The CIA will be responsible through an appropriate prime contractor (hereinafter called Systems Engineer) for the detailed technical direction necessary to accomplish the specified objectives of the ARGON Program.

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The Systems Engineer will be charged by CIA with the responsibility for performance of engineering work as required by the satellite vehicle system as a whole, and for providing appropriate direction to insure the technical adequacy of various components, subsystems, and facilities required in the development of the satellite vehicle system as well as for necessary ground equipment, including that for data processing. The Systems Engineer will also be responsible for resolution of all technical controversies (except as limited below) arising during development of the satellite vehicle system, including the problem of payload integration, and for the technical direction of the research, development, and production efforts of all associated contractors. The Systems Engineer will conduct analytical studies, and with the assistance of the associate contractors will provide the specifications and other data as may be required to completely define the satellite vehicle payload system characteristics. These will include: system specifications, criteria and requirements for major subsystems, trajectories and guidance equations, power and interface specifications, maintenance of reliability performance and accuracy estimates, weight, and balance.

Whenever disagreements arise between the CIA, the Systems Engineer and/or Associate Contractors involving possible compromise to the attainment of project objectives, or which may involve interference with establishment of fully effective physical integration of vehicles and payloads, these matters will be referred for decision to the ARPA Project Manager in appropriate form.

Initial program schedules, system and subsystems development plans, developmental milestones, integrated test and checkout procedures, launch schedules and associated ground station operations, including funding under which the CIA arranges for work using funds made available by ARPA, and changes thereof, will be approved by the ARPA Project Manager. ARPA will be furnished copies of general performance specifications, work statements, copies of integrated test and checkout procedures for payload and boosters, and detailed plans for test operations. ARPA will review the proposed award to all major prime and subsystems contractors selected by the CIA.

The CIA will provide ARPA with access to all contractors and subcontractors for information-gathering purposes and briefing. Because of the complex interface relationships throughout the entire system, and because changes in one portion of the system evidently may be reflected throughout the entire system, no changes in program direction or emphasis will be effected by CIA or the Systems Engineer without prior agreement of the ARPA Project Manager.

As the program progresses, circumstances may arise to alter the areas of ARPA interest. The CIA's or the Systems Engineer's suggestions in such circumstances are expected and will be appreciated.

General technical performance guidelines for the vehicle, orbit, stabilization, payload, and collective data are given by the following tabulation:

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ITEM		SPECIFICATION
Booster first stage		Thor
Booster second stage		Bell-Hustler
Orbital Altitude		120 n.m. (Circular ± 25 n.m.)
Orbital Life		7 Days
Platform Stabilization		Pitch, Roll, Yaw ± 2°
Correction with Horizon Scan in Pitch & Roll to -		.1°
Total Weight of Recovery Vehicle		273 lbs.
Recovery Shell	85 lbs.	
Propulsion Ejection System	74	
Recovery System	52	
Cassette	12	
Film	50	
	273 lbs.	

Complete payload weight including all structure and components forward of bulkhead X (310-1) shall not exceed 400 lbs.

Camera

Film Size	5 Inches
Focal Length	3 Inches (nominal)
Angular Coverage	74° X 74°
Ground Resolution	Not over 260 ft.
Distortion	5 Microns
Shutter	Between-the-lens

ITEM	SPECIFICATION
Shutter Speeds (Ground Camera)	1/500 sec. to 1/2000 sec.
Format Size (Ground Camera)	4-1/2" X 4-1/2"
(Stellar Camera)	1" X 2-1/4"
Time Recording	Time trace accurate to 1/1000 second. Also - time accurate to less than 2 seconds over a period of 4 days.
Weight	34 lbs. (Approx)
Cassette Weight	12 lbs.
Operational Data	
Forward Overlap	60%
Ground Width	180 n.m. (Approx)
Film Quantity	2800 - 2900 ft.
Film Weight	48 - 50 lbs.
Film Duration (Photographic Passes)	64 Passes
Climatic Control	70° F $\pm$ 10°

A total of four vehicle launchings should be planned to carry out the program with the first to take place about 1 June 1960. Six complete payloads shall be constructed to allow some flexibility in the program.

Launchings will be planned to take place from Vandenberg Air Force Base, utilizing the existing launch-pad complex associated with the DISCOVERER Program. The ground-based tracking, communications,

and recovery network associated with the DISCOVERER Program are adequate for this project and will, therefore, be also utilized. The ground-based data handling equipment should be that essentially specified in the "SALAAM" Proposal, with maximum use being made of equipment being bought and paid for under the MONTICELLO I and II Programs.

Successful completion by the CIA of all aspects of each satellite vehicle payload operation under this project will be consummated by delivery, through appropriate channels, to the Army Map Service of the final recovered payload of each such operation.