CHRONOLOGY OF

NRO-CIA RELATIONSHIPS

Volume I

1 May 1960	The USSR shot down a U-2 reconnaissance aircraft, flown by Gary Powers, on a CIA-sponsored mission.
10 June 1960	President Eisenhower directed a special review of the satellite reconnaissance program. (Tab 1)
25 August 1960	The Special Panel on Satellite Reconnaissance (Office of the Special Assistant to the President for Science and Technology), convened pursuant to President Eisenhower's 10 June direction, reported on the Air Force satellite reconnaissance program. The Panel concluded that, from the array of important investigations already carried out by the Air Force, a few of the studies could be extracted and integrated into a single simple and powerful program "to give us the reconnaissance we need." (Tab 1)
25 August 1960	A special meeting of the National Security Council was called for the purpose of reviewing the satellite reconnaissance program. The NSC noted and discussed the report of the Special Panel on Satellite Reconnaissance and the President's approval of several recommendations made by the Special Panel. On September 1, 1960 the NSC directed the Secretary of Defense to reorient the overt project, SAMOS, and to establish a special management structure and procedures. SAMOS was removed completely from normal channels and assigned to a newly established field element (SAFSP) under General Greer, who was assigned directly to the Secretary of the Air Force and reported to the Secretary with no intermediate supervision or review.

25 August 1960 (Continued)	A small special staff (SAFMS) under Brigadier General R. D. Curtin was established within the Office of the Secretary of the Air Force to accomplish Washington staff work for the Secretary and the SAMOS Project Director. The Secretary's responsibilities for the SAMOS Project were delegated to the Under Secretary of the Air Force (Dr. Charyk) who reported directly to the Secretary of Defense concerning the SAMOS Project. (Tabs 1 and 2)
September 1960	Immediately after establishment of the new SAMOS management structure, Dr. Charyk placed management of the CORONA and ARGON projects within the special SAMOS management structure, insofar as Air Force actions and authority were concerned. He also established direct liaison with the Deputy Director/ Plans, CIA (Mr. Bissell) concerning the management of covert efforts. (Tab 2)
Spring 1961	During this period, initial consideration was given to further revisions to the special management structure. In a summary review of the National Reconnaissance Office (NRO) written just prior to his departure, Dr. Charyk related the underlying rationale: "The existing structure was effective only for the specific SAMOS, CORONA and ARGON projects; it had no relation to other projects, existing or proposed. Furthermore, the arrangement did not provide for the degree of management effectiveness warranted by the national importance of satellite reconnaissance." (Tab 2)
7 August 1961	Dr. Charyk forwarded to the Secretary of Defense, a Memorandum of Understanding, to be signed by Mr. McNamara and Mr. Dulles, covering the management aspects of the National Reconnaissance Program.

7 August 1961 (Continued)

The Memorandum:

1. defined the National Reconnaissance Program

2. established a National Reconnaissance Office (NRO) on a covert basis

3. designated the Deputy Director of Plans (CIA) as Director of the NRO and the Under Secretary of the Air Force as Deputy Director of the NRO.

Dr. Charyk indicated his understanding that he and Mr. Bissell, on the basis of the agreement, were to develop a detailed plan of operation.

Also attached for Mr. McNamara's signature was a memorandum providing the delegation of authority insofar as the DOD was concerned.

The Memorandum of Understanding was signed by Mr. McNamara. It was not signed by Mr. Dulles. (Tab 3)

5 September 1961

With a memo for the Deputy Secretary of Defense, Dr. Charyk forwarded a redraft of a basis of understanding between the CIA and the DOD relative to the NRP.

Mr. McNamara had signed the original draft (Tab 3), but Mr. Dulles felt that certain changes were desirable and that he would prefer to have the agreement in the form of a letter rather than a formal memorandum.

The only substantive change had to do with the designation of Mr. Bissell and Dr. Charyk, acting jointly, as responsible for the NRP rather than the Director - Deputy Director relationship prescribed in the original memorandum which Mr. McNamara signed.

5 September 1961 (Continued)	Mr. McNamara had requested that Mr. Gilpatric sign the new document. (Tab 4)
6 September 1961	A DOD/CIA Agreement, signed by Mr. Gilpatric (Deputy Secretary of Defense) and General Cabell (Acting Director, Central Intelligence Agency) 1. defined the National Reconnaissance Program (NRP) to consist of all satellite and overflight reconnaissance projects whether overt or covert 2. established, on a covert basis, a National Reconnaissance Office to manage the NRP under the direction of the Under Secretary of the Air Force (Dr. Charyk) and the Deputy Director (Plans) of the CIA (Mr. Bissell) acting jointly. (Tab 5)
6 September 1961	In a memorandum jointly addressed to the Secretaries of the Military Departments, the DDR&E, the Chairman of the JCS, and the General Counsel - Mr. McNamara designated the Under Secretary of the Air Force as his Assistant for Reconnaissance and delegated full authority for the management of the National Reconnaissance Program. (Tab 6)
September 1961	The National Security Council 5412 Group rejected the co-director provisions of the CIA-DOD agreement on the basis that the reconnaissance program was too important nationally to be conducted under divided management. (Tab 1)

October 1961 - May 1962	During this period, discussions of a revision to assign unequivocally the complete responsibility for management of the entire reconnaissance program to a single person were carried out. Essentially no progress was possible toward the formal organizing of the NRO. Consequently, the previous arrangement was continued with the Deputy Director/Research (Mr. Bissell), due to internal CIA organizational changes. (Tab 1)
28 November 1961	Mr. Allen Dulles departed the CIA. Mr. John McCone was appointed as Director, Central Intelligence.
12 December 1961	Mr. Gilpatric asked Mr. McCone to consider two memoranda (prepared by Dr. Charyk) which set forth a plan of action for the functioning of the NRO. A principal element in the plan was the assignment to Dr. Charyk of the technical management of all national reconnaissance projects (overt and covert). Mr. Gilpatric suggested that the CIA and DOD review the present functioning of the NRO before the subject was brought up again either before the Special Group (on whose agenda it was being held by General Taylor pending further word) or the President's FIAB, which had postponed consideration of the subject until its next meeting. (Tab 7)
5 January 1962	A new draft Memorandum of Understanding on the Management of the National Reconnaissance Program was prepared in SAFUS. The agreement proposed to establish, on a covert basis, an NRO to manage the national program. The Director of the NRO would be the Assistant for Reconnaissance to the Secretary of Defense. The Deputy Director of the NRO would

5 January 1962 (Continued)	be the Deputy Director (Plans) of the CIA. Total responsibility for the NRP would be delegated by the Secretary of Defense and the DCI to the DNRO. He would in turn delegate specific responsibilities to the CIA and elsewhere as required. Within the DOD, the Air Force would be the operational agency for management and conduct of the NRP. The management and conduct of individual projects and elements would be assigned by the NRO to the CIA as the operational agency. A Technical Advisory Group for the NRO would be established. A Satellite Operations Central (SOC) would be established as part of the NRO located within the Air Force STC at Sunnyvale, California, and headed by the Air Force member of the NRO. An Aircraft Operations Central (AOC) would be established at an appropriate location and headed by a CIA member of the NRO. Specific responsibilities for existing individual NRP projects were outlined. (Tab 8)
March 1962	Mr. Bissell departed the CIA. Dr. Herbert Scoville was appointed Deputy Director/Research, CIA.
30 March 1962	Dr. Charyk forwarded to Mr. Vance, General Counsel, DOD a copy of a 27 March 1962 proposed CIA version of the Agreement between DOD and CIA relative to the management of the NRP. Dr. Charyk stated that the CIA version appeared to differ in a fundamental fashion from the draft forwarded by Mr. Gilpatric to Mr. McCone on 17 January 1962. The CIA version proposed the establishment, on a covert basis, of an NRO under the direction of a Director and Deputy Director - one being appointed by the DOD and the other by the CIA. The DOD representative would be the Under Secretary of the Air Force. The Deputy Director (Research) would

30 March 1962
(Continued)

act for the CIA. The prime responsibility and authority for the over-all aspects of each individual project would be specifically assigned to either the DOD or the CIA by the Secretary of Defense and the DCI acting jointly upon the recommendation of the Director and Deputy Director, NRO. Decisions of the NRO would be implemented and management of the NRP would be made effective: within DOD, by the exercise of the authority delegated to the SAFUS; within the CIA, by the Deputy Director (Research) in the performance of his assigned duties. The SAFUS would be designated Special Assistant for Reconnaissance to the Secretary of Defense and delegated full authority in this area. Within DOD, the Air Force would operationally manage and conduct those projects assigned by the NRO to the DOD. Within the CIA, the Deputy Director (Research) would be the operational element responsible for management and conduct of those projects assigned by the NRO to the CIA. A Technical Advisory Group for the NRO would be established. The NRO would be directly responsive to, and only to, the photographic and electronic signal (SIGINT) collection requirements and priorities established by the USIB. NSA would be solely responsible for the research, development, planning and operations for processing of electronic signal data (COMINT and ELINT) collected from space vehicle sources. Management control of the field operations of various elements of the program would be exercised directly, in the case of DOD, from the SAFUS to the designated project officers, and in the case of the CIA, from the Deputy Director (Research) to the designated project officers. Major program elements and operations of the NRO would be reviewed on a regular basis and as special circumstances required by the Special Group under NSC Action 5412.
(Tab 9)

2 May 1962	A new CIA-DOD agreement established a single Director of the NRO, responsible directly to the Secretary of Defense and the Director of Central Intelligence for management of the entire National Reconnaissance Program (NRP). (Tab 10)
2 May 1962	Concurrent documents established the NRO as an operating agency of the DOD. The Under Secretary of the Air Force (Dr. Charyk) was designated as the Director, NRO. (Tab 1)
Late May 1962	A special conference was convened by the Director, NRO, to discuss organization and procedures to be established under the new charter. General agreement was reached on the basic organization and modus operandi. In attendance: Deputy Director/ Research (CIA) and several key members of his staff; several members of the SAFUS special staff. (Tab 1)
14 June 1962	DOD Directive TS 5105.23 was published. This directive:

1. Established the NRO as an operating agency of the DOD under the direction and supervision of the Secretary of Defense.

2. Organized the NRO separately within the DOD under a Director, NRO appointed by the Secretary of Defense.

3. Made the Director, NRO responsible for consolidation of all DOD satellite and air vehicle overflight projects for intelligence, geodesy and mapping photography and electronic signal collection into a single National Reconnaissance

14 June 1962 (Continued)

Program (NRP) and for complete management and conduct of this program in accordance with policy guidance and decisions of the Secretary of Defense.

(Tab 9~~8~~)

14 June 1962

In a memorandum to:

The Secretaries of Military Departments
The Director, Defense Research & Engineering
The Chairman, Joint Chiefs of Staff
The Assistant Secretaries of Defense
The General Counsel
The Special Assistant to the Secretary of Defense
The Assistants to the Secretary of Defense
The Director, Defense Intelligence Agency
The Director, National Security Agency

Mr. Gilpatric designated Dr. Charyk, Director, National Reconnaissance Office.

With a separate memorandum to the same addressees, Mr. Gilpatric forwarded a copy of the CIA/DOD Agreement dated 2 May 1962 and directed that all DOD activities in this area be handled in accordance with the agreement.
(Tab 11)

27 June 1962

In a memorandum to the CIA Comptroller, Dr. Scoville provided answers to several BOB questions involving the Deputy Director (Research), CIA. In general, Dr. Scoville felt that all of the BOB questions arose from past practices (pre-NRO) and that the charter of the newly activated NRO clearly placed the responsibility for providing satisfactory management of all the problems raised by the BOB.

27 June 1962
(Continued)

On a question of possible duplication in the large number of different sensor platforms for satellite systems, Dr. Scoville remarked that the NRO would determine the U.S. program for these various platforms and combinations and would assign to either CIA or DOD the development and operation of the desired systems. Scoville felt that this should provide a central evaluation of the many systems under consideration and the development and direction over a single U.S. program employing the most advanced state-of-the-art.

On a question concerning correlation of ground processing equipment with sensor payload development, Dr. Scoville stated that the DNRO was clearly charged with the responsibility of keeping all processors, i.e. NPIC and NSA, informed of forthcoming developments in a timely fashion.

Concerning the number of missions required for overhead reconnaissance, Dr. Scoville remarked that intelligence requirements were determined by the USIB, through use of its COMOR and that these requirements were forwarded through COMOR to the NRO, which was charged with selecting the appropriate system to meet the requirements.

On the question of limited program funding flexibility of CIA in managing large programs as required for overhead reconnaissance, Dr. Scoville stated that all programs and funds budgeted by CIA for this purpose were at the direction and under the approval of the DNRO.
(Tab 12)

1 July 1962

General Curtin departed the NRO. Colonel John L. Martin was designated Director, NRO Staff.

19 July 1962

Responding to a Scoville memorandum on the procedure for initiation of overflight reconnaissance, Dr. Charyk opined that, as a normal procedure, the COMOR, which was solely concerned with requirements, should submit its recommendations for U.S. intelligence needs to the USIB and that the USIB, in turn, should forward its recommendations to the NRO.

Dr. Charyk stated further that the NRO, in light of stated requirements, would forward its specific recommendations to the Special Group for decision. In cases where significant new factors entered or where new systems were involved, the NRO would, as a normal rule, forward its assessment to the USIB for comments and would include these in its presentation to the Special Group. In the case of on-going programs where no new factors entered, the NRO treatment would be perfunctory. Dr. Charyk thought it desirable that all such matters go to the Special Group through the NRO since, under the charter, the NRO had the operational responsibility for the total effort. Dr. Charyk included an illustrative sketch of these procedures. (Tab 13)

23 July 1962

A Director, NRO memorandum for the NRO Program Directors and the Director, NRO Staff established the basic organization of the NRO and functions of the individual NRO elements. The general organizational concepts:

1. A separately organized, operating agency concealed entirely within other agencies, using personnel and resources of these agencies on full or part-time basis, as required.

23 July 1962
(Continued)

2. To consist of carefully selected personnel of highest qualifications and kept as small as possible in order to operate with the efficiency and quick reaction time required.

3. To consist of the Director, NRO, NRO Staff, NRO Program Directors, and their Project Directors and key staff officers.

4. To establish, initially:

   a) a Director, Program A responsible for NRP satellite effort conducted by NRO utilizing Air Force resources;

   b) a Director, Program B responsible for NRP effort conducted by NRO utilizing CIA resources; and

   c) a Director, Program C responsible for NRP effort conducted by NRO utilizing Naval Research Laboratory resources.

5. To provide organizational cover as follows:

   a) Director, NRO activities by his position as Under Secretary of the Air Force (SAFUS);

   b) NRO Staff by the title, Office of Space Systems, OSAF (SAFSS);

   c) Director, Program A by his overt primary duty as Director, Special Projects, OSAF (SAFSP);

   d) Director, Program B by his overt duty as Deputy Director/Research, CIA; and

23 July 1962
(Continued)

e) Director, Program C by a similarly effective arrangement.

6. Personnel selected for duty with NRO from Services and Agencies not to function in strict liaison capacity, but to be full time members of NRO, serving full tour on inter-agency transfer basis, and responsible solely to an NRO supervisor for duration of tour.

7. Streamlined management procedures to be used throughout all aspects of NRO management.

8. Program Directors responsible directly and solely to the Director, NRO.

9. Director, NRO responsible for all funding of the NRP. All covert funds budgeted by Air Force, all covert NRP contracts let by CIA as Executive Agency for the Director, NRO.

10. NRO interface with the U. S. Intelligence Board to be carried out within NRO, Washington.

11. Director, NRO to assign operational control for aircraft projects to appropriate Directors.

12. NRO Staff to be responsible for actual mission planning for satellite projects (specify targets, desired on-orbit program option, approval of actual mission target program and options, on-orbit selection between options).

(Tab 14)

21 August 1962

In a membrandum for Dr. Charyk, Dr. Scoville recorded his agreement with the procedure for initiation

21 August 1962 (Continued)

of overflight reconnaissance outlined by Dr. Charyk on 19 July. Dr. Scoville stated his belief that it would be impracticable in terms of time to submit proposals for additional missions for on-going programs for Special Group approval. Accordingly, he proposed a revision to Dr. Charyk's procedure for on-going programs which would charge the project director for a given program to consult with the DNRO where new factors such as unusual risk or sensitivity had arisen as a means of expediting the movement of recommended actions to the Special Group for approval.
(Tab 15)

26 September 1962

In a memorandum to the Secretary of Defense, Dr. Brown (DDR&E) outlined his recommendations after reviewing the reconnaissance satellite program.

Key recommendations:

1. The CORONA J program, which would use M cameras but add an extra capsule and recovery, should be carried out.

2. The E-6 program should be cancelled.

3. The CORONA M program should carry on through the whole of FY 64.

4. Additional LANYARD payloads and launches beyond the five approved should be approved through calendar 1963 at one per month.

5. The ARGON program and the various ELINT programs appeared to be adequate and well-planned.

(Tab 16)

1 October 1962

In a note for the DNRO, Mr. McNamara provided the following direction:

> "Proceed with three more E-6 shots, money for which is in the program. After these three, if it appears desirable to proceed with more, discuss with Ros (Gilpatric) or me."

(Tab 17)

12 October 1962

In a memorandum for the Director, Central Intelligence Agency, Mr. McGeorge Bundy related the following:

> "In view of the changing international situation and in the light of the recommendations of the Special Group (5412), the President has directed that the responsibility, to include command and control and operational decisions, with regard to U-2 reconnaissance overflights of Cuba is transferred from the CIA to the DOD, effective this date."

The memorandum further directed the CIA to render all appropriate support and assistance to the agency designated by the DOD as having responsibility for these missions.
(Tab 18)

13 October 1962

In a memorandum to Mr. Bundy, General Carter, Acting Director of Central Intelligence stated that he had taken steps to ensure that full command and control responsibility for Cuban U-2 reconnaissance flights was transferred from the CIA to SAC, effective 12 October 1962.

13 October 1962
(Continued)

General Carter also stated that he was obliged to record his essential opposition to the extreme rapidity with which the changeover of command control was being accomplished at a time when the criticality of these missions was so high.

General Carter stated that in his view, the precipitate changeover of command responsibility with its attendant risks without adequate preparation and advance planning, as well as evaluation of the consequences, was not in the best interests of achieving our intelligence objectives.

General Carter included a memorandum, for Mr. Bundy's signature, directing the accomplishment of the transfer, which General Carter indicated "to date, have been communicated to me only orally by the Deputy Secretary of Defense."
(Tab 19)

13 October 1962

In a memorandum for the Deputy Secretary of Defense and the Acting Director of Central Intelligence, Mr. Bundy recorded his own view of the situation with respect to the responsibility for "a particular reconnaissance operation authorized by higher authority on October 9."

Mr. Bundy stated that "in light of the views of those with direct recollection of opinions of higher authority who are present in Washington, it seems to me right that responsibility for this particular operation which has been authorized should now be vested in the Department of Defense, and it is the understanding of all concerned that this responsibility now rests with that department."

Mr. Bundy stated further that "we must all recognize that there is a deep and honest difference of opinion

13 October 1962 (Continued)	not only about the wisdom of this particular decision but also in the best way of proceeding in the future" that "the assignment of responsibility . . . should not be regarded as a binding precedent" and that "the whole question of roles and responsibilities in this area should be reviewed by the special group and presented to higher authority for decision when further authorizations are requested." (Tab 20)
23 October 1962	In a Memorandum for the Record, Dr. Scoville related his discussions with Dr. Charyk relative to CIA/NRO arrangements on Cuban reconnaissance. The memorandum outlined proposed arrangements for BLUE MOON and NIMBUS. The memorandum commented further on arrangements for the CIA interface with the JRC and the NRO Staff. (Tab 21)
26 October 1962	Colonel Martin advised the Director, DIA that the security aspects of reconnaissance overflight of Cuba had been changed as follows: 1. Information revealing specific plans for overflight operations would be classified as SECRET or TOP SECRET, as appropriate. 2. This information would no longer be controlled within the BYEMAN control system. 3. Communications pertaining to planned operations would be transmitted as TOP SECRET, to specific addressees only, disclosable, as required, on a strict need-to-know basis.

26 October 1962 (Continued)

The information that CIA resources were supporting some of the U-2 operations at McCoy Air Force Base remained classified under IDEALIST and was to be transmitted within the BYEMAN control system. (Tab 22)

6 November 1962

In a resume of personal observations relative to intelligence data collection and exploitation as highlighted by the Cuban experience, Dr. Charyk stated that:

> "The DOD should be responsible for the development and the operational control of all reconnaissance activities except possibly for those that are truly covert in nature. Decision making and efficiency can be streamlined if desired Agency participation in these activities, even to the extent of real time following of operational missions, is eliminated. The DOD programs, of course, must be formulated in the complete context of all requirements, including the Agency requirements, and all of the appropriate data and results should, of course, be made available to the Agency. However, active participation in development and in operations leads only to unnecessary confusion and complications. The existence of such criteria would have eliminated the controversy relative to the operational responsibility for the U-2 missions over Cuba."

(Tab 23)

7 November 1962

Dr. Charyk clarified the questions raised by Dr. Wheelon in the 23 October Memorandum for Record on procedures in regard to Cuban reconnaissance.

7 November 1962 (Continued)

Dr. Charyk stated that the JCS were responsible for the operational planning to cover specified reconnaissance objectives and for all aspects of actual reconnaissance operations in accordance with approved plans. Dr. Charyk stated further that the JCS were delegating to appropriate military commanders subordinate responsibilities for the planning and execution of these operations. In the JCS the focal point for operations was the JRC.

The DIA was responsible for recommending reconnaissance objectives on the basis of NPIC analysis of previous mission results, COMOR recommendations for additional target coverage and tactical military requirements.

Specific approvals on an individual aircraft and route basis were the responsibility of the NSC Executive Committee.

With reference to Dr. Scoville's suggestion concerning the establishment of a CIA liaison with the NRO Staff, Dr. Charyk stated his belief that the assignment of an individual solely for a liaison function was incompatible with the concept underlying the NRO. (Tab 24)

20 November 1962

Confirming his oral discussions with Mr. Gilpatric, Dr. Charyk stated that in connection with the CIA U-2 flight program in the India-China border area, the NRO would provide assistance and support as necessary, using Air Force resources. (Tab 25)

23 November 1962

In an earlier letter to Mr. Bell (Bureau of the Budget) Mr. McCone had proposed to budget for those programs which were the responsibility of the NRO; to justify the amounts in the CIA budget submission

23 November 1962 (Continued)	to Congress; and to have full fund control over amounts contained in the CIA budget. Dr. Charyk, in a memorandum to Mr. Gilpatric, explained that Mr. McCone's proposal would, in effect, give the DNRO a financial function in advance budget planning but not a responsibility for financial control and administration of the NRP. Dr. Charyk indicated further that, if the NRO were to function, it must be responsible for continuous monitoring of financial and technical status of programs, it must control release of funds to programs and it must be able to reallocate funds as necessary and desirable between programs comprising the total NRP. (Tab 26)
13 December 1962	In a letter to Mr. Bell (Director of the Budget) Mr. McCone advised of his understanding with respect to the amount which should be included in the CIA budget for FY 1964 to provide for those programs for which the CIA was responsible within the NRP. Mr. McCone indicated that, within the NRP, the CIA was responsible for "a wide variety of developmental and operational activities." Mr. McCone stated that in the aircraft field CIA was currently developing the OXCART A-12, operating IDEALIST and [redacted] and had responsibility for the development of a new A-12 drone. He indicated further that CIA had the payload portion of an operational satellite program and was conducting feasibility studies looking to the development of a truly covert satellite reconnaissance system. Additionally, Mr. McCone stated that CIA was engaged in programs of general research to provide future capabilities as well as in activities, such as photographic processing, required for support of all NRP programs.

13 December 1962 (Continued)	Mr. McCone attached a listing of specific projects and activities for which CIA was responsible along with the estimated cost for each. (Tab 27)
14 December 1962	In a letter to Mr. Bell, Dr. Charyk pointed to some inconsistency between his concept of the relative responsibilities between DOD and CIA and that implied by Mr. McCone's letter of 13 December 1962. Dr. Charyk stated his feeling that the total NRP should be considered as a single program in order to achieve the greatest measure of economy, efficiency and flexibility. Since the proposed course of action was not compatible with his understanding of the manner in which the total program would be administered, Dr. Charyk asked for the opportunity to consult with Mr. McNamara before providing detailed comments on the items listed by Mr. McCone. (Tab 28)
8 January 1963	With respect to a discussion of special equipment on U-2s as a protection against contingency of operational SAMs, Mr. McCone advised Mr. McNamara that three U-2s had been modified to accommodate special ECM equipment and that a program was underway to modify all seven of the CIA U-2s and two of the Air Force U-2s -- those being the U-2s equipped for refueling. No provision had been made to modify the remaining Air Force U-2s. (Tab 29)
24 January 1963	In a memorandum for Secretary Zuckert and General LeMay, General Breitweiser (Assistant Chief of Staff, Intelligence) outlined the key features of NRO organizational and functional relationships.

24 January 1963 (Continued)

As a result of his review of the NRO charter documents, General Breitweiser added several interesting personal observations.
(Tab 30)

25 January 1963

In a memorandum for Mr. McNamara, Dr. Charyk confirmed his understanding of the management system for the R-12 program.

Dr. Charyk envisioned the establishment of an R-12 program office within the NRO. This office would report directly to the DNRO and would have the responsibility for the development and procurement of a vehicle to satisfy the SAC requirement for an interim strategic reconnaissance aircraft system.

The contracting responsibility would be handled by NRO using AF black procurement procedures. Security policy would be established consistent with that in effect for the A-12 program.

Dr. Charyk suggested that Mr. McNamara might wish to confirm the understanding with Mr. McCone in order that program implementation and techniques therefor be understood by CIA personnel in the A-12 program.

Dr. Charyk proposed further that similar management and procurement arrangements be established for the AQ-12 drone program.
(Tab 31)

25 February 1963

In a summary review of the NRO, prepared just prior to his departure from the position as Director, NRO, Dr. Charyk stated that "the most serious problem concerns the fundamental nature of the NRO; is it to be an operating agency, with actual and effective management responsibility for a

25 February 1963 (Continued)	single national program or is it to be a coordinating office responsible for liaison and coordination between related projects which are the management responsibility of different Agencies and Services?" (Tab 1)
1 March 1963	Dr. Charyk departed the NRO. Dr. Brockway McMillan was appointed Director, NRO.
13 March 1963	A revised DOD-CIA agreement on "Management of the National Reconnaissance Program" was signed by the Deputy Secretary of Defense (Mr. Gilpatric) and the Director of Central Intelligence (Mr. McCone). It:

1. Established the Secretary of Defense as Executive Agent for the NRP.

2. Established the NRO as a separate operating agency of the DOD under the direction, authority and control of the Secretary of Defense.

3. Authorized the Secretary of Defense and the Director of Central Intelligence to designate appropriate officials of the OSD and CIA to examine and monitor on their behalf the activities of the NRO.

This agreement outlined in detail:

1. The organization and command of the NRO.

2. The functions and responsibilities of the Director, NRO and the Deputy Director, NRO.

3. The functions and responsibilities of the NRO.

13 March 1963 (Continued)

4. The authorities of the Director, NRO.

5. The relationship between the Director, NRO and the

   a. Secretary of Defense
   b. Director of Central Intelligence
   c. USIB
   d. JCS
   e. DIA
   f. NSA
   g. DOD
   h. CIA

(Tab 32)

13 March 1963

Dr. Herbert Scoville, Deputy Director/Research (CIA) was designated Deputy Director, NRO.

26 March 1963

Dr. Fubini was designated monitor of NRO activities on behalf of the Secretary of Defense (per the 13 March 63 DOD-CIA Agreement).

2 April 1963

The DNRO directed SAFSP to conduct a wrap-up evaluation of the studies to date of covert launching schemes for reconnaissance satellite vehicles to include:

a) a comparison of submarine launching as proposed by the Navy and air launching as covered in Convair B-58 study

b) a discussion of the feasibility and desirability of covert launching operations

c) a recommendation as to a future course of action.

2 April 1963
(Continued)

This evaluation was considered essential to a decision on the extension or termination of the submarine launching study.
(Tab 33)

10 May 1963

Colonel Martin issued a memorandum, Subject: "Duties of the Deputy Director, NRO." Referencing the 13 March 63 DOD-CIA Agreement, the memorandum outlined the following as duties of the Deputy Director, NRO, under the direction of the Director, NRO:

1. Keeping fully and currently informed as to all activities of the NRP.

2. Supervising relations between the NRO and the USIB and its subcommittees, and the intelligence exploitation community.

3. Supervising all NRP tasks assigned by the Director, NRO to the CIA.

4. Acting for and exercising the powers of the Director, NRO during his absence or disability.

The Deputy Director, NRO retained his CIA office location and supporting staff as Deputy Director/Research, CIA, never moving to the Pentagon.

Internal NRO administrative procedures were established in order to permit the Deputy Director, NRO to be kept fully informed on all activities of the NRP.

With regard to CIA support of the NRP, the Deputy Director, NRO was responsible, inter alia, for:

10 May 1963
(Continued)

1. Insuring CIA responsiveness to NRO direction and guidance.

2. Insuring that the Director, NRO was informed on progress of NRO projects assigned CIA.

3. Submitting to the Director, NRO, the CIA portion of NRP budget.

4. Initiating proposals for operational employment of NRO projects assigned to the CIA.

(Tab 34)

24 May 1963

The Director, NRO in a memorandum to the Deputy Director, NRO, Subject: "NRO Use of CIA Contracting Authority" outlined the rationale supporting NRO use of CIA contracting authority for "projects and/or tasks other than those for which technical management responsibility was assigned to Director, NRO Program B." The uses:

1. To provide essential security to NRO matters, not available otherwise.

2. To provide speed of response not obtainable through DOD contractual channels by utilizing existing CIA contracts in cases of overriding urgency.

3. To obtain significant savings to the government, or significant improvement in management, by utilizing such contract authority in joint DOD-CIA procurement actions in support of the NRO.

(Tab 35)

29 May 1963	In a conversation with Dr. Fubini, Dr. Scoville commented to the effect that it was his and the CIA's belief and understanding that the 5412 Group had assigned to the CIA the responsibility for the development of a "truly" covert satellite. (Tab 36)
31 May 1963	In a Memorandum for Record, Dr. Fubini pointed out that; on the basis of further discussions, it appeared that Dr. Scoville's statement of a 5412 Group assignment of covert satellite development may have been overstated. (Tab 37)
1 June 1963	In a memorandum to Dr. Scoville (DDNRO) Mr. Gilpatric advised that "it has come to my attention that according to your understanding the 5412 Group has assigned to CIA the responsibility for development of a covert satellite." Mr. Gilpatric stated that he did not recall being party to any such understanding and that he had found no record of it in the 5412 minutes or any other papers. Mr. Gilpatric indicated that he "certainly did not intend in any agreements reached during the FY 64 NRO budget review to commit DOD to any such mission assignment," and affirmed that it was not his purpose in this memorandum to deal with the merits of a proposal that CIA have the responsibility for a covert satellite development but rather to make clear that the issue was one that remained to be resolved. (Tab 38)
7 June 1963	Mr. McGeorge Bundy forwarded to Mr. McNamara the text of recommendations on the National

7 June 1963
(Continued)

Reconnaissance Program made by the President's Foreign Intelligence Advisory Board (FIAB) together with comments thereon submitted by the Director of Central Intelligence on 15 April 1963.

The FIAB expressed its judgment that the draft "Agreement between the Secretary of Defense and the Director of Central Intelligence on the Management of the NRP" was the best conceived and most soundly detailed plan for the management, the mission and the operation of the NRO that had come to its attention and urgently recommended its immediate adoption. Additional recommendations included:

1. Establishing a clear channel of guidance and authorization from policy decisions of the President to the Secretary of Defense, and as provided to the Director of Central Intelligence.

2. Establishing a clear and effective connection between planning of the NRP and plans for reconnaissance capabilities of the DOD and military services.

3. Planning to improve the continuity of management of the NRO.

4. Ensuring consistency between DOD directive which guides the NRP and pertinent directives from higher authority, e.g., National Security Council Intelligence Directives (NSCID's).

5. Clarifying present and planned relationships within the DOD between NRO, DIA and NSA.

Mr. McCone had commented that:

7 June 1963
(Continued)

1. The new (13 March 63) agreement already provided for close relationships between the NRO and the USIB.

2. Arrangements for handling specific FIAB recommendations were outlined in the NRO agreement -- noting a "natural interface between CIA and DOD in overhead reconnaissance."

3. The new agreement was reached after due consideration of possibilities that either DOD or CIA take full responsibility for the program.

Mr. McCone concurred in the judgment of the Board that the plan was well conceived and soundly detailed. Mr. Bundy requested from Mr. McNamara a report reflecting the status of the NRP as of 15 September 63 and the progress toward meeting the objectives of the FIAB recommendations.
(Tab 39)

14 June 1963

Dr. Scoville, in a reply to Mr. Gilpatric's 1 June memorandum, indicated that he was sure he had at no time stated that the 5412 Group had assigned to CIA the responsibility for the development of a covert satellite and that Mr. Gilpatric's source of information must have been misinformed.

Dr. Scoville stated further that he knew perfectly well that the 5412 Group was not the responsible organization to make such an assignment, and therefore, was certain he had been misquoted.

Dr. Scoville indicated that Mr. McCone had informed him that Mr. Gilpatric had reached a decision to

14 June 1963 (Continued)	place the item in the CIA budget during the FY 64 NRO budget discussions. In light of CIA's preliminary studies, Dr. Scoville suggested that it would be very timely for a joint meeting between DOD, CIA and NRO to make a decision on the assignment of responsibility in this area. (Tab 40)
15 June 1963	Dr. Herbert Scoville departed the CIA. Dr. Albert D. Wheelon was appointed Deputy Director/Science & Technology, CIA.
18 June 1963	In a note for Mr. Gilpatric, Dr. Fubini stated that, as a result of the Purcell Committee study, the general interest in a covert satellite capability among those concerned had greatly decreased. Additionally, Dr. Fubini remarked that the amount of money originally budgeted for that purpose might have to be adjusted in light of an over-all deficit of $100 million in 1964. Dr. Fubini expressed his view that a meeting to decide on assignment of responsibilities not be called until such time as he and Mr. Gilpatric were convinced that the project should be pursued. (Tab 41)
19 June 1963	Mr. Gilpatric noted his agreement with Dr. Fubini's views on delaying the meeting on assignment of responsibilities and asked that he be advised when such a meeting would be timely. (Tab 41)
2 July 1963	Mr. Eugene Kiefer was appointed Deputy Director, NRO and moved to an office in the Pentagon.

16 July 1963

Dr. McMillan and Mr. Kiefer met with Mr. McCone to discuss the Purcell Report. Mr. McCone mentioned the last paragraph of the Purcell Report (which comments on management organization) and expressed his confidence that the organization as constituted, was satisfactory.
(Tab 42)

23 July 1963

In a Memorandum for the Record, General Carter related his discussions with Dr. McMillan of the TAGBOARD program.

Key relevant points:

1. Dr. McMillan stated that he was not prepared to draw back from his TAGBOARD memorandum, unless so directed by Mr. McNamara, presumably generated by a protest from Mr. McCone.

2. Dr. McMillan stated he wished to assign a project officer to the CIA to push forward on the program and that at the end of three months the entire program would be switched over to NRO Program D (Colonel Geary) for management. General Carter reported that CIA was agreeable to having the Air Force supply a Project Director.

3. General Carter proposed that any decision on transition be deferred for about six months when a much better idea of where OXCART stood would be available. General Carter suggested that there might even be a need for some policy decisions in this connection.

4. General Carter proposed to hold the existing line, i.e., budget for and technically manage

23 July 1963
(Continued)

TAGBOARD in Program B (under Colonel Ledford in CIA).

On other subjects:

1. General Carter strongly recommended both Colonels Giller and Ledford for promotion to Brigadier General.

2. General Carter proposed that more CIA people be assigned to the NRO Staff and that CIA people be proliferated into the various other programs.

3. General Carter proposed that Dr. McMillan call in all NRO Program Directors and their deputies for a one-or two-day symposium slanted toward emphasizing their primary function of intelligence collection.

4. General Carter mentioned a rumor that General Greer had decided to take over contracting of all his projects and expressed his feeling that "any moves which tended to downgrade these (CIA) capabilities were not in the best interests of NRO and certainly not in the best national interests of an exotic intelligence collection program."

(Tab 43)

15 August 1963

In a Memorandum for the Record, General Greer related the items discussed and agreed upon by the Directors of Program A and B regarding plans for developing an ultra high resolution satellite reconnaissance system.

These items included:

15 August 1963 (Continued)

a. Performance Specifications which were directed elements.

b. Work Statement which would be prepared by a joint team of members from Program A and Program B with assistance as required by Aerospace. The work statement was to provide for development through prototype of each of two cameras meeting the performance characteristics.

c. RFP which would be handled covertly and be sent to EKC, Itek, Fairchild, P-E and Hycon.

d. Source Evaluation which would be accomplished by a board composed of representatives of both Programs A and B with technical panel assistance by Aerospace.

e. Management which was to be provided over-all by the Director of Program A with regular participation by designated representatives from Program B. Security and contracting would be a CIA responsibility with execution delegated to CIA representatives on the Program A staff.

f. Go-Ahead Date which would be immediately upon receipt of DNRO direction.

(Tab 44)

22 August 1963

Mr. McCone, at a luncheon meeting, expressed concern over the functioning of the NRO, specifically that:

1. NRO was functioning as a line organization rather than as manager (coordinator) of a

22 August 1963 (Continued)

combined enterprise which, in his estimation, was the intent of basic CIA-DOD agreement.

2. CIA experience in contracting for both aircraft and satellite reconnaissance projects should be used for results not achievable under the more elaborate and time-consuming Air Force procedures.

3. NRO was misplacing emphasis on R&D advances rather than on intelligence collection.

In attendance at this meeting were:

Mr. McCone	Dr. Fubini
Mr. Gilpatric	Dr. Wheelon
General Carter	

(Tab 45)

23 August 1963

In a message to Dr. McMillan, the Director of Program B referenced General Greer's memorandum of 15 August and cited an apparent misunderstanding over areas of agreement between he and General Greer in the discussion of plans for developing an ultra-high resolution satellite reconnaissance system.

Comments by the Director, Program B:

1. Concur with the camera performance specifications as directed by the DNRO.

2. Agree with preparation of work statement by joint team of members from Programs A and B. Recommend the Director of Program A appoint a chairman for this effort.

23 August 1963 (Continued)	3. Agree that EKC, Itek, Fairchild, P-E and Hycon constitute available industry capability and should be asked to submit proposals.
	4. Agree to joint proposal evaluation board and propose Colonel Charles Murphy as chairman.
	5. Do not agree with Director, Program A on plan for over-all management. The entire problem of assignment of functions and responsibilities within the NRP is being debated at higher levels and any agreement on program management must necessarily await a major policy decision.
	6. Recommend proceeding with the work statement and evaluation on a joint basis until over-all NRP management responsibilities are defined at higher levels.
	(Tab 46)
4 September 1963	At a meeting with Mr. McNamara and Mr. Gilpatric, Mr. McCone acknowledged that his previous statements regarding NRO not functioning as a line organization was not in accordance with Article V(B) of the basic agreement and stated that while he was not asking at the time for a change in the agreement he was concerned that CIA's reconnaissance resources be fully utilized. (Tab 47)
6 September 1963	Mr. Gilpatric confirmed the assignment of responses to FIAB recommendations to Dr. McMillan and Dr. Fubini. (Tab 48)

10 September 1963

With reference to the White House memorandum of 7 June 1963, Mr. McCone forwarded to Mr. Bundy a memorandum indicating that:

1. The implementation of the CIA-DOD agreement had brought forth certain ambiguities and areas of possible conflict that needed clarification.

2. These areas had been identified and were the subject of several weeks' discussions between and among Dr. Wheelon, General Carter and Mr. McCone for CIA and Dr. McMillan, Dr. Fubini and Mr. Gilpatric for DOD.

3. It was perhaps premature to state whether the discussions would bring about need for a revision of the agreement.

4. In light of the significance of the program, Mr. McCone would insure that Mr. Bundy was kept advised of any significant changes.

(Tab 49)

11 September 1963

Dr. McMillan met with Mr. McCone to deliver the report of NRO actions related to the Purcell Board.

Mr. McCone discussed his views on relations between the CIA and the NRO. Mr. McCone made the following points:

1. He reiterated that he felt the central issue was to ensure that all resources, both military and CIA, be brought effectively to bear on NRO matters.

11 September 1963 (Continued)

2. He said that he had been surprised to learn the extent to which the NRO had actually been set up as a line or operating organization and was surprised also to learn of special organizational arrangement under which General Greer operates. He expressed a desire to be informed of background history.

3. He said that he was still not fully clear, in his mind, regarding exactly how the Director, NRO should work with CIA - whether with Colonel Ledford or with an individual farther up in CIA - or perhaps with two individuals, depending on the matters at issue.

(Tab 50)

13 September 1963

In a Memorandum for the PFIAB, Mr. Gilpatric submitted, on behalf of the Secretary of Defense, comments on the 7 June 1963 PFIAB recommendations on the NRP.

General comments:

1. In his supervision and guidance to the NRO, the Secretary of Defense has adhered to the provisions of the 13 March 1963 NRO agreement. In this process certain problems and divergencies of viewpoint have occurred and are in fact not completely resolved. Where such differences have occurred the issues have been frankly discussed and worked out to the benefit of NRO operations.

2. It is the conviction of the Secretary of Defense that the over-all operation of the NRO is satisfactory; that NRO programs are producing,

13 September 1963
(Continued)

and will continue to produce, important intelligence information; and that a smooth, steady state and highly efficient operation of the NRO is beginning to be apparent.

Specific Comments:

1. In the opinion of the Secretary of Defense, there already exists the clear channel of guidance and authorization recommended by the FIAB.

2. Several steps have been taken to establish a clear and effective connection between the advanced technology and planning of the NRP and the development plans for reconnaissance capabilities of the DOD and the military services.

   a) The Secretary of Defense has assigned exclusive responsibility to the NRO for the research, development and operation of all reconnaissance mapping and geodesy systems, both photographic and electronic signal, which are developed for and are operated in overflight of denied areas.

   b) Provision has been made within the organizational structure of the NRO to monitor potentially overlapping areas of NRO and other DOD research and development.

   c) The Assistant Secretary of Defense (Deputy DDR&E) has been given the responsibility to monitor all aspects of the NRO on behalf of the Secretary.

   d) Responsible personnel within key development areas have been briefed on the

13 September 1963
(Continued)

entire NRO development and operational program.

e) The Army and Navy have provided highly qualified technical officers for full time duty in key development billets within the Air Force element of the NRO.

f) The NRO Staff includes full time billets filled by personnel from the Army, Navy, Air Force, CIA, NPIC and NSA.

3. Continuity of management has been provided for by establishing direct monitoring of key personnel moves by the Director, NRO.

4. Department of Defense directives, which the Secretary of Defense promulgates as executive agent for the NRP, are consistent with recommendations and policies emanating from higher authority.

5. The Director, DIA is kept completely knowledgeable of all aspects of the NRP as requested. In addition, his membership on USIB permits him to participate in the formulation of requirements to which the NRP is responsive.

6. The primary interest of NSA in the NRP lies in the non-image forming collection capability developed for the NRO. The participation of NSA in this aspect of the NRO activity is now beginning to be fairly complete. The Director, NSA, in preparing the National ELINT Plan, has considered certain aspects of NRO responsibilities in the ELINT area. The Director, NSA participates in USIB and is, therefore, in the

13 September 1963 (Continued)

position of helping to formulate requirements to which the NRO is responsive.

Summary Comments:

1. The Secretary of Defense is doing, and will continue to do, in coordination with the DCI, his utmost to make certain that the resources of both the DOD and CIA are fully utilized and efficiently managed by the DNRO under the joint guidances of the DCI and the Secretary of Defense.

2. It is reasonable to anticipate that the NRP, as managed by the DNRO in his capacity as head of an operating agency, will meet the full expectations of the FIAB and the other individuals who have been largely responsible for its creation and for the statement of basic guidance for the program.

(Tab 51)

18 September 1963

In the executive session of the USIB meeting, Mr. McCone expressed concern over gaps in the relationship between USIB and the NRO. He advised the Board members that he had discussed the problem with Mr. McNamara who had concurred in his conclusion that it would be useful to have Dr. McMillan meet with the Board whenever matters of mutual concern were on the USIB agenda.

Mr. McCone stated further that a similar relationship should be developed to ensure NRO participation in appropriate COMOR deliberations.

18 September 1963 (Continued)	The USIB concurred in the arrangements described by Mr. McCone. (Tab 52)
22 October 1963	In a memorandum for General Rodenhauser (AFTAC), Dr. Wheelon related a CIA decision to provide a [redacted] package for the OXCART vehicle in an effort to exploit the operational flexibility of the vehicle. The memorandum agreed to the development, under CIA funding, of a [redacted] (Tab 53)
28 October 1963	Dr. McMillan forwarded to Mr. McCone for his concurrence, a proposed memorandum to the Directors of NRO Programs A and B concerning responsibility for operating management of the CORONA project. (Tab 54)
31 October 1963	In a Memorandum of Record, [redacted] (NPIC) reported on a meeting with General Greer at Aerospace to discuss the need for retaining horizon cameras with the CORONA program. [redacted] expressed his feeling that the CORONA program was becoming schedule dominated and that "some of the operations people are losing sight of the prime objective of the program; the user." (Tab 55)
5 November 1963	In a letter to Dr. McMillan, Dr. Wheelon discussed the problem of quality spread in CORONA photography and advised that CIA would convene a Satellite Photography Working Group to address both an immediate question of present system improvement and the longer term problems which were fundamental to the design of future systems. Dr. Wheelon

5 November 1963 (Continued)

discussed objectives, arrangements, staffing, organization and funding for this Working Group and outlined three types of support which he anticipated would be required from the NRO:

1. Designation of a liaison officer on the NRO Staff who could support the group by arranging visits and briefings.

2. Nomination of one or more technical individuals from the NRO Staff who could serve under the chairman as working members of the group.

3. Agreement to reimburse the CIA for the direct costs of the group up to [redacted] from FY 64 NRO funds.

(Tab 56)

7 November 1963

Dr. McMillan, Mr. Kiefer, General Carter, Dr. Wheelon and Mr. Bross met to review the organizations, responsibilities and technical capabilities of the:

1. NRO Staff
2. NRO Program A
3. NRO Program B
4. Office of the Deputy Director/ Science and Technology, CIA

(Tab 57)

8 November 1963

Mr. McCone, in a letter to Mr. Gilpatric, indicated that:

1. In light of agreement that NRO would be strengthened by active participation of

8 November 1963 (Continued)	additional officers with CIA experience, General Carter and Dr. Wheelon were working with Dr. Fubini and Dr. McMillan to determine appropriate assignments. 2. Dr. Wheelon had been designated to examine and monitor on his (McCone's) behalf the activities of the NRO, in accordance with the provisions of the CIA-DOD agreement. 3. Regularly scheduled meetings of senior DOD, CIA and NRO officials to review and discuss policy aspects of all NRO programs and activities would greatly improve the policy guidance afforded the NRO by the Secretary of Defense and the DCI. (Tab 58)
8 November 1963	In a Memorandum for Record, General Martin commented on the 31 October MFR by [redacted] of NPIC. General Martin had discussed the memorandum with Mr. Lundahl, who agreed with the expressed concern and apologized for the memorandum and with Dr. McMillan, who called General Carter and Dr. Wheelon and asked that the [redacted] memorandum be withdrawn. (Tab 59)
18 November 1963	In a response to Dr. Wheelon's letter of 5 November, Dr. McMillan related his general agreement with the establishment of a Satellite Photography Working Group and the proposed over-all approach to the problem of variations in quality and resolution of the CORONA system.

18 November 1963 (Continued)

Dr. McMillan considered the proposed working arrangements amenable. He felt the Group should be limited to several particular objectives, kept as small as possible, and confined to the very best qualified people.

Dr. McMillan named Lt. Colonel Howard (NRO Staff) and Lt. Colonel Williams (NRO Program A) to serve as members of the Working Group. (Tab 60)

27 November 1963

Dr. McMillan met with Mr. McCone to discuss "Unified CORONA Management."

Dr. McMillan's objectives:

1. Assign to one Program Director the single management responsibility for developing, testing and employing CORONA/MURAL satellite systems to include the responsibility for:

   a) Development, launching, tracking, recovery, and product delivery of CORONA/MURAL satellite systems in accordance with approved schedules.

   b) System engineering/technical direction authority and control over all system and associate contractors.

   c) Technical direction authority and control of engineering changes recommended by the Configuration Control Board (CCB) within limits expressed by the Director, NRO.

27 November 1963 (Continued)

d) Contract administration of all contracts pertaining to CORONA/MURAL satellite systems.

e) Directive control over all NRO representatives at contractors' plants.

f) Programming and budgeting responsibility to the Director, NRO for approved programs.

g) Accountability to the Director, NRO for reporting program and financial progress on all applicable contracts.

h) Utilization of DOD and CIA special skills, capabilities, and resources to achieve maximum program accomplishment.

Dr. McMillan expressed his concern that while the Director, Program A had over-all responsibility, he did not control all elements essential to managing the CORONA/MURAL programs effectively, i.e., he did not administer all pertinent contracts, he did not have directive control over all contractors involved, he did not have control over all NRO representatives at contractors' plants, he did not have complete programming and budgeting responsibility. (Tab 61)

4 December 1963

Mr. Gilpatric signed a joint (Gilpatric/McCone) memorandum establishing the NRP Review Commitee.

The Committee:

Dr. McMillan	Chairman
Dr. Fubini	Member
Dr. Wheelon	Member

4 December 1963 (Continued)

was responsible for:

1. Regular review of the responsiveness of the NRP to the intelligence collection requirements and priorities established by the USIB.

2. Review of the 5-year program planning.

3. Review of the annual program and budget planning.

4. Review of major advanced development projects.

5. Review of such other aspects of the NRP as may be deemed appropriate by the Chairman.

(Tab 62)

4 December 1963

In a memorandum to Dr. Wheelon, CIA, Dr. McMillan suggested the procedures that should be followed by Dr. Wheelon in performing his function to examine and monitor on behalf of the DCI the activities of the NRO.

Key points:

1. Working relationships between Dr. Wheelon and Dr. McMillan should follow the same pattern as those followed by Dr. Fubini, performing the same function on behalf of the Secretary of Defense.

2. Dr. Wheelon's contacts with the NRO should be made through Dr. McMillan whenever possible.

4 December 1963 (Continued)

3. Necessary arrangements for information, briefings, or attendance at meetings by NRO personnel would be directed by Dr. McMillan.

4. There would be no direct tasking of any personnel assigned to the NRO on an individual basis.

(Tab 63)

7 December 1963

The NRP Review Committee met.

Items discussed:

1. Failure of CORONA mission. Dr. McMillan agreed to appoint a committee to investigate.

2. Telephone Security. Dr. McMillan raised issue expressing concern at a number of codewords improperly used.

3. Management of CORONA/MURAL. Dr. McMillan suggested a directive on management of the program. He considered it most important that the DNRO approve major changes. He felt that a CIA contracting officer was needed on General Greer's staff and proposed that the DCI nominate such an individual. General Carter objected to previous management proposal "because too much was turned over to Greer." General Carter stated the new draft might not meet objections - CIA had been eroded. General Carter proposed to:

7 December 1963 (Continued)	a) separate "search" and "target track" into two payload programs acquiring vehicles from same source but with separate integration. b) establish General Greer as a joint CIA/DOD staffing at appropriate level with a CIA Deputy for General Greer. c) advise operating level of fact that intelligence was purpose of this program and infuse all levels of NRO with this purpose. Several other management schemes were discussed (and are summarized in this Tab). (Tab 64)
10 December 1963	In a letter to Mr. Gilpatric, Mr. McCone acknowledged receipt of the proposed joint memorandum on the establishment of an NRP Review Committee signed by Mr. Gilpatric on 4 December. Mr. McCone noted his understanding that Dr. Fubini had proposed that the review group meet biweekly, alternating meeting places and chairmen and that such a working arrangement had been agreed by all. Mr. McCone suggested proceeding in accordance with the Fubini proposal and expressed his hope that he and Mr. Gilpatric could meet periodically, perhaps monthly, to receive status reports and recommendations from the monitoring group. (Tab 65)
10 December 1963	Dr. McMillan discussed with Dr. Wheelon the information required by Wheelon in his personal capacity

10 December 1963 (Continued)	as the designated staff monitor of the NRO for the DCI. (Tab 66)
10 December 1963	In a memorandum to Mr. McCone, Dr. McMillan asked that his proposed memo to Directors of Programs A and B of 28 October 63 be returned. Dr. McMillan forwarded with this memo a revised proposed directive, that more clearly defined the assignment of responsibilities for the conduct of the CORONA program, for Mr. McCone's concurrence. The proposed memorandum assigned to the Director, Program A the responsibility for: 1. Projecting vehicle and payload requirements and launch schedules, 2. Directive control for launching, orbital and recovery operations, 3. Technical direction to contractors for day-to-day engineering, 4. Contractual direction of CORONA contracts through a CIA contracting officer to be assigned the Program A staff, and 5. Programming, budgeting, and progress reporting on all assigned projects. (Tab 67)
11 December 1963	Dr. McMillan recorded his conversation with Mr. McCone on 10 December.

11 December 1963 (Continued)	After reading Dr. McMillan's proposed draft directive on consolidation of CORONA management, Mr. McCone said "This is the same paper you presented before. You want to take the whole project over." Mr. McCone added that he had looked into the history of the CORONA project and that he was convinced that had it not been for CIA influence the U.S. would still today be without pictures of the Soviet Union. He stated that he would not stand for submersion of the CORONA project into the "bureaucracy of the Air Force" and that he would "liquidate the NRO" if necessary to prevent this. Mr. McCone spoke of the necessity to keep the "imagination, inventiveness, enthusiasm and flexibility of the CIA organization" at work on the CORONA project in order to insure its success. Mr. McCone promised Dr. McMillan a decision on the CORONA matter "within a few days." (Tab 68)
12 December 1963	In a memorandum for the Secretary of Defense and the Director of Central Intelligence, Dr. McMillan related the results of the 7 November 63 review of organizations, responsibilities and technical capabilities of NRP participants and indicated a desire to consider immediately nominations from CIA for candidates for the following positions: 1. Staff Aircraft Operations Officer, NRO Staff 2. Staff Engineer, NRO Staff 3. Staff Development Engineer, Program A Staff (Tab 69)

12 December 1963

Dr. McMillan outlined for Mr. McNamara some possible NRO/CIA issues.

Dr. McMillan surmised that Mr. McCone would make several assertions:

1. The NRO is dominated by the Air Force.

2. The historic role of the CIA in satellite reconnaissance has been eroded away, and is threatened with extinction.

3. The resources of the CIA, the imaginativeness and flexibility that created our present satellite capability, are not being effectively employed.

4. He will "liquidate the NRO" rather than have the CIA's capability frustrated or destroyed.

5. It is essential that the CIA be given responsibility to develop a new broad-coverage satellite system.

With respect to these assertions, Dr. McMillan outlined the facts as he saw them: "The CIA did control the early development of the present CORONA camera and reconnaissance system. They built on, and depended on, Air Force contributions, but it was by their leadership that the U.S. achieved successful satellite reconnaissance as early as it did. The Air Force SAMOS program was ill considered, undisciplined, and poorly managed. It would have, at best, floundered into success at a much later date."

Dr. McMillan added that CIA's contribution to CORONA was not primarily technical, nor to management in the broad sense. They set and enforced a disciplined

12 December 1963
(Continued)

set of requirements which focussed the Air Force's efforts, and provided a simplified management structure which kept the military bureaucracy out of the critical parts of the program.

Dr. McMillan stated that the CORONA system had long been an "operating" system in which reliability, efficiency, and responsiveness to intelligence needs were primary considerations. He added that management was not faced with major decisions. Contracting for the program was split between Air Force and CIA, with CIA responsible for payloads and their integration into the spacecraft. Technical control of the payload integration contracts was vested in a committee, the Configuration Control Board (CCB), on which CIA had two members.

Dr. McMillan stated that at the present time, as far as he knew, no one in the CIA who played a significant role in the creation of CORONA now had any responsibility associated with its routine operation. He did not feel that Mr. McCone realized this point.

Dr. McMillan added that since he had become DNRO, the CIA had made no unique contributions to satellite reconnaissance. He considered that part of the CIA which reported into the NRO structure to have no special capability in the satellite field, and to be so busy with necessary activities elsewhere as to have little interest. Dr. McMillan felt that such unique capabilities as CIA had, resided in the large and expanding organization of Dr. Wheelon (DD/S&T) and were outside the NRO program organization.

Dr. McMillan outlined several other specific issues which he felt Mr. McCone might raise:

12 December 1963
(Continued)

1. The DNRO is trying to eliminate the last element of the CIA contribution to the CORONA project.

2. He (Mr. McCone) has been trying to get a unified staff in the NRO, but the difficulties are insurmountable.

With regard to these two issues, Dr. McMillan stated that he had proposed a clarification of responsibilities and a simplification of the CORONA management which would put the NRO West Coast project director, General Greer in control of the CIA contracts for such technical matters as in his judgment were minor and were necessary for the health of the system. Dr. McMillan had also confirmed, in writing, four proposed specific additions to the NRO management organization which could profitably be manned by qualified and experienced CIA personnel.

In summary comment, Dr. McMillan considered the final price of peace with the CIA, "considering the temperament of its leaders," was at least to give the CIA carte blanche for development of a new general search system. He opined that until this was done, or the leadership changed, there would be continued obstruction of the NRO and contests of its actions, on many subsidiary issues. He saw no reason, however, to compromise judgments or voluntarily liquidate the NRO. He did not consider that he had exhausted his means to resolve the specific issues being contested.

Dr. McMillan recommended temporizing by negotiating all ancillary issues on their merits while awaiting the main issue on which he felt there should be no compromise in any manner that denied to the U.S. the benefits of that development which was judged most needed.
(Tab 70)

13 December 1963

Mr. McCone in a reply to Dr. McMillan's letter of 10 December, indicated that:

1. The McMillan proposal raised several questions,

2. He would not be able to present his views until he returned from Saigon,

3. He considered it essential that no action be taken within the NRO or its contractor structure which might prejudice "our" ability to implement other management approaches.

4. He desired that status quo be maintained until he had further considered the matter.

Mr. McCone iterated his concern over the "resources" problem and asked Dr. McMillan to take corrective action on a contractor problem which had been brought to his attention.
(Tab 71)

14 December 1963

Dr. McMillan outlined for Dr. Wheelon the methods to be used in supplying the information required by Wheelon in his capacity as designated CIA staff monitor of the NRO. These included:

1. Information copies of wires.

2. Daily wire report on launching schedule status.

3. Information copies of NRO documents.

4. Mission wrap-up information reports.

14 December 1963 (Continued)	Dr. McMillan indicated his willingness to consider a trial period of weekly personal briefings to Dr. Wheelon by an NRO Staff member, but rejected Wheelon's suggestion that the information be provided his weekly DD/S&T (CIA) staff meeting (as contrary to paragraph V(B) of the CIA-DOD agreement). (Tab 72)
20 December 1963	Dr. McMillan asked Dr. Wheelon's personal hand in guiding, on his behalf, the NRO Program B studies of a possible mobile-launched satellite. Dr. McMillan suggested several general guidelines and mentioned several past studies which he considered to have a direct bearing on the further effort. (Tab 73)
10 January 1964	In a letter to Dr. McMillan, Dr. Wheelon objected to a statement of Dr. McMillan's intent to assign to the Director, Program A the responsibility for any new system development in the covert or synchronous satellite field. Dr. Wheelon stated that developmental work on covert satellites was a responsibility of the Director, Program B and that it was his position that such responsibility should remain unchanged. Dr. Wheelon indicated that this position would "be sustained at such times as further discussions take place on programming NRO activities for FY 1965." (Tab 74)
13 January 1964	In a Memorandum for the Record, Dr. Fubini summarized his discussions with Mr. McCone concerning

13 January 1964
(Continued)

the resolution problems which interfered with the proper relationship of elements that composed the NRO.

Dr. Fubini had suggested:

1. assignment to CIA of the responsibility for the research, development, engineering and the early flights of a new payload aimed at achieving the maximum resolution permissible with current state-of-the-art without compromising the breadth of coverage accomplished with LANYARD and GAMBIT and planned for the follow-on to GAMBIT.

2. that such a program come about as a natural consequence of the basic studies being carried on by the Drell Committee.

3. that after the first 4 or 5 successful flights, a smooth transition take place between CIA management of the payload and payload integration into a "routine" operational arrangement under the detailed control of the Air Force but still subordinate to plans and policy direction from both the DCI and Secretary of Defense (through the NRO).

4. that the same rule be applied to CORONA, i.e., that "keep well" steps necessary to maintain efficiency and effectiveness of CORONA be made unmistakably a part of the Air Force's responsibilities.

As a part of the over-all reassignment of responsibilities in NRO management, Dr. Fubini expected that the Air Force would apply itself to the research,

13 January 1964 (Continued)	development, engineering and early test flight of follow-on GAMBIT with exactly the procedure toward the NRO that the CIA would practice in the broad coverage program. (Tab 75)
13 January 1964	In a memorandum for Dr. McMillan, General Greer discussed several management aspects of the CORONA Program. The memorandum outlined in detail: 1. Organization of SAFSP, SSD, SCF and the flow of operational information between these organizations 2. Disposition of Agena vehicles 3. Implementation of program changes 4. Systems documentation and CCB management arrangements 5. Contractual work statements Additionally, the memorandum addressed the relationship between the CORONA program and the Agena D SPO, and the relationship between the LMSC AP Facility, the resident CIA representative and the CORONA program. (Tab 76)
15 January 1964	In a letter to Dr. Wheelon, Dr. McMillan stated his concern over CIA's identification, in the FY 65 budget, of "a possible source of funds for use should a covert or synchronous satellite development be undertaken." Dr. McMillan stated that the Director, Program B had not been assigned responsibility for development

15 January 1964 (Continued)

of a covert satellite and that a previous claim to the contrary had been dealt with on 1 June 1963. Dr. McMillan advised Dr. Wheelon that no decisions or actions since that date had changed the situation.

Dr. McMillan indicated his belief that "studies specifically directed toward a covert system must be paralleled by studies of other requirements and of other possible systems before a decision to develop a covert system can rationally be made." (Tab 77)

28 January 1964

Dr. McMillan reminded Mr. McCone that while three positions within the NRO had been identified as ones which might usefully be staffed by qualified CIA personnel, he had received no nominations from the CIA.

Of the three identified, Dr. McMillan felt that the position of Aircraft Operations Staff Officer should be filled within the very near future because of the lack of necessary coverage and capability within the NRO Staff in this area. Dr. McMillan felt it to be of mutual interest to consider individuals from CIA for this post and urged Mr. McCone to submit CIA nominations by 14 February 1964. (Tab 78)

28 January 1964

Dr. McMillan provided for Mr. McNamara a very detailed resume on the management of the CORONA project.

Dr. McMillan considered as the two major problems in the CORONA project:

1. a degree of operational unreliability which, while not crippling, had been serious and, in his judgment, correctable.

28 January 1964
(Continued)

2. a separation of management responsibilities within the NRO between two of the principal program directors.

Dr. McMillan indicated that he had tended to "charge off operational faults and failures" mostly to the central contractor, Lockheed, and had several times engaged in informal technical audits of Lockheed's activities. He had tended to regard the divided management primarily as an inconvenience, mostly because it had obliged him to make explicit and careful division of responsibility each time a minor non-routine matter arose. He had discussed with the DCI, without success, a proposal to eliminate the split in management.

In pursuing the solutions to the two problems, Dr. McMillan had concluded that they were indeed the same problem. More precisely, he felt they were respectively operational and structural demonstrations of the fact that the Government's management of CORONA was "unconscionably weak and diffuse." He was further convinced that under a more effective management CORONA would demonstrate significantly higher reliability and better technical performance, and that such could be accomplished with a real reduction in costs.

Dr. McMillan discussed, in detail, the current management and concluded that:

1. The only place in the present organization where the authority of a true project director could be exercised was in the office of the DNRO.

2. The defined channels through which the DNRO must operate as project director were confused and unnecessarily tortuous.

28 January 1964 (Continued)

3. There was not contractually defined responsibility for systems engineering of the whole system from booster through reentry vehicle and of its operation from mission definition to recovery.

Dr. McMillan discussed further a recommended organization, the recommended contracting and policy, the initiation of improvements and immediate actions.
(Tab 79)

3 February 1964

Dr. McMillan advised Mr. McNamara that he had briefed the FIAB on 30 January on the status of a proposal to have a group of consultants examine the conduct by the Government and its contractors of the CORONA project.

Upon being asked by the FIAB for his recommendations as to possible changes, Dr. McMillan presented essentially the structure, policies and actions outlined in his report of 28 January to Mr. McNamara. Dr. McMillan explained to the FIAB that his recommendations did not have the approval of Mr. McNamara or the DCI. Dr. McMillan proposed to brief the DCI at the earliest possible time.

Toward enforcing better control of the CORONA project, Dr. McMillan advised Mr. McNamara that he had issued a directive (see Tab 82) that set out policy and objectives, and introduced procedures for keeping the DNRO more closely informed of proposed engineering changes.
(Tab 80)

4 February 1964

In a letter to Mr. McCone, Dr. McMillan reported the results of his personal survey of the management, technical and contractual arrangements, and practices followed in the CORONA program.

4 February 1964 (Continued)

Dr. McMillan had concluded that "the Government's management of this project is a significant factor contributing to the unsatisfactory record of recent performance."

As a result of his survey, Dr. McMillan issued a policy directive defining the over-all objectives for the conduct of the CORONA program. The directive outlined administrative procedures which Dr. McMillan considered interim in nature, but effective until such time as he felt the program was under satisfactory control.

Dr. McMillan informed Mr. McCone that he had been asked, in late January, to report to the FIAB on the status of the NRO and its programs. In Mr. McCone's absence, Dr. McMillan had discussed with Mr. McNamara the material he intended to present. During the FIAB meeting, Dr. McMillan was asked specifically to outline the steps he considered necessary to bring into being a satisfactory management structure. Dr. McMillan offered to review this material and present a detailed account of his survey and plans for aligning the management and contractual structure.
(Tab 81)

4 February 1964

In a memorandum for the Directors of Program A and Program B, Dr. McMillan stated the policy for the CORONA program against which engineering objectives could be set and engineering decisions made. The memorandum also established procedures by which the DNRO would be kept informed of the degree to which the policy was effective and made aware of any problems creating a need for further guidance.

4 February 1964
(Continued)

Policy:

1. The primary objective of the CORONA program - to achieve consistent reliable returns of intelligence photography of a quality comparable to that of the best experienced during 1963, on a schedule closely approximating that laid down in advance by the DNRO, and in a manner responsive to the targeting guidance supplied by USIB.

2. The secondary objective of the CORONA program - to improve the performance of the CORONA system in quality, in responsiveness to intelligence needs, and in reliability and economy.

3. The amount of engineering effort expended must be controlled to insure that such effort is always and economically directed toward approved objectives of high priority. Changes would not be introduced into the system or its operation except as judged essential to meet the primary objective or judged to contribute significantly toward specific, important, identifiable improvements in quality, responsiveness, reliability or economy.

4. [redacted] on a CORONA mission without the explicit approval of the DNRO.

5. [redacted] without explicit prior approval of the DNRO.

4 February 1964 (Continued)

6. System improvement efforts would be initiated only when the effort was specific in nature; when directed toward a specific identified improvement in quality, responsiveness, reliability or economy; when judged to be significant and desirable in the light of the cost to attain; and when judged to be possible without significant risk to the primary objective.

(Tab 82)

12 February 1964

Dr. McMillan asked General Martin to prepare a document summarizing the basic policies which had been set forth in written references to CORONA project management. The purpose of the document was to provide a convenient, unified statement of the material, for reference.

Dr. McMillan outlined, for inclusion, several items of policy which were not completely defined in the references:

1. Planning, design, engineering, and incorporation of specific system changes would be authorized, and assigned for accomplishment, by decision of the DNRO.

2. Authorized planning, design, and engineering of changes would be conducted under contracts separate from those under which normal operations were conducted.

3. DNRO approval would be required for any change in the system which altered the format or content of any part of the product, for any change that altered the format or flexibility of planning or control of missions, for any

12 February 1964 (Continued)

change that required prior flight testing, or for any change that required more than [redacted] of engineering effort.

4. Any change that required extensive flight testing or one that altered such things as the size or nature of the product material, the controlling dimensions of the prime sensor, the amount of recovered material, the mode of recovery, or the basic philosophy of design of the prime sensor was to be considered so sweeping in character as to be classed as a "new development." Any such change would have to be judged for desirability against other potential new developments.

(Tab 83)

12 February 1964

Mr. McCone forwarded to Dr. McMillan a copy of his notes covering their 11 February discussion of the information given to the Clifford Board.

Mr. McCone indicated that it was important that agreement be reached in memorandum form concerning the future of CORONA before there was further disturbance of existing outstanding contracts and management responsibilities of the CIA.
(Tab 84)

3 March 1964

In the absence of CIA nominations for a qualified Air Operations Officer, Dr. McMillan selected [redacted] to fill the position on the NRO Staff. Dr. McMillan advised Mr. McCone of this selection and urged his consideration of nominees for the other posts identified in the 12 December 63 memorandum.
(Tab 85)

9 March 1964	In a letter to Dr. McMillan, Dr. Wheelon complained about the NRO designating individuals in CIA to serve on study groups. Dr. Wheelon cited two examples - the first related to photographic film processing resources, and the second to follow-on for the Drell-Chapman Committee. Dr. Wheelon considered it "quite inappropriate for the NRO Staff to be designating individuals in CIA for such purposes" and asked that Dr. McMillan make his needs known to CIA, who would "select the best qualified people in view of their other time commitments to both CIA and NRO programs." (Tab 86)
12 March 1964	Dr. Wheelon, in reply to Dr. McMillan's request for nominations, proposed that "incremental solutions to partial staffing problems" be postponed until broader guidelines are supplied by the DCI and the Secretary of Defense. (Tab 87)
23 March 1964	Dr. McMillan advised Dr. Wheelon that he was completing an inventory of all advanced planning of all projects within the NRP in preparation for the programming for FY 1965. Dr. McMillan asked for a resume of any CIA in-house studies and investigations, and contractual work, pertaining to or applicable to the NRP or its objectives. (Tab 88)
24 March 1964	CORONA-J (Mission 1003) failed to orbit.
26 March 1964	Dr. McMillan forwarded to Mr. Vance two histories: 1. a very detailed description of the development of satellite reconnaissance programs beginning in 1946 and continuing to date.

26 March 1964 (Continued)	2. an explanation of the development and continuation of the Configuration Control Board activity associated with the CORONA/MURAL program. (Tab 89)
27 March 1964	DOD Directive TS 5105.23 was revised in response to a strong appeal from DIA for more definitive guidance regarding the appliance of appropriate security controls to knowledge that the NRO and NRP existed. The change required that the expressions "NRO" and "NRP" be handled within BYEMAN or TALENT/KEYHOLE systems only. There were no changes in the "functional text." (Tab 90)
27 March 1964	Dr. McMillan forwarded to Mr. Vance copies of the following documents: 1. the 13 March 1963 DOD/CIA Agreement on Management of the NRP 2. a proposed Presidential Directive to amend the 13 March Agreement 3. a set of footnotes explaining the rationale behind the proposed changes 4. an explanation of some of the more pertinent problem areas. The proposed Presidential Directive expressed the sense of Dr. McMillan's recommendations, not necessarily in the language appropriate for such a directive.

27 March 1964 (Continued)	Dr. McMillan cautioned that the fact that such a proposal had been presented to the FIAB was known only to a few people and suggested that the proposal be held in confidence. (Tab 91)
16 April 1964	In a message for the DNRO, the Director, Program B stated: "Recent events and communications force me to request formal clarification and definition of my responsibilities and functions concerning the (LMSC) AP Facility and CORONA payload management." (Tab 92)
18 April 1964	In Dr. Wheelon's absence, General Carter responded to Dr. McMillan's letter of 23 March 1964. General Carter asked that discussions of the "various advanced projects under way in support of the NRP" be held until Dr. Wheelon's return from abroad. General Carter took this opportunity to mention "certain advanced projects" undertaken with CIA money which had a direct bearing on CIA's capability to carry out its intelligence mission and which were concurrently in direct support of the NRP. These were primarily in the ELINT area. General Carter suggested further that the discussions cover the dollar and anticipated contract levels of the various NRO program elements wherein CIA's "special authorities, security and contract channels" would be employed. (Tab 93)

27 April 1964	CORONA-J (Mission 1005 - next in succession to Mission 1003) experienced a series of difficulties: 1. The camera doors did not eject due to a pyro power failure. 2. The film broke in camera #1. 3. The first capsule impacted in Venezuela on revolution 451. 4. The second capsule was not recovered.
15 May 1964	Dr. McMillan reminded Dr. Wheelon of his 23 March 1964 request for a resume of any CIA in-house studies and investigations, and contractual work pertaining to or applicable to the NRP or its objectives. In view of the impending FY 1965 budget decisions, Dr. McMillan asked that the review of these efforts be set for an exact date during the week of 25 May. (Tab 94)
20 May 1964	In a restricted session of the USIB meeting, Mr. McCone stated that "unless the NRO organization can come closer to meeting USIB requirements for the intelligence inventory, something would have to be done about the NRO itself." Mr. McCone indicated that he would have to respond to Secretary McNamara that, if NRO failed to obtain the necessary satellite photographic coverage in time, USIB would be unable to meet the requested National Intelligence Estimate (NIE) schedules. (Tab 95)
22 May 1964	Mr. McGeorge Bundy forwarded to the Secretary of Defense and the Director of Central Intelligence a report and recommendations on the National

22 May 1964
(Continued)

Reconnaissance Program submitted by the President's FIAB under date of 2 May 1964. Mr. Bundy requested preliminary comments and recommendations on the report not later than 1 June 1964.

Based on its review, the FIAB submitted the following conclusions and recommendations:

Conclusions:

1. The NRP must be conducted as a national effort.

2. The DCI (as Chairman, USIB) has a large and important role in the establishment of intelligence requirements and priorities to be met through the NRP.

3. Both the Department of Defense and the CIA have made important contributions toward the achievement of an effective, national reconnaissance capability.

4. It is essential that the NRP include the fullest use of science and technology in the conduct of long-range, forward-thinking research and development leading to the advancement of our reconnaissance intelligence collection techniques and to more efficient means for processing and analyzing the intelligence obtained.

5. Fuller use should be made of the potential of the CIA in meeting the vital need for advance planning and research.

6. Effective development and conduct of the NRP require that it be a streamlined operation under strong, centralized management and

22 May 1964
(Continued)

control within the Department of Defense, with ready access to personnel and resources of the DOD and of the CIA.

7. With proposed FIAB modifications, a sound organizational concept for the NRP is set forth in certain parts of the March 13, 1963 Agreement between the Secretary of Defense and the DCI.

Recommendations:

The FIAB recommended the issuance of a Presidential directive which would provide guidelines for the centralized direction, management and conduct of the NRP, and clarification of the departmental and agency responsibilities involved, as follows:

1. Definition of the NRP as a single program, national in character, for the development, management, control and operation of all projects, both current and long-range, for the collection of intelligence, mapping and geodetic information through overflight (excluding peripheral reconnaissance operations).

2. Designation of the Secretary of Defense as Executive Agent for the NRP having primary responsibility and authority for (a) the management and conduct of reconnaissance activities involved in the NRP and (b) the tasking of personnel, facilities and other resources of the DOD, CIA and other agencies as required.

3. Establishment within the DOD of a National Reconnaissance Office to function as a separate operating agency of the DOD, and to be

22 May 1964
(Continued)

headed by a Director responsible solely to the Secretary of Defense for discharging the Secretary's responsibility as Executive Agent of the NRP.

4. Assignment to the DCI, as Chairman of the USIB, of the function of sharpening and expediting the efforts of the USIB.

5. Direction that there be a coordinated, comprehensive budget for all elements of the NRP and that there be established fiscal control and accounting procedures to assure appropriate utilization of funds by the agencies concerned in support of the Program.

6. Direction to the heads of the DOD, the CIA and other agencies concerned that full utilization be made of the resources of each of those agencies as required for the conduct of research projects looking to the development of new and improved aircraft and satellite reconnaissance vehicles, photographic and other sensors, and advanced methods for improved processing and exploitation of the intelligence obtained therefrom.

7. Assignment to the CIA of the responsibility for providing the Executive Agent with security and policy guidance required for the maintenance of a uniform system of security procedures for the NRP.

8. In lieu of present monitor and review functions periodic reporting by the Executive Agent for the Program to the President's Special Assistant for National Security Affairs and the President's FIAB, concerning all aspects of the Program.

22 May 1964
(Continued)

9. Authorization to the Director of the NRO to establish a Scientific Advisory Board.

The FIAB recommended further the implementation of several actions within the framework of the NRO. These included:

1. Close and continuing collaboration on the part of the Secretary of Defense and the DCI.

2. Continued designation of the Under Secretary of the Air Force as Director of the NRO.

3. Contributions of personnel by the DOD and the CIA to provide staff support to the Director, NRO - such personnel to serve solely under the direction and supervision of the Director, NRO while so assigned.

4. Delegation by the Secretary of Defense to the Director, NRO of the authority for the issuance of directives to elements of the DOD, and for levying of requests upon the CIA and other agencies involved in the conduct of the NRP.

5. Assignment to the DOD (Air Force) of responsibility for the management of over-all systems engineering, procurement and operation of all satellite reconnaissance systems.

6. Elimination of the inter-agency Configuration Control Board as a decision-making entity within the satellite reconnaissance program.

7. Continued assignment to the CIA of the OXCART program (responsibility for operational use,

22 May 1964
(Continued)

following development, to be determined by the 303 Committee.)

8. Continuation for time being of present management arrangements with respect to the A-11, the R-12 and TAGBOARD Projects.

(Tab 96)

28 May 1964

Dr. McMillan met with Mr. McCone.

Dr. McMillan reported on the two (recent) failures of the CORONA system and the actions that he had directed General Greer to undertake to insure an adequate investigation.

Dr. McMillan stated his desire to introduce Aerospace Corporation as the general systems engineering and technical direction contractor. While Mr. McCone agreed that this was probably the right thing to do, he reminded Dr. McMillan that it had been at Dr. Charyk's insistence that Lockheed had been given the systems engineering responsibility.

Dr. McMillan pointed out that his proposal to introduce Aerospace in such a role would require contractual changes since the existing arrangement called for systems engineering by Lockheed and technical direction by a Configuration Control Board (CCB). Mr. McCone agreed that the CCB was undesirable. Dr. McMillan stated that he wanted General Greer to be fully in charge of the CORONA contracts. The discussion immediately turned to much the same ground that previous discussions on this subject had covered. Mr. McCone questioned General Greer's qualifications. He recalled the

28 May 1964
(Continued)

historic role of CIA. He accused Dr. McMillan of wanting only to cut CIA entirely out of the satellite business. Dr. McMillan attempted to justify his proposed changes. Mr. McCone countered with a number of sharp criticisms of the NRO and of Dr. McMillan's administration thereof. Dr. McMillan urged Mr. McCone to put these criticisms in a letter to him. Mr. McCone then stated that he thought it was "absolutely criminal" for Dr. McMillan to make a visit to the West Coast and conduct an investigation of the conduct of the CORONA project without inviting anyone from the CIA to be present.

The working relations between Dr. McMillan and Dr. Wheelon were discussed extensively. Dr. McMillan stated that if there were to be a CIA role in the satellite field under the NRO, then these relations would have to change, since he could not be responsible for activities over which he had no control and about which he had no knowledge. Mr. McCone did not challenge this statement.

At the close of the meeting, Mr. McCone agreed again that Aerospace could be installed as systems engineering contractor and stated that he would "speak to his boys" about changing the contracts. (Tab 97)

2 June 1964

In a memorandum for Mr. McGeorge Bundy, Mr. Vance concurred with the recommendations contained in the 2 May 1964 report of the President's FIAB.

Mr. Vance stated that, upon issuance of the Presidential directive recommended by the FIAB, he would request the DNRO to make the necessary detailed arrangements regarding the implementation of the further recommendations of the Board. (Tab 98)

12 June 1964

In a Memorandum for Record, Dr. McMillan stated that he and Dr. Fubini had received a briefing by Philco which outlined its studies of:

1. Capabilities of Titan III as a booster for reconnaissance payloads
2. Subsystems and techniques for on-board power, attitude control and navigation
3. Side looking radar as a reconnaissance sensor
4. Sensors for ELINT
5. Communications techniques and systems for transmission of imagery
6. Conceptual satellite systems for intelligence data collection
7. Cost-effectiveness of various conceptual systems.

Dr. McMillan judged the material to be of direct interest and importance to the NRO and duplicative, in part, of current and past studies by the NRO. (Tab 99)

12 June 1964

Dr. McMillan asked Mr. McCone for a listing of all active CIA contracts for the study or development of systems, subsystems, equipment or techniques that related to the use of satellites for the collection of intelligence. (Tab 100)

12 June 1964

Dr. McMillan advised Mr. Vance of his conversation with General Carter regarding an unanswered

12 June 1964 (Continued)

request to CIA for a resume of all studies having to do with the NRP.

General Carter had responded with "Why worry about it -- the FIAB is going to straighten everything out."

Dr. McMillan also stated that he had had separate indications that Dr. Wheelon was contracting for satellite system and subsystem studies with probable explicit instructions to the contractors "not to give the DNRO or DDR&E any information regarding the source of the request for study."
(Tab 101)

13 June 1964

Mr. McCone asked for the results of Dr. McMillan's analysis of the possibility of using the Atlas-Agena and the GAMBIT type platform as a launching vehicle for the CORONA payload.

Mr. McCone felt that the additional costs and the availability of the Atlas-Agena combinations might weigh heavily in the decision, particularly if there were developing increasing demands for GAMBIT shots along the lines "as some have advocated during the past few months."

Mr. McCone appreciated the fact that this suggestion was made during the "darkest hours of CORONA troubles" and opined that the recent success would also influence the final decision.
(Tab 102)

25 June 1964

In a Memorandum for Record (passed to General Carter) Dr. McMillan related his discussions with General Carter on the conduct of further studies of FULCRUM.

25 June 1964
(Continued)

Dr. McMillan had agreed that:

1. CIA funds to the extent of about $800,000 could be obligated in FY 1964 to conduct tests at ITEK of an engineering model of the critical film-transport mechanism.

2. The test program would be conducted under the aegis of the NRO.

3. An individual in CIA would be identified as responsible for the tests, and responsible to the DNRO for them.

4. The DNRO would be kept fully informed about the conduct and progress of the tests.

5. In order to obligate the money during FY 1964, the contract could be initiated by a letter of intent. The DNRO would review the work statement of the definitive contract before it was signed.

6. The management arrangement did not commit the DNRO or the CIA in connection with any final development program that might be initiated for a new general search system.

7. In the event the FULCRUM concept was approved for development other than under CIA auspices, the CIA funds expended on the tests would be reimbursed by the NRO.

The assignment to Aerospace Corporation of responsibility for systems engineering on CORONA was also discussed. Dr. McMillan noted that during FY 1963, the equivalent of the CIA contract SE-1928 had been

25 June 1964 (Continued)

held by SAFSP as an Air Force contract. Dr. McMillan stated that the Program B contracting office should not negotiate an extension of SE-1928, but that the necessary contractual coverage would be provided by SAFSP either under an Air Force black contract or under a black annex to an existing Air Force contract.

Dr. McMillan informed General Carter that a new Director of the NRO Staff would soon be named. (Tab 103)

26 June 1964

Dr. McMillan met with Mr. McCone, General Carter, Dr. Fubini and Dr. Wheelon to discuss

1. FULCRUM

2. the need for thorough photographic coverage of the Soviet Union in search of new single-silo launch sites

3. the status of GAMBIT-3

The FULCRUM discussion touched on technical considerations but centered on the question of establishing a budgetary line item.

On the search of USSR item, Dr. McMillan recommended that a CORONA mission during July 1964 be programmed for area search, using monoscopic photography for maximum coverage. The matter was referred to Dr. Wheelon for consideration.

During the GAMBIT-3 discussion, Dr. McMillan stated that about [redacted] was proposed for GAMBIT-3 during FY 1965. Mr. McCone questioned the requirement, in comparison to the need for a

26 June 1964 (Continued)	new general search system, and stated that he had not been informed that such a decision was being considered or made. Dr. McMillan identified the decision as his own. (Tab 104)
26 June 1964	The Director, NRO in a message to the CIA and SAFSP, related the decision (coordinated with the Secretary of Defense and the DCI) directing SAFSP to contract with the Aerospace Corporation to perform a general system engineering function on the CORONA program. The message authorized: 1. The Director, Program B to allow Contract SE-1928 (for systems engineering and integration) with Lockheed to expire. 2. The Director, Program A to accomplish, by 1 July 64, contractual arrangements establishing Lockheed as systems integrating contractor with a work statement compatible with the general systems engineering effort to be accomplished by the Aerospace Corporation. (Tab 105)
29 June 1964	Referring to Dr. McMillan's 25 June MFR, General Carter related his understanding that, in light of subsequent conversations between Dr. McMillan and Mr. McCone, the memorandum was of purely academic interest. General Carter remarked further that the memorandum did not conform with his understanding

29 June 1964 (Continued)

and that he had made no agreement of any kind, nor did he commit CIA or the DCI to any course of action on FULCRUM. (Tab 106)

30 June 1964

General Carter referred to Dr. McMillan's outline of two actions which he (Dr. McMillan) stated he must take on 1 July 1964:

1. Establish a contract with Aerospace Corporation for comprehensive systems engineering and technical direction of the CORONA project.

2. Continue the work at Lockheed, conducted under CIA contract SE-1928, under an Air Force "black" contract with a work statement modified to reflect the SE/TD responsibilities of Aerospace and to define Lockheed's role as an integrating contractor.

General Carter reminded Dr. McMillan that the DCI had stated that he desired no changes in contracts, management concepts, or current NRO operating procedures for the CORONA program until the matter presently before the FIAB had been settled, or except with his own personal approval in each case.

General Carter considered his memorandum to confirm his telephone conversations with Mr. Vance and Dr. McMillan indicating that he did not concur in the action proposed by Dr. McMillan. General Carter recommended, instead, that the CIA contract with Lockheed be extended on an indefinite basis by letter of intent, pending settlement of the matter.

30 June 1964 (Continued)

In a covering note to Mr. Vance and Dr. McMillan, General Carter stated that Mr. McCone had independently arrived at the conclusion that the actions proposed by Dr. McMillan should not be taken "at this time."
(Tab 107)

30 June 1964

Dr. Fubini in a memorandum to Dr. McMillan, referred to a Project FULCRUM briefing and recalled for Dr. McMillan's attention, a series of technical events:

1. The Purcell Committee advised against a new broad coverage system.

2. The Air Force made a series of recommendations for the improvement of the CORONA camera, in accordance with the Purcell Committee recommendations.

3. Dr. Wheelon disagreed with the Air Force recommendation and initiated the study of the Drell Committee.

4. The Drell Committee found little correlation between the product results and the mechanical or optical characteristics of the system, and made a number of suggestions for further quantitative measurements of the product.

5. Recent CORONA missions seemed to confirm the Purcell recommendation that substantial improvement over the CORONA camera result could be obtained, and appeared also to confirm the Drell Committee findings since there did not seem to be any basic

30 June 1964
(Continued)

change in the camera set-up between recent missions and the old ones.

6. CIA made a proposal called FULCRUM which did not correct the unknown defects of the CORONA camera nor take into account the questions, recommendations or conclusions of the Drell Committee related to hardware improvement - but instead, proposed to initiate a completely different camera design.

7. Recent results in CORONA take seemed to indicate a possible resolution of 5 to 7 feet, in rough accordance with expectations. If this resolution were maintainable, would there be sufficient motivation for a new broad coverage system in the 3.5 to 5 ft resolution range? (CIA studies seemed to indicate that resolutions substantially under this were desirable for high target detection confidence in many target classes).

Dr. Fubini stated that he felt it absolutely necessary that before a new system design were accepted, a comparison should be made between the old CORONA results, new CORONA results, the Drell Committee results, KH-7 results and finally the technical recommendations aimed at the new broad coverage camera to insure that the still unknown causes of poor performance in CORONA (except the most recent) had been eliminated.

Dr. Fubini expressed his belief that a substantial amount of effort could and should be devoted to these problems at the earliest possible time.
(Tab 108)

1 July 1964

Dr. McMillan drafted a reply to General Carter's memorandum of 30 June 1964.

Dr. McMillan stated that he had authorized the extension of the CIA contract with Lockheed, under its present terms, for thirty days. He added that his proposals for centralizing the management of the CORONA project had been before the DCI, in writing, for more than eight months and had been discussed with the DCI in extenso on four separate occasions. Dr. McMillan considered the only substantial difference between his present recommendations and those he had made on 28 October 1963 to be the determination that Aerospace should carry the responsibility for over-all systems engineering and technical direction.

Dr. McMillan inferred, from General Carter's memorandum, that one ingredient necessary for a determination by the DCI of a final position on the matter was a recommendation from General Carter and Dr. Wheelon. Dr. McMillan urged an early resolution of the matter.

In a cover note to Mr. Vance, Dr. McMillan asked:

"Cy -

Should I sign this?

Brock"

The memorandum was never signed.
(Tab 109)

2 July 1964

Dr. Wheelon presented and discussed a plan for initiating the FULCRUM project. The CIA plan called for:

1. The conduct of a six months' design analysis with seven contractors for [redacted] covering a new camera system, a new re-entry vehicle, and a new spacecraft to be launched on a TITAN II from a PMR pad with STL acting as the integration assembly and checkout contractor.

2. The establishment of a new project officer under the CIA DD/S&T of 8-10 technical people (5-8 new requirements) to perform SETD with STL staff support.

3. The provision, by present NRO elements in the CIA, of procurement/contracting and security.

4. The enlargement of the project office to approximately 35 people, by means of further recruitment, upon approval of the FULCRUM system.

5. A request to the DOD to provide launch services and recovery operations for launches beginning in FY 67.

(Tab 110)

7 July 1964

Dr. McMillan prepared a paper on "CIA Management of Satellite Projects" in which he discussed CIA studies of, and plans for, a new general search satellite system (FULCRUM).

7 July 1964
(Continued)

On 26 June, the DCI stated his desire that the NRO be directed to establish FULCRUM as an NRO development project, and to assign to the CIA responsibility for research, development and operation.

On 2 July, Dr. Wheelon presented and discussed a plan for initiating the project with a six months' period of design studies and preliminary design effort, requiring about [redacted] and involving seven contractor organizations. CIA would establish a project office with a director reporting to Dr. Wheelon. The project office would have full technical responsibility, consist initially of ten people, and be expanded to 35 people should a full scale development follow.

Dr. McMillan considered the central issue to be: should the CIA establish an independent capability for full scale development of space systems? He raised a related and more fundamental issue: how are new developments to be authorized?

Dr. McMillan recommended that:

1. The Secretary of Defense will be the executive agent for the NRP.

2. As executive ggent, the Secretary of Defense will have authority to initiate such new development projects as he determines are feasible and necessary in support of the NRP.

3. Such developments as are initiated in response to specific collection requirements enunciated by the DCI shall be concurred in by the DCI.

7 July 1964
(Continued)

4. As executive agent, the Secretary of Defense will determine the assignment to elements or agencies within the DOD and the CIA of responsibility for tasks or projects in support of the NRP.

Dr. McMillan considered only recommendation 3 as not already explicit in the NRO agreement and the PFIAB recommendations.

Dr. McMillan concluded the paper with a detailed discussion of possible reasons for considering the assignment of major development responsibilities to the CIA, rather than to elements of the military establishment.
(Tab 111)

7 July 1964

In a note to Mr. McNamara, Dr. McMillan outlined the CIA plan for FULCRUM:

1. Conduct a six months design analysis with seven contractors for [redacted] covering a new camera system, a new re-entry vehicle, a new spacecraft, to be launched on a TITAN II from a PMR pad with STL acting as the integration, assembly and checkout contractor.

2. Establish a new project office under Dr. Wheelon of 8-10 technical people (5-8 new recruitments) to perform SETD with STL staff support.

3. Procurement/contracting and security provided by present NRO elements in the CIA.

7 July 1964
(Continued)

4. Upon approval of the FULCRUM system enlarge the project office to approximately 35 people, by means of further recruitment.

5. Request DOD to provide launch services and recovery operations for launches beginning in FY 1967.

Dr. McMillan indicated he had discussed the CIA plan with Mr. Vance, who recommended that Mr. McNamara sign a proposed memorandum to Mr. McCone.

(Note: Mr. Vance signed the proposed memorandum to Mr. McCone on 8 July 1964. Tab 113)
(Tab 112)

8 July 1964

In a letter to Mr. McCone, Mr. Vance referred to the CIA plan for FULCRUM and suggested that "in order to insure that all possible alternatives have been explored . . . we should ask the Director, NRO to direct the completion of comparative studies, meanwhile authorizing CIA to pursue only those designs and tests that are necessary to establish the feasibility of the proposed FULCRUM camera concept." Mr. Vance indicated that the results of the studies should become available in January 1965 and would provide the information necessary:

1. To determine whether a development should be undertaken.

2. To select a system.

3. To discuss the assignment of responsibilities for development and operational employment.

(Tab 113)

9 July 1964

In a memorandum for the Director, NRO, Dr. Wheelon outlined various FULCRUM tasks for which the CIA required immediate NRO funding. The tasks included:

1. Film drive and control

2. Camera design, engineering, mock-up and dynamics

3. Weight budget and dynamic balance

4. Assembly, integration, and checkout; and

amounted to a [redacted] requirement ([redacted] less $.85 million available Agency year-end funds).

Dr. Wheelon indicated that particular emphasis had been placed on areas which the Land Panel had identified as meriting immediate attention. Dr. Wheelon further advised that upon conclusion of the effort, scheduled for six months, CIA "should have amassed a substantial appreciation of the technical appects of each task which will permit an over-all evaluation of the program with a high confidence factor."
(Tab 114)

10 July 1964

In a memorandum to the Director, NRO, the Director, Program B, submitted an addendum to his FY 65 budget which confirmed the immediate requirement of [redacted] for FULCRUM and requested that the remainder of the [redacted] sought in FY 65 be set aside for Program B use pending the outcome of the initial tasks scheduled for a period of six months. The Director, Program B, added

10 July 1964 (Continued)	that "until their (the tasks) completion, it is difficult to judge whether the entire [redacted] can be judiciously committed in the current (FY 65) fiscal year; however, at this point in time, we prefer that this amount be earmarked for FULCRUM to prevent any delay in the program should our initial efforts prove successful." Also noted, was information that [redacted] had been included for booster mods and an additional [redacted] for construction and launch facility equipping - though normally incorporated in the Air Force budget - carried in FULCRUM for program integrity and to ensure the availability of funds. (Tab 115)
20 July 1964	The Director, Program B urgently recommended to the Deputy Director/Science & Technology (CIA) that immediate action be taken to fill the position to be vacated by Colonel Murphy (CORONA Operations Officer at the covert Palo Alto Facility) at the end of July "to preclude the possibility of General Greer's staff to usurp this function and responsibility." (Tab 116)
21 July 1964	Colonel Ledford, Director Program B offered "congratulations and warmest appreciation for most excellent performance" to Colonel Murphy as his CIA tour approached completion. For Lt. Colonel Webb, Colonel Ledford directed that "in view imminent departure Colonel Murphy, effective immediately you are designated as Chief Operations Officer, LMSC (A/P), vice Colonel Murphy reassigned." (Tab 117)

23 July 1964

In a letter to Mr. Vance, Mr. McCone offered several recommendations which he believed should be implemented promptly by the DNRO:

1. GAMBIT - all practical steps should be taken to obtain the maximum resolution from this system

2. GAMBIT-3 - an advisory panel should be convened to review this system and to advise concerning its feasibility

3. FULCRUM - proceed with the research and developmental work recommended by the Land Panel. Decision to proceed must necessarily await successful conclusion of the developmental work.

4. Alternative high resolution spotting and search systems - a briefing by Dr. Fubini or Dr. McMillan on conceptual designs by the five principal systems manufacturers should be arranged since the ideas advanced might weigh heavily on decisions with respect to the GAMBIT-3 and FULCRUM systems.

(Tab 118)

23 July 1964

Mr. McCone commented on the FY 1965 NRP plan.

He expressed concern that the Program A and D funding under the President's Budget was fully authorized and in fact increased (Program A) by [redacted] while Program B funding of [redacted] remained to be justified.

23 July 1964 (Continued)

Mr. McCone expected a COMOR study to "throw further light on the desirability of new photographic reconnaissance systems to improve our reconnaissance inventory" and presumed that USIB's desires would serve as guidance to NRO for its FY 1965 and subsequent programs.

Mr. McCone summarized his specific comments by stating that he needed much more information in considerable depth on the questions he raised and suggested that the budget discussions be continued at the earliest opportunity. Mr. McCone suggested that major commitments of FY 1965 funds "in those controversial" areas he had noted be held in abeyance until he and Mr. Vance could agree on an FY 1965 NRP.
(Tab 119)

29 July 1964

Dr. McMillan commented in detail to Mr. Vance on Mr. McCone's memorandum of 23 July.

Dr. McMillan felt that the McCone memorandum took a much more imperative tone than any previous correspondence from the DCI, save perhaps brief notes or paragraphs concerning very specific items, e.g., a change of contract or reassignment of program responsibility.

Dr. McMillan considered the document, coming from the DCI, to represent a complete rejection of the word and spirit of the 13 March 1963 NRO Agreement. He felt that, inasmuch as the DNRO was responsible directly to the Secretary of Defense as Executive Agent for the NRP, the DCI should not assume the authority to direct specific actions or require separate program justifications in a manner that implied exclusion of Mr. Vance's office.
(Tab 120)

29 July 1964

In a letter to Mr. McCone, Mr. Vance iterated the agreed upon objective of FULCRUM - to establish, in an expeditious manner, definitive data on the technical issues that are critical to the performance or success of the camera. Mr. Vance stated his belief that the FULCRUM effort "should be directed toward and limited to:

1. Initial design, fabrication of an engineering model, and definitive test of the complete film transport mechanism.

2. Preliminary optical and mechanical design of the rotating camera, limited to the amount necessary to establish a model suitably simulating the camera's mass inertia, balance, and flexural stiffness; this model must be dynamically tested with prototype bearings."

Mr. Vance further suggested that activities be conducted under the following general conditions:

1. Under the aegis of the NRO, full information on activities and progress to be made available to the Director, NRO at all times.

2. Separate contracts for items 1 and 2 above.

3. Consideration of competitive bidding on 1 above.

4. Application of funds only to specific contracts, each defined by a negotiated statement of work approved by the Director, NRO and accompanied by a definitive contractor cost estimate.

29 July 1964 (Continued)

5. No contracts for items not covered in 1 and 2 above (e.g., systems integration, spacecraft design, r/v design, etc.)

6. An individual in CIA identified as responsible for the contract.

Mr. Vance provided several additional suggestions relative to the accomplishment of the effort, and solicited Mr. McCone's over-all views. (Tab 121)

29 July 1964

In a message to Colonel Ledford and General Greer, General Martin stated:

> "Dr. McMillan requests that Contract SE-1928 be extended until 10 August 64 at the current level of effort and under the current work statement."

(Tab 122)

1 August 1964

The first evidence of a breakdown in LMSC/AP (CIA covert facility for CORONA operations) day-to-day communications with SAFSP (CORONA Program Office) began to develop.

3 August 1964

Brigadier General John L. Martin departed NRO to become the Vice Director of Special Projects, OSAF (SAFSP). Brigadier General James T. Stewart was designated Director, NRO Staff.

5 August 1964

A CIA message to Lt. Colonel Webb outlined his supplementary duties. These were:

1. Duly authorized representative of the contracting officer on contracts DM-2616, TE-1901 and SJ-1939.

5 August 1964 (Continued)

2. Resident contract administrator.

3. Final inspection and acceptance of all items under contracts cited above - to be redelegated only in exceptional circumstances.

The message further stated that "in keeping with the spirit of accomplishment under programs covered by the above contracts, no detailed procedures for your operation will be attempted other than to request that the Contracting Officer be kept appropriately advised . . . of actions taken by you as his duly authorized representative."
(Tab 123)

7 August 1964

During a presentation to the FIAB, Dr. McMillan stated that, as a result of close management and hard bargaining in connection with the GAMBIT system, the cost of GAMBIT-3 had been reduced almost 20% below the early forecast for FY 1965. He was asked by the FIAB whether similar savings might not be expected in the CORONA system. He replied that it was his considered opinion that close management and hard bargaining would not be possible on the CORONA system as long as the contract structure under which the system operated remained in its present unsatisfactory and diffuse state. Dr. McMillan noted that he had been unable to secure permission to change this structure.
(Tab 124)

11 August 1964

Dr. McMillan recorded the agreements made and the actions agreed upon at a meeting on 11 August 1964 among Mr. Vance, Mr. McCone, Dr. Fubini and Dr. McMillan.

11 August 1964
(Continued)

On GAMBIT-3: The program was approved in principle by Mr. Vance and Mr. McCone. It was agreed that Dr. McMillan would review program phasing and return by 15 September a recommended program for consideration by Mr. McNamara and the parties to the meeting.

On FULCRUM: Mr. McCone stated that it was not his intention to establish within the CIA a unilateral capability for development and operation of space systems. He stated that responsibility for launch and on-orbit operation of developed systems would remain an Air Force responsibility.

It was agreed that the CIA would not undertake, in-house, to do systems engineering for FULCRUM, but would rely on a systems engineering contractor for this function should a development be undertaken.

It was agreed that a systems design study would be undertaken on FULCRUM, in addition to work on the camera described by Mr. Vance on 29 July. Terms agreed upon:

1. the study would be conducted by a contractor, or contractors, limited to about a six months' period

2. no commitment to a subsequent development would be made

3. should a development be undertaken, contractors would again be selected by competition and the study contractor(s) would have the opportunity to bid

11 August 1964
(Continued)

4. if feasible, study contractor(s) would be selected competitively

5. the study would be under the aegis of the NRO and NRO funds would be authorized against firm negotiated proposals.

On TITAN III: All parties agreed on the desirability of a polar launch capability for TITAN class vehicles on the West Coast. The DNRO would undertake to expedite consideration of:

1. modifications to existing facilities to adapt to TITAN II, TITAN IIIA, TITAN IIIX, with or without AGENA.

2. a full TITAN IIIC facility.

On CORONA: Mr. McCone stated his view that to introduce Aerospace as general systems engineer and source of technical direction on CORONA would be most undesirable "at this critical time." He felt that it could be a serious disturbance to a situation which, at the moment, appeared to be in a satisfactory state. Mr. Vance voiced his view that the services of Aerospace would be valuable to the program. Dr. McMillan stated that if Aerospace were introduced, full continuity of all activities would be maintained, and that he would continue to review and approve personally any technical changes proposed for introduction into the system.

It was agreed that Dr. McMillan could make the necessary contractual changes and install Aerospace Corporation as proposed.

At this particular meeting, it was agreed to hold periodic meetings, attended by these four individuals,

11 August 1964 (Continued)

to discuss any major policy problems confronting the NRO. This agreement constituted the informal establishment of the NRO Executive Committee. (Tab 125)

12 August 1964

The Director, NRO in a message jointly addressed to Directors, Program A and Program B, cited the agreement between Mr. McCone and Mr. Vance effective 17 August 64 and assigned to the Director, Program A the responsibility for contracting for the system engineering functions on the CORONA project.

The message authorized the Director, Program A to introduce Aerospace Corporation in a general systems engineering and technical direction capacity and applied the following criteria:

1. Contract with LMSC to insure continuity of project effort until total SETD relationships firmly established.

2. Director, Program A to establish suitable contract with LMSC to insure continuity of systems integration function.

3. Director, Program B to allow SE-1928 to expire.

4. Director, Program B to incorporate enabling clause in existing contracts with LMSC (A/P), FSDS, ITEK, and GE.

5. Director, Program A to present work statements and description of SETD contractual structure for Director, NRO approval prior to final contract.

12 August 1964 (Continued)

6. Director, Program B to complete by 14 August 64, the processing of clearances for Aerospace and SAFSP personnel.

(Tab 126)

14 August 1964

In a memorandum to Dr. Wheelon, Mr. McCone sought to "make two points abundantly clear" with regard to the handling of FULCRUM contracts to the extent authorized:

"1. There shall be no commitment, contractual or implied that we are to proceed past the authorized R&D work on the film handling mechanism and the camera, which includes developmental mock-ups built in sufficient detail to answer or to disprove all questions or doubts concerning feasibility and, with respect to the spacecraft and re-entry vehicle, conceptual designs and sufficient detailed engineering to present accurate determinations as to weight of the total assembly and compatibility with the launcher."

"2. You will employ engineers and contractors to the fullest possible extent, reserving as 'in-house activities' responsibilities for supervision and guidance of the engineers and contractors. I wish you to avoid as far as possible unnecessarily building an in-house capability, restricting the expansion of your staff, if any is required, to such additions as are necessary to adequately supervise the work of the engineers and the contractors."

14 August 1964 (Continued)

Mr. McCone specifically indicated his feeling that the above guidance involved:

1. The employment of an architect-engineer or systems engineering contractor to be responsible for developing plans, specifications, etc., for all phases of the project.

2. Competitive contracts with two or more contractors for film transport mechanism.

3. A contract for the camera, recognizing that it probably could not be competitive because of the ITEK input to the FULCRUM concept.

4. Competitive contracts for the design of the spacecraft, assuming that competitors would introduce first phase conceptual plans and from these the winning contractor would be chosen and authorized to proceed with detailed engineering to the extent necessary.

(Tab 127)

14 August 1964

In a memorandum for Dr. Wheelon, Dr. McMillan related his understanding of guidelines for the [redacted] concept study.

1. CIA would conduct an informal competitive selection of the contractor to do the study.

2. The recommended selection together with the proposed work statements and the anticipated period of effort would be discussed with Dr. Fubini and Dr. McMillan.

14 August 1964 (Continued)

3. The proposed study effort would consider inclusion of a feasibility and requirement analysis for [redacted]

4. After reaching agreement on the contractor to be selected and the contents of the work statements, the DNRO would establish mechanisms for the selected contractor to acquire necessary information.

5. Funding for the [redacted] studies would be [redacted] as previously released to Program B.

Dr. McMillan referred to a CIA proposed AKINDLE study and indicated that the views expressed by the 303 Committee were sufficiently discouraging that the expenditure of funds on AKINDLE was not warranted.
(Tab 128)

17 August 1964

A CIA message to ITEK, LMSC (A/P) and GE, advised that specified enabling clauses would be incorporated in each of their contracts "for purposes of establishing appropriate recognition of Aerospace Corporation."
(Tab 129)

18 August 1964

Mr. Kiefer summarized the discussions at a meeting attended by Mr. Vance, Mr. McCone, Dr. Fubini and Mr. Kiefer.

The contracting arrangements for FULCRUM were discussed. Mr. McCone expressed his views by quoting from his 14 August 1964 memorandum to Dr. Wheelon. His views:

18 August 1964
(Continued)

1. Contract with ITEK for preliminary design study of camera

2. Competitive contractors for preliminary design study of film transport

3. Same for preliminary design study of spacecraft to verify weight estimates

4. Selection of contractor to perform systems engineering and technical direction

5. Minimum increase in government personnel for supervision of these activities

Dr. Fubini explained the system engineering and technical direction contracting structure, emphasizing that the Air Force contracted directly with hardware suppliers and not via a prime-subcontract relationship involving the system engineering contractor. Mr. Kiefer stated that the only apparent issue of importance was whether system engineering and technical direction would be done within government or by contract. Mr. Vance and Mr. McCone agreed that CIA would initiate contracts within the framework of Mr. McCone's memorandum of 14 August 1964 to Dr. Wheelon, and within budgetary approvals, and would exert system engineering and technical direction through an appropriate contractor.

Dr. Fubini raised the question of using the SAMOS E-2 equipments being examined for lunar reconnaissance applications in the first phase of the CIA [redacted] project. He stated that the E-2 equipment might not be obtainable if a decision on its [redacted] application were delayed. Mr. McCone agreed to review the question.
(Tab 130)

26 August 1964

Mr. Kiefer summarized the discussions at a meeting attended by Mr. Vance, Dr. Fubini, General Carter and Mr. Kiefer.

General Carter brought up the subject of CORONA procurement, stating that funds beyond the current contract extensions to September and October had not been released to CIA. Mr. Kiefer stated his understanding that this was being done through General Greer in accord with agreement at the 11 August meeting. Mr. Vance read Dr. McMillan's memorandum on the meeting, in order to clarify the understanding.

General Carter stated that such an arrangement obviated any input by CIA into the CORONA program in the future. On this point, Mr. Vance stated that there was agreement on the SETD function via contractor, and that CIA technical participation was desirable, thus leading to the question of whether separate Air Force and CIA suppliers' contracts could be continued with the agreed SETD arrangement. Dr. Fubini stated this was possible in a theoretical sense. Mr. Kiefer voiced objection on practical grounds. Dr. Fubini agreed.

Mr. Vance asked how a CIA input could be retained in the program. Mr. Kiefer suggested that a few qualified CIA personnel be assigned to the project office under General Greer. Dr. Fubini concurred but observed that, in addition, it would be necessary to create an environment to foster good working relations. General Carter and Dr. Fubini suggested that a practice of holding suppliers meetings as often as every two weeks would be beneficial. Mr. Vance stated that it would be desirable, but not mandatory, to assign CIA people to General Greer's CORONA

26 August 1964 (Continued)	project office. Mr. Vance favored such an approach. The point was left open for further study.
	Dr. Fubini reminded General Carter of the question raised at the previous meeting on E-2 equipment for [redacted]. (Tab 131)
27 August 1964	In a memorandum to the Deputy Director/Science & Technology (CIA), General Carter provided additional (to 14 August DCI memo) DCI-approved guidelines for the over-all organization and direction of the FULCRUM program. These were:

1. The FULCRUM Program is a CIA program under NRO aegis. Command, control, supervision and direction of the entire FULCRUM Phase I Program is assigned to DD/S&T.

2. Coordination, liaison, project integration and engineering support will be provided to DD/S&T by the systems engineering contractor, who will have direct access to all other contractors.

3. DD/S&T will keep NRO fully and completely informed of its progress through regular monthly progress reports and/or briefings, and will provide information copies of contractor work statements to NRO.

4. DD/S&T will act as the sole point of contact and direction in the government for the FULCRUM contractors.

27 August 1964
(Continued)

5. Additional funds up to [redacted] may be committed against the DD/S&T plan, as approved by the Deputy Director of Central Intelligence. The NRO will reimburse the CIA for funds expended in the FULCRUM program in accordance with previous agreements between Mr. Vance and the DCI.

6. A specific unit will be established in DD/S&T reporting directly to the DD/S&T to manage the FULCRUM and other satellite programs. In consonance with the DCI's discussions with the PFIAB and Secretary McNamara, it should be no larger than 20 or 30 technical people depending on the impact of other programs, but may utilize covert support capabilities elsewhere in DD/S&T to accomplish its assigned mission.

General Carter also directed the development of (1) an organizational concept, (2) a schedule of contracts and contractual structure, and (3) a concept for system engineering for FULCRUM for his approval.
(Tab 132)

31 August 1964

Dr. Wheelon responded to the Deputy DCI direction with a memorandum for the DCI, Subject: "Conduct of the FULCRUM Program." The memorandum confirmed the DCI-established terms of reference and advanced a specific management plan for Phase I FULCRUM development.

The paper related the creation of a Special Projects Group within DD/S&T (CIA) to handle all new CIA satellite reconnaissance programs - consisting of

31 August 1964 (Continued)	eleven CIA staff technical professionals and six support people being brought together in one unit. Additionally reported were four technical professionals in the CIA "recruiting pipeline" to be assigned the group, and a probable eventual growth to fill the 20-30 authorization mentioned by the DCI to the President's FIAB. (Tab 133)
1 September 1964	Mr. McCone advised Mr. Vance that he had approved Dr. Wheelon's 31 August 64 proposed procedures for the conduct of the FULCRUM program, as consistent with agreements reached at a meeting on 18 August. Mr. McCone further advised that he had instructed Dr. Wheelon to keep Dr. McMillan as Director, NRO and the NRO ExCom fully and currently informed on the progress of FULCRUM work. (Tab 134)
1 September 1964	Mr. Vance and Dr. McMillan met with Mr. McCone. It was agreed that an earlier (11 August) conversation referred only to the use of Aerospace as SETD contractor on CORONA, and only to the contractual changes related thereto. Mr. McCone made a long statement of his position that the NRO was not properly organized and cited his memoranda on this subject to Mr. Bundy and to Mr. McNamara. He maintained that it was wrong to permit one agency to influence the internal management of another and that therefore the NRO should simply task the CIA, not run its internal affairs. He asked that no further change be introduced into the CORONA contract structure until this major issue was settled.

1 September 1964 (Continued)	Mr. Vance remarked "All right, John, we think it is wrong, but if you want it that way we can run it that way." Dr. McMillan supported this statement, however, recounted all the good management reasons why it was wrong to operate in such a way. Dr. McMillan urged that at least the CIA contracts be administered by a contracting officer on General Greer's staff. Mr. McCone agreed. Dr. McMillan viewed the contracts under discussion to be those with ITEK, Eastman Kodak, Fairchild and General Electric as well as the Lockheed contract for fabrication of the payload compartment. (Tab 135)
1 September 1964	An SAFSP message to the CIA related the contents of a proposed security annex to the LMSC contract for systems integration of the CORONA system and requested that CIA authorize its covert facility security representative to have LMSC comply with SAFSP security procedures. (Tab 136)
4 September 1964	In a memorandum for Mr. Vance, Dr. McMillan identified the more serious misunderstandings, differing views and differing interpretations relating to FULCRUM. Key points: 1. Initial discussions centered about the use by CIA of a systems engineering contractor to avoid a need to expand the CIA staff to guide FULCRUM. Dr. McMillan considered this to apply to the management technique that CIA would use should a full scale development be undertaken. Dr. Wheelon, on the other hand, proposed to use a separate systems engineering contractor also during any Phase I studies.

4 September 1964
(Continued)

2. CIA explained in great detail the term "systems engineering" as a function identical with that described by Dr. Wheelon as a function to be performed by a proposed "integration and check-out" contractor. Subsequently, Dr. Wheelon stated explicitly that the integration and check-out contractor would not do system engineering. Specifically, the prime systems engineering functions were reserved for the CIA.

3. Initially Dr. Fubini suggested that in addition to work on the camera and film transport system, already agreed to, a contractor be engaged to do a comprehensive systems design study. This was offered as an alternative to Dr. Wheelon's plan to engage separate study contractors for spacecraft and reentry vehicle integrating all of the study efforts by use of his own staff.

Dr. McMillan concluded with a recommended position:

1. Preliminary optical/mechanical design, prototype fabrication, and dynamical test of the camera, sole source to ITEK.

2. Possibly competitive efforts of similar kind on the film transport mechanism.

3. A systems design study of the whole system, conducted by a study contractor who would not be restrained from bidding on a subsequent development; consider parallel competitive studies.

4 September 1964 (Continued)

4. The DNRO to review work statements of all contracts before final negotiation.

5. NRO funds to be released against firm negotiated prices.

6. The whole an NRO project with DNRO access to all information.

(Tab 137)

4 September 1964

In a letter to Mr. McCone, Mr. Vance called attention to the fact that the FULCRUM program direction issued by General Carter on 27 August did not reflect the Vance/McCone agreement in one very important detail.

Mr. Vance restated the agreement that a SETD (systems-engineering-technical-direction) contractor would be hired and that the work of integration and technical direction would be conducted by the contractor and not by CIA personnel.

General Carter had interpreted the agreement to state: Coordination, liaison, project integration and engineering support will be provided to the DD/S&T (CIA) by the systems engineering contractor, who would have direct access to all other contractors.

Mr. Vance stated that this was clearly inconsistent with the agreement. He further reported that his difficulties were increased by the interpretation given to this "already weakened and not acceptable condition" by Dr. Wheelon's memorandum of 31 August, in which the systems engineering contractor was made responsible only for developing plans,

4 September 1964 (Continued)	specifications, etc. for all phases of the project on an integrated basis. This interpretation, Mr. Vance felt, rendered the plan contradictory to the agreement. (Tab 138)
8 September 1964	In a letter to Dr. McMillan, Dr. Wheelon commented that the FULCRUM feasibility study was progressing and that the CIA planned to release that week the funded design competition contracts for the re-entry vehicle. Dr. Wheelon indicated that FULCRUM might be the only reason for a new re-entry vehicle if his understanding of the NRO intent to use the standard CORONA (Mark V) capsule for G-3 was correct, and asked to be advised of any other NRO system which required a new re-entry vehicle "so that we do not design two capsules where one might be justified." Dr. Wheelon expressed his desire to become thoroughly familiar with the GE Mark VIII design (though never developed) or any other r/v design studies conducted by the Air Force or NRO. Dr. Wheelon asked Dr. McMillan if this access could be arranged by the NRO in the near future. (Tab 139)
8 September 1964	In a letter to Dr. McMillan, Dr. Wheelon stated that "we are now charged with exploring the technical and system feasibility for several photographic and electronic satellite reconnaissance systems," indicating that Mr. McCone had urged him to examine how the present FULCRUM high resolution payload system based on TITAN II could be enhanced or insured by utilizing the greater payload capability of TITAN III.

8 September 1964 (Continued)

Dr. Wheelon indicated a CIA interest in TITAN III for lifting the [redacted] and for the low and medium orbital altitudes of [redacted].

Dr. Wheelon asked for authoritative design and performance data on TITAN III in its various configurations, together with firm planning schedules for its operational availability at both AMR and PMR.

Dr. Wheelon further suggested that he be added to the routine distribution list for all TITAN III documents and that he be afforded ready and continuing access to the responsible Air Force SPO.
(Tab 140)

9 September 1964

In a message to CIA, Lt. Colonel Webb stated that plans for the incorporation of the GE programmer into CORONA systems were proceeding at a rapid rate and as yet there had been no CORONA Configuration Control Board (CCB) deliberations on the subject.

He remarked further that in the past, system changes of far less magnitude had been subject to approval only by the CCB and the Contracting Officer.

Lt. Colonel Webb recommended that, since contract negotiations for the GE programmer and software were at that point in process, multi-lateral discussions through the auspices of the CCB be held at the earliest possible date.
(Tab 141)

10 September 1964

Dr. Wheelon forwarded to the Director, NRO copies of the CIA Requests for Proposals (RFP) on the spacecraft and recovery systems for Project FULCRUM.

10 September 1964 (Continued)	The Project Program and Schedule attachment reflected: 1. A Phase I, lasting from 1 September 64 to 31 January 65 devoted to demonstrating the technical and mechanical feasibility of the over-all program, and 2. A Phase II covering the development, production and operation of the entire system to commence on 1 March 65 should the over-all Phase I study effort "prove the merit of embarking on a full-scale development program." (Tab 142)
10 September 1964	Mr. Vance and Dr. McMillan met with Mr. McCone and General Carter. Mr. McCone stated that he had decided to assign a new CIA man, Mr. Crowley, to General Greer's staff to be responsible for all CIA activities on CORONA: contracting, security, and technical. Crowley would have CIA contracting and security people with him. Mr. McCone, in the presence of Mr. Vance and Dr. McMillan, directed General Carter to send a memo to this effect to Dr. McMillan. It was agreed that a technical advisory committee (to Greer) would be formed, with CIA representation, to replace the defunct CCB. (Tab 143)
10 September 1964	Responding to Dr. McMillan's 14 August memo on [redacted] Dr. Wheelon stated that primary

10 September 1964 (Continued)	emphasis had been laid on establishing clearly the program responsibility within CIA and in beginning a preliminary screening of suitable study contractors. A Special Projects Staff within the DD/S&T (CIA) had been established to carry the primary responsibility for "all satellite reconnaissance programs." Project responsibility for [redacted] had been assigned to that Staff and Dr. Lauderdale had been named Program Director. Six contractors [redacted] considered to possess the necessary qualifications for pursuing [redacted] design studies had been invited to describe their qualifications and experience for conducting such studies. Dr. Wheelon promised the first of monthly [redacted] exchange sessions during the week of 13 September. (Tab 144)
17 September 1964	General Stewart alerted General Greer to Dr. Wheelon's request for results of r/v design studies by Air Force or NRO and indicated that the Director, NRO had advised Dr. Wheelon to contact General Greer directly for the information desired. (Tab 145)
17 September 1964	In a reply to Dr. Wheelon's 8 September letters, Dr. McMillan indicated that arrangements had been completed to provide the desired information to CIA on the various TITAN III configurations. Dr. McMillan designated Captain Frank B. Gorman, USN (Deputy Director for Advanced Plans, SAFSP) as a direct point of contact for TITAN III matters. With regard to Mark VIII r/v design information, Dr.

17 September 1964 (Continued)	McMillan apprised General Greer of Dr. Wheelon's desires and suggested to Dr. Wheelon that he contact General Greer with the specifics. (Tab 146)
17 September 1964	In a message to the CIA, Lt. Colonel Webb requested that an early CCB meeting be convened at the LMSC A/P Facility to discuss the following CORONA operational requirements: 1. Increased accuracy of film footage pot readings from take-up cassettes. 2. Modifications to allow cut-and-wrap operation to be independent of recovery operation. Webb iterated his belief that any change to the CORONA system, however small or large, should have the benefit of CCB discussions before presentation to the Contracting Officer. (Tab 147)
17 September 1964	In a message to the CORONA Program Office, Lt. Colonel Webb complained that he had received unofficial word that the CORONA vehicle contractor had already been directed to incorporate the GE digital programmer in the AGENA to be used to carry CORONA payloads in the near future. Lt. Colonel Webb considered that this change presented a different interface to the payload system and requested full particulars in order that the LMSC A/P could plan and accomplish any necessary adjustments to operational support procedures and equipment. (Tab 148)

18 September 1964	Replying to a 1 September request by SAFSP, a CIA message advised that "NRO security policy is based upon the premise that security responsibility follows contracting authority, i.e., if Director, Program A executes contract with LMSC he would have security responsibility for activities under contract." Caveat noted "understanding that subject proposed contract is under discussion between agencies . . . and that . . . message addresses only security responsibility . . . not contract authority or management matters." (Tab 149)
18 September 1964	Dr. McMillan summarized the activity of 15, 16 and 17 September 1964 regarding the systems integration contract for CORONA that was being negotiated with Lockheed by General Greer. On 17 September, Dr. McMillan had learned that CIA contracting officers had instructed Lockheed not to sign the contract with General Greer for systems integration work. Security problems had been cited, without specifics. The question of whether the A/P facility, under CIA jurisdiction, could be used by contractors of agencies other than CIA was also raised. Dr. McMillan advised Mr. Vance of the situation. Mr. Vance instructed Dr. McMillan to contact Lockheed and ask for a written confirmation of the fact that CIA had instructed them not to sign the systems integration contract with General Greer. Dr. McMillan directed Colonel Buzard, representing the DNRO and [redacted] representing Colonel

18 September 1964 (Continued)	Ledford to meet Colonel Ford, representing General Greer and visit the Lockheed A/P facility to examine the security problem. (Tab 150)
18 September 1964	Dr. McMillan recorded his conversation with Mr. Bross regarding the "security problem" at the LMSC A/P facility. Mr. Bross believed that CIA procedures on CORONA were less formal than those customary on Government classified contracts, in the interests of maximum covertness. He stated that Mr. McCone, just before leaving on 17 September, had made some statements to General Carter about the security issue at the LMSC facility which had not been easy to interpret. Mr. Bross felt that Mr. McCone and Mr. Vance had reached some agreement on CORONA on 17 September. Dr. McMillan indicated that his conversations with Mr. Vance had left him with a firm impression that CORONA had not been discussed between Vance and McCone on 17 September. (Tab 151)
23 September 1964	Colonels Buzard and Ford and [redacted] reported their findings on security procedures at the Lockheed A/P facility. The group found a marked similarity in practices between the LMSC facility and NRO Program A. The group unanimously concluded that, to effectively operate security controls over covert contracts and to alleviate contractor confusion, there should be only one security control system within a facility.

23 September 1964 (Continued)

The group felt that there were only two professionally sound alternatives to the problem:

1. continue with the present security control system under which classifications were not stamped on documents and intra-facility loggings were not required

2. adopt a system which would require classification stampings together with the "special handling" notation on each document and intra-facility loggings by each contractor of the CORONA project

The group recommended, in light of the increased size of the CORONA project, the latter alternative. (Tab 152)

23 September 1964

In a message to the NRO on the status of FULCRUM, CIA cited the following programs as underway:

1. ITEK had begun work in late June to demonstrate the feasibility of film handling, camera dynamics, optical design, facility analysis, and general engineering of the 60-inch F-3 Maksutov design. The effort, on letter contract to date, was being negotiated in final form.

2. Back-up effort at STL to demonstrate feasibility of fast film handling had begun on 8 September 1964. Final contracts were being negotiated.

3. Back-up optical design evaluation effort had been established at Perkin-Elmer on 23 June 1964, with CIA funds running to

23 September 1964 (Continued)	28 September 64 at a low level. CIA was exploring possibility of continuing and enlarging this effort substantially to explore alternate designs.
	CIA advised (for planning purposes) that it would call upon NRO for release of approximately [redacted] of the Program B advanced study fund to cover these efforts. (Tab 153)
24 September 1964	In a memorandum for General Stewart, Colonel Worthman outlined the key points of a 21 September SAC briefing on Satellite War Reconnaissance to the JCS and commented that "it is clear that the Strategic Air Command has become aware of the so-called 'FULCRUM Development.' I call it a development because everyone who hears about this work - whether in SAC, JCS, or DIA - believes that we are actually producing the system and keeping it on super hush-hush. When one attempts to explain that the system under description is at most a study and at least a hope, the listener invariably says, 'if this were only a study you would not have assigned a codeword to it.' We made a fundamental error in permitting a codeword to be assigned to the study. Our own security policy - well-known to the intelligence community - states that we will never do this. We can expect a growing clamor for FULCRUM clearances from people who hear hints of it and want on the 'inside.'" Colonel Worthman recommended cancellation of the codeword and use of a standard, routine study designator, such as "P-43." (Tab 154)

29 September 1964

Dr. McMillan noted the discussions at a meeting with Mr. Vance, Dr. Fubini and General Carter.

1. General Carter would reply to Dr. McMillan on the security issue at the Lockheed A/P facility

2. General Carter would reply whether or not CIA accepted the General Greer contract with Lockheed for systems integration on CORONA

3. General Carter would reply on whether CIA had objections in substance to the new S/I installation.

Mr. Vance's version of these agreements with General Carter was consistent with Dr. McMillan's. (Tab 155)

29 September 1964

In a memorandum for the CIA DD/S&T, Dr. McMillan referenced:

1. An 11 August agreement between the Deputy Secretary of Defense and the DCI that "in addition to preliminary design on the FULCRUM camera, and design and test of the film transport system, a contractor should be engaged to conduct a comprehensive systems design study centered on the FULCRUM concept."

2. A 23 September 64 CIA message reporting that funded competitions were underway to select contractors to study new spacecraft and re-entry vehicles for FULCRUM.

3. A 10 September 64 CIA transmittal describing the manner in which the competition was

29 September 1964 (Continued)	being conducted and indicating CIA intention to contract thereafter for separate design studies on spacecraft and re-entry vehicle.
	Dr. McMillan expressed his belief that the CIA funded competition and its proposed manner of continuing separate studies were both premature and not in conformance with the 11 August agreements.
	Dr. McMillan indicated his non-concurrence in the CIA action and requested that, upon receipt of initial contractor responses, further efforts be suspended pending discussion by the NRO Executive Committee. (Tab 156)
29 September 1964	In a message to SAFSP, CIA requested the following types of information for use in "conducting a series of studies on a new system."
	1. Operational and design parameters for Mark V and Mark VIII.
	2. Any studies for new re-entry vehicles.
	3. Detailed rundown on the operational aspects of the recovery, including limitations imposed by snatch gear, etc.
	CIA proposed to visit SAFSP for a discussion and suggested 15 or 16 October as best dates. (Tab 157)
1 October 1964	Contract administration services cognizance of the Hiller Aircraft Company Plant, Palo Alto ("black" facility for CORONA contracts) was assigned to the Army. (Tab 158)

1 October 1964

Representatives of Perkin-Elmer visited Dr. McMillan.

During the summer of 1964, P-E had been under contract to CIA studying a number of alternative camera designs. The work was about to be completed and they had been approached by CIA to extend the contract, to pursue in more depth a design study or preliminary design of one particular preferred configuration. At almost the same time as the later approach by CIA, General Greer had approached P-E for a proposal on certain studies which were sufficiently like the work requested by CIA, that P-E feared they could not undertake both without danger of criticism. In conveying this feeling, P-E sensed that General Greer's people felt that P-E had "let them down" in favor of a CIA contract.

Dr. McMillan explained the general rationale for conducting studies of the kind in question. He noted that there was intense enthusiasm in the CIA for a particular approach to the general search problem. Dr. McMillan stated as his desire that a basis of study be established broad enough to insure that any decision by the Government on a new general search/surveillance system be taken "rationally rather than emotionally."

Dr. McMillan and P-E agreed that P-E would consider what they might accomplish in this study area but would not be duplicating work that the CIA contract covered.
(Tab 159)

1 October 1964

Dr. McMillan provided to General Carter and Mr. Vance information concerning the LMSC A/P

1 October 1964 (Continued)	facility and its fabrication, test and system engineering effort for the CORONA program. Specifically, Dr. McMillan detailed the tasks included in a follow-on Air Force contract proposed by General Greer. (Tab 160)
1 October 1964	In a memorandum for Dr. Wheelon, Dr. McMillan requested that no discussions implying a contract award on [redacted] be engaged in until the agreements called for by Dr. McMillan on 14 August had been arrived at. Dr. McMillan's memorandum was instigated by a letter of 24 September in which Dr. Wheelon stated that he was finalizing study contracts with each of three selected firms. No discussion of the selections had taken place nor had agreement been reached on either the selections or the content of the work statements. (Tab 161)
2 October 1964	In a reply to Dr. McMillan's 29 September memorandum, Dr. Wheelon indicated that CIA was proceeding on FULCRUM according to the plan of 31 August 64 (forwarded to Mr. Vance on 1 September by Mr. McCone with an indication that he had approved the procedure and considered it consistent with "the agreement reached on 18 August 1964.") Dr. Wheelon suggested that Dr. McMillan's reference to a meeting of 11 August might explain the difference and stated "In any case, our actions taken thus far and planned are completely consistent with the basic document." (Tab 162)

5 October 1964	In a memorandum for Mr. Vance, Dr. McMillan recorded the discussions at meetings on 1 and 10 September on CORONA contracting and added a plea:

> "let us not agree to foul up this impossible mess any further by having SETD under Greer and Lockheed systems integration under CIA."

(Tab 163)

5 October 1964	Dr. McMillan asked Dr. Wheelon for a status report on [redacted] studies - what contracts were in force and for what amounts - with a brief description of the scope of each. (Tab 164)
6 October 1964	In a reply to the 29 September CIA request, SAFSP indicated that Lt. Colonel Sweeney would provide the information on r/v operational and design parameters and on the operational aspects of recovery. SAFSP confirmed the date 15 October for the proposed CIA visit to SAFSP. (Tab 165)
6 October 1964	Mr. McCone, in a memorandum to Mr. Vance, proposed the consolidation under General Greer of CIA responsibilities for security, contracting and technical assistance in the CORONA program. Mr. McCone suggested:

1. Designation of a single authoritative program director.

2. Establishment of a CORONA Advisory Committee.

6 October 1964 (Continued)	3. Referral of all proposed CORONA system changes to CORONA Advisory Committee for evaluation and appropriate recommendations. 4. Establishment of Aerospace Corporation in a general systems engineering function. (Tab 166)
7 October 1964	Dr. Wheelon advised Dr. McMillan that an earlier response to a query for information on the NRO vulnerability program did not provide the information required by the DCI. Dr. Wheelon asked for a briefing on the exact nature of the vulnerability program sponsored by Director, Program A, in FY 1965. (Tab 167)
8 October 1964	Responding to Dr. McMillan's letter of 5 October, Dr. Wheelon provided a brief status report on [redacted] Dr. Wheelon stated that at the time CIA established the Special Projects Staff in DD/S&T to serve as a focus for CIA participation in the satellite portion of the NRP, the decision was made to transfer the [redacted] program to that Staff. This transfer was delayed and Mr. Maxey had just begun to review the entire program in detail. Dr. Wheelon surmised that a regrouping or shift in emphasis among the contractual efforts might prove desirable once the examination had been completed. (Tab 168)
9 October 1964	Dr. McMillan submitted to Mr. McNamara the NRO Budget (Table 33 - Costs FY 1964 through 1970).

9 October 1964
(Continued)

Dr. McMillan stated that the program could be accomplished at a cost through FY 1969 of [redacted] above the approved Force Structure & Financial Plan.

The increase provided for the development and introduction of an improved general search system; of a new high resolution system - GAMBIT - 3; five launches of a new advanced cartographic system; and an additional buy of 20 AQ-12 drones.

Dr. McMillan remarked that the program could cover the CIA-recommended FULCRUM system, if the decision were made that FULCRUM would be the new general search system. He pointed out that the FY 65/66 budget figures for this development were lower than CIA had recommended for FULCRUM. The program did not include CIA-recommended programs for a major new aircraft system, two new balloon projects, nor financing as CIA had recommended for two additional satellite systems.
(Tab 169)

9 October 1964

General Carter forwarded to Mr. Vance, a draft of proposed working arrangements for systems engineering of the FULCRUM program, commented on by Mr. McCone at a 6 October meeting of the NRO Executive Committee.

Dr. Fubini's comment:

"Excellent definition of SE but no TD."

Mr. Vance asked for Dr. McMillan's comments.
(Tab 170)

14 October 1964

At a meeting with Mr. Vance, Mr. McCone, General Carter and Dr. Fubini, Dr. McMillan reported on the latest CORONA and GAMBIT failures.

Dr. McMillan also reported on SE/TD as practiced by Aerospace for the Air Force. Mr. McCone and General Carter both stated that the excerpt from the contractual language read by Dr. McMillan well expressed their intent with regard to SE/TD on FULCRUM. Mr. Vance stated his feeling that CIA was not tasking its contractor for technical direction. Dr. Fubini recalled his experience that the TD contractor, when assigned explicit responsibility for that task, assumed full technical direction. It was agreed that Dr. McMillan would furnish an example of a contract on which Aerospace had SE/TD responsibility, and a copy of the corresponding tasking language in the Aerospace contract.

Mr. McCone asked for Mr. Vance's reaction to his letter proposing a centralized CIA responsibility on CORONA, under Crowley, reporting to Greer. Mr. Vance indicated that he had a letter in preparation.

Dr. McMillan stated his desire to meet Mr. Crowley. Mr. McCone asked General Carter to meet with Dr. McMillan, Mr. Crowley and General Greer and tentatively set a date of 27 or 28 October. (Tab 171)

15 October 1964

Mr. Vance, in a reply to Mr. McCone's 6 October memorandum, lauded the DCI proposal, indicating complete OSD agreement on all points.

Mr. Vance concurred in the proposed designation of General Greer as the "single authoritative

15 October 1964 (Continued)

representative of the Government for technical direction on the entire CORONA system (r/v, camera, substructure, AGENA, booster, STC, and recovery forces)."

Mr. Vance proposed Colonel Heran as the Chairman of CORONA Advisory Committee and suggested that Mr. Crowley serve as the senior CIA representative.
(Tab 172)

20 October 1964

Dr. McMillan forwarded to Mr. McCone several pertinent contractual documents which defined the general system engineering and technical direction responsibilities of Aerospace in the GAMBIT program and the contractual enabling clauses that recognized the Aerospace relationships with associate contractors.

Included were:

1. Statement of Work, Contract AF 04(695)-469 with Aerospace

2. Technical Operating Plan covering specific Aerospace responsibilities

3. GSE/TD Clause of Contract AF 18(600)-2106 with GE

(Tab 173)

20 October 1964

Referring to General Stewart's proposed memorandum to NRO Program Directors A and B on security clearance processing procedures, Dr. Wheelon advised that he was the responsible officer within the CIA to monitor the policies which "guide the arriving at such must-know determinations."

20 October 1964 (Continued)

Dr. Wheelon reminded General Stewart that the DCI had made clear to the NRO Executive Committee that he desired that no changes be made in the over-all assignment for contract responsibility in the CORONA program. In this light, Dr. Wheelon felt the time was not appropriate to institute the proposals recommended by General Stewart and suggested that consideration be suspended to a later date. Dr. Wheelon felt it would be appropriate to reconsider the matter at such time as the NRO Executive Committee had completed its current deliberations and had arrived at a conclusion on the over-all contract management of the CORONA program.
(Tab 174)

20 October 1964

Dr. McMillan discussed the NRO budget with Mr. McNamara and Dr. Fubini.

Dr. Fubini proposed as a policy that enough launchings be programmed in both CORONA and GAMBIT to insure a high probability of successfully launching twelve each year. Sixteen or seventeen launchings of CORONA and fifteen or sixteen launchings of GAMBIT were suggested.

Mr. McNamara directed that two CORONA systems be added in FY 1965 to the previously proposed schedule of fifteen, and that planning for GAMBIT be done on the basis of twelve successes rather than ten launchings.
(Tab 175)

21 October 1964

Dr. McMillan called Dr. Wheelon to ask whether the DCI had made any determination about incorporating technical direction language into the FULCRUM systems engineering contract.

Dr. Wheelon stated that if the NRO had the impression the DCI was considering such a move, it was mistaken. Dr. Wheelon indicated that CIA had

21 October 1964 (Continued)	absolutely no intention of incorporating technical direction in the way he and Dr. McMillan understood the term. Dr. Wheelon questioned whether General Greer used Aerospace for technical direction in the way being discussed for FULCRUM. Dr. McMillan pointed out that the Aerospace contract called for subsystem analyses and the analysis of trade-offs between subsystems to optimize performance, and imposed upon Aerospace a contractual responsibility to develop a consistent over-all system description and specification. Dr. McMillan stated his desire that the SE/TD contractor for FULCRUM studies have a similar responsibility to propose a coherent system concept. (Tab 176)
22 October 1964	The Director, NRO, in a memorandum to [redacted] requested: 1. Authorization for extended use of the classified section of the Hiller Plant. 2. Exemption from normal administration by Army representatives. (Tab 177)
24 October 1964	Mr. Vance forwarded a copy of his notes on the 23 October NRO Executive Committee meeting to Mr. McCone. Actions agreed to: 1. DNRO would submit a written report on the last three missions.

24 October 1964 (Continued)

2. Sixteen CORONA launchings would be budgeted for in each of FY 65 and FY 66, with purchasing to keep six or more reserve systems available.

3. Thirteen GAMBIT launchings would be budgeted for in FY 65 and fifteen in FY 66. Seventeen systems would be purchased for delivery during FY 66.

4. Engineering and fabrication would be initiated for four modification kits to permit flying the CORONA camera in the GE orbital vehicle.

5. [redacted] would be held in FY 65 for GAMBIT-3 planning purposes.

6. DNRO would consider with Dr. Fubini the possibility of moving Program 417 out of the classified budget.

(Tab 178)

26 October 1964

In a response to Mr. Vance's letter of 15 October, Mr. McCone stated that he was not sufficiently familiar with the internal workings of General Greer's organization to comment on the details of the organizational structure and its function.

Mr. McCone considered it proper to have a single authoritative program director (General Greer) and that this director should exercise complete technical direction and that corporations such as Aerospace and others should be assigned responsibilities such as the general systems engineering function.

26 October 1964 (Continued)	Addressing the assignment of Mr. Crowley to and in support of General Greer, Mr. McCone stated that Mr. Crowley would "pull together and be responsible for all of the activities carried on by CIA personnel." Mr. McCone felt this would provide a focal point for contact on all matters and "would overcome the problem mentioned to the Executive Committee by Dr. McMillan." (Tab 179)
27 October 1964	Dr. McMillan recorded, in considerable detail, the NRO FY 1965 financial plan discussions at a meeting among Mr. Vance, Mr. McCone, Dr. Fubini and Dr. McMillan on 27 October. He forwarded to Mr. Vance an unsigned memorandum - in shorter form - that he considered more appropriate for signature and transmittal to Mr. McCone.

Key relevant items:

1. Dr. McMillan would report in more detail on the Westover (AFSPPL) budget, relating it to the capability of that facility to supplement the EK facility.

2. [redacted] for vulnerability might be low. Dr. Fubini would review the program with Dr. McMillan.

3. [redacted] would be applied to [redacted] studies. Development funds, if needed, would be sought at a later time.

4. [redacted] would be held for FULCRUM studies. Mr. McCone would review the contractual language defining the SE/TD role of Aerospace on GAMBIT.

(Tab 180)

27 October 1964

In a message to CIA, Lt. Colonel Webb protested the method for transporting recovered CORONA capsules directly to the East Coast and requested that "an early meeting be convened at Project Headquarters with each interested organization represented to discuss the many operational, technical, economic and security advantages and disadvantages introduced by that method."

Webb further requested that, on a trial basis starting with the next scheduled CORONA-J mission, the airplane delivering capsules stop at Moffett NAS long enough for the capsule to be defilmed at the LMSC A/P covert facility in Palo Alto.

He suggested that the net loss in time would be about one hour over the direct delivery method. (Tab 181)

28 October 1964

In a message to the CIA, Lt. Colonel Webb reported that the CORONA contractor had submitted, at the request of the CORONA Program Office, a work authorization for the installation of a yaw programmer in CORONA system J-18.

The CORONA Program Office considered it advisable to review the results of yaw steering in the J-18 system prior to authorizing the incorporation of the programmer in subsequent flights.

Webb considered that the value of photography to be derived from yaw steering could not be conclusively established by a comparative analysis of results with and without the capability; and recommended that further experimentation with the yaw programmer

28 October 1964 (Continued)	be terminated and that the yaw programmer be immediately introduced into the systems J-19 through J-39 as an "operational requirement." (Tab 182)
28 October 1964	The CORONA Program Office had asked the CORONA contractor to install Pirani gauges and amplifiers on systems J-4, J-14, J-19 and J-20 to measure pressures as a check on the pressure make-up system just installed. In a message to the CIA, Lt. Colonel Webb advised that he was withholding approval of this work until the results of previously flown gauges were fully assessed and the benefit of further installations was clearly delineated. Webb indicated that the probable operational importance that could be gained from additional flights was not readily apparent. Webb remarked further that this same subject had been discussed many times in the past and that he "believed it time we sat down and figured out what it is we are trying to prove with these pressure gauges before we go further." (Tab 183)
2 November 1964	[redacted] authorized the Director, NRO the extended use of Hiller Plant and exempted the specified area from normal administrative procedures practiced by plant representatives. (Tab 184)
2 November 1964	In a message to the NRO Satellite Operations Center, Lt. Colonel Webb stated that he had instituted a program for sampling all orbits developed for vehicle ascent guidance purposes and sent to him

2 November 1964 (Continued)	(LMSC A/P) for mission planning to "prevent another episode such as developed around attempts to apply the 9th day synchronous, 80° orbit to a Cuba-emphasized CORONA mission. Webb indicated that it appeared to him that the NRO Satellite Operations Center had been left out of planning for the referenced mission and asked that he be advised if there had been a change in the planning procedure which would shift responsibility from the NRO Satellite Operations Center to some other authority. (Tab 185)
2 November 1964	With reference to Lt Colonel Webb's 2 November query, Dr. McMillan advised General Greer that "the Director, NRO holds the Program Office and Program Director at SAFSP responsible for the accuracy of orbital planning information submitted to the NRO Satellite Operations Center on the CORONA Program." Dr. McMillan suggested that General Greer should make the necessary arrangements to insure that the responsibility was adequately fulfilled. (Tab 186)
3 November 1964	In a memorandum for Dr. McMillan, General Stewart summarized the events which necessitated the recycling of the countdown for CORONA Mission 1014 and the consequent inability to meet the launching date for this mission proposed by Mr. Vance to the USIB on 22 October. Although he did not consider it necessary for Mr. Vance to explain the technical details to the USIB, General Stewart suggested that Mr. Vance be advised of "our problems." Mr. Vance's response to the advice: "Brock -- We must be more careful in the future. This is sloppy and puts us in the position of looking like we don't know what we are doing. How did it happen. Cy" (Tab 186A)

4 November 1964

In a memorandum for the Director of Program B, Dr. McMillan expressed his concern over the increase of inadequate responses to requests for submission of important data.

To reverse the undesirable trend, Dr. McMillan directed that:

1. existing and future requests for data be complied with on a timely basis,

2. material overdue be furnished as rapidly as possible, and

3. a positive cooperative relationship be developed.

(Tab 187)

5 November 1964

In a memorandum for Dr. Wheelon, Dr. McMillan discussed the possibility of [redacted] satellite.

Dr. McMillan considered it quite important that the CIA [redacted] studies examine the extent to which [redacted].

Dr. McMillan felt that for a relatively small fraction of the cost of developing and putting up a [redacted].

Dr. McMillan concluded that the development of a [redacted]

5 November 1964 (Continued)	Dr. McMillan recommended that CIA keep fully informed on the course of military studies of purposes for [redacted] (Tab 188)
6 November 1964	Dr. Wheelon complained to SAFSS about a "torrent of directives" and guidance flooding Lt Colonel Webb and announced his direction to Lt Colonel Webb that he accept only Mr. Crowley's word for authentication of technical matters. Dr. Wheelon stated that [redacted] could, of course, continue to provide operational guidance. (Tab 189)
6 November 1964	General Stewart, in a message to the Director, Program B cited the following incidents (see Tabs 177 and 181): 1. The transport of recovered CORONA capsules. 2. The yaw programmer. 3. The Pirani gauges. as examples of actions, taken by Lt Colonel Webb, at cross purposes with the CORONA Program Director (SAFSP). General Stewart explained that "non-contractual opposition, while it requires effort needed on other problems and may be irritating, is not necessarily bad -- but it is intolerable to have contractual action initiated which is directly counter to the expressed wishes of the Program Director." General Stewart stated that, on the specific items in question, the Director, NRO had decided: 1. That the yaw programmer was not desirable on CORONA System J-19 and up.

6 November 1964 (Continued)

2. To approve the installation of Pirani gauges and amplifiers on CORONA Systems J-4, J-14, J-19 and J-20.

General Stewart requested that the CIA Contracting Officer (CORONA) take appropriate contractual action. (Tab 190)

7 November 1964

Referring to General Stewart's 6 November message, Lt. Colonel Webb expressed to the CIA regret that "a mature and conscientious effort on my part to carry out responsibilities to Project Headquarters and to the CORONA Program has been misinterpreted as malicious interference with the wishes of the CORONA Program Director."

In a somewhat lengthy comment, Webb attempted to rationalize his actions on the specific problems.

Webb stated his belief that "the major fault is that I persistently recommended a return to the practice where emotionally mature people discuss the needs of the program in an atmosphere of mutual professional respect."
(Tab 191)

9 November 1964

Dr. McMillan directed that Program B (CIA) contractor security practices be revised to provide for:

1. A formal internal document accounting system at all contractor installations for all documents.

2. Marking of all documents with the appropriate standard security classification indicator in addition to other indicators.

9 November 1964 (Continued)	A copy of this directive was forwarded to General Carter with a note from Dr. McMillan which referenced a 23 September 1964 report of security practices at the LMSC A/P Facility on which he had expected General Carter's comments. Dr. McMillan advised General Carter that, in the absence of any comments, he had issued the directive. (Tab 192)
10 November 1964	In a memorandum for the Director, NRO, Dr. Wheelon offered a progress report on the FULCRUM program during the week of 16 November 64. (Tab 193)
10 November 1964	Referring to Dr. McMillan's concern over estimates of satellite vulnerability, Dr. Wheelon offered the services of the Office of Scientific Intelligence, CIA to resolve any differences of substantial magnitude in the estimates. (Tab 194)
11 November 1964	Referring to Dr. McMillan's message of 2 November, General Greer commented on the current situation regarding operational responsibility for the CORONA project, and suggested explicit direction by the Director, NRO to correct the situation. Summarizing his comments, General Greer advised Dr. McMillan that the prime factor in the series incidents surrounding the CORONA program was that " . . . Webb's operations are now almost completely removed from the Satellite Tracking Center in practically every respect. Other than to check microwave, we seldom see any of his people and the great majority of all business is now by phone." (Tab 195)

12 November 1964

Dr. Wheelon complained bitterly that Dr. McMillan's direction to apply FY 64 advance aircraft studies carry-over money against "other approved" items in FY 65 was contrary to the agreement Dr. McMillan had reached "in the presence of a dozen CIA and NRO personnel" at a meeting at Langley.

Dr. Wheelon claimed that CIA had presented a persuasive case that a Mach 5-6 aircraft would make little improvement over OXCART and had requested that the money be carried over into FY 65 as a "working account for promising new approaches." Wheelon alleged that Dr. McMillan had agreed to this course of action as a "prudent and constructive step."

Dr. Wheelon asserted that if those funds were not available, CIA must insist on comparable interim funding from FY 65 pending clarification of the matter.

Dr. Wheelon had directed Colonel Ledford to suspend action on that portion of Dr. McMillan's directive which dealt with the subject.
(Tab 196)

13 November 1964

Dr. McMillan called General Carter to arrange a meeting with General Carter, General Greer and Mr. Crowley for the following week.

General Carter indicated he would be away for several days the following week. General Carter advised that he was trying to have an analysis made of the Vance/McCone correspondence because, although he could see vast areas of agreement, he also saw places which could become "hookers," and believed it would be best to have Carter/McMillan negotiations on these areas prior to setting up such a meeting.

13 November 1964 (Continued)	General Carter felt that, after the analysis had been evaluated, and proper negotiations between McMillan and Carter took place, a meeting could be arranged with Greer and Crowley. Dr. McMillan agreed with that approach and advised General Carter that he would await further word. (Tab 197)
16 November 1964	In a letter to Dr. McMillan, General Carter concurred in the "recommended security revisions" in Program B contractor security practices. General Carter explained that he had chosen not to comment "as there seemed to be agreement as to the relatively minor changes required" and added the caveat: " . . . it is explicitly understood that this modification does not set a precedent for other CIA programs nor does it affect the current discussion of CIA participation in various portions of the CORONA program." (Tab 198)
18 November 1964	Because of a severe shortage of clearances, it was not until the first part of this month that the Aerospace Corporation agreed that it would participate in a CORONA mission. This was considered by Aerospace to be the most rapid and efficient method of acquiring a detailed understanding of the complete CORONA system. Accordingly SAFSP contacted the CIA representative at the LMSC A/P and requested schematics, calibration books, block diagrams, telemetry schedules, payload operation sequence data and other pertinent data and documents. The CIA representative reluctantly agreed to supply this data to Aerospace during the operation.

18 November 1964
(Continued)

To cause as little commotion as possible, Aerospace agreed to take the documents and data to a separate area at the Satellite Control Facility (SCF), Sunnyvale and perform an independent analysis.

Upon arrival at the SCF, on the day of the CORONA Mission 1014 operation, Aerospace requested the documents and were told by the CIA representative that in his opinion he did not have the authority to release them to Aerospace.

Aerospace explained that, in order to discharge its responsibilities as the general SETD contractor, it required a detailed firsthand knowledge of the complete system and that such knowledge, it felt, could be gained most efficiently from actual experience.

The CIA representative was most concerned by the Aerospace request for the actual payload operation sequence. In an effort to proceed, Aerospace waived that request and agreed to proceed to the LMSC A/P Facility and pick up the documents.

At the appointed time, the Aerospace personnel arrived at the LMSC A/P Facility and were confronted by the CIA representative, who flatly refused to supply Aerospace with any documentation or data, giving as his reason his feeling that he did not have the proper authority.

At this point, Aerospace abandoned all hope of obtaining the documentation or data or of monitoring the mission - and departed.
(Tab 199)

19 November 1964	Mr. Vance apprised Mr. McCone of his suggestion that Dr. McMillan convene a small steering group of appropriate persons, under Dr. McMillan's chairmanship, to assure that the approach or approaches selected for future development of a new search and/or surveillance system fulfilled all national requirements and were, in fact, the best options available. Mr. Vance indicated that he had asked that the group examine information needs, determine technical and operational criteria, and present an evaluation of the most promising alternative search and/or surveillance satellite systems which might be included in the NRP. He anticipated further that the steering group be assisted by a full-time task force in the Washington area. Mr. Vance indicated his agreement on Dr. McMillan's suggestion that the steering group and the task force each have a CIA representative and asked Mr. McCone for the names of his representatives. An "Operating Plan for Study of Search/Surveillance Satellite Reconnaissance" was attached. (Tab 200)
20 November 1964	Responding to Dr. Wheelon's memorandum of 12 November, Dr. McMillan stated that his directive of 14 August relative to funding was still in force. Dr. McMillan agreed to consider authorizing FY 65 funds for studies relating to advanced aircraft if a specific and clear requirement were identified. (Tab 201)

20 November 1964	Referring to Dr. Wheelon's memorandum of 10 November, Dr. McMillan stated "we seem to be losing sight of my original request to the Agency for assistance." Dr. McMillan indicated that his original request to the DCI was for estimates of the possible and probable Soviet anti-satellite technical/operational capabilities in mid-1965 and by mid-1968. He explained that he had been briefed on possible near term Soviet detection and tracking capabilities, but had asked for further analyses. Subsequently, Dr. McMillan had pointed out that his need was for anti-satellite weaponry as well as detection and tracking systems. He had not received any information on this subject. Dr. McMillan reiterated his original request. (Tab 202)
20 November 1964	General Greer advised General Stewart that Lt. Colonel Webb (CIA representative at LMSC A/P) had refused to give the representatives of Aerospace Corporation the documentation and data essential to carrying out its general engineering responsibilities in the CORONA program. (Tab 203)
21 November 1964	In a message for Colonel Ledford, Dr. McMillan indicated that Lt. Colonel Webb's refusal to release CORONA payload information to duly authorized Aerospace representatives had been brought to his attention. Dr. McMillan directed that Colonel Ledford issue instructions to the CIA representative at the LMSC A/P Facility to release the requested information to Aerospace personnel as authorized by General Greer. (Tab 204)

23 November 1964	CIA cancelled the FULCRUM briefing scheduled for 24 November 64. (Tab 205)
25 November 1964	Dr. McMillan asked Dr. Wheelon for a briefing on FULCRUM activities on 3 or 4 December. He also asked Dr. Wheelon to arrange for the CIA group to brief the Steering Group for the new NRO Search/Surveillance Satellite System on 9 December. (Tab 206)
28 November 1964	A CIA message authorized the CIA representative at the LMSC A/P Facility to provide Aerospace personnel in their capacity as general systems engineers the CORONA payload information previously requested. The message noted further that this "interim" action was taken pending further negotiations on the over-all CORONA program. (Tab 207)
30 November 1964	Referring to Dr. McMillan's request of 25 November, Dr. Wheelon stated that he would have to await instructions from "his boss" before agreeing to brief the Steering Group, as requested. Dr. Wheelon stated that his organization was not persuaded that the Steering Group was a proper or a good idea. He characterized the briefing to Fubini and McMillan as "routine and proper." (Tab 208)
30 November 1964	Dr. McMillan in an attempt to clarify West Coast responsibilities and to preclude inadvertent actions in the operational CORONA program, directed the following:

30 November 1964 (Continued)

1. All CORONA traffic to be handled between the NRO and SAFSP/STC terminals on the BYECOM net.

2. General Greer to be responsible for the accuracy and content of all traffic.

3. During missions, [redacted] under command of General Greer (or his designated representative) and to be responsible for:

[redacted]

4. During CORONA missions, responsible representation from the LMSC A/P Facility to be present at the [redacted] to provide advice or take required actions.

(Tab 209)

30 November 1964

Referring to Dr. McMillan's memorandum of 5 November to Dr. Wheelon, General Carter stated that, while the potential [redacted] had been recognized as one of the possible critical factors of the system from the outset, he did not

30 November 1964 (Continued)

consider it timely to speculate or render premature judgment of such [redacted] until CIA had had an opportunity to review the results of the technical studies being prepared in depth by the "three highly competent contractors presently studying the problem."

As an administrative matter having a direct bearing on the possible future [redacted] General Carter cautioned the granting of clearances for [redacted] access. He considered it essential that comingling of the [redacted] purposes be assiduously avoided.

General Carter remarked that the policy decision that Mr. Vance and Mr. McCone had made regarding vigorous and secure exploration of "this important intelligence opportunity" by CIA was being followed diligently by CIA.
(Tab 210)

1 December 1964

Dr. McMillan forwarded to General Carter a proposed redraft of a memorandum of agreement on the CORONA program.

The redraft:

1. named General Greer as program manager

2. aligned responsibilities of the Secretary of Defense and the DCI with the 13 March 63 Agreement

3. adjusted organizational terminology to that of NRO elements

1 December 1964 (Continued)	4. recognized the contractual amendment of Aerospace responsibilities 5. removed Mr. Crowley from a proposed chairmanship of the CORONA Advisory Committee 6. specified the technical decision responsibilities of General Greer, as CORONA program manager 7. deleted a proposed parallel project manager arrangement. (Tab 211)
2 December 1964	SAFSP requested the CIA to place eight SAFSP and six Aerospace personnel on the permanent access list at the LMSC A/P Facility in order that SETD responsibilities in the CORONA Program could be carried out. (Tab 212)
2 December 1964	In a message to Dr. McMillan, General Carter stated that "in view of recent traffic concerning the (operational CORONA) problem and our conversations about your opinion of Lt. Colonel Webb" he had examined all incidents that might fall within the "oblique references" of Dr. McMillan's 30 November message. General Carter indicated that whatever problems had occurred, they were not traceable to deficiencies in the standard operating procedures being used nor to any lapse on the part of Program B personnel at the LMSC A/P Facility. General Carter concluded that the problems, if any, would not be solved by modification of the procedures,

2 December 1964 (Continued)

especially since there was still in force the Deputy Secretary of Defense/DCI agreement not to make changes pending solution of CORONA program organizational responsibilities.

General Carter stated further that he could not agree to Dr. McMillan's 30 November direction nor to any changes to existing standard operating procedures or manuals which would reflect such proposals.
(Tab 213)

3 December 1964

In a reply to Mr. Vance's 19 November letter, Mr. McCone stated that he had no objection to Dr. McMillan's suggestion that a steering group and supporting task force be established to assure that the approach or approaches selected for future development of a new search and/or surveillance system fulfilled all national requirements. He indicated that he was agreeable to CIA participation and that he would arrange for the necessary personnel to be assigned to both organizations.

Mr. McCone qualified his agreement by stating that he assumed that the terms of reference for the task force would be modified to the extent necessary to avoid overlaps or duplications with the charters of the existing USIB committees or the USIB itself, and that the research and development work underway on FULCRUM and GAMBIT-3 would be carried forward to the point agreed by the NRO Executive Committee without interruption or further delay.

Mr. McCone indicated his desire to reserve comment on the details of the "Operating Plan for Study of Search/Surveillance Satellite Reconnaissance" which, he felt, served as terms of reference for the steering group and might require modification.
(Tab 214)

4 December 1964	In a reply to the 2 December request by SAFSP for permanent access to the LMSC A/P Facility, CIA indicated that the LMSC A/P had been directed to place only Colonels Murphy and Heran on the permanent access list and that the CIA had non-concurred in the request for permanent access for the remaining personnel on the basis of inadequate justification for need-to-know and CIA's view that the subjects did not need unlimited access in the performance of their duties. SAFSP was told that all SAFSP visits to the LMSC A/P would require individual written clearance from Washington, based upon detailed individual subjects to be discussed and processed at least 48 hours in advance. (Tab 215)
4 December 1964	Dr. McMillan was briefed privately on FULCRUM by Mr. Maxey. Mr. Maxey indicated that all was going well. The design remained about the same as shown on previous charts -- 60 inches, F/3, two cameras. The coverage remained at 11,000,000 square miles in stereo. (Tab 216)
8 December 1964	Confirming his telephone conversation with Dr. McMillan, General Carter designated Mr. Huntington Sheldon as the initial CIA representative to the McMillan steering group. Also confirmed was the designation of Mr. Arthur Lundahl to the steering group in his capacity as Director, National Photographic Interpretation Center. General Carter cautioned that later developments might well indicate the desirability of adding additional CIA personnel to both the steering group and task force or changing the designated representative.

8 December 1964 (Continued)	General Carter indicated his understanding that Dr. McMillan had requested a briefing on FULCRUM for the steering group on 9 December, and advised that Mr. McCone's letter to Secretary Vance had excluded FULCRUM from the consideration of the steering group. He remarked further that he would discuss the matter with Mr. McCone as the first order of business after his return. (Tab 217)
9 December 1964	In a message to Dr. McMillan, General Carter confirmed his agreement with Mr. Vance on 8 December that the CORONA procedures in existence prior to Dr. McMillan's directive of 30 November would be utilized for the CORONA mission scheduled for 14 December 64, and further that the provisions of the 30 November directive would be held in abeyance until such time as the entire matter of command, control, jurisdiction of payload and operational aspects of CORONA had been agreed to by the DCI and the Secretary of Defense. General Carter requested that Dr. McMillan: 1. Advise appropriate CORONA addressees that the 30 November procedures were not applicable. 2. Advise appropriate CORONA addressees that the LMSC A/P would participate in the mission under former procedures existing prior to the issuance of the 30 November directive. 3. Detail Lt. Colonel Vern Webb to the CIA so that he could assume his prior duties and responsibilities at the LMSC A/P Facility. (Tab 218)

10 December 1964	The Director, Program B advised the CIA representative at the LMSC A/P Facility that "should you encounter any circumstance which will not permit the efficient discharge of your responsibilities, or circumstance which in your view jeopardizes mission success, I am to be notified immediately." (Tab 219)
11 December 1964	A Director, Program B Instruction to [redacted] at the LMSC A/P Facility stated: "1. Contracting Officer herein transfers the redelegation of his authority . . . to you. This authority covers all of the work under contracts DM-2616, TE-1901, SJ-1939, and AM-2617. "2. This authority originally granted Lt. Colonel Webb is herein rescinded." (Tab 220)
14 December 1964	Lt. Colonel Webb was returned to the Air Force from duty with the CIA and assigned to the SCF, Sunnyvale.
14 December 1964	In a memorandum for Dr. McMillan, General Carter designated [redacted] to the McMillan task force and vice Mr. Sheldon on the steering group. General Carter indicated his understanding that the original "Operating Plan for Study of Search/Surveillance Satellite Reconnaissance" was being fully implemented and that the revised terms expected by Mr. McCone for his approval would not be forthcoming. General Carter specifically pointed out that the participation of [redacted] and Mr. Lundahl in

14 December 1964 (Continued)

the work of the steering group and task force did not commit in any way the DCI or the CIA to the findings of these groups - stating that they were participating as individuals who had a technical competence needed in Dr. McMillan's studies.

Substantive actions developed as the result of studies, General Carter stated, would be subject to the approval of the DCI and, as appropriate, the USIB.
(Tab 221)

14 December 1964

Mr. McCone requested that Dr. McMillan brief the NRO Executive Committee and members of the CIA staff on plans and proposals for utilization of the two film processing facilities, EK, Rochester and the AFSPPL at Westover AFB.

Mr. McCone stated that the 11 August 62 memorandum of understanding regarding processing and reproduction of photography designated

1. the covert EK processing facility under CIA to be utilized for processing all original negative materials, some film duplication and R&D of new processing techniques for both facilities.

2. the AFSPPL to be utilized to produce duplicates for distribution to users.

Mr. McCone considered it necessary that this policy be reaffirmed or modified by joint agreement in order that CIA might comment properly on the FY 65 NRO budgetary proposals.
(Tab 222)

18 December 1964	General Carter informed [redacted] (newly designated CIA representative at the LMSC A/P Facility) that no policy decisions had been reached between Secretary Vance and the DCI nor had discussions been held. General Carter directed that normal procedures in effect on 30 November 1964 for CORONA would continue to be followed, i.e., [redacted] had personal control and responsibility for the payload as well as on-orbit camera operations. [redacted] was advised to maintain strict control of contractor support and to insure their specific responsiveness to him as the CIA representative. (Tab 223)
19 December 1964	Referring to Mr. McCone's request of 14 December, Dr. McMillan agreed to brief the NRO Executive Committee on NRO film processing plans. He also agreed to a subsequent briefing of appropriate members of the CIA Staff. (Tab 224)
21 December 1964	Referring to General Carter's memorandum of 14 December, Dr. McMillan welcomed [redacted] participation as a member of the Steering Group/ Task Force. Dr. McMillan confirmed the understanding that the participation of [redacted] and Mr. Lundahl would not commit in any way the DCI or the CIA to any findings of the Group. (Tab 225)
21 December 1964	In a message to Captain Gorman, the CIA requested payload and configuration data (see Tab 146) on the TITAN IIIX/AGENA launch vehicle in support of "study programs now underway at CIA." (Tab 226)

22 December 1964

In a memorandum to [redacted] Mr. Clark (CIA Director of Budget, Program Analysis and Manpower) finalized the funding arrangement for Project FULCRUM and requested funds in the amount of [redacted] for total obligation in FY 65.
(Tab 227)

24 December 1964

In a note to Mr. Vance, Dr. McMillan requested guidance in the handling of the 22 December CIA request for FULCRUM funding.

Specifically, Dr. McMillan recommended "that we do not release the [redacted]" and that notification be given to the CIA via Comptroller channels in a memorandum containing the following central paragraph:

> "The DNRO has instructed me that NRO funds are to be released at this time only for those parts of the FULCRUM studies that cover preliminary optical and mechanical design of the camera and film handling system, and fabrication and definitive dynamical test of suitable prototypes or simulations thereof. Other studies relating to FULCRUM are not being conducted in a manner approved by the DNRO or by the Deputy Secretary of Defense, and no agreement has been reached that they be funded from the NRO budget."

Dr. McMillan stated his belief that "the CIA's complete rejection of NRO control in this case should not be condoned in any way."

24 December 1964 (Continued)	Mr. Vance noted the recommendation but did not concur. He indicated that the matter should be handled in the same manner as GAMBIT-3, i.e., with review and release points. (Tab 228)
24 December 1964	Dr. McMillan asked Mr. Vance's guidance on a request by CIA to the NRO Comptroller that a copy of the NRO budget for FY 1966 be forwarded to Mr. McCone, since the budget had not been discussed at NRO Executive Committee level. Mr. Vance replied "Give it to Mr. McCone." (Tab 229)
30 December 1964	Referring to Dr. McMillan's memorandum of 20 November, Dr. Wheelon alleged that the correspondence had shifted the subject somewhat away from the proposition that originally caused Mr. McCone's concern. Dr. Wheelon related his understanding that Dr. McMillan had challenged the correctness of the CIA/Office of Scientific Intelligence estimates of the [redacted] of the [redacted] tracking combination. Dr. Wheelon remarked that the validity of this estimate would be easily discussed and settled in a technical forum. Dr. Wheelon stated that if Dr. McMillan did not disagree with the CIA estimates "by an order of magnitude or more" then the matter could be promptly closed. Dr. Wheelon added that Dr. McMillan's memorandum raised the broader and more fundamental question of probable Soviet capabilities and intent, which he felt was certainly the first concern of the

30 December 1964 (Continued)	NRO. This judgment, he claimed, properly belonged to the Board of National Estimates. (Tab 230)
4 January 1965	[redacted] reply to the 22 December 64 CIA request for FULCRUM funding simply requested that CIA furnish the data which would essentially update the chart attached to Dr. Wheelon's memorandum of 31 August 64. (Tab 231)
4-15 January 1965	Parametric study results and preliminary designs on the search/surveillance satellite system (S-2) were presented to Dr. McMillan by EKC, FCIC and ITEK.
6 January 1965	General Stewart and Mr. Maxey had undertaken a series of low-key, exploratory negotiations in attempting at least a partial resolution of the CORONA impasse. General Stewart and Mr. Maxey agreed that: 1. A [redacted] circuit would be established between [redacted] STC (General Greer) and the LMSC A/P (CIA representative). 2. A [redacted] circuit would be established between STC and the LMSC A/P. 3. BISON (CIA representative, STC) would be closed. General Stewart instructed [redacted] (NRO Communications Officer) to install the circuits.

9 January 1965

In a note to Dr. Fubini, Dr. McMillan included a summary of the characteristics of the camera system being studied by Perkin-Elmer as a backup to ITEK on FULCRUM.

P-E had been told by Dr. Wheelon to devise a relatively simple system with low risk factors. Dr. McMillan felt that his reasoning was that he wanted something he knew would work as compared to the risks involved in the ITEK concept.

Dr. McMillan opined that the P-E design was marginal. He likened the concept of two 7-foot barrels moving horizontally and laterally to "two G's moving in the breeze!" While Dr. McMillan could not understand Dr. Wheelon's reasoning in this matter, he felt that Dr. Wheelon had perhaps accepted the P-E design "as a wedge to insure that the ITEK concept was the most reasonably acceptable."
(Tab 232)

12 January 1965

Referring to the CORONA agreement which he had been discussing with General Stewart, Mr. Maxey expressed CIA concern that the designation of the Director, SAFSP as responsible for the direction of field operations could be interpreted to include those activities being performed at the LMSC A/P Facility, specifically the on-orbit camera operations.

Mr. Maxey indicated his recollection that General Stewart had agreed not to alter present procedures concerning the functions of the LMSC A/P Facility and that, by field operations, General Stewart was particularly concerned about launch, space-tracking, recovery, etc.

12 January 1965 (Continued)	Mr. Maxey requested a confirmation of this understanding. (Tab 233)
13 January 1965	General Carter forwarded to Dr. McMillan a copy of a proposed Memorandum of Agreement on CORONA, indicating that it had been worked over very carefully by General Stewart with the CIA people. General Carter signed the original and carbon and indicated that he would consider the agreement in full force and effect upon receipt of a copy signed by Dr. McMillan. Key points: 1. The Director, SAFSP as the single authoritative program manager for CORONA, reporting directly to the Director, NRO. 2. All CIA technical and contractual activities in CORONA consolidated under a senior CIA representative, reporting to and located in the offices of the Director, SAFSP. 3. Aerospace Corporation to provide systems engineering services for CORONA. 4. Palo Alto A/P Facility to continue to provide software support to the CORONA program. (Tab 234)
14 January 1965	Dr. Wheelon called Dr. McMillan to discuss the allegation that the GE and Lockheed contracts had not been amended to permit Aerospace to get the necessary information.

14 January 1965 (Continued)	Dr. McMillan told Dr. Wheelon that the information requested by Aerospace was not being made available and that he (Dr. McMillan) was not sure it was the fault of the contractors involved. Dr. Wheelon asked Dr. McMillan a specific question, "Who do you think it was?" Dr. McMillan replied, "You." (Tab 235)
15 January 1965	In a reply to Mr. Maxey's query of 12 January on the CORONA understanding, General Stewart stated that his interpretation of the intent of the agreement was that there would be no change either in current functions and responsibilities of the LMSC A/P Facility or in their relationships with the NRO Satellite Operations Center. General Stewart indicated that he felt some change in the relationship of the LMSC A/P Facility with the Director, SAFSP was implicit through the responsibilities, functions, etc., of the proposed senior CIA representative. (Tab 236)
16 January 1965	In a message for Dr. McMillan, Dr. Wheelon reiterated CIA's understanding that the basic ground rules for CORONA operations were predicated upon the agreement reached between General Carter and Mr. Vance that CORONA procedures effective on 30 November 64 would apply for CORONA missions until such time as the entire matter of command, control, jurisdiction of payload and operational aspects of CORONA had been agreed by the DCI and the Secretary of Defense. Dr. Wheelon requested that Dr. McMillan ensure that only those CORONA procedures in effect on 30 November be applied to current CORONA operations.

16 January 1965 (Continued)

Regarding communications discussions between Mr. Maxey and General Stewart, Dr. Wheelon indicated that it was Mr. Maxey's understanding that agreement was reached to provide [redacted] communications between the LMSC A/P and [redacted] STC and also to install a [redacted] between those two facilities.

On a new subject, Dr. Wheelon stated that the CIA was convinced that nothing but confusion could stem from contractors receiving directions, requests, and information from more than one source. Dr. Wheelon indicated his belief that, in view of the newly proposed CORONA agreement and the fact that Dr. McMillan was not taking specific exception to the principle, it would be proper for the direction to the CORONA payload contractors and other CIA-let contracts to be channeled through the CIA contracting officer [redacted] in the case of the LMSC A/P Facility).
(Tab 237)

22 January 1965

A CIA message to LMSC, ITEK and GE reiterated the following CIA contracting officer's policies and procedures covering the CORONA program:

1. Contractors shall not implement work outside the contract scope and/or specifications without the expressed approval of the contracting officer or his duly authorized representative (designated as [redacted] at the LMSC A/P).

2. Contract specifications may be changed only by written direction from the contracting officer or in the form of technical directives signed by the contracting officer or [redacted]

22 January 1965
(Continued)

3. Contracting officers will be kept informed of proposed increases in contract scope from the very beginning.

The CIA indicated that this action was essential in light of "several instances where CORONA contractors had received cables, letters and/or phone calls from various sources in the government which had requested and/or directed that certain work be accomplished."
(Tab 238)

22 January 1965

In a letter to Mr. McCone, Dr. McMillan outlined the study efforts undertaken by different NRO contractors, exclusive of those on FULCRUM, that applied or were related to general search and surveillance systems. These included:

1. The EKC VALLEY contract directed specifically to general search systems based on TITAN IIIC boosters.

2. The ITEK contract which included such items as atmospheric investigations using balloon photography and some work on large aperture optics.

3. The Fairchild contract for studies leading toward the definition of one or more general search systems.

4. The LMSC studies on:

   a. Adaptation of the AGENA to a larger diameter payload.

   b. Updating of the "six-pack" r/v concept.

22 January 1965 (Continued)	c. Integration of various protective measures. d. Increased orbit adjust capability for the AGENA. 5. The GE study of the adaptation of the backup G-3 spacecraft to the general search mission. Dr. McMillan intended that this information serve as background prior to detailed briefings to Mr. McCone and Mr. Vance scheduled for 2 February 1965. (Tab 239)
25 January 1965	EKC and ITEK were directed to produce advanced preliminary design on S-2 and to build mock-ups. One full-scale and one approximately 1/10 scale mock-up were required. GE and LMSC were directed to build approximately 1/10 scale mock-ups to illustrate systems integration with the EKC and ITEK S-2 payload designs.
25 January 1965	In a memorandum to Mr. Vance, Dr. McMillan provided the CIA data (communicated by Dr. Wheelon) on the proposed further funding for FULCRUM and a copy of his 22 January 65 letter to Mr. McCone on NRO studies of general search and surveillance systems. Key points by Dr. McMillan: 1. The question as to whether all of the work done on FULCRUM was necessary as part of a feasibility study was no longer an issue -- all but [redacted] was now frankly identified as part of the design phase, required to protect a development schedule and to preserve the development team.

25 January 1965 (Continued)

2. The important questions appeared to be:

   a. Whether development effort seems warranted, ad interim or otherwise.

   b. If development is undertaken, what are to be the roles and responsibilities of the NRO and the DOD?

   c. How is our judgment on any of these matters to be made effective?

Dr. McMillan recommended that:

1. As of 26 January, we go no further than the intermediate funding alternate, [redacted] deferring determinations relative to the other efforts at least until after the preliminary review of alternatives now scheduled for 2 February.

2. If Mr. Vance felt that the decision about a new general search system must be made in the present environment, no funds above the [redacted] be agreed to until after a specific plan is established for arriving at the necessary decisions and insuring their acceptance.

(Tab 240)

29 January 1965

Mr. Clark furnished the FULCRUM funding summary (updating and costs) requested by [redacted] on 4 January 65.
(Tab 241)

3 February 1965	In a memorandum for Mr. McNamara, Dr. McMillan provided a detailed summary of the NRO position in the selection of a new satellite reconnaissance system for general search and surveillance purposes. (Tab 242)
4 February 1965	Dr. McMillan furnished Mr. Vance a recapitulation of and comment on a 2 February discussion of candidate systems for quick reaction or crisis management. (Tab 243)
5 February 1965	Mr. McCone in a letter to Mr. Vance suggested a possible modification of procedures for presentation and substantiation of the NRO budget to Congress (which would curtail the budgetary authority of the Director, NRO). (Tab 244)
10 February 1965	General Stewart advised Mr. Maxey that a commercial service authorization had been given the telephone company to install a teletype circuit [redacted] between the LMSC A/P Facility and [redacted]-STC for an operational date of 1 February. (See Tab 237) General Stewart reported further that the telephone company representatives were denied access to the LMSC A/P Facility and had returned the service authorization to the DCA, after being told that a high-level CIA approval would be required before proceeding with the installation. (Tab 245)
11 February 1965	Dr. Wheelon forwarded to the Director, NRO work statements on the following FULCRUM contracts: 1. Camera: ITEK Perkin-Elmer

11 February 1965	2. Alternate Fast Film Transport Studies: STL RCA 3. SEAC: STL 4. Spacecraft: GE 5. Recovery vehicle: AVCO (Tab 246)
12 February 1965	In a message to all CORONA contractors, CIA indicated that it remained responsible for providing CORONA payload flight hardware and that all direction to CIA contractors would continue to be channeled through or from the CIA. (Tab 247)
15 February 1965	In a memorandum to Mr. Vance, Dr. McMillan related the CIA proposal to spend [redacted] during February on the FULCRUM project, maintaining design and other efforts with all of the contractors involved. In view of his concern about the stringent weight budget to which the FULCRUM system had to be held, Dr. McMillan recommended a continuation of the efforts during February at the level requested by CIA. Mr. Vance approved. (Tab 248)
15 February 1965	In a message to General Stewart, the CIA expressed concern that decisions by the CORONA Program Office on payload items were threatening the CORONA launch schedule and therefore the availability of timely data to the intelligence community.

15 February 1965
(Continued)

The CIA cited a series of events centered on a recovery vehicle forebody problem on CORONA Mission 1017, indicating that the CORONA Program Office -- with no prior consultation with CIA headquarters, the payload system integration contractor, or the CIA resident manager at the LMSC A/P Facility -- had ordered the recovery vehicle forebodies replaced on the CORONA Mission 1017 system. The message stated that the CORONA Program Office had also directed that no missions would be flown in which forebodies would be scheduled wherein the age at recovery would exceed twelve months.

The CIA further stated that the SAFSP directive, issued without regard for program implications, would have caused CORONA operational standdown of three to four months.

On being informed that SAFSP did not consider the forebodies on Mission 1017 to be flightworthy, the CIA took the following action:

1. Directed the LMSC A/P to replace the items with younger forebodies.

2. Directed that the replaced items be sent back to the General Electric Company (Philadelphia) for tests similar to those used to indicate over age in the GAMBIT program.

3. Directed the LMSC A/P to evaluate the shelf life of all items necessary to support the spares requirement indicated by SAFSP.

4. Directed the assessment of program implications and remedial measures to preserve program integrity.

15 February 1965 (Continued)

5. Initiated action to determine specifically the validity of the information on shelf life limitations in the CORONA program.

The CIA indicated that an analysis of the data had established flight acceptability and reliability for forebodies of at least 17 months.

In view of considerable program perturbation, the CIA advised that it had informed all CORONA contractors that the responsibility for assuming flight qualified hardware on a schedule responsive to total program requirements rested with the CIA, and that the contractors were to respond only to direction received from the CIA "in order that further embarrassment to the Government and program difficulties (could) be obviated." (Tab 249)

16 February 1965

In a letter to Mr. Vance, General Carter indicated that, before embarking on the FULCRUM search satellite program in July 1964, Mr. McCone had asked Dr. Land to convene a technical panel to advise him whether or not it was a promising venture. General Carter stated further that the Land Panel, after careful examination, had recommended a six month technical feasibility program and that this program had been completed.

Confirming a conversation between Mr. McCone and Dr. McMillan, General Carter indicated that Dr. Land had agreed to reconvene his panel to evaluate the results of the feasibility program, but that CIA did not feel that it should include Government people. Dr. Land had also agreed to providing CIA with his technical counsel on FULCRUM but felt that his panel should also be exposed to other search satellite proposals in order to make a balanced evaluation.

16 February 1965 (Continued)

General Carter recalled for Mr. Vance a subsequent discussion in which they had agreed that Dr. McMillan would arrange to present the two Air Force search satellite proposals (Eastman Kodak and ITEK) to the Land group. General Carter indicated that Dr. Wheelon and his staff would present the FULCRUM system and advised that a thorough-going two-day session in Boston had been tentatively set for 23 and 24 February 1965.

Dr. Land had asked that his terms of reference be clearly established. Mr. McCone had indicated that Dr. Land and his panel would be acting as technical advisors to Mr. Vance and Mr. McCone, to whom he would provide his technical findings.

Mr. McCone had agreed to go to Boston on the first day to clarify the terms of reference and to summarize the USIB requirements for a new search system. General Carter invited Mr. Vance to join Mr. McCone.
(Tab 250)

17 February 1965

Dr. McMillan forwarded his revised draft of the Memorandum of Agreement on CORONA (See Tab 234) to General Carter.

Dr. McMillan's revised draft expressed in much greater detail the responsibilities of both the Director, SAFSP, and the senior CIA representative.
(Tab 251)

17 February 1965

In a message to the Director, Program B, Dr. McMillan stated that it was essential that he be provided a complete review of the circumstances and practices which led to the inclusion of out-of-spec components in the SRV's assigned to CORONA Mission 1017.

17 February 1965
(Continued)

He asked to be immediately advised as to what specific steps had been taken to avoid a recurrence of the problem and to determine:

1. Who was responsible for the inclusion of the out-of-spec components.

2. Who approved their inclusion.

3. Whether disciplinary actions had been taken or were contemplated.

Dr. McMillan stated that he was scheduling for 1 March, a detailed technical review of the life-times of all the critical components in the SRV's utilized in both Program A and Program B, to include:

1. The identification of all recovery system components which had or should have definitely specified life limits.

2. What these limits were or should be.

3. The technical validation/test basis that had been or should be used to determine the limits.

It was Dr. McMillan's intent that a set of standard specifications for both Program A and Program B SRV's be developed from the review.

Dr. McMillan indicated his desire that there be participation by the contractors involved in both Program A and Program B, including the Aerospace Corporation.
(Tab 252)

18 February 1965

With reference to Dr. McMillan's message of 17 February, the Director, Program B outlined the following information:

1. No out-of-spec components were assigned to CORONA Mission 1017.

2. A shelf life survey of MK5A components was authorized by the CIA representative at the LMSC A/P Facility on 20 July 1961. The survey results, presented on 20 March 1962, indicated that a 36-month shelf life for the forebodies was considered conservative.

3. The payload for CORONA Mission 1017 was bought off by an SAFSP representative at the LMSC A/P Facility.

4. No disciplinary action taken or contemplated or appropriate.

The message outlined the following actions:

1. A detailed shelf life limitation determination was presently under review.

2. A forebody age test program was in progress.

3. A GE technical representative would be assigned to the LMSC A/P Facility as an advisor to the CIA resident officer.

4. The buy-off at Vandenberg AFB would be accomplished by the CIA resident officer at the LMSC A/P Facility.

18 February 1965 (Continued)	The CIA indicated that "shelf life" had not been defined in the development document and that no qualification program had been authorized. The message indicated that the CIA would continue to comply with the broad programming directives of the Director, NRO in providing acceptable flight qualified payload hardware in a timely fashion and would be prepared to present on 1 March a status report on all SRV components which had shelf life limitations. (Tab 253)
18 February 1965	Mr. Eugene Kiefer departed the NRO.
23 February 1965	In his reply to Mr. McCone's 5 February letter, Mr. Vance acknowledged that modification to the previous year's procedures (wherein Mr. Hitch and Dr. Brown presented the budget) was possible and indicated that the inclusion of members of CIA in the discussions to emphasize the joint character of the NRP was a "healthy" suggestion. Mr. Vance asked Mr. McCone for the names of those who would represent CIA when Mr. Hitch and Dr. Brown met the Appropriations Committees. Mr. Vance suggested that perhaps Dr. McMillan should also be present. (Tab 254)
24 February 1965	Colonel Worthman received a call from Mr. Walt Levison of ITEK Corporation, who made the following remarkable announcement: "For a multitude of reasons, ITEK has come to a copporate decision that it cannot accept the follow-on to FULCRUM, even if it is offered." Mr. Levison emphasized that this was a corporate decision and stated that there were no conditions which would change this attitude.

24 February 1965
(Continued)

Mr. Levison asked Colonel Worthman's advice as to the proper scenario for handling the situation. Colonel Worthman stated that the first thing ITEK had to do was to advise its FULCRUM sponsor - Mr. McCone - of the decision. Colonel Worthman urged Mr. Levison (and Mr. Lindsay, President of ITEK) to move very quickly pointing out the danger of waiting several hours or perhaps a day until they could locate or gain access to Mr. McCone. Colonel Worthman suggested that ITEK should convey its message to General Carter or to whoever was in charge of the CIA at the moment. Colonel Worthman further pointed out that the Land Committee was in executive session and that it would be most embarrassing to all participants if the Committee were to make a decision and then receive the ITEK decision.

About twenty minutes later, Mr. Levison called again to say that Mr. Lindsay was unable to reach Mr. McCone, but had passed the corporate decision to Mr. Bross. Mr. Levison asked Colonel Worthman to arrange for a meeting with Dr. Land and Dr. McMillan. Colonel Worthman contacted Dr. McMillan and urged him to call Mr. Levison.

Late in the afternoon, Mr. Levison met with Dr. McMillan and Dr. Land at the Polaroid factory to announce the ITEK corporate decision regarding FULCRUM. Mr. Levison stated categorically that under no condition would the Corporation accept a follow-on FULCRUM contract.

Mr. Levison informed Dr. McMillan that the ITEK decision was made with the full knowledge that it would cut the Corporation out of additional satellite camera development within the near-term future but stated that ITEK felt it could not survive under

24 February 1965 (Continued)

the "domination of the CIA." Mr. Levison also referred to the CIA as fostering an "immoral environment" which was becoming increasingly unacceptable to ITEK. (Tab 255)

25 February 1965

Dr. McMillan prepared for Mr. Vance a complete record of his 24 February meeting with Dr. Land and representatives of ITEK.

At Mr. Levison's request, Dr. McMillan and Dr. Land met with Mr. Levison and Mr. John Wolf at 5:00 PM on 24 February. Mr. Levison reported that he, Mr. Lindsay, Mr. Philbrick and others of ITEK management had decided that they would not accept from the CIA any follow-on development contract to their present contract on FULCRUM. Mr. Levison made it clear that the decision ITEK had made was a considered Corporate decision, that it was not politically motivated, that ITEK had no intention of seeking favor or special treatment of any kind as a result of the decision.

Mr. Levison stated that the ITEK decision had been arrived at at approximately 4:00 PM on 24 February, that Mr. Lindsay had immediately tried to telephone Mr. McCone. Although unable to reach Mr. McCone, Mr. Lindsay had communicated the substance of the ITEK decision to Mr. Bross at the time of his call - 4:00 PM. He added that Mr. Lindsay and Mr. Philbrick were already on their way to Washington with the hope of seeing Mr. McCone personally during the evening.

Subsequent discussion brought out a number of the circumstances surrounding the ITEK decision:

25 February 1965
(Continued)

1. ITEK felt that they could not maintain their "technical integrity" if they undertook a development project for FULCRUM with as little technical control over the project as they had been allowed during the work up to this time.

2. ITEK felt that the rotating optical bar technique to be used in FULCRUM could not be justified unless there was a firm requirement for scan angles of 120° or more.

3. In response to previous ITEK queries on the validity of the 120° scan requirement, the CIA staff (Dr. Wheelon, Mr. Maxey, Mr. Dirks) had replied that no such requirement had been stated. (A fourth member of the CIA staff pointed out that the requirement for the 120° scan was stated in the ITEK contract.)

4. On 23 February, Mr. Dirks had specifically stated that the CIA was considering both 120° and 90° scan angles.

5. In June 1964, Mr. Philbrick had asked Dr. Wheelon for permission to brief Dr. McMillan on the FULCRUM project. This permission was denied pro tem and several other requests during the summer of 1964 were likewise denied. In August 1964, Dr. Wheelon advised ITEK that he would be the point of contact between ITEK and the DNRO on the FULCRUM project.

25 February 1965 (Continued)

6. ITEK had never been given any information from the associate contractors working on alternate film drives or alternate camera concepts.

(Tab 256)

25 February 1965

In a memorandum for Mr. Vance, Dr. McMillan discussed an earlier meeting with Mr. Levison of ITEK.

Dr. McMillan had expected at the time of his earlier meeting with Mr. Levison to recommend to Mr. Vance and Mr. McNamara the development of a general search system other than those that were being studied by ITEK. He felt that ITEK should be warned of this recommendation and that they should have full opportunity to prepare their own technical case in the best possible fashion. Dr. McMillan discussed the reasons for his technical judgments and heard a brief rebuttal by Mr. Levison.

Dr. McMillan felt that both the fact and content of Mr. Levison's rebuttal made clear the need, in the national interest, to continue ITEK on an alternate approach to that which he tended to favor, until all substantial technical uncertainties could be resolved.
(Tab 257)

26 February 1965

Dr. McMillan recorded the events which occurred at the opening of the meeting of Dr. Land's panel on the morning of 24 February.

After explaining the program for the day, Dr. McMillan introduced Colonel Howard, who briefed the group on the background of correspondence and

26 February 1965
(Continued)

actions in regard to collection requirements that had taken place since July 1960. His briefing further covered actions taken within the NRO in relation to studies of new general search systems.

During the discussion of requirements, Dr. Wheelon made a number of comments -- in particular on the existence and content of COMOR paper D13/29 which was addressed by Colonel Howard.

Dr. Wheelon appeared to object to the paraphrase of the content of the COMOR document as well as to the inclusion of reference to the document in the briefing of requirements. He stated that he felt that the discussion of the COMOR document might lead to confusion in the minds of the panel.

Upon Dr. McMillan's reiteration of the status of the COMOR paper (i.e. that USIB had discussed the paper, declined to accept it, and returned it to the several agencies represented on USIB for examination and comment), Dr. Wheelon ceased his comments.

After Colonel Howard's briefing, Dr. Wheelon passed to Colonel Howard a handwritten note which said:

> "Hank --
>
> I am sorry to have had to tackle your pitch. However, it was pretty damned self-serving for AF and NRO and in direct conflict with McCone's charge to the panel. ~~I will~~ McCone and I will take this upstaging up with McNamara and Vance.
>
> Bud"

(Tab 258)

1 March 1965

In a memorandum to [redacted] Mr. Clarke (Director of Budget, CIA) confirmed the advance of [redacted] to date to CIA for the first phase of FULCRUM and requested funds for the month of February in an amount of [redacted] to sustain the program at ITEK and to cover development, design, and/or systems engineering effort at Perkin-Elmer, GE, AVCO, STL and RCA. (Tab 259)

2 March 1965

In a letter to General Carter, Dr. McMillan expressed serious concern over the lack of progress in implementing the 12 August agreement between Mr. Vance and Mr. McCone to employ the Aerospace Corporation in a general systems engineering role on CORONA.

Dr. McMillan noted his instructions of 14 August 1964, and the poor results achieved to date in the implementation of the necessary actions.

Dr. McMillan requested General Carter's support in issuing the necessary directive to correct the situations in order to comply with the Vance/McCone agreements.
(Tab 260)

3 March 1965

In a letter to General Carter, Dr. McMillan indicated that, to date, NRO had received no technical data on FULCRUM other than copies of briefing charts used in August 1964.

Dr. McMillan requested:

1. Copies of all charts used to brief Dr. Land's panel on 23 Febmuary 1965.

2. Copies of all contractor reports available.

3 March 1965 (Continued)

3. An indication as to when remaining reports would be available.

(Tab 261)

5 March 1965

Dr. McMillan summarized for Mr. Vance the status of four matters in connection with the management and operation of CORONA. These were:

Systems Engineering
Security
Orbital Operations
Camera Commands

(Tab 262)

6 March 1965

Dr. McMillan recorded his concerns about the ISINGLASS proposal.

1. It was not clear that a manned vehicle was required, or even desirable, for the mission in question.

2. The vehicle described, though somewhat different in structural concept, was in size and performance very similar to the X-20 (DYNASOAR) toward the development of which the Government had spent about [redacted]. Any undertaking to study vehicles of the ISINGLASS type must permit bringing to bear knowledge gained and technology developed on the X-20.

3. It was not clear that a fully integral, completely recovered, single stage boost was the best for the mission -- in particular, a smaller vehicle, properly staged at boost might not require

6 March 1965
(Continued)

development of a new propulsion system.

4. A program of the size and scope of that visualized by CIA cannot practicably be carried out in a clandestine manner.

5. A boost glide system is in potential competition with satellite and ballistic systems.

While he agreed that proper consideration must be given to a boost glide system, Dr. McMillan did not feel he could recommend even initial steps to the Secretary of Defense or the DCI until he was satisfied that two conditions could be met:

1. that a program could be laid out that provided the DNRO, and the Secretary of Defense and DCI, with a full and objective comparative analysis of all competing means that might reasonably satisfy the stated requirement, and

2. that financial commitments and obligations to contractors during the program could at all times be limited to those which in the judgment of the DNRO were justified by their expected contribution toward the achievement of approved goals.

Dr. McMillan provided the detailed guidelines and asked the Director, Program B, to lay out a program for his consideration.
(Tab 263)

9 March 1965

Dr. McMillan forewarned Mr. Vance of possible CIA complaints about the somewhat more temperate approach to ISINGLASS which he had

9 March 1965 (Continued)	requested in his memorandum to CIA. Dr. McMillan outlined the issues involved and stated his conviction that "we cannot afford another breathless endeavor, begun with shoddy analyses and conducted without recognition of technical realities." (Tab 264)
9 March 1965	Dr. McMillan noted that the CIA proposed boost glide device was not in the BYEMAN system; but rather in a new security category called -- ISINGLASS. Procedures for handling ISINGLASS documents were listed. The names of cleared individuals in Air Force were recorded. (Tab 265)
10 March 1965	General Stewart passed to Dr. Fubini a draft of a "possible letter to Mr. McCone from Mr. Vance regarding the continuing NRO/CIA management problems." The letter suggested early resolution of the CORONA and related management problems and a focus of NRO Executive Committee attention to the significant policy aspects of the NRP. (Tab 266)
11 March 1965	Dr. Fubini reviewed a draft letter to Mr. McCone regarding the continuing NRO/CIA management problems prepared by General Stewart. Dr. Fubini's response: "General Stewart: This is typical of the grab for power of which the AF has been guilty for years and is in line with your desire to get the CIA out of the reconnaissance business -- I will oppose this with all the resources at my command. E. Fubini for Bud Wheelon!"

11 March 1965
(Continued)

The draft letter viewed as the only logical solution to the CORONA management problem the assignment of total responsibility for CORONA to General Greer.

In the space reconnaissance area, the draft letter suggested that the CIA staff "probably should direct their attention only to studies and science/technology efforts as a part of the total NRP." Dr. Fubini commented on this point as the CIA advocate:

> "Yes, but you (---...) from the Air Force don't want to use these efforts. You are trying to get rid of us!"

The draft letter also addressed an adjustment of aircraft programs and the complete realignment of responsibilities.
(Tab 267)

15 March 1965

Dr. McMillan forwarded to General Carter a draft of a directive which he considered necessary to insure the proper conduct of future CORONA missions.

It would direct that on CORONA Mission 1018, and on all subsequent missions, an authoritative representative of Program B be present at the STC at such time during the orbital operation as may be requested by the Director, Program A.

It would further direct that at all times during the orbital operation, all calibrations and other data necessary to interpret telemetry and to validate commands be physically present at the STC and available to such CORONA cleared individuals as the Director, Program A, might designate.
(Tab 268)

16 March 1965

In his reply to Dr. McMillan's letter of 2 March 1965, General Carter indicated that:

1. The Aerospace problem would have to await the more comprehensive agreement.

2. Mr. Crowley had been instructed to re-establish coverage by retroactive contract with LMSC on system integration.

3. The 15 March 1965 draft directive (by Dr. McMillan) was merely an attempt at piece-meal solution to the CORONA problem, and should be considered only in an agreement on its over-all management.

(Tab 269)

18 March 1965

Dr. McMillan prepared for Mr. Vance a chronology of the dialog between SAFSP and ITEK concerning estimates of costs and schedules for a program to develop and fly their version of a general search system.

Two approaches were made by SAFSP to ITEK soon after 24 February. SAFSP had interpreted Dr. McMillan's cautions about approaches to ITEK to be: don't initiate or discuss new programs, or new increases in current efforts. Dr. McMillan assumed full responsibility for such an interpretation--which he felt sure was implicit in his instructions to SAFSP. These instructions were followed meticulously. The total rate of effort at ITEK throughout the January-March period had remained almost constant. Major components of the effort were:

1. Support of balloon-borne photography to probe the characteristics of the atmosphere.

18 March 1965 (Continued)

2. Preparation of an 80" lightweight experimental mirror.

3. Preliminary design, and breadboard testing, related to a new general search system. (This effort, the newest, was at issue.)

(Tab 270)

18 March 1965

In a letter to Mr. Bross (CIA), Dr. Fubini addressed the subject of CORONA system improvements and called to Bross' attention "the fact that, in addition to the management considerations related to a device whose operational date is late in 1967, we should begin to give attention to something which could become operational in the middle of 1966," adding that "it is clear that such action can only be taken through the intermediary of the present contracting agency, i.e., CIA."
(Tab 271)

19 March 1965

In a memorandum to Mr. Vance, Dr. Fubini passed on a "little detail about commercial blackmailing" and quoted a source as indicating that a CIA employee had told members of a leading electronics firm that they should not team up with ITEK since "ITEK is in disrepute with CIA."
(Tab 272)

20 March 1965

In a reply to Dr. McMillan's 3 March letter, General Carter forwarded a compilation of the charts employed in the Land Panel Briefing on 23 February.

With regard to definitive reports from contractors, General Carter indicated they had not been completed but offered to have Mr. Maxey and his staff brief Dr. McMillan on any points.

20 March 1965 (Continued)	General Carter suggested that Dr. McMillan look upon Mr. Maxey and his staff as "that technical arm of the NRO responsible for the FULCRUM program." (Tab 273)
24 March 1965	In a note to Mr. Vance (written at 10:30 a.m.), Dr. McMillan furnished a copy of a CIA message which he interpreted as saying that there would be no change in orbital operations for CORONA Mission 1018 from the conditions prevailing on the two previous missions. Dr. McMillan considered these prevailing conditions unsatisfactory. Dr. McMillan had verified his interpretation through a conversation between Colonel Heran and [redacted] (senior CIA representative at the Lockheed A/P facility). Dr. McMillan felt he could get nowhere by trying to argue with General Carter by telephone from the West Coast; hence directed that the mission be postponed one day. Dr. McMillan stated that he was unwilling to conduct a mission unless full information on the condition of the payload and payload section was freely available to the SAFSP personnel running the operation. Dr. McMillan concluded that he had two choices: 1. issue a directive having the force of a proposed draft (which he attached for Mr. Vance's review) 2. take charge himself and issue a comparable directive naming himself as Director, Program A. (Tab 274)

24 March 1965

Dr. McMillan prepared and handcarried to Mr. Vance a record of a telephone conversation with General Carter at 6:15 p.m. on 24 March.

General Carter reported that he had sent Mr. Crowley to Sunnyvale to assume responsibility for CIA operations on the next CORONA mission.

Dr. McMillan had asked if Mr. Crowley would be prepared to release to General Greer (or his designated representative) any and all technical information on the health and condition of the payload. General Carter replied, "No. He will release any information that bears on the success of the operation or the decision to de-orbit."

Dr. McMillan asked General Carter whose judgment would determine whether a particular item of information is or is not relevant to the success of the operation or the decision to de-orbit. General Carter replied, "Crowley's."

General Carter stated further that he was not willing to release the calibration data on the payload commands or the payload telemetry to General Greer or to his representatives.

A copy of Dr. McMillan's memorandum for the record was forwarded to General Carter. (Tab 275)

25 March 1965

General Carter prepared his record of the telephone conversation with Dr. McMillan on 24 March.

General Carter told Dr. McMillan that the instructions to Crowley were to ensure continuation of the procedures which had been followed in

25 March 1965
(Continued)

the past, and to make sure that there was no slip-up in the passage of information about the payload necessary to determine the health of the bird or to make a decision on de-orbit.

General Carter reported that he had implored Dr. McMillan to consider the proposed agreement on West Coast organization that he (General Carter) had forwarded in January and which had been worked out with the NRO staff.

General Carter stated that it was his intention to keep the Agency in the satellite business and that he had no intention of proliferating away the Agency's responsibilities, authorities, and equity in the program on piecemeal matters. He urged Dr. McMillan to come to some agreement on the West Coast organization along the lines of his prior proposals so that "we could get away from this sort of basic organizational problem."

General Carter denied that he was in the habit of refuting memoranda for record and stated he would furnish Dr. McMillan a copy of his memordandum for record. This he did. (Tab 276)

25 March 1965

In a message to Mr. Crowley and [redacted] General Carter stated that the instructions of the CIA message of 23 March (see Tab 274) remained in effect.

General Carter stated further that if Dr. McMillan visited STC during Mission 1018, Crowley and [redacted] should be prepared to brief him fully on appropriate procedures and activities relative to CIA's participation and responsibilities in CORONA

25 March 1965 (Continued)

missions. The message reminded the CIA representatives that they should not change any current procedures, but "conform fully and with highest cooperation with current SOPs." (Tab 277)

29 March 1965

Dr. McMillan expressed to Mr. Vance his appreciation for Mr. Vance's personal support in "restoring a state of normalcy to the current CORONA operations."

Dr. McMillan confirmed that there had been a resumption of data provision, and information that had been withheld during the last several operations was now available at the STC to Col Heran. Dr. McMillan stated that it was quite clear that the CIA representatives did not want Aerospace to look at their data. Accordingly, Dr. McMillan had instructed SAFSP not to raise or test this issue.

Dr. McMillan regretted the fact that until a realignment of responsibilities was accomplished, he, as DNRO, was powerless to bring about any significant improvements in NRO management where CIA was concerned. For the near future, Dr. McMillan promised to try personally to minimize any further perturbations in NRO activities, pending a successful conclusion to Mr. Vance's negotiations or organization.

Dr. McMillan attached a copy of his note to General Carter expressing his sincere appreciation for General Carter's personal efforts in restoring a successful working relationship in the CORONA on-orbit operations. (Tab 278)

3 April 1965	In a response to Dr. McMillan's note of 29 March, General Carter pointed out that the detailed data exchange that had taken place in the recent CORONA mission was really a continuation of procedures that had long been in effect between the A/P facility and Colonel Heran's program office, rather than a new departure or resumption. General Carter stated that CIA was always anxious to lend whatever help they could in establishing and maintaining proper relationships between "our two organizations" to the end that the best interest of the Government as a whole was served. (Tab 279)
12 April 1965	Dr. McMillan prepared for Mr. Vance a detailed paper on the argument that responsibility for the Satellite Operations Center (SOC) was an essential element of any properly constituted management structure for the NRP. He noted in passing that the CIA clearly recognized the essentiality of the SOC -- that they had made an issue of it in 1963 and were doing so again. Dr. McMillan noted further that his paper was drafted "before today's news about Raborn" but "may however be relevant." (Tab 280)
20 April 1965	Dr. McMillan asked General Schriever for the reports resulting from an AFSC analysis of a possible new boost glide vehicle. Dr. McMillan cautioned that any circulation of the reports outside the Air Force would require the approval of the Secretary and the Chief of Staff. (Tab 281)
20 April 1965	Dr. Wheelon advised Dr. McMillan that the terms of

20 April 1965
(Continued)

reference for the completion of the Phase I [redacted] program had now been established by Mr. Vance and Mr. McCone and were proceeding along those lines.

Dr. Wheelon stated further that during this phase of the program, CIA would have its contractors explore the feasibility of incorporating other capabilities into the design of the basic [redacted]

Dr. Wheelon stated that it was indicated that the DNRO would provide the requirements data for these additional functions to the CIA; and asked if Dr. McMillan could provide this data within the next two weeks so that CIA could definitize the work statements along appropriate lines.
(Tab 282)

21 April 1965

Dr. McMillan informed Mr. Vance that "rumors indicate that CIA is making full preparations for an early move of the Satellite Operations Center to Langley."

Dr. McMillan explained that this remained a relatively harmless and internal game at the moment, but that issues would come into the open on or about 1 May since financial plans were due on that date.

Dr. McMillan indicated that the CIA plan would call for full funding of CORONA through the CIA, as well as, the development of a new general search system.
(Tab 283)

22 April 1965

Dr. Fubini outlined for Mr. McNamara a proposed Presidential directive on the NRP.

Key points:

1. The NRP is a single program national in character.

2. The Secretary of Defense is designated as the sole executive agent for all aspects of the NRP, including the management of all programs and the tasking of other agencies to cooperate in such programs.

3. There shall be established within the DOD, a National Reconnaissance Office to function as a separate operating agency of the DOD, to be headed by a Director, responsible solely to the Secretary of Defense for discharging the Secretary's responsibility as executive agent for the NRP.

4. The DCI is assigned the following responsibilities:

   a. As Chairman, USIB, to establish requirements and priorities for intelligence collection.

   b. To review intelligence collected by the NRP to insure that it is responsive to the requirements established by the USIB.

   c. To recommend steps for improvement of such collection.

   d. To establish a research and development organization within the CIA, solely responsive to the tasking instructions of the Director, NRO.

22 April 1965
(Continued)

e. To review the budget of the NRP each year before its presentation to the Bureau of the Budget.

5. The DCI should further be responsible for the prompt analysis, and reporting for appropriate uses, of the photographic and signals intelligence obtained from the NRP provided the processing and analysis of ELINT information is carried on through the NSA.

6. The Central Intelligence Agency will be responsible for providing the Secretary of Defense the security policy guidance for the maintenance of a uniform system of security procedures in the whole area of the National Reconnaissance Program.

7. The Director of the JRC shall be designated as the Director of Operations of the NRO, reporting to the Director, NRO. There shall be established within the DOD a Satellite and Aircraft Operations Office under the direction of the Director, NRO, and under the management of the Director of Operations of the NRO.

8. Subject only to review by the Secretary of Defense, the Director, NRO, will have complete authority to initiate, modify, redirect, or terminate all research and development programs in the NRP, including those carried on within all agencies in the U.S. To fulfill these functions, the Director, NRO, will establish a Director of Research and Development, at the same organizational level as the Director of Operations.

9. The Director, NRO, shall prepare a coordinated comprehensive budget for all aspects of the NRP and shall establish a fiscal control and accounting

22 April 1965
(Continued)

procedure to insure that all funds expended in support of the NRP are fully accounted for and properly utilized.

The budget shall show separately those funds to be applied to research and exploratory development, advanced development, engineering development, and operational development. CIA portion of funds for research and exploratory development shall normally approximate one-half of the total budget for research and exploratory development. The Director, NRO, shall report to the Secretary of Defense if he cannot make full use of the resources of the CIA or if the funds allotted to the CIA cannot be fully utilized.

10. The Secretary of Defense shall endeavor to maintain a close and continuing cooperation with the DCI.

11. The Secretary of Defense shall insure that personnel of the CIA are given an opportunity to participate in the work of the NRP by direct assignment to offices working under the direction of the Director, NRO. In this case, these personnel will serve solely under the direction and supervision of the Director, NRO, while so assigned.

12. As an interim measure, the CIA shall continue the management of the OXCART program under the direction of the Director, NRO.

13. Following development, the responsibility for the operational use of the OXCART and related facilities shall be controlled by the Director, NRO.

(Tab 284)

23 April 1965

A DOD talking paper on the NRO organization outlined two important issues:

1. Direct responsibility for the Satellite Operations Center was an essential element of a strong centralized management of the NRP. This issue was not addressed directly by the PFIAB report; it appeared explicitly in the Fubini draft directive.

2. Assignment to the DOD of responsibility for satellite systems -- their "management, over-all systems engineering, procurement and operations" -- as recommended by the PFIAB, was also essential for a strong and effective NRO.

The recommendations included:

1. That the Fubini draft directive (22 April 1965) be used as a basis for redefining the charter of the NRO.

2. That the assignments of responsibility recommended by the PFIAB be implemented.

(Tab 285)

26 April 1965

The Land Panel issued its report on the 23-24 February study of FULCRUM and two other similar proposals. The Panel addressed itself chiefly to the following questions:

1. How confident can one be that the device shall meet the performance goals?

2. Are there critical technical problems in any one of the proposed systems the solution of which is not in hand?

26 April 1965
(Continued)

3. Is there a likelihood that unforeseen technical problems will be encountered in carrying a particular design to completion and operation?

4. In the light of one's judgement on the preceding questions, how great is the risk of serious delays in reaching operational status and assured operational reliability?

Key points:

1. An earlier study of FULCRUM had singled out certain key technical problems whose solution was necessary for the success of the device--among them:

   -- High speed film transport

   -- Multiple passages of the same film strip

   -- Rotational stability connected with loading and unloading of very large spools

   -- Reliability of the cut and splice operation

The Panel felt that very significant progress had been made in answering some of the questions, i.e.:

   -- Mechanical aspects of rapid film transport appeared to be under control

   -- A less tortuous and tricky film path had been worked out

   -- The dynamical problems inherent in the earlier configuration were circumvented in the new design

26 April 1965
(Continued)

2. Many questions of earlier concern remained open

   -- Effects of the real space environment on film transport

   -- Reliable control of the dynamic balance in the spools throughout a mission

   -- Reliability of the cut and splice operation

3. If there were no acceptable alternative to the FULCRUM camera system, a continued vigorous development of the concept would be thoroughly justified.

4. On the assumption that a 120° scan is not an overriding requirement, this unique property of FULCRUM does not outweigh the risk, namely that the novel and difficult problems which still remain cannot be all solved on schedule, and probably at this stage cannot all be foreseen.

5. The other two systems are more conventional in concept and represent a relatively short evolutionary step from present practice.

6. Unless the 120° angle is an absolute requirement, it appears to the majority of the Panel that in this program a revolutionary development is not necessary and that an evolutionary approach, with its much smaller risks is the wiser choice for the next addition to the national reconnaissance capability.

7. A minority (of one) position: "Although this system (FULCRUM) may not be optimum, the good progress to date and the more thorough

26 April 1965
(Continued)

system analysis which has been done on this system compared with the others, justify at least tentative authorization for full-scale development. It should be remembered that any of these systems, at anywhere near the claimed cost, will actually save money over the present operations, in addition to contributing greatly to the national security." His view was that a contractor judgment that this system is less than optimum is less relevant than the same contractor's judgment that the system is feasible.

8. Two members stressed the potential value of new techniques for film transport, thermal control, and optical scan, and would regard any recommendation to abandon the whole FULCRUM approach as, at best, premature.

Panel Conclusion: "The investigation undertaken in FULCRUM was valuable, informative, and stimulating, even though it does not seem prudent to push FULCRUM as a whole to conclusion. Far from regarding FULCRUM as something that should not have been undertaken, we feel it is exactly the kind of investigation that will be repeatedly needed and that its scope is probably the necessary one for evaluation of any worthwhile fresh approach."

(Tab 286)

26 April 1965

The CIA proposed an "Agreement for Reogganization of the National Reconnaissance Program."

In a preamble were set forth some basic assumptions which would determine the appropriate organization. These included:

26 April 1965
(Continued)

1. The national character of this intelligence enterprise must be maintained through a joint endeavor on the part of DOD and CIA.

2. The potentialities of U.S. technology must be aggressively and imaginatively exploited to develop systems for the collection of intelligence which are fully responsive to intelligence needs and objectives.

3. Scheduling and targeting of satellite and manned aircraft reconnaissance missions over denied areas shall be the final responsibility of the DCI and the USIB.

4. A new organizational framework is required which will a) provide a clearly established delineation of the roles and responsibilities of components of the Government engaged in satellite reconnaissance operations and systems development and b) ensure effective coordination of these activities under centralized policy guidance and control.

As an organizational framework, the CIA proposed version of an agreement called for an Executive Committee, consisting of the Deputy Secretary of Defense and the DCI, to formulate, guide and regulate the NRP. Specifically, the Executive Committee would:

1. Establish an appropriate level of effort for the NRP.

2. Approve or modify the consolidated NR program and its budget.

3. Acting through the D/NR, allocate responsi-

26 April 1965
(Continued)

bility and the corresponding funds to CIA and/or DOD for research and preliminary design studies for new systems.

4. Allocate development responsibilities and the corresponding funds for specific reconnaissance programs to DOD or CIA, and establish guidelines for mutual support where appropriate. It would be free to use technical advisory groups as necessary.

5. Assign operational responsibilities to either DOD or CIA for various types of manned overflight missions, subject to the concurrence of the 303 Committee.

6. Review periodically the essential features of major program elements of the NRP.

A Director of National Reconnaissance (D/NR) would be appointed by the Secretary of Defense with the concurrence of the DCI. The D/NR would serve a four-year term and would be selected by the Secretary of Defense and concurred in by the DCI from CIA, DOD, or from other sources. He would be responsible to and carry out the directives of the Executive Committee. He would devote his activities exclusively to the NRP and would have no other official duties. Specifically, he would:

1. Provide a single point of integration for the planning and budgeting of the NRP and would be responsible to the Executive Committee for the execution of the program.

2. Be kept fully and completely informed of all reconnaissance activities in CIA and DOD.

26 April 1965
(Continued)

3. Schedule the use of the space launching, tracking and recovery facilities.

4. Review budget proposals submitted by appropriate elements of CIA and DOD and prepare and submit a consolidated budget for examination and approval by the Executive Committee.

5. Ensure the flow of funds from the NRP appropriations to CIA and appropriate DOD elements in lump-sum transfers each fiscal year.

6. Deal with the operating head of the CIA or his designated alternate on all matters of policy, coordination, or guidance. He would not exercise command control over subordinate elements of CIA or its personnel; however, the DCI would insure that the fullest measure of cooperation was afforded the D/NR.

7. Sit with USIB for the matters affecting the NRP.

8. Appear before the 303 Committee to the extent desired by the DCI or the Deputy Secretary of Defense to secure approval for overhead reconnaissance missions.

To insure that the NRP was truly a national entity, CIA proposed that it be manned in a balanced way by personnel from DOD and CIA. An appropriate plan to rotate DOD and CIA personnel into key positions of the NRP would be developed and approved by the Executive Committee.

Other aspects of the NRP were discussed in detail in the proposed agreement. Key relevant items:

26 April 1965
(Continued)

1. Research and preliminary design--would be encouraged and supported in both CIA and DOD, by lump sum allocation at a level recommended by the D/NR and approved by the Executive Committee.

2. Systems development--would, when approved by the Executive Committee, be assigned as a specific program in whole or in part to either the CIA or DOD.

3. Satellite reconnaissance operations--would be the responsibility of the D/NR who would establish the launching schedule. DOD would create a single satellite reconnaissance operational organization which would be responsible for the launch, command, tracking and recovery phases of all satellite operations. A Satellite Requirements Program Center, formerly known as "Satellite Operations Center" would function as the responsibility of the CIA.

4. Manned overflight operation--covert manned overflights of denied areas would be the responsibility of the CIA. DOD would continue to support such operations with airlifts, tankers, and base equipment in accordance with basic U-2 and OXCART agreements. Overt manned overflights of denied territory or overt missions covering friendly territory would generally be executed by the DOD.

5. Security--over-all security policy would be the responsibility of the DCI, in accordance with his statutory responsibilities.

6. Budgeting--would be the subject of a separate NRP funding agreement to be made part of the basic agreement.

(Tab 287)

27 April 1965	Colonel Worthman and Major Yost prepared a comparative analysis of 1. The FIAB Memorandum for the President, 2 May 1964 2. The Fubini Memorandum for the Secretary of Defense, 22 April 1965 3. The CIA Proposed Agreement, 26 April 1965 The analysis compared management concepts, executive management roles, organizational concepts, functional concepts, budgetary and program review provisions and security policy among the three proposals. (Tab 288)
28 April 1965	Mr. McCone departed the CIA. Vice Admiral William F. Raborn (USN-Retired) was appointed Director of Central Intelligence. Lt General Marshall S. Carter departed the CIA and was appointed Director, National Security Agency. Mr. Richard McG. Helms was appointed Deputy Director of Central Intelligence.
28 April 1965	Addressing a suggested reevaluation of an AKINDLE proposal, Dr. Wheelon related a 303 Committee disapproval of the use of the AKINDLE concept and stated that he considered the capabilities of the [redacted] to be better suited for the [redacted] Dr. Wheelon indicated that, should the DNRO feel that an AKINDLE type stand-by capability and more experience in the high altitude balloon reconnaissance art was a desirable NRO Program, the CIA was prepared to consider a vehicle developmental program for such operations over the ZI. (Tab 289)