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AFNIN/Mr. Eldridge/acb/70973/4 Apr 68

8 APR 1968

Special Materials Support Requirements for MOL

Director, Defense Intelligence Agency

1. The manned MOL flights, as currently baselined, will support not only the early development of the unmanned automatic flights, but also will provide for the evolution of techniques to enhance qualitatively and quantitatively the value of the intelligence collected. All flights, manned and unmanned, require precise knowledge of the location of each aiming point. To realize the further enhancement of collected intelligence in manned flights, it will be necessary to train flight crews, utilizing special stimulus materials, and to provide them with target cues for use on board the spacecraft.

2. The assessment of what will be required for the orderly and timely development of this aspect of the MOL system has been completed. Key to the systematic accomplishment of this task is the development of a Master Photo Chip (MPC) File, which consists of highly controlled master photographic negative chips of each designated MOL-DORIAN target installation. These chips will constitute the primary reference materials for the identification and location of MOL-DORIAN aiming points. They will also be the master negative from which the operational cueing target materials and cue-derived training materials will be made.

3. The ACIC concept for the provision of this support is at Attachment 1.

4. The MOL Program Office has assigned to AFNIN the responsibility for the implementation of the ACIC concept for the provision of the MPCs and cue strips within a time frame consistent with the over-all MOL program.

5. In order to minimize any impact on current DOD production programs in ACIC, the Air Force is undertaking to augment ACIC's current manning to the extent required to provide this support, as outlined in paragraph 4, Attachment 1. This augmentation will be reflected in Change 1 to PCR 68-4, which will be submitted by the Air Force in the immediate future.

6. The development and acquisition of certain unique equipments required to prepare and handle the MPCs and cues will be funded by the MOL Program Office, and will not represent a charge against Intelligence funding.

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7. The overall project for preparing the MOL support items has been given the unclassified nickname SENTINEL COPE. It has an Air Force Precedence Rating of 1-9.

8. Apart from its significance to MOL Program operations, the MPC appears to possess capabilities of potential usefulness to the Intelligence Community, in that it offers the capability of rapidly positioning any item in the 8 by 10 mile area covered by each chip with respect to the World Geodetic System. The COMIREX has been briefed on project SENTINEL COPE and, specifically, on the characteristics of the MPC; as have selected individuals in DIAXX and DIAMC.

9. The approval and assistance of the Defense Intelligence Agency is requested with respect to

a. supporting and maintaining the resources to be allocated to ACIC for SENTINEL COPE as a separate CIP line item to be devoted only to support of the MOL Program, as visualized in Attachment 1, and

b. undertaking to explore, through the COMIREX, the usefulness of the MPC as a tool to the Intelligence Community. Should this be favorable, it will be necessary to design a scheme for the identification of the individual MPCs which would be compatible with existing photo chip storage and retrieval schemes. No such scheme has yet been developed for use of the MPC in the MOL operational system; consequently, any scheme which would be standardized through the Intelligence Community can be adopted for MOL operations.

10. Air Force project personnel for SENTINEL COPE are:

a. Principal: Mr. Alan M. Eldridge, AFNINC, Rm 4A 924, X74903.

b. Alternate: Mr. Donald R. Holben, AFNINCB, Rm 306, Lynn Building, X48342.

JACK E. THOMAS, Major General, USAF
Assistant Chief of Staff, Intelligence

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Concept for ACIC Support of MOL
Program

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ACIC

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CONCEPT FOR ACIC SUPPORT OF
THE MOL PROGRAM

1. Schedule of Events (Attachment 1). This graphic shows the current MOL baseline schedule requiring ACIC support.

a. The 11 manyears already programmed at ACIC are supporting the simulator equipment at General Electric. This CIP manyear level will be a continuing requirement to support the Operational Training Environmental Facility (OTEF) after it becomes operational at Vandenberg.

b. Geodetically controlled Master Photo Chips (MPC) and cueing material for mission orientation and training must be available by July 1970, when the Mission Module Simulation Equipment is installed in the OTEF.

c. Final cueing materials for the first complete mission must be provided and then updated between March and August 1971.

d. The above cycle repeats for each subsequent mission.

2. Product Quantities (Attachment 2). This graphic shows the estimated quantities of MC&G products for which product yardstick and costs have been established to determine additional manpower requirements.

3. Product Scheduling (Attachment 3). This graphic shows that the geodetically controlled MPCs must start in work at ACIC during the first quarter FY 69 and continue through the first manned mission (Mission #3). Products for cue training and operation are compressed into short time frames. Production of additional chips and new cueing strips for subsequent missions are also shown.

4. Manpower Requirements (Attachment 4). This graphic shows the necessary time-phased expenditure of production manpower by quarters to support the production level shown on Attachment 2.

a. The red line represents total manpower required to accomplish production of MPC and cueing data, starting at the beginning of second quarter, FY 69. Recruitment and training must be initiated six months prior to that date, to minimize adverse impact upon other high-priority programs.

b. The black line represents that part of the total manpower application required for cues. It is based upon the availability of MPCs for cue production.

c. The green line represents phasing of the additional manpower authorizations, including the six month recruitment and training time, required to accomplish the MOL support with minimum impact upon other high-priority programs.

5. Manpower Allocation Adjustment (Attachment 5). This attachment is unclassified. It is being submitted within the Air Staff, to support the request for additional manpower authorizations shown as required in Attachment 4. It is prepared in accordance with the standard Air Force format for such actions.

6. Flow of Communications and Materials (Attachment 6). This graphic shows the organizations involved in the MOL Program which are affected by the ACIC product support.

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1. Schedule of Events
2. Product Quantities
3. Product Scheduling
4. Manpower Requirements
5. Manpower Allocation Adjustment
6. Flow of Communications and Materials.

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SCHEDULE OF EVENTS

FY	1968	1969	1970	1971	1972	1973	FY	
CY	1967	1968	1969	1970	1971	1972	1973	CY
	Engineering Development Simulator	Mission Development Simulator July						
	OTEF-Operational Training Environmental Facility July							
				MMSE-Mission Module Simulation Equipment July				
				Train	Launch#5 Nov. Apr			
				Train	Launch#4 July Dec			
				Train	Launch#3 Mar Aug			

WORKING PAPERS

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& Atch 2

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PRODUCT QUANTITIES

MC&G PRODUCT	QUANTITIES		
	#3	#4	#5
MASTER PHOTO CHIP			
• Geodetics	5,000	500	500
• Photo Chips	20,000	2,000	2,000
• Enlargements	20,000	2,000	2,000

CUEING DATA

• Mission Training	14,000	14,000	14,000
• Operation Update	3,000	3,000	3,000
• Film Strips	15 (6 ea)	15 (6 ea)	15 (6 ea)
• Enlargements	7,000	700	700

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PRODUCT SCHEDULING

		FY 69				FY 70				FY 71				FY 72			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
#3-MPC	Chips																
	Geodetics																
CUES	Training																
	Operation																
#4-MPC	Chips																
	Geodetics																
CUES	Training																
	Operation																
#5-MPC	Chips																
	Geodetics																
CUES	Training																
	Operation																

#3, 4, 5 Represent Manned Missions

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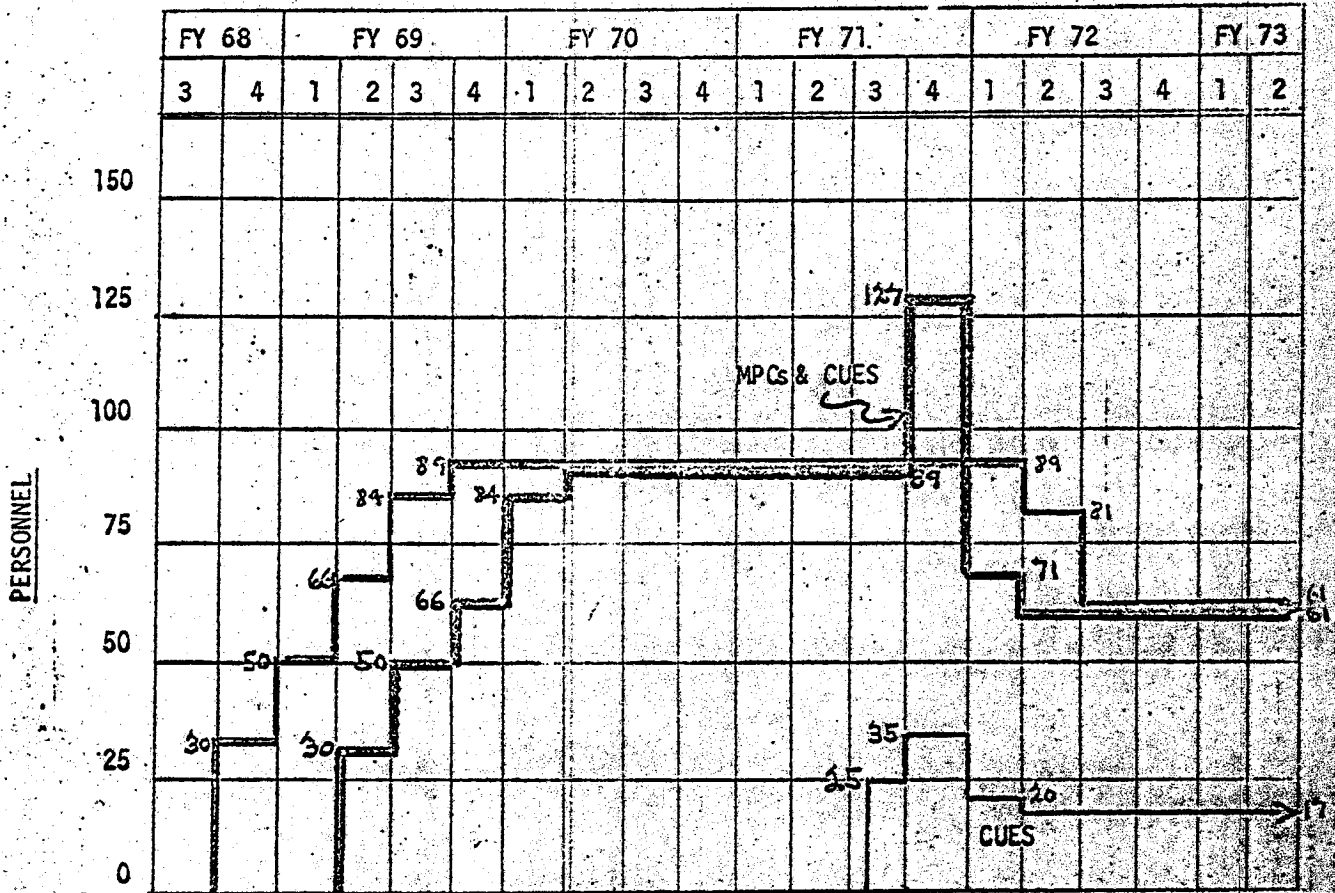
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MANPOWER

TIME



← INITIATE RECRUITMENT

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to book 1

MANPOWER ALLOCATION ADJUSTMENT

1. The manpower requirement to support Project "Sentinel Cope" will be associated with AF Program Element 3DN (Mapping, Charting and Geodesy). Further, this requirement is for civilian authorizations, B/P 489. Required manpower with minimum impact on current DOD priority MC&G programs is as follows:

<u>FY 4/68</u>	<u>FY 1/69</u>	<u>FY 2/59</u>	<u>FY 3/69</u>	<u>FY 4/69 thru FY 1/72</u>	<u>FY 4/72</u>	<u>FY 4/73</u>
+30	+50	+66	+84	+89	+61	+61

2. Additional manpower requirements are generated by an increased mission associated with Project "Sentinel Cope" as identified in classified ACIC letter to General Thomas, dated 14 March 1968. The following information is provided in accordance with Chapter 2, Paragraph 2-2, AFM 26-1.

a. The civilian manpower spaces requested will be allocated primarily to function code 3300, Cartographic-Geodetic. The workload data requested in paragraphs 2. a. and 2. b., and the authority for the increased workload, reference paragraph 2. c., is provided in attachments to classified letter referenced above.

b. Reference paragraph 2. d. Attached as Tab A is an organization chart depicting the organizational structure of the workload center of functions concerned. The majority of the additional manpower will be allocated to this new branch organized within the Missile Support Division of ACIC Production and Distribution Plant. The remaining manpower resources will be allocated to production and support functions such as the photo services activities of the Missile Support Division. Grades and AFSGs have not been included on the organization chart since the manpower resources are proposed as additional civilian authorizations.

c. Reference paragraph 2. e. The manpower requirements presented in paragraph 1 above have been time-phased to agree with the execution of the program.

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to Atch 1

d. Reference paragraph 2.f. Resources cannot be realigned to satisfy this requirement without impacting high DoD priority MC&G programs. The manpower requested in paragraph 1.a. above is necessary to satisfy this new mission requirement without impacting other programs.

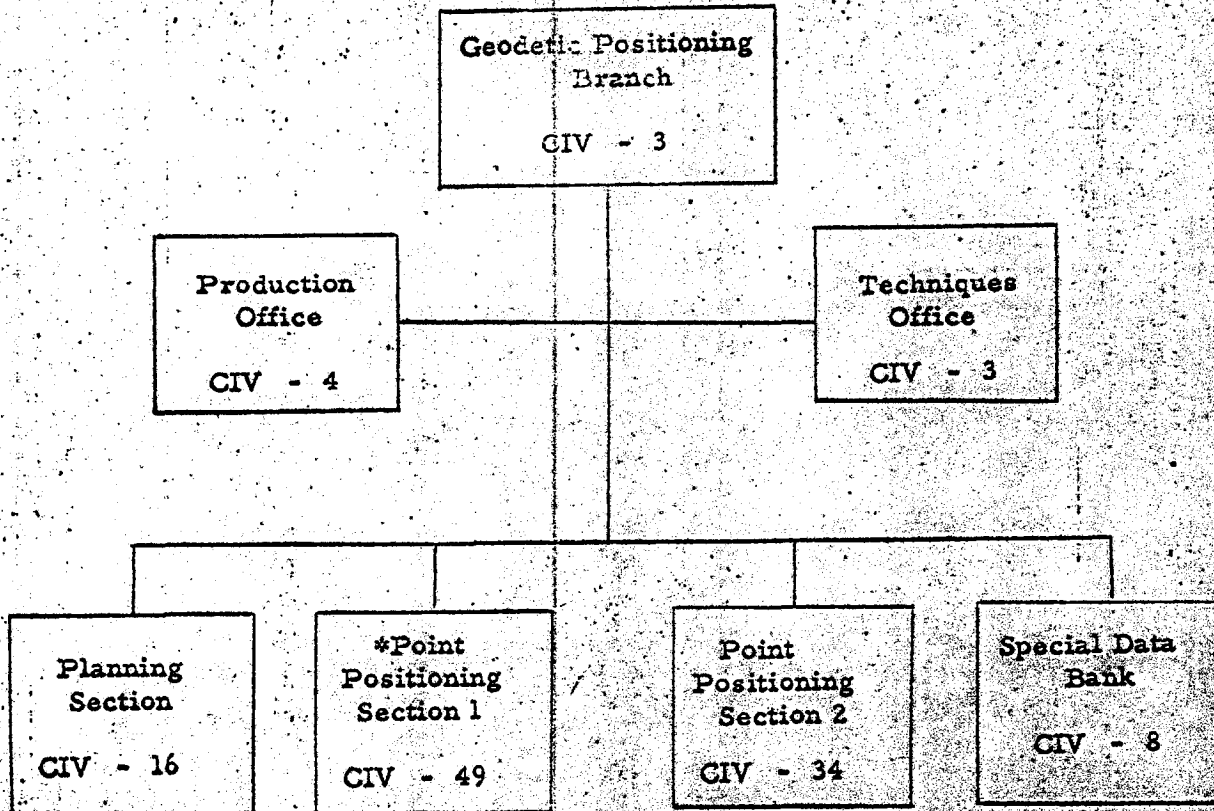
e. Reference paragraph 2.g. Since this is a new mission involving new methods of operation, manpower validation standards are not applicable. Workload data referenced in paragraph 2.a. above was compared to existing production standards data in establishing the manpower requirements.

f. Reference paragraph 2.i. There are no lower priority functions that could be discontinued to accommodate the new workload without impacting USAF stated MC&G production objectives.

g. Reference paragraph 2.j. There are no contractual services currently being performed in the functional activity where increased manpower is requested.

TAB A

MISSILE SUPPORT DIVISION



*Point Positioning Section 1 and current authorizations will be moved from the Analytical Branch of the Missile Support Division to this Branch.

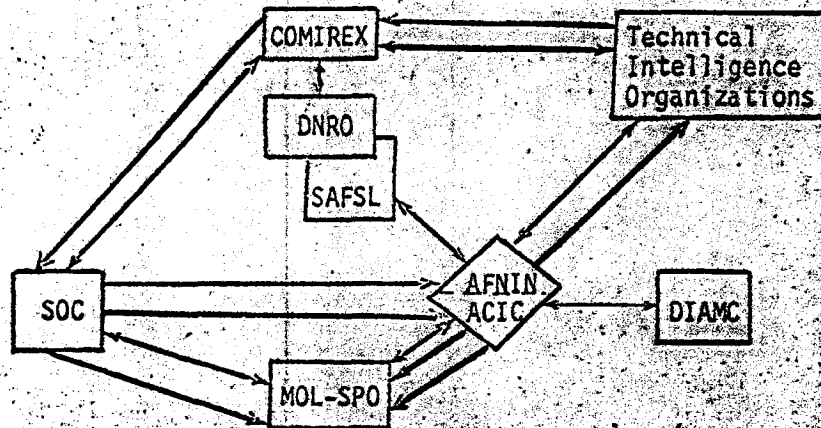
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FLOW OF

COMMUNICATIONS & MATERIALS

- Communications →
- Aiming Point Reseau Measurements →
- MC&G Materials
 - MPC (Software, Chips, Prints) →
 - Cues →



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