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UNITED STATES INTELLIGENCE BOARD

See memo for Record dtd 12 Mar 69

MEMORANDUM FOR HOLDERS OF USIB-D-41.14/229

SUBJECT : Requirements for Present Satellite

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REFERENCES :
a. USIB-D-41.14/229 (COMOR-D-13/43) 19 March 1965, 25X1
b. USIB-D-41.14/235 (COMOR-D-13/45) 26 March 1965, 25X1
c. USIB-D-41.14/240 (COMOR-D-48/96) 5 April 1965, 25X1

1. The draft statement on the subject in the Enclosure and Tabs to USIB-D-41.14/229 (reference a.) was approved by the United States Intelligence Board (USIB) (as recorded in reference b.) subject to:

a. Amendments in paragraphs 13, 14 and Tab A, and

b. Subsequent approval by the Director of Central Intelligence.

2. In restricted session at the USIB meeting on 14 April 1965, the Director of Central Intelligence (DCI) referred to the above actions by the Board and subsequent discussion in reference c. Mr. McCone noted that the statement on the subject in reference a. called for about 10 successful KH-4 missions each year primarily for search and surveillance, and 2 additional missions annually primarily for mapping, charting and geodesy requirements. He commented that this would call for a total of 12 successful KH-4 missions annually, and noted that provision for these was being made by the National Reconnaissance Office (NRO). Mr. McCone also observed the analysis in

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NRO review(s) completed.

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COMOR highest priority targets because of their particular location and geographic arrangement.

3. Mr. McCone expressed his view that the requirement in reference a. as amended and approved by USIB represented a good practicable program. The DCI informed the Board that he has now approved the Enclosure and Tabs to USIB-D-41.14/229 as adopted by the Board at its 24 March meeting.

4. Accordingly, the attached revised pages 6 and 7 and the last page in Tab A are transmitted herewith for substitution in all copies of USIB-D-41.14/229, which now stands approved for information and guidance for all concerned.

5. In addition, all copies of USIB-D-41.14/229 should be modified as follows:

a. Page 4, paragraph 6.b., line 1 - change "emergency" to "emergence" and page 5, paragraph 10, line 2 - change "forcal" to "focal."

b. Insert the attached pages 1 and 2 of Tab B, and change

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Executive Secretary

Attachments

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USIB-D-41.14/229
(COMOR-D-13/43)
19 March 1965

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UNITED STATES INTELLIGENCE BOARD

See Memo for Record 12 Mar 69

MEMORANDUM FOR THE UNITED STATES INTELLIGENCE BOARD

SUBJECT : Requirements for Present Satellite

25X1 [redacted]

REFERENCES : a. USIB-D-41.14/217 (COMOR-D-13/37)
1 March 1965, [redacted] 25X1
b. USIB-D-41.14/216 (COMOR-D-13/35)
15 February 1965, [redacted] 25X1

1. The attached draft statement on the subject, recommended for United States Intelligence Board (USIB) approval by the Committee on Overhead Reconnaissance (COMOR) in response to USIB instructions in reference a., is circulated herewith for consideration by the Board at its meeting on 24 March 1965.

2. The attached paper is a revision of reference b., and takes into account the need for a statement of the number [redacted] ILLEGIB 25X1D

[redacted]

3. In forwarding this paper COMOR asked that USIB be advised that COMOR's estimate of the number of successful missions required annually had the benefit of an extensive computer study made by the National Reconnaissance Office (NRO). This study took into account the probabilities regarding weather, season of the year, light factors, and vehicle reliability.

4. Tab B, referred to in paragraph 6. of the Enclosure, will be circulated separately as soon as available.

5. This item is scheduled on the USIB agenda for the meeting of 24 March 1965.

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Executive Secretary

Enclosure

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USIB-D-41.14/229
(COMOR-D-13/43)
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REQUIREMENTS FOR PRESENT SATELLITE [redacted] 25X1

Section I

Requirements for Employment of
KH-4 and KH-7 Capabilities

Introduction

1. This statement of requirements including targets and frequency of coverage in Tab A hereto is specifically designed to provide general guidance to the NRO in the operation of the KH-4 and KH-7 capabilities for the next two years or so. It is emphasized that Tab A is an estimate of the number and type of targets and the frequency of coverage required and is subject to change in the light of shifting world situations or other factors that may bear on our current intelligence needs such as the results of previous reconnaissance missions and the receipt of collateral information. Accordingly, Tab A will be supplemented on a mission-to-mission basis with specific guidance which reflects changes in our intelligence needs. To assure effective management, including frequency of launch, each mission will therefore be targeted on the basis of a continuing review of the intelligence needs. Long-term satellite reconnaissance requirements are discussed in Section II of this paper which deals with requirements for new or improved collection capabilities.

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KH-4

2. The KH-4 generally serves well as a search (area coverage) photo reconnaissance device and can additionally meet some of our surveillance needs, as shown in detail in Tab A, and can assist in meeting

25X1D the mapping, charting, and geodesy requirements, as shown in paragraphs 8 through 11 below. [redacted] 25X1

[redacted]

[redacted] 25X1

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3. Search (Area Coverage). With the present capability we need to search the essentially entire area of the Sino-Soviet Bloc semiannually to permit us to detect and identify activities associated with both the strategic and major tactical threat against the United States and to locate and identify weapons systems capable of countering or impeding our offensive capability. Generally, we expect priority will be given to the built-up areas of the USSR and China.

There is also a need for periodic search of other parts of the world depending on whether the prevailing political situation poses some threat to ourselves, our allies, or our commitments to the free world. These areas may on occasion require high priority attention.

4. Surveillance (Target Coverage). Our surveillance requirements of today (see Tab A) can be satisfied to an important extent by KH-4

5. Frequency of KH-4 Missions for Search and Surveillance. It is preferred that missions be spaced at fairly even intervals throughout the year. Such spacing will assist in:

a. Searching critical areas, such as the ICBM belt, until deployment is completed.

b. Detecting the emergence of new installations; and

c. Keeping track of their development.

d. Comparing the status of similar installations and their activities.

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e. Covering new requirements which have emerged from collateral sources.

f. Providing the PI with sequences of photography derived from different angles of obliquity and lighting conditions which will provide deductive increments over and above that obtainable strictly from the resolution.

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6. On the basis of the analysis made of the experience during the period 1961 through January 1965 (See Tab B) several facts emerge:

a. Nearly all of the Sino-Soviet Bloc was covered with interpretable photography, the bulk of the area several times.

b. We observed the emergence of new facilities, the deployment of weapons systems, and were able to keep abreast of such developments in a time frame which minimized the chance of surprise or concealment.

c. The period included good and bad weather cycles and light conditions ranging from the best to the worst.

7. Statistical evaluations carried out by NRO* indicate that ten successful KH-4 missions can be expected to search, semiannually, in cloud free stereo, about 90 per cent of the Sino-Soviet Bloc. In addition, extrapolations from these studies indicated that about 90 per cent of the surveillance requirements (Tab A) for KH-4 can be met with these ten successful missions. We therefore conclude that a reasonable effort for KH-4 is about ten successful missions, approximately evenly spaced throughout ~~each~~ THE YEAR, for the KH-4 search and KH-4 surveillance tasks.

*See COMOR-D-13/41, 9 Mar 65

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Mapping, Charting, and Geodesy

8. There is a requirement for KH-4 type stereo satellite photography to prepare maps and charts of the Sino-Soviet Bloc as well as areas outside of the Sino-Soviet Bloc. For the Sino-Soviet Bloc, about ~~three~~ ONE million square miles remain to be covered for preparation of maps and charts. Outside the Sino-Soviet Bloc a photographic data base of about 23 million square miles remains to be covered during the next two- or not more than three-year period.

[redacted]

9. There is a specific geodesy requirement for satellite photography to provide an accurate world-wide primary control network for use in establishing a launch-to-target geodetic relationship for long-range missiles and for establishing a coherent intra-continental network of position and elevation control for map and chart production. The remaining geodesy coverage requirement is for stellar index camera type data for 12 million square miles of land area plus Polar ice regions by July 1966.

10. The NRO had advised that the KH-4 system can be modified to include an index camera with a three-inch ~~forcal~~ focal length (the present camera is one and one-half inches) and a reseau in the panoramic camera. These modifications were initiated by the NRO to assist in mensuration and to contribute to satisfying mapping, charting, and geodesy needs. Both of the modifications have appreciable potential value in the mapping, charting and geodesy tasks. Incorporation of these modifications should be expedited if the potential value is realizable and if the cost and impact on the normal search and surveillance mission are not unacceptable.

11. The current procurement program for, and the improved reliability of the KH-4 system will furnish about 12 successful missions per year, two in excess of the number anticipated necessary to meet the KH-4 search and surveillance requirement. The amount of mapping and charting photography to be obtained during the search and surveillance missions (estimated at 5 to 20 per cent per mission) be determined on the basis of mission-to-mission analysis of the current as well as long-term needs. Two missions annually should be utilized additionally to accelerate the fulfillment of the mapping and charting requirements. COMOR will furnish NRO the priority areas and other specific information, including desired launch date, with respect to these missions.

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KH-7
Surveillance - Technical (Target Coverage)

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NRO

12. For the next two years or so the KH-7 is the primary system to obtain surveillance-technical information over the Sino-Soviet Bloc. The KH-7 requirement is included in Tab A.

[redacted]

Standby KH-4 and KH-7 Missions (Critical Intelligence Collection Means).

14. In addition to the plans for use of KH-4 and KH-7 to meet search, surveillance, and technical requirements, there should be available additional KH-4 and KH-7 vehicles to meet periods of international tension. Although we realize that these systems are limited in this role, we believe they should be available on standby basis to be employed on

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short notice not only as back-up for regularly scheduled missions but also for special purpose missions. The acquisition of information with these capabilities at such critical times might provide information for the policy maker which could be highly important in his policy considerations. Until the development of special reconnaissance capabilities (explored in Section II of this paper) standby KH-4 [redacted] should be programmed in this role. 25X1D

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James Q. Reber
Chairman
Committee on Overhead Reconnaissance

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