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**MANAGEMENT OF  
THE NATIONAL RECONNAISSANCE PROGRAM  
1960-1965**

**VOLUME V IN  
A HISTORY OF SATELLITE RECONNAISSANCE**

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## A PREFACE TO VOLUME V

This portion of A History of Satellite Reconnaissance is concerned with the creation, growth, and travails of the National Reconnaissance Program in the years between 1960 and late 1965. Events and people, causes and effects that both call for and represent "management" are its substance. Its focus is the headquarters establishment -- the staff and its activities -- although the account extends to events which bore on the central theme without being essentials of it. Mostly having to do with the management of individual programs or with technical and operational aspects of those programs, these events are treated in other volumes in this set. In particular, the background of the CORONA and GAMBIT programs and of original SAMOS program must be appreciated if one is to understand the National Reconnaissance Program.

The foundation of this account is the correspondence, reports, studies, minutes and similar records left by participants. In the jargon of historians, these are primary sources. Most are in the files of the staff offices of the Director of the National Reconnaissance Office. Some few were drawn from the files of the Directorate of Special Projects (SAFSP) in Los Angeles. The sources are abundant; the peculiar isolation of the satellite reconnaissance program has protected them

from records controllers and other silverworms of bureaucracy, while the unstinting cooperativeness of program personnel both in Los Angeles and in the Pentagon has made them accessible. In my judgment they are more nearly complete, and more comprehensive in content, than the records of any other program managed by the Air Force in the past two decades.

Where there were gaps in the contemporary papers, the participants have provided information. In the main, it has been background fill -- recollections of environment and the like -- but in some few instances either discretion or haste prevented the preparation of complete records of events and there was no alternative to relying on interviews. I have tried to treat such interview evidence critically, to weigh it against the surviving primary sources, and to use it cautiously and fairly. To the best of my belief, I was exposed to no deliberate fabrications (because of the rich fund of primary materials they would have been readily detectable) and very few reconstructed viewpoints. Faulty memory was openly admitted, an occurrence sufficiently uncommon to deserve notice.

Second, in no instance was I asked either to present or to suppress a specific viewpoint, to be selective in my use of facts, or to alter any

of the implied conclusions that all practitioners of history are impelled to state from time to time. Indeed, unless specifically asked for an opinion or a personal viewpoint, most of those involved in the program deliberately avoided interpretative analysis in answering questions. Neither facts nor documents were withheld on the grounds of their sensitivity, their personal character, or the possible consequences of their use in a history -- even a history that will have little circulation. There were, of course, records to which I did not have access, notably the internal correspondence of the Central Intelligence Agency (although I have perhaps seen more than will any other historian for a great many years). Notwithstanding that handicap, it is my belief that the events of the period speak plainly enough for understanding. Motives and intent are another matter. I have done my best and honestly believe that I have not dealt unfairly with them. It is unlikely that all those here mentioned would agree, but that is a matter best set aside.

Here and there through the narrative are scattered observations on personalities, on causes and effects, on the significance of certain events. Some are implied rather than stated. Most sponsored histories of government activities eschew all references to personalities and motives; I am persuaded that they always have at least as much

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relevance as the drab formalities of bureaucracy so often detailed, and in this case a good deal more. I have tried to strike a proper balance, but the reader must be his own judge of my success. If it is an advantage, my observations and conclusions have the advantage of being hindsight observations made by a non-participant. They are as objective as I can make them, but they are not necessarily neutral.

The first draft of this history was written in 1966. It was very modestly expanded in 1967 and took its present form through an editing process of early 1969.

One comment on the temporal span covered by this narrative: it begins with the first suggestion that a national reconnaissance program and an organization to control it were needed; it stops, but does not end, with the issuance of the third (1965) formal document defining the responsibilities and prerogatives of the national reconnaissance organization. That stopping point was selected for two reasons: first, when the third charter was issued there no longer was reason to question the permanence of the organization, though quite a lot of uncertainty about its span of authority and its relations with other agencies of government remained to be resolved. Second, in the Fall of 1965 the organization -- and the program -- acquired a chief who could be

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more concerned with continuing operations and long term plans than with organizing and solidifying the organization itself. That the principal events of later years will also be chronicled seems inevitable, but that the account will differ in emphasis and content from what follows seems equally certain.

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I

ORIGINS

The concept of satellite reconnaissance as a means of overcoming a long evident problem of national security was refined well in advance of any significant concern for its domestic or international implications. Until 1955, there was no serious consideration of how a reconnaissance satellite effort might fit into the national force structure, and apart from some generalized discussions which were accorded more amused tolerance than serious attention, there was no interest in defining a national policy on the use of space for military or para-military purposes.

The first impulse for a change coincided with significant improvements in the supporting technology and in the prospects of satellite reconnaissance. As the original WS-117L reconnaissance satellite project made a tortuous transition from concept to modestly funded development in the years 1951-1959, so did appreciation of the potential policy implications of peacetime satellite reconnaissance become more widespread. That there was no sudden or intense concern can be

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ascribed to various circumstances. First, the prospect that satellite reconnaissance might become an important intelligence resource was only of academic interest so long as there were no deployed or deployable intercontinental ballistic missiles in the world. The goal of pre-1957 programs stemmed primarily from the assumption that a satellite-borne sensor might provide a useful gross warning of impending attack by detecting troop concentrations or air fleet movements and thereafter from the Strategic Air Command's general interest in improving its target folders. In an era dominated by the doctrine of massive retaliation, cities were the main targets and bombers were the main threat. For such a military outlook, reconnaissance from space represented a useful but scarcely essential capability.

Second, in the early 1950s, there seemed little likelihood that an operationally useful satellite system could be made available before 1960. A reluctance to plan seriously for the relatively distant future characterized the outlook of operating forces, while within the research and development sector of the Air Force the reconnaissance satellite remained but one of many promising systems competing for scarce funds.

Third, the climate of Defense Department opinion was, to say the least, unfavorable for serious consideration of space programs. Neither

the Secretary of Defense nor his chief research and development advisor\* in the period 1955-1957 had any special sympathy for a program as chimerical as space flight, whatever its purported application or theoretical value. In early 1957 this viewpoint became so pronounced as to oblige the Air Force to re-title, re-document, or camouflage most of its scant space program.

Finally, from May 1955 onward, it became increasingly clear that the National Security Council and the President were committed to a policy of making space a preserve for "peaceful" activities. That such a policy was inherently incompatible with satellite reconnaissance was apparent; the alternative to abandoning the concept was a premise of covertly conducted satellite reconnaissance. There appears to have been little honest concern for the inherent incompatibility of covert operations with the "space for peaceful purposes" theme and virtually no concern for the pragmatic details of program control. Whether such a compartmentalization of viewpoints was deliberate or merely evidence of shortsightedness is difficult to determine.

The National Security Council (NSC) first took up the matter of a space policy in the spring of 1955, producing a paper (No. 5520) in

\*Defense Secretary C. E. Wilson and D. A. Quarles, erstwhile Secretary of the Air Force and Deputy Secretary of Defense.

May of that year which set forth a national commitment to the "freedom of space" and an accompanying insistence that the United States should avoid actions which would inhibit its right to act unilaterally in developing or operating spacecraft. The "peaceful and scientific purposes" theme received further reinforcement and the unilateral-right stand was weakened in November 1956 when NSC took the position that the United States should seek international agreement on prohibiting the production of "objects designed for... outer space for military purposes..." That viewpoint was imbedded in position papers submitted to the United Nations during the early months of 1957.<sup>1</sup>

Although not explicitly so stated in the documents of the time, it appears that even this early there was some hedging on the question of what "peaceful and scientific purposes" might include or exclude. Within the military, however, and particularly within the fraternity of those involved in the development of reconnaissance satellites, there arose the notion that international acceptance of the U. S. viewpoint would cause the President to forbid space reconnaissance. The concern thus aroused led to a series of proposals for the clandestine operation of space reconnaissance vehicles under CIA rather than Air Force auspices. Those who favored such an approach considered themselves

political realists who clearly understood the rationale of current and recent clandestine overflight programs. They included Major General B. A. Schriever, then head of the Air Force ballistic missile program, members of his immediate staff (including several who were intimately familiar with earlier CIA support of covert overflight programs), Mr. R. M. Bissell of CIA, Dr. J. R. Killian (the President's chief advisor on affairs of science), Air Force Assistant Secretary (R&D) Richard Horner, and Lieutenant General Donald L. Putt, then Air Force Deputy Chief of Staff, Development. Outspoken supporters of a direct, frankly acknowledged satellite reconnaissance effort included the commanders and most senior officers of the Air Research and Development Command and the Strategic Air Command, the most influential members of the Air Force Headquarters Intelligence Directorate, and (by all subsequent indications) the Air Force Chief of Staff. \*

In October 1957, the Soviets put their first satellite into orbit.

\* It is perhaps a wry commentary on the factionalism that developed in 1957 and later that the advocates of a "realistic" (by which was meant "clandestine" program) were those who had the greatest faith in the technical feasibility of satellite reconnaissance, while the supporters of an overt program tended to be most dubious about that feasibility. It is also interesting, though possibly not of great significance, that the "realists" were members of the ballistic missile clan in the Air Force and most, though not all, of the opposition discounted the missile approach.

Two months earlier, they had proclaimed the success of their early ballistic missile trials, touching off a Senate debate on the "missile gap," an issue which until then the United States had largely ignored. In consequence of these developments, the Air Force decided to forego development of a scientific satellite and to accelerate the existing, though lightly funded, WS-117L program. Somewhat hastily, and without full appreciation of the force behind the "peaceful uses" doctrine, the Air Force concluded that acknowledged overflight of denied areas by reconnaissance satellites must become accepted U.S. policy.

Coincidentally, RAND, Thompson-Ramo Wooldridge, Lockheed, and General Electric developed a pronounced interest in an interim reconnaissance satellite, one to become available sooner than the complex WS-117L vehicle. The combination of a THOR missile with one or another of several adaptable upper stages was simultaneously advocated by a variety of boards, committees, special study groups, and contractors. All were confident that a relatively simple camera system could be put together, combined with a recoverable re-entry capsule, launched into polar orbit, operated over Soviet territory, and the exposed film safely recovered.

Until that time, very little thought had been given to film retrieval from orbit by means of recoverable capsules. The contemporary WS-117L approach was entirely focused on developing exposed film on orbit and transmitting the product to earth by means of a complex electronic scan and readout system. The ATLAS-boosted WS-117L was scheduled for initial research and development operation in mid-1960; all concerned were confident that a THOR-boosted space reconnaissance system employing capsule recovery techniques could be launched by late 1958.\*

While such an approach was being evaluated, President Eisenhower urged the Soviet Premier again to accede to the "space for peaceful purposes" doctrine. If the Eisenhower thesis should be accepted and its enforcement should include both a broad definition of "peaceful purposes" and provisions for inspected enforcement, space reconnaissance would almost certainly be prohibited. Contemporary Soviet opinion was unalterably hostile to "aerial inspection" of any sort. Enforcement seemed less probable than a set of bilateral pieties, however; Russian equating of inspection with espionage had not lessened since the first coupling of the two during the abortive 1946 atomic weapons control debates in the U. N.

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\*This resume is largely based on A History of Satellite Reconnaissance, Vol I, Chapters I and II.

Thus even though an acknowledged WS-117L program had supporters, there was also some advocacy of a clandestine effort to be conducted as a parallel if not an eventual substitute program. In planning for development of an interim reconnaissance device an open and a covert effort were simultaneously considered. Copies of an Eisenhower to Bulganin open letter on international space policies <sup>were</sup> ~~was~~ released on 12 January <sup>K58</sup>; about two weeks earlier, while it was in the preparation stages, Eisenhower's chief military aide (Major General A. J. Goodpaster) and his science advisor met with Dr. Edwin Land of Polaroid Corporation, and R. M. Bissell, to consider what approach should be sponsored. They decided, at least tentatively, that satellite reconnaissance was a national essential and that as insurance against the after-effects of a WS-117L cancellation it would be desirable to create a covert program.

Generalities of a covert scheme were worked out by Colonel F. C. E. Oder, General Schriever's principal satellite program officer. He proposed the creation of an interdepartmental coordinating committee representing the Air Force, the State Department, and CIA, that group to be responsible for broad-scale planning, security, public information, and obtaining approval at the President's level. <sup>2</sup>

In the weeks immediately following, the suggestion of an interdepartmental board of governors dropped from sight. Program decisions were

made by Bissell for the CIA and Schriever for the Air Force, with considerable assists from Dr. Land, who maintained direct contact with the White House. The CIA assumed general control of the covert arrangements, acquiring immediate technical assistance through the assignment of one of Oder's principal aides, Captain R. C. Truax (USN) to the Advanced Research Projects Agency; in actuality, Truax served as Bissell's technical advisor. Within CIA, Bissell assumed personal responsibility for keeping Allen Dulles briefed on system progress. The technical approach had been defined by April 1958, at which point Dulles, Killian, and Defense Secretary Neil McElroy personally briefed President Eisenhower on the scheme. Eisenhower approved. Interestingly enough, the State Department was then engaged in refining a joint British-French-American proposal to create a body of experts to work out the details of a space vehicle inspection plan that would "assure that outer space is used for peaceful purpose only."<sup>3</sup>

The arrangements of 1958 put the bulk of policy management responsibility in the hands of the CIA and left most of the technical management details to a small group of Air Force officers at the Ballistic Missile Division in Los Angeles. The CIA let the camera contracts, although an Air Force officer served as a principal consultant on camera details. Lockheed, under contract to both CIA and USAF, per-

formed technical direction functions. The CIA handled all matters involving security, including the authority to approve or disapprove requests for access to program information. The only management problems of any consequence arose well outside the program structure, chiefly from ARPA's efforts to re-orient the covert program (now called CORONA) toward some rather variable objectives of its own choosing. Concurrently, the CORONA program fell on difficult times when the original cost estimates -- those on which Eisenhower's approval had been based -- proved characteristically optimistic. By late 1958, program expenditures were some [REDACTED] greater than the original [REDACTED]. In some degree the cost increase could be charged to ARPA's intervention, although that target was so temptingly undefended that it probably got more attention than it deserved. There are some indications that Lockheed was charging to CORONA expenses which more properly should have been itemized as part of the WS-117L budget. The entire affair was settled by Gordian means on 4 December 1958, when CORONA was set off from the remainder of the WS-117L effort, with which it had been officially associated until that time.

One justification for the establishment of an independent CORONA program (under the aegis of a "research satellite" effort dubbed DISCOVERER) was the increasingly tense international situation with

*Approved U-2*

respect to overflight. CORONA personnel believed that the President would order cancellation of the entire effort if it continued to be popularly identified with an acknowledged reconnaissance development -- WS-117L -- now called SENTRY. One product of this concern was an elaborate cover plan, a means of convincing suspicious but uninformed onlookers that DISCOVERER was precisely what it pretended to be.

Early in 1959 there arose the first of what was to be a long sequence of increasingly acrimonious squabbles over CORONA funding and management. About 90 percent of program costs were being paid by the Air Force, and so long as additional THOR's and AGENA's were needed such costs would continue. It was not so much that the Air Force could not afford the program as that concealing such large expenditures was abominably difficult. Consequently, one faction in the Air Force urged that the covert aspects of CORONA be dropped and that a carry-over program be integrated with the remainder of the open Air Force space activity. The CIA objected to any disclosure that DISCOVERER had actually been a clandestine satellite reconnaissance program. Chiefly on the argument that it was less dangerous to continue sponsorship of CORONA than to trust in Air Force discretion to conceal the Agency's original role, CIA extended its sponsorship through fiscal year 1960 and continued the covert status of the program. Although no launching

had yet been attempted, and no assurance of CORONA's utility was at hand, the basic program was expanded to include a total of 25 vehicles. Originally only ten launchings had been contemplated; the total had gradually climbed toward 20 in the first year of development effort.<sup>4</sup>

During the first six months of 1959, the CORONA program was more troubled by faulty technology than by institutional differences. DISCOVERER's I and II (which were legitimate orbital test vehicles) were modestly successful, although by a disconcerting mischance of timer operation the second vehicle came down somewhere in northern Norway rather than in the central Pacific. DISCOVERER IV carried a CORONA camera, but its 25 June launching was unsuccessful, repeating the experience of DISCOVERER III three weeks earlier. There followed more than a year of frustration as one after another of the programmed launchings and recoveries failed to come off properly. Perhaps more discouraging, telemetry records indicated that the camera system had been functioning no better than the recovery system. CIA's CORONA people were particularly discouraged. More and more openly were heard arguments for cancelling the entire effort. The Air Force program chief, now Colonel P. E. Worthman, spent a great deal of time soothing strained tempers and calming disbelievers, while Bissell trudged to the White House time after time to convince an angry and

despairing President that CORONA should not be cancelled. By the summer of 1960 he was standing almost alone against the united adverse judgement of the President's principal advisors.

On 15 April 1960, DISCOVERER XI was launched. For the first time there were telemetry indications that the camera had operated properly, but there was yet another failure of the recovery devices. The Air Staff -- or that part of it aware of CORONA -- was convinced that such a "poor man's system" could not succeed. Bissell was nearly ready to concede the point. Further unbalancing the scales was the recent course of events in the older reconnaissance program, now called SAMOS. Starting in January 1960, both General T. D. White, Air Force Chief of Staff, and General Schriever, now head of the Air Research and Development Command, had begun to talk of SAMOS and its goals in public. Although a spotty record of matching predictions with accomplishments tended to discount much of what was said, a willingness to speculate openly about the future of satellite reconnaissance raised the stock of SAMOS while depressing that of CORONA. The Air Force seemed little concerned by the fact that the United Nations had taken up the space-for-peace dirge and had by March 1960 adopted a plan providing for inspection of all space vehicle launching areas. During the first week of May, Eisenhower and Nikita Khrushchev were

scheduled to meet in Paris at a summit conference widely expected to lead to a bilateral disarmament agreement.

Into such a setting trundled that paradoxical undercover agent, Gary Powers, aboard a U-2 which began ailing well inside the borders of the USSR. Overflight of Soviet Russia by American reconnaissance aircraft became an instant sensation, debated by presidential candidates, denied, then acknowledged, and ultimately cancelled.

An untimely addition to the policy controversy stirred up by the U-2 incident was the disclosure that the Air Force had generally mismanaged SAMOS since having recovered custody of that program from ARPA six months earlier. The Strategic Air Command, designated user of an operational SAMOS, and the Air Force directorate of intelligence, were harshly critical of a gradual shift of emphasis from readout to recovery as a data retrieval technique. Most program officers were by then thoroughly convinced that readout techniques would not do the job. Budget officials were appalled at the predicted costs of a deployed readout system and loudly protested recently disclosed cost overruns in the development program. Troubled by the apparent failure of CORONA, alarmed at the declining prospects of SAMOS, seeking a replacement source for the cancelled U-2 overflight data, the Air Staff concluded that the need for early satellite reconnais-

sance results justified extreme measures. Under Secretary of the Air Force J. V. Charyk, relatively new to that office after serving first as Chief Scientist and then as Assistant Secretary (R&D) of the Air Force, heartily endorsed that viewpoint. But it rapidly became clear that to the Air Staff "extreme measures" meant acceleration of the ongoing program by providing more money and manpower, measures that Charyk and the President's closest advisors on such matters found inadequate. Before the end of May 1960, Charyk had forcefully turned the program away from readout and toward recovery. Early in June, the National Security Council solicited the advice of the Director of Defense Research and Engineering on the proper future conduct of SAMOS.

By dispensation of Dr. George Kistiakowsky, the President's Special Assistant for Science and Technology, Charyk was made responsible for the study the NSC had requested. Sensing that Air Force motives and abilities were equally mistrusted, he began to move toward the idea of a compartmented satellite reconnaissance effort controlled immediately by a senior secretarial official. He also accepted a concept advanced by Dr. Bruce H. Billings, that what was needed was a national intelligence capability rather than a reconnaissance system operated by the Strategic Air Command chiefly in support of missile

and bomber targeting requirements. Billings, in turn, had borrowed from Army and Navy arguments to the Joint Chiefs of Staff; for reasons which could be presented as dispassionate but which almost certainly included a smattering of partisanship, the other services had devoted much of the previous spring to opposing the concept of exclusive Air Force ownership of the only satellite reconnaissance system.

Dr. H. F. York, who headed the Directorate of Defense Research and Engineering, had been constantly critical of Air Force management and program concepts over the same period. York was a dedicated cynic about concurrency, particularly as it was being applied to SAMOS. He agreed with Billings that the best course for the moment would be to remove SAMOS from Air Force keeping and entrust it to some special agency created for that purpose. There were indications that he was thinking in terms of an organization reporting to his own directorate; quietly, but with some force, others suggested that the CIA should take over the best of SAMOS and combine it with CORONA. Charyk, apparently with the support of Kistiakowsky, took the view that the program could best be managed by the Air Force, but directly under the Air Force Secretary -- or Under Secretary.

Adding to the attractiveness of some such solution was the 1960 appearance of two new system proposals composed in response to newly

approved intelligence board requirements. All of the existing SAMOS techniques, even including the latest but exceedingly cumbersome E-5 recovery system, were in substantial disfavor in one quarter or another. Both of the new proposals originated with contractors other than those long engaged in SAMOS work. A clean break with the past seemed entirely possible.

Tardily recognizing the strength of the opposition, the Air Force in late June 1960 began attempting to correct its past mistakes. The unacceptable expensive and technically unattractive "Subsystem I," which had been designed as a near-omnipotent data retrieval and processing system, was radically cut back. (But it was not cancelled, though such a move would have been a far more convincing demonstration of reborn purity.) Simultaneously, General White told the Strategic Air Command that SAMOS would be an Air Force rather than a SAC system. Here was another laggard appreciation of reality; there seemed little enough chance that the Air Force could prevent a transfer of SAMOS to direct Department of Defense custody. The Ballistic Missile Division submitted a revised SAMOS development plan that accepted most of the precepts Dr. Billings had spelled out. Finally, General Schriever suggested to General White that he would be agreeable to the nomination of a highly regarded Air Force general officer to

head a new "management by exception" SAMOS program. White thought this an excellent suggestion, proposed it to Charyk late in July, and later met with Charyk to evaluate candidates. Brigadier General R. E. Greer, who had an exceptionally fine background in technology and management, a demonstrated ability to work successfully with Secretariat-level officials, and no association with any of the identified SAMOS factions, was chosen. Charyk, who by then was well along in the construction of his presentation to the National Security Council, clearly foresaw a continuing role for Greer. White and Schriever took that as an indicator of the future, reassured that "management by exception" would give Greer a role and scope comparable to that of other key program directors in the Air Force Systems Command. They took Greer's appointment to mean that the Air Force would not lose SAMOS to either the DOD or the CIA.

General Schriever apparently had sufficient confidence in the strength of his position to attempt its further improvement. Early in August he proposed a public statement covering General Greer's new assignment and including an announcement that the Air Force was the executive agent for all reconnaissance satellite developments, a generalization that apparently would include CORONA. Publication of such a statement would be interpreted to mean acceptance of its thesis.

But the planned news release did not survive review and a final resolution of the imbroglio came to hinge on the outcome of the long pending presentation to the National Security Council. Actually, the main decision was made in advance of that event: as early as 15 August, Charyk privately told Greer that the Air Research and Development Command would not retain any program management authority after program overhaul.

Charyk's presentation to the National Security Council was superbly timed. Only days earlier, the first set of CORONA photographs had been recovered from DISCOVERER XIV. DISCOVERER XIII had made a still greater impact on the public at the time of its 12 August recovery, but XIII carried flight data instruments while XIV carried film. In CIA's opinion, the prints were marvelous. The President was duly impressed. Charyk could pivot his presentation on a sparkling success -- not entirely the product of Air Force efforts, true, but a reconnaissance satellite notwithstanding.

The outcome of National Security Council deliberations on that afternoon of 25 August was a directive assigning SAMOS program responsibility to the Secretary of the Air Force. For practical purposes, that meant the Under Secretary.

During the next five days, directives enacting the approved program were drafted, approved, and circulated. Their effect was to set up a West Coast field office to service the entire Air Force space reconnaissance effort. Dr. Charyk reported directly to the Secretary of Defense in matters affecting SAMOS.<sup>5</sup> One of his first actions, in an organizational sense, was to provide for the administrative reunion of the Air Force portion of CORONA with the balance of the original SAMOS project. The resulting arrangement was more nearly a loose liaison than a structural integration, however. Its purpose was to insure some general coherence of objectives rather than to bring on a combination of programs. Most of the Air Force and some of the CIA retained the general impression that CORONA would serve as an interim predecessor of more refined systems to be developed in the course of SAMOS evolution. Although the technical approach of SAMOS and its schedules had been markedly altered in the 30 months since CORONA's gestation, no long-term CORONA program had ever received approval. Procurement plans, the best indicators of program commitment, provided for CORONA launchings until mid-1961, at which time (it was widely assumed) SAMOS systems would begin doing the assignment. The original argument for CORONA, that its covert character was necessary to offset the possibility of a prohibition on acknowledged

satellite reconnaissance, had become weaker with time and with the increasingly slight prospect of an international agreement on launching site inspection. Further erosion of that CORONA rationale had resulted from the September 1960 decision to begin an Air Force sponsored covert reconnaissance program -- subsequently GAMBIT.

Security Council approval of Charyk's proposal to establish a consolidated reconnaissance satellite program did not by any means end the agitation for a different solution. Within the Air Force, the Air Research and Development Command continued to press for a share of program management responsibility; the Army and, to a lesser extent the Navy, insisted on having a free hand in space flight areas each claimed on the basis of special prerogative; CIA was somewhat suspicious of Charyk's intentions from the onset; and State urged a policy of "responsible openness" for SAMOS operations -- coupling the doctrine to a proposal for assigning program management authority to a civilian body exempt from the control of either Defense or the CIA. The group within State that originated such views contended that national secrecy, as practiced by the Soviets, was a wasting asset. Given the potential of reconnaissance satellites, they argued, secrecy would also become a wasting asset for the United States. Apart from the obvious effort to concoct a policy that would show United States intentions in their best possible

light, State's desire apparently was to devise an approach that would encourage "acquiescence in observation satellites as consistent with the peaceful uses of outer space." The objection was, of course, that observation satellite activity once disclosed would be most difficult to reconceal. And it was an interesting commentary on the doctrinal indecision that marked the period between cessation of the U-2 overflights into Soviet territory and the beginning of consistent returns from CORONA. Finally, State's position of late 1960 took no notice of two important incidents of the abortive summit conference in Paris the previous spring. President Eisenhower had explained the American need for overflight information to his French and British counterparts in terms they found acceptable, and in the course of an angry exchange between the President and Premier Khrushchev, the Premier had proclaimed that he was concerned only with airplanes: "any nation in the world who wanted to photograph the Soviet areas by satellites was completely free to do so."<sup>6</sup> In these terms, obtaining understanding from the free world or toleration by the Russians required no such extreme concessions as those State favored.

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2. A History of Satellite Reconnaissance, Ch II; MFR, Col F. C. E. Oder, Dir/WS-117L Prog, 31 Jan 58, Subj: Establishment of the THOR-Boosted Phase of WS-117L.
3. The meeting with President Eisenhower is not mentioned in surviving documents from the spring of 1958, but is cited in correspondence between Bissell, Brig Gen O. J. Ritland (Schriever's deputy) and Col W. A. Sheppard (who replaced Col Oder as Schriever's project officer for this covert activity), on 20 Oct 58 (Msgs 2956 and 2979). No single document sums up the rather casual organizational arrangements initially established; the various sources are set down in Fn 38 to Ch II, A History of Satellite Reconnaissance. Memo, Johnson to Nitze, 5 Jun 62, discusses the British-French-American Proposal, submitted to the Soviet Government on 28 May 58.
4. A History of Satellite Reconnaissance, Ch II.
5. Details of these arrangements are included in A History of Satellite Reconnaissance, Vol I, Ch IV.
6. D. D. Eisenhower, The White House Years: Waging Peace, 1956-1961, Doubleday, 1965, in excerpt published by Washington Post, 5 Oct 65, p. A 19; the State Dept position is summarized in a draft, "Development of a Political Approach to the SAMOS Problem," dated (in ink) Sep 60, but probably written in July or early Aug 60, both reproduced in SAFSS documents, "Policy, Political and International Aspects of Satellite Reconnaissance, Sep 60 - Feb 62."

II

A NATIONAL CONCEPT

With Dr. Charyk's conception of making Air Force CORONA management responsive to General Greer there was planted the seed of a basic policy disagreement. It is reasonably clear that from the beginning of his interest in SAMOS reorganization, Charyk's goal was a centralized, consolidated satellite reconnaissance program.

The ideal may have originated in Kistiakowsky. In any case he urged it on. The principal objections came not from the CIA but from the Air Staff and command establishment. Neither SAC nor ARDC was willing to give up its anticipated role in SAMOS development and operation; coercion was necessary. Fending off ARDC attempts to intervene in program affairs or to obtain control of critical resources occupied an astonishing amount of General Greer's time during the last quarter of 1960. SAC was nearly as troublesome in other ways. Neither Greer nor Charyk seems to have given much credence to the possibility that CORONA or some descendant might become a fixture of satellite reconnaissance, so neither made any special effort, immediately, to consoli-

date his grasp on CORONA management. Newer programs seemed obviously more critical to the objective of centralized management. Nor do CORONA project people seem to have thought of the program as being particularly destined for long life.

The program taken over by Charyk in September 1960, though faulty in some of its technology, nonetheless encompassed a span of satellite reconnaissance vehicles (E-1, E-2, E-5 and E-6) theoretically capable of satisfying every general requirement yet stated, from broad search through relatively high resolution surveillance. With the quiet reinstatement of the E-4 mapping satellite, refinement of the E-6, and clandestine approval of the GAMBIT program, the spectrum was extended to include every technically feasible photographic device which could be employed usefully from orbit. The total program included two different recovery techniques and one readout method, a set of options which appeared to cover all foreseeable contingencies.

Many later difficulties in the management of what subsequently was called the National Reconnaissance Program stemmed from nothing more sinister than basic misinformation about the origins and early events of the CORONA program. Few people had first hand knowledge of what actually had occurred and they tended to be more concerned with current crises than those immediately past. In the absence of

reliable fact, there grew up an aura of myth about CORONA, as in so many strikingly successful programs that lacked precedent. And with time the myth and the paucity of fact fed the native chauvinism of some program participants to produce wildly erroneous accounts, unfounded beliefs, and mistaken convictions, none having much basis in past reality.

One of the most notorious statements of misinformation, and one representative of the breed, was registered by John McCone, successor to Allen Dulles as Director of Central Intelligence, in February 1964 -- only six years after CORONA's start and while many of the original participants still were active in some aspect of satellite reconnaissance. McCone saw 1964 problems of NRO authority and prerogatives as the outgrowths of a situation in which "... the Air Force had refused to develop the CORONA but had insisted on developing the more sophisticated SAMOS and hence CIA undertook the job and this got them into the business of buying cameras, re-entry vehicles, etc."<sup>7</sup>

Quite apart from the fact of U-2 program precedents, the issue of 1958 had not been whether to develop what became CORONA rather than what became SAMOS, but whether to develop a Thor-boosted interim reconnaissance satellite under ordinary security rules or in complete secrecy, as a covert program. Precisely the same devices -- boosters,

upper stages, and camera systems -- were considered in the two approaches, and essentially the same people would have done the work regardless of the program decision. Original Air Force interest in CIA sponsorship of (or participation in) a satellite program was motivated by apprehension that the administration would adopt a national policy on space activities that would force cancellation of the WS-117L program. A clandestine program might survive. A secondary excuse from the Air Force side -- at least in 1957 -- was the probability that CIA participation would insure the availability of adequate funds, although the projected CIA contribution was relatively small. It was also true, however, that SAC, most of the Air Staff, and much of ARDC favored readout, an expensive and elaborate data handling system, and a management approach of no great promise.

As for CIA's buying "cameras, re-entry vehicles, etc.," the pattern of CORONA management was neither greater nor smaller than that of the U-2. Brigadier General O. J. Ritland, Schriever's Deputy Commander and the senior Air Force officer intimately involved in the early CORONA arrangements, was fresh from an assignment as Bissell's Air Force deputy in the U-2 development. Ritland and Bissell took the easy and obvious course of recreating in CORONA the arrangements which had worked so well for the U-2. The rationale for CORONA's

management structure was nothing more elaborate than a reasonable desire to reproduce an effective working relationship which had existed earlier. That the Air Force had ignored the potential of the U-2 was irrelevant. Moreover, questions of how CORONA should be operated, managed, and controlled could not become issues until something more substantial than a program with a record of ten consecutive flight failures was at stake. Finally, even the eventual success of CORONA would have meant little had not improved versions been introduced -- first the C' (C-prime), then C''' (C-triple-prime), and then MURAL (a stereo version of C'''). A contributing factor, of course, was the continuing ineffectiveness and eventual cancellation of all of the SAMOS-E series projects -- with the result that from 1960 to 1963, CORONA was the only provider of photographic information on the Soviet heartland. It achieved most eminence because, in the words of Brockway McMillan, "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."<sup>8</sup>

The post-1960 arrangement of CORONA/SAMOS affairs was effective for almost precisely the reasons the earlier independent CORONA program had been: the people involved were highly rational pragmatists. On the West Coast, the principals were Colonel Paul E.

Worthman and General Greer, alike in being highly skilled program managers, in their preferences for direct and dispassionate handling of issues, and in their tendencies to rely on careful analysis. In Washington were Bissell and Charyk, each possessed of a rare ability to respect another's integrity, each more interested in end results than in transient differences, and each having a high regard for the other's ability. The only change in pre-August arrangements was to have Charyk's staff (under Brigadier General R. D. Curtin) become the focal point for CORONA and ARGON matters of concern to the Air Force, and to have Greer serve as a West Coast locus for such matters.<sup>9</sup>

One significant move toward the better utilization of overflight photographs was the creation on 18 January 1961 of the National Photographic Interpretation Center (NPIC), a centralized handling, evaluation, and intelligence dissemination establishment headed by a Director who was selected by the Director of Central Intelligence with the advice and consent of the United States Intelligence Board and the Secretary of Defense.<sup>10</sup> A second was the cessation of public discussion of satellite reconnaissance, a deliberate, gradual process which had the effect of further consolidating knowledge about the reconnaissance programs and hence of inhibiting efforts by non-participants to influence events. Stricter security was the mechanism of reform.

One goal of the more stringent security regime was to create the impression that the acknowledged satellite reconnaissance activity was no more than a continuing research and development effort -- although the real goal was to become operational as soon as possible. This pattern was strengthened in February 1961 by the establishment of special clearance procedures as a prerequisite for access to SAMOS information. (CORONA, of course, had long enjoyed such a special status.) Use of the word SAMOS (even in classified papers) was discouraged and no public statements on satellite reconnaissance were permitted without the approval of Charyk's office.

A much more elaborate plan for controlling the flow of information on satellite reconnaissance appeared late in January 1961, partly in consequence of Charyk's earlier discussions with Greer in the matter of a cover for the GAMBIT program. The purpose was to obscure all reconnaissance activity by making it indistinguishable from non-reconnaissance-oriented space shots -- or at least those managed by the military services. Implicit in the evolution of the policy was the assumption that total control of the military space program would be vested in a single agency. \* Charyk's early notion was to create

\* The security plan was originally known by the codeword CENTURY, for which first RAINCOAT and later UMBRELLA were substituted. It was formally approved and put into effect nearly a year later as DOD Directive S-5200. 13.

directly under the Secretary of the Air Force an Office of Space Projects which would be headed by a Director and Vice Director who would also serve as Commander and Vice Commander of the Space Systems Division. \* The idea was subsequently dropped, partly because it would have involved people like Greer, the obvious candidate for the director-commander slot, in the tense absorbing details of too many petty projects. <sup>11</sup>

By mid-1961 it was becoming apparent that the surroundings and conditions of the original SAMOS program arrangement had changed sufficiently to warrant both a reappraisal and a firmer definition of authority and responsibility. Apart from a particularly treacherous security problem, there was the matter of dealing with an entirely new set of Secretariat officials (except for Charyk himself), at the Defense and Air Force Department levels. And although the Air Research and Development Command (now the Air Force Systems Command) had been generally discouraged in its attempts to acquire or regain elements of authority for reconnaissance systems, both the Army and the Navy were reactivating their interest in obtaining direct control of individual programs. In the case of the Navy, the problem was relatively minor; small electronic intelligence payloads were the

\*In Los Angeles, at the site of the Air Force Ballistic Missile Division.

stake and there was abundant evidence that the Navy would settle for a role in the development process without haggling over broader authority.

The Army position was significantly harder than had been the case in August 1960. ARGON, the Army-sponsored mapping satellite program, relied on the same launching and orbital vehicles as CORONA, although the programs were managed independently. Inter-relationships were increasingly complex, particularly in the matter of scheduling payloads for the still limited supply of launching vehicles. Then there was the interest of the Army mapping people in exploiting the products of SAMOS and CORONA flights. Unrealistic though it seemed to many of the CORONA people, the Army wanted to use CORONA-derived photographs as the basis for large scale charts. Finally, the artificial separation of mapping and charting responsibilities from the remainder of the satellite camera program was causing increased friction between the Army and the Air Force. The mounting coordination difficulties promised to become more pronounced still as the Army moved toward acceptance of a new mapping camera system (TOMAS/VAULT) tentatively scheduled for Army management. The Army proposed to control the program through its own establishment, tasking the Air Force in such items as boosters, orbital vehicles, and launching services. The

prospect of having to support a semi-autonomous program through participation in a tri-service coordinating group had few attractions in its own right; its appeal was further limited by the near certainty that such a tactic would expose quantities of reconnaissance program information to large numbers of people who could not and should not dabble in the management of reconnaissance programs but who would be tempted to do so once they became peripherally involved.

In the spring of 1961, Dr. Charyk became sufficiently concerned about the uncertain nature of his authority and the possibility of its being diluted to take up the matter with the new Secretary of Defense, Robert S. McNamara. \* McNamara suggested that Charyk commit his problem and a proposed solution to paper and then take it to Cyrus Vance, Secretary of the Army, for discussion. Vance, generally agreeable to a consolidation of DOD satellite authority under Charyk, urged a still more comprehensive program amalgamation, one that would envelop all overflight vehicles and would provide a central font for management of the entire reconnaissance effort.

\* Major General J. L. Martin has suggested that Dr. Charyk received general instructions to "do something" about consolidating satellite reconnaissance under a single executive and that such instructions originated with McNamara shortly after his installation as Secretary of Defense. Charyk left no record of such contacts, but it is a very plausible explanation for the events that followed.

Notably, at that point the motivation was entirely intra-DOD in origin. The problems were in security and cover, control of mapping satellites, and to a lesser degree SIGINT payloads. Bissell and Charyk were working in complete harmony, maintaining their respect for one another in the process. At the operating level, on the West Coast, an equally effective if somewhat more formal relationship prevailed.

Yet there were problems in the offing. It was increasingly clear that the CORONA program would be more tenacious of life than earlier had been anticipated. In July 1960, about a month before the first CORONA film was recovered, Itek and Lockheed had first begun considering a stereo version of the "Improved" CORONA -- that employing the "C-triple-prime" camera system. Although many of the details were vague (there was some talk, apparently quite serious, of a need for film reading devices capable of working at a resolution level of 200 lines per millimeter!), by early 1961 the proposal was far enough along to suggest the need for a code name and clearance system separate from CORONA. The project was called MURAL. An investment of [REDACTED] was thought sufficient to pay for development, test, and eight flyable camera systems.

In March 1961, the proposal came to Dr. Charyk's immediate attention. He generally endorsed the idea of MURAL and recommended

that development be entrusted to "the existing management structure and control, i. e., Air Force and CIA." To the Under Secretary, the project did not appear to represent a particularly difficult problem in research and development.

If the project were carried forward, the satellite would fly contemporaneously with such stereo systems as E-5, E-6 and GAMBIT. With a possible ground resolution of six feet, it was clearly competitive with both the E systems although there seems to have been a general understanding that six feet was not a particularly realistic objective. In any case, the prospect of an extended CIA role in satellite program activity in the stead of the limited part that in earlier and more casual days had been assumed for the Agency prompted thought for the long term conduct of the total reconnaissance effort. Charyk discussed his original ideas with McNamara, Vance, Dr. J. R. Killian (the President's Science Advisor), and General Maxwell Taylor (recalled from an unwanted retirement to advise the President on military affairs). He also talked with Bissell, whose task it was to keep the ARGON program covert and who would presumably be called on to do as much for VAULT at some later date. The original Charyk proposal contemplated a general CIA-DOD agreement on the conduct of satellite reconnaissance; his object, plainly, was unquestioned authority over all Department of Defense satellites.

There was, at that point, no suggestion of a single executive for the entire overflight program; he assumed that DOD and CIA would control their own programs through their own channels, coordinating by an interaction of the senior program managers (Charyk and Bissell). One would become the director and the other the deputy director of what Charyk dubbed the National Satellite Reconnaissance Office.\* (The term "Satellite" dropped out with the inclusion of aircraft and drone vehicles in an early revision.) Each would have a small staff, the entire operation being covert. As Dr. Charyk put it, "The office would not direct anything as an office; the actions taken would be through the authority which the Director and Deputy hold over their respective agencies..."

At Secretary Vance's suggestion, and without discussing it elsewhere, Charyk put together an alternative proposal that would center the entire responsibility for the National Reconnaissance Program in the Department of Defense. He reasoned:

\*In one part of the draft plan, Bissell is clearly identified as the proposed Director, National Satellite Reconnaissance Office; in another section, there is the statement that "...the Under Secretary of the Air Force would hold one of these positions, and the Deputy Director, Plans, of CIA would hold the other." (Bissell was "Deputy Director, Plans," of CIA.)

The only way that a single person could be given complete program responsibility would be to designate a CIA official having line responsibility and authority in that Agency to simultaneously be an official in DOD also exercising line responsibility and authority in the name of the Secretary of Defense, and charged with responsibility for the complete program. This official would be Director of the NSRO and would direct CIA activities through his line responsibility and authority in that Agency and direct DOD activities through his responsibility and authority in DOD. The Under Secretary of the Air Force would be Deputy Director of the NSRO, and actions to Air Force units would be through him.

In a definition of assorted responsibilities, Charyk suggested that CIA should be "primarily responsible for program security including communications, target programming of each vehicle and covert contract administration" while the DOD was charged with "technical program management, scheduling, vehicle operations, financial management and covert contract administration."<sup>12</sup>

Obviously, Charyk's original intention was to clarify his own authority as the agent of the Secretary of Defense for satellite projects in the keeping of the three services. The inclusion of provisions for a centralized National Reconnaissance Office was in part a reaction to the conviction, shared by many members of the newly installed Kennedy administration, that CIA ineptness had brought on the embarrassing fiasco at the Bay of Pigs. Following so closely on the U-2 episode, the Bay of Pigs affair could not but heighten Presidential distrust of

CIA management. A further indicator of declining CIA influence was the January 1961 creation of a special committee (the 5412 Group) to advise the President on such matters as the wisdom of undertaking or continuing reconnaissance satellite overflights. President Eisenhower had been quite responsive to advice from Allen Dulles, for whom he had a very high regard, and from Richard Bissell, generally acknowledged to be the most capable of CIA's policy makers. Bissell, more than Dulles, was blamed for the outcome at the Bay of Pigs; mistrust thus generated tended to decrease his influence at the White House in other matters with which he was concerned -- and satellite reconnaissance was prominent among these. Hence the suggestion that DOD assume general responsibility for the entire reconnaissance effort. \*

Perhaps so sweeping a change could not have been carried through without a crisis of some sort to precipitate action. In this instance there was none. Nevertheless, Secretary McNamara resolved the issue

\*It seems probable, on the evidence, that Dr. Charyk was rather less cavalier in his alternative proposal than he could have been. Later events seem to indicate that his solution, which would have made Bissell the chief of the National Reconnaissance Program, was a greater concession to CIA than McNamara and Vance had in mind. There is no better confirmation of the excellence of personal and working relationships between Charyk and Bissell than the proposal Charyk prepared at Vance's suggestion -- and under obvious instructions to withhold it from the CIA. Nor is there a better indicator of the character of the two principals.

that had originally prompted Charyk to act by giving him "... complete authority to speak for the DOD and to determine the payloads of the particular satellites involved (i. e., reconnaissance and geodesy payloads) during the next few months." Complaints, McNamara added, should be passed to him. <sup>13</sup>

On the day following that delegation of authority, Secretary McNamara instructed Charyk to continue his discussions with Killian, Land, Taylor, Vance, and Bissell with the object of entirely resolving any organizational difficulties that promised to hamper the operations of the satellite reconnaissance effort. On 7 August, Charyk submitted for McNamara's signature a memorandum of understanding that, assuming the agreement of the CIA, would have brought into being the sort of structure suggested by Secretary Vance some days earlier. The paper explicitly designated Bissell (by his position title) as Director of the National Reconnaissance Office and Charyk (by title) as Deputy Director. It included a clear statement of function: "This office will have direct control over all elements of the total program." The program was to include "all satellite and overflight reconnaissance projects whether overt or covert" -- a definition that included "all photographic projects for intelligence, geodesy and mapping purposes, and electronic signal collection projects for electronic signal intelligence and communications intelligence."

Although "management control of the field operations of various elements of the program..." was to be exercised by Bissell for CIA activities and by Charyk for DOD projects, the central aspects of program management were clearly intended to be NRO functions.

Secretary McNamara signed the memorandum as written, but Mr. Dulles "felt that certain changes were desirable" and also favored specifying the arrangements in a letter rather than a formal inter-agency agreement. It appears that McNamara may then have had a change of heart about the advisability of entrusting the entire DOD reconnaissance program to an executive from the CIA, and there were some indications that the CIA was less than enthusiastic about letting Charyk control the CIA satellite program. In any event, when the re-drawn agreement was sent forward on 5 September it specified that Charyk and Bissell would be jointly responsible for the program.<sup>14</sup> There were no other substantive changes. Although the arrangement was administratively awkward, it was probably workable so long as the original assignees to the joint directorship remained in office.

On 6 September 1961, McNamara announced to a select group that Dr. Charyk had been named his Assistant for Reconnaissance with full authority to act for Defense in matters of reconnaissance program management. The earlier memorandum to Charyk was formally con-

firmed; the Under Secretary was charged with responsibility for all DOD photographic reconnaissance, mapping, geodesy, ELINT and SIGINT programs. A new public information policy designed to reduce the vulnerability of satellite launches to international protests was also promised. All this was a part of the formal agreement between McNamara and Dulles that officially created a National Reconnaissance Program and defined the arrangements for its manning and operation.

The only significant difference between the arrangement Charyk had proposed on 7 August and that actually approved on 6 September 1961 was the substitution of a joint executive for the director-plus deputy structure Charyk had urged. This, obviously, was a compromise of viewpoints. Charyk had no objections to Bissell's being named director but either McNamara or some members of the White House advisory staff did. Dulles (and CIA CORONA people) were not particularly enthusiastic about having Charyk exercise general control of the total effort, but Bissell had no objections. Dulles suggested the joint-executive solution. McNamara left the matter of its acceptability to Charyk's determination, and Charyk approved. So, apparently, did Bissell. Both, however, had earlier expressed the belief that a single authority, preferably a CIA official responsible directly to the Secretary

of Defense, would be the most appropriate solution. That they did not insist on such an arrangement was almost entirely the consequence of their mutual respect and a joint conviction that they could work effectively under almost any administrative shelter.<sup>15</sup>

By means of separate directives, Deputy Secretary of Defense Roswell Gilpatric and Air Force Secretary Eugene Zuckert confirmed Charyk's ultimate authority and responsibility for all DOD reconnaissance programs and his right to allocate resources to those programs. But in the larger matter of a CIA-DOD relationship, the 5412 Group proved unwilling to ratify the agreement, contending that the national reconnaissance effort was too important to entrust to divided management. The 5412 Group held out for straightforward assignment of authority to one person -- the position that Charyk had essentially predicted several weeks earlier and which he had urged on McNamara. However, Charyk's solution to the impasse -- naming Bissell to the Director's post -- was not acceptable to either the 5412 Group or to Defense. The alternative, naming Charyk, was equally unacceptable to CIA middle management.

Relatively little progress was made toward a solution during the winter of 1961-1962 because first Dulles and then Bissell left the CIA. John A. McCone became the Director and Herbert Scoville inherited

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much of Bissell's responsibility for the overflight program, although Scoville was nominally called Deputy Director for Research. \* But until Bissell actually departed in March 1962, the working relationship with Charyk remained smooth. <sup>16</sup>

\*Scoville never had Bissell's authority; the post, as Bissell had occupied it, was essentially abolished and its functions parcelled out. The decision to reorganize CIA's executive in this fashion served as a signal to Bissell that departure would not be unwelcome.

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III

THE CHARYK ERA

During the winter preceding Richard Bissell's March 1962 return to private life there were several indications of Dr. Charyk's intent to consolidate authority over DOD satellite reconnaissance projects. A draft statement of "NRO Functions and Responsibilities" prepared by Charyk's staff in November 1961 suggested the outright transfer of ARGON, MURAL and Navy-sponsored ELINT programs to the Air Force. In the opinion of the Air Force project people, there was no need for concern about the future of CORONA (by which was meant the original one-camera CORONA payload), because by then only two scheduled shots and one unassigned payload remained of the program. There was also some sentiment -- which never became enthusiasm -- for transferring ARGON exploitation equipment and the mission responsibility to the Army Mapping Service, with the Defense Intelligence Agency exercising operational control.<sup>17</sup> Desultory discussions of the basic proposal followed, involving Gilpatric and McCone, but for uncertain reasons they trailed away in December.<sup>18</sup>

Both the Special (5412) Group and the President's Foreign Intelligence Advisory Board continued to express interest in the topic through the early winter, but again, whatever objections were advanced to an early resolution of the issue were deemed sufficient and no action was taken. Charyk had by this time begun to favor consolidating all program management functions within the National Reconnaissance Office "without regard for previous arrangements." He was also convinced that funding and contracting authority had to be concentrated there and that he would be well advised to avoid giving the CIA responsibility for either the research and development aspect or the technical management of the diverse projects clumped together as a National Reconnaissance Program. He looked to the end of the original CORONA program as the beginning of a new era.<sup>19</sup>

By mid-January 1962, the revised concept of a National Reconnaissance Program had been reduced to working papers and had become the topic of renewed discussions between Gilpatric and McCone. The proposal, as drawn by Defense (actually Charyk's staff), contemplated a one-program management approach, an office headed by an assistant for reconnaissance who reported directly to the Secretary of Defense, a technique of providing joint CIA-DOD program guidance to the office chief, and a clear delegation of authority from both organizations. The

reconnaissance function would thus be concentrated in the person of the Secretary of Defense, who would act as Executive Agent for both DOD and CIA. He, in turn, would delegate it to his "Assistant for Reconnaissance." The proposed assignment included all National Reconnaissance Program projects, covert and overt, with authority over fiscal as well as technical and operational matters. A Pentagon control center for operations was part of the plan, as was a mission operations group composed of representatives from all participating agencies.<sup>20</sup>

Submitted to CIA on 17 January, the proposed charter was returned -- heavily modified -- in March. The CIA version provided for a National Reconnaissance Office which planned, developed, and monitored programs, but in which responsibility and authority for program management was exercised by either CIA or DOD as required by program proprietorship. The CIA objective clearly was an office which would insure some general coordination of independently conducted programs.<sup>21</sup> This, of course, was akin to the arrangement Charyk had originally suggested, but its effectiveness depended largely on the sort of smooth working relationship that had existed while Bissell was the principal CIA participant.

On 11 April, another version of the proposed agreement appeared, this representing the Air Force revision of the CIA submission. It restated the basic rule of NRO responsibility for managing and conducting

the entire reconnaissance program, but provided for a delegation to CIA of responsibility for administrative procurement and contracting for covert programs assigned to that agency. Whereas the CIA draft had insisted that the Agency must concur in decisions on scheduling, the Air Force version provided that the NRO Director would assign operation responsibility to the DOD or the CIA in accordance with guidance obtained from the Defense Secretary and the Director of Central Intelligence. Non-controversial statements on joint staffing and minor functions were unchanged. <sup>22</sup>

The inevitable proposal for changes arrived on 19 April. CIA accepted a premise of theoretical authority embodied in the NRO Director, but with the provisos that covert programs then in CIA hands and others assigned by the Defense Secretary and the Director of Central Intelligence would be totally the responsibility of the Agency, that CIA would fund "its own covert projects," would be executive agent for those projects, would establish NRO security policy, and would have to concur in schedules for its own projects. Operational control would be assigned to either DOD or CIA as appropriate. Moreover, CIA insisted on having a veto over advance planning for all post-1962 programs assigned to NRO. Finally, the Deputy Director, Research, CIA (Scoville), was to be responsible for seeing that the CIA assignments and related agreements were carried out. <sup>23</sup>

The exchange of drafts, modified drafts, re-drafts, corrected drafts, and substitute drafts probably could have continued for months without exhausting the ingenuity of either side. As much could not be said for patience. . . The mailing intervals were growing shorter, but there was no evidence that either party was willing to accept the basic viewpoint of the other. On the evening of 19 April -- after receiving the most recent CIA revision of the proposed agreement -- Charyk met with Scoville. Although they found some common ground, it was clear that they still were in disagreement on principles. The proposal to have Scoville become Deputy Director of the NRO, for example, led him to argue for a status as a CIA representative, rather than as a deputy to the director. CIA still insisted on having a veto in planning. At the time, and in a subsequent note to Scoville, Charyk rejected both of these points. There was some additional wrangling over details, but on 2 May 1962, agreement compromising the main points in dispute was signed by Gilpatric for the DOD and McCone for the CIA.<sup>24</sup>

In essence, the 2 May agreement conceded to the CIA the main points at issue, making that organization the executive agent for programs "already under its management" and for those later assigned by the Secretary of Defense and the Director of Central Intelligence -- to whom the Director of the NRO was made responsible. CIA was to fund

the programs it then managed and all covert contracts required in support of overt programs. CIA also had the security policy assignment. In the matter of scheduling, the key phrase was "coordination with" rather than "concurrence," as CIA had earlier urged, but operational control was to be assigned as the Intelligence Director and Defense Secretary decided, on a project-by-project basis. The phrase "coordinated with" appeared again in the definition of advanced planning functions.<sup>25</sup>

The product of nine months of wrangling was a document which compromised virtually all of the principles set down in the September 1961 Agreement (an agreement which the 5412 Group had rejected -- chiefly at the urging of General Taylor -- on the grounds of its providing an ineffective executive). The original agreement had been built in days when CIA was represented by Richard Bissell, with whom Charyk and his staff got on splendidly. Since that time the climate had changed; tempers were set by the January-March 1962 negotiations, and in some cases they were never quieted. Charyk secured a relatively strong policy statement on NRO purposes, but in other respects the CIA viewpoint prevailed. The principle of unified reconnaissance program management that Charyk had set out to establish was but vaguely acknowledged in the May 1962 document, although on some points there remained enough of a foundation to support hope for successful program manage-

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ment. The agreement provided for CIA coordination rather than concurrence, and for guidance from the two agency heads rather than direction from them, as CIA had wanted, but it remained to be seen whether a virile National Reconnaissance Program could survive the accommodation.

In a provocative footnote to the episode, McCone volunteered his appraisal of Charyk as "uniquely qualified" to become Director, National Reconnaissance Office.<sup>26</sup>

From Charyk's viewpoint, the chief shortcoming of the May 1962 Agreement was that it provided no single, central scheme for managing both those programs responsive to the desires for the Director, NRO, and those charged to the Deputy Director, who might or might not have the same viewpoint as the Director and who was only figuratively subordinate to him. A program planning activity, a central operating facility, and a permanent home for the NRO Staff were obvious requirements which had either been overlooked or diplomatically ignored when the NRO charter was stuck together.

Such matters were gently taken up at the first full dress meeting of principal NRO assignees on 22 May. \* On some questions there was

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\*Attendees included Charyk, Greer, Curtin, Col John Martin, Scoville, Col Stanley Beerli, Eugene Kiefer and Col Leo Geary, with Scoville, Beerli, and Kiefer representing the CIA.

quick agreement -- as in the matter of denying the National Security Agency the authority to develop SIGINT payloads: NRO's prior rights were quickly acknowledged. A premature assignment of processing responsibility to the Army was similarly handled. But when Dr. Scoville described his concept of the NRO as an organization which should monitor management and review changes in program scope but should not be involved in details, it immediately became clear that major differences of viewpoint had survived the signing of the 2 May agreement. CIA proposed assuming to itself full responsibility for all contracting, contract monitoring, technical aspects, and development of operational plans for the conduct of missions. The interim decision of the meeting was that such matters should be handled "in the same basic way as the satellite programs" to which they were related. Charyk emphasized that the interagency agreement made him responsible for approving all contracts, covert and overt, although the covert contracts would be let by the CIA. Scoville agreed to assign Agency procurement people to Greer's staff. Charyk made it plain that he intended to be the sole NRO point of contact with the 5412 Group, the National Photographic Interpretation Center, the Mapping Agencies, and the National Security Agency. He added that he proposed also to monitor the engineering analyses carried out by the various program chiefs -- which brought on a discussion of the need for individual agree-

ments of responsibility in each project. The new Director (though not yet officially named to the post) also emphasized that in his absence necessary decisions would be taken by the head of the NRO Staff and the head of the program concerned, that his authority would not be automatically delegated to a deputy in toto.

Although such divergencies in viewpoint gave an impression of discord, in the main the 22 May meeting (known later as the Greenbrier Conference) was harmonious. Several of the participants much later concluded that Greenbrier marked the high point of DOD-CIA concord in overflight matters.\* Charyk had outlined his intentions and his philosophy, and for the most part CIA had accepted them without much protest. He had also acknowledged, without agreeing to the CIA position, that DOD had no inherent right to participate in the management of Agency-sponsored programs.

Yet the central cause of past differences and the certain source of problems to come were not taken up, much less resolved. Charyk's conception of an authoritative director controlling the entire national reconnaissance activity contrasted sharply with the Scoville image of a cognizant director monitoring coordinated but separately managed programs. These were in no wise reconcilable viewpoints, at least in the frame of reference initially established.<sup>27</sup>

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\*Which says a great deal about the nature of relationships later on.

The fact that such sharp differences existed, that the National Reconnaissance Office was in fact far less of an autonomous and authoritative agency than was widely assumed within DOD was not reflected in the directives which officially created the organization and named Dr. Charyk its chief. Of course, these were DOD directives and of necessity they generally avoided any hint of CIA involvement in the reconnaissance program.\* But to the untutored reader they said that a truly national program had been created, that authority had been effectively centralized, and that within the structure all essentials of an effective program had been deposited.<sup>28</sup> That was an unfortunate mixture of myth, misunderstanding, and self delusion.

Dr. Charyk, stubbornly holding to the concept of a monolithic program, began moving immediately toward elimination of what he took to be the shortcomings and redundant dualities in the existing procedures. In mid-June he advised Gilpatric that the need for separate SAMOS and CORONA contingency plans had long since vanished. Should a satellite complete with either camera or film fall into unfriendly hands it would matter little whether the lens had been purchased by the DOD or by the CIA. Elimination of the public differentiation between DISCOVERER and SAMOS had been implied by the 23 March 1962 publication of DOD

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\*There was one exception.

Directive S-5200.13, the end product of the earlier CENTURY, RAINCOAT and UMBRELLA studies. The United States had never denied its intention of doing satellite reconnaissance and had never acknowledged that such activity could be construed as other than both legitimate and peaceful. The objection, of course, was that even an indirect disclosure of CIA participation in satellite reconnaissance would underscore the deception practiced in the name of the DISCOVERER project, and the "national image" would suffer thereby.

Of course, it was most unlikely that the Soviet was ignorant of DISCOVERER's real function; unless one proceeded from an assumption of Soviet stupidity -- which was scarcely the course of wisdom -- it was difficult to avoid the evidence. First and foremost, of course, was the stack of public statements dating from the early 1950's and particularly blatant in the period between November 1959 and December 1960. In September 1961, the Honolulu Advertiser had casually published a detailed description of the CORONA capsule (although not so identified of course), complete with weights and dimensions, and had speculated on its reconnaissance application. Pravda Ukrainy, in March 1962, devoted considerable space to the SAMOS project, summarizing most of the publicly released information and drawing appropriate conclusions. The London Daily Mirror of 5 March 1962, had announced the recovery "yesterday" of reconnaissance photography via a DISCOVERER capsule --

incorrectly, as it happened, because that particular shot had ended with parachute ejection failure -- and had added that "America has been flying spy satellites over Russia since a U-2 spy plane... came down over Soviet territory in 1960." There were many other examples, and while the average American who did not set out to collect indicators of overflight activity might not be aware of their frequency, no more than a moderately capable clipping service was needed to provide overwhelming evidence of both intent and event.<sup>29</sup>

Charyk assumed, very reasonably, that no prospective foe of the U. S. was likely to go on believing that satellites carrying CORONA equipment were actually performing scientific research.\* He was convinced that the United States should not in any way compromise its freedom to use observation satellites at times and in ways of its own choosing -- a position somewhat at odds with that maintained by the State Department. In the early months of 1962, State had campaigned urgently for Presidential endorsement of a comprehensive orbital-object registry system, one that acknowledged the purpose of each vehicle upon launch. Individuals within State, apparently with the sup-

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\*Nor was there a serious effort to convince anybody that recovered DISCOVERER capsules actually returned valuable scientific data.

port of senior officials there, had argued for a policy of disclosure-- open acknowledgement of SAMOS being one element. In February 1962 an alarmed Charyk had the Air Staff prepare a position paper that emphasized the peaceful nature of space surveillance and opted for a continuation of the "no comment" doctrine. State hoped to "legitimize" reconnaissance satellites, to obtain international endorsement of their use. The best response was provided by Brigadier General R. D. Curtin, Charyk's chief of staff, who in April 1962 wrote:<sup>30</sup>

...it is certainly not obvious that moving toward "openness" in reconnaissance will "legitimize" this activity at all; in fact, it may have the very opposite effect through provoking other nations. There is no technical or scientific reason to take reconnaissance or mapping photographs of the earth from satellites except as an inferior substitute for aircraft in those areas where aircraft overflight is denied. The more this is discussed, the more this fact will become apparent.

Curtin's remarks, accompanied by the position paper Charyk had ordered, went to State, CIA, and the JCS in April and was favorably considered by the Special (5412) Group immediately thereafter. Late in May the National Security Council produced an action memorandum that led indirectly to the creation of a new high level "Ad Hoc Interagency Committee" to consider the entire question of national policy in the matter of reconnaissance from space. On 10 July 1962, the Ad Hoc Committee (which never officially acquired another name) submitted to the National Security Council a set of

eighteen recommendations, adopted with but one minor modification. These, inevitably referred to thereafter as "The Eighteen Points," firmly committed the administration to a policy of continuing the existent tactics for managing satellite reconnaissance matters. Although on the face this seemed a negative reaction, in actuality it represented the first positive NSC action since August 1960 to reconfirm the object of and approach to satellite reconnaissance.<sup>31</sup>

Concealment of much was unlikely, denial was pointless, even for CORONA. As much had been conceded when the program began returning photographs in 1960. There was even less likelihood of hiding many of the programs that stemmed from the original SAMOS effort, unless GAMBIT might be successfully camouflaged. (Unfortunately, GAMBIT's only real cover was the cultured impression that it involved some sort of bombs-in-orbit work, an inappropriate entry in the international satellite list. In any case, GAMBIT was a highly classified rather than a covert program.) In arguing for the consolidation of contingency plans, then, Dr. Charyk was but trying another approach to his unchanging goal -- a totally centralized reconnaissance effort. So the proposal was interpreted, in any case.

Consolidation of contingency plans was but one route to the construction of a centrally controlled national reconnaissance program.

Operating procedures were another. As early as June 1962, Dr. Charyk began urging the centralized handling of mission planning, on-orbit target programming, and approval of mission targeting options. (He had earlier discussed the matter with Bissell, but to no effect.) He considered such functions to be natural responsibilities of the NRO Staff. Dr. Scoville's views were on record; they differed sharply from Charyk's. By late June, the basic question had reached the President's Foreign Intelligence Advisory Board (FIAB). It was there considered in the context of the May agreement, with consequences that promised an improvement in the existing situation. FIAB advised the President that

... the actual structure of the documents [of agreement between DOD and CIA] is inadequate to support an efficient organization when the present experienced and distinguished group moves on to other tasks. We therefore recommend a continuing study of a more satisfactory permanent documentary basis for the NRO with particular references to existing NSC directives with which the present NRO plan may be in conflict.

President Kennedy endorsed the recommendation without comment. McGeorge Bundy, his Special Assistant in these affairs, advised McNamara and McCone in early July that a report of progress

in carrying out the recommendation was wanted by 15 September.<sup>32</sup>

McCone and Gilpatric sat down together on 10 July to discuss the matter in detail. Gilpatric took the position that the only way to satisfy FIAB and Dr. Killian (who, with General Taylor, was generally credited with having fostered the resolution) was to incorporate in a new agreement the basic provision of the January 1962 draft which made the Secretary of Defense executive agent for both DOD and CIA in all aspects of the National Reconnaissance Program. He suggested that the general counsels of CIA and DOD collaborate on an appropriate supplement to the existing charter.<sup>33</sup>

There survived in NRO files no indication of McCone's reaction either to the Bundy memorandum or the meeting with Gilpatric. But in late August and early September, Scoville proposed (or announced, the difference being entirely academic) three de facto alterations of the arrangements earlier made. First he told Charyk that CIA would continue to go directly to the 5412 Group on matters concerning ongoing projects -- which was further interpreted to mean that neither new subsystems nor "unusual risks" were involved. This, of course, ate at the heart of the stand Charyk had taken during the 22 May meeting and in a subsequent memorandum to Scoville.<sup>34</sup>

Interestingly enough, there was on record one item of correspondence in which Scoville almost totally endorsed the concept of NRO functions sponsored by Charyk. Writing to the Bureau of the Budget in late June 1962, Dr. Scoville observed that:

One of the main responsibilities of the recently activated National Reconnaissance Office (NRO) is to determine the U. S. program for various platform and sensor combinations to satisfy overhead reconnaissance intelligence requirements as formulated by USIB. The DNRO will assign to either CIA or DOD the development and operation of the desired systems.\*

Second, only weeks after having endorsed the concept of a dominant NRO, Scoville substantially and significantly altered his viewpoint. He suggested that his status be changed from Deputy Director, NRO, to Senior CIA Representative reporting to the Director, NRO, with responsibility extending over the entire spectrum of the reconnaissance program. A separate director of "Program B" (the Agency-managed program) should, he suggested, be named -- preferably the Assistant Director of Special Activities for CIA. This, of course, ran directly

\* Italics added. This set of remarks apparently was not seen by Charyk at the time. It is interesting because it indicates that at one point Scoville and the CIA fully accepted the notion of a monolithic NRO -- but a commitment to a given position tended to be impermanent so it probably has less lasting significance than one would ordinarily attribute to it.

counter to Charyk's idea of an NRO with "operational responsibility for the entire effort."

Third, Dr. Scoville also urged a changed budget procedure. He and Charyk, he said, should review the individual programs together and recommend that executive management of additional programs be transferred to the Agency. The CIA would then defend its own part of the budget, which would thereafter be controlled by Scoville "in accordance with approved programs." He also went on record as opposing Charyk's decision to have the CIA let covert contracts for programs not under its exclusive control. Widespread use of CIA techniques by the Air Force, he argued, would bring the entire procedure under the scrutiny of the Bureau of the Budget and Congress.

When Dr. Charyk showed no special enthusiasm for this line of argument, Scoville reopened the question on slightly different grounds. Maintaining that CIA's special obligational authority should be used only "as necessary in order to carry out CIA's responsibilities," he contended that it was inherently undesirable for the Agency to "assume the responsibility for covert procurement for projects GAMBIT and [REDACTED]" But in a meeting with Charyk on 1 October, within a month of Scoville's second rebuff of the consolidated

procurement idea, McCone agreed to CIA assumption of all covert procurement responsibility. Charyk, of course, was delighted. 35

The procurement policy matter was not at all an academic issue. In July 1962, shortly after the Agency had indicated that it would station a CIA procurement expert in General Greer's office, the West Coast group had worked out a clever cover arrangement and had otherwise provided for the assignee all that he needed to assume the specified duties. All, that is, except means for obligating the money needed to support Eastman Kodak and General Electric in their covert contracts under GAMBIT. Theoretically, 1 July of each year was the date for funding action, although in practice it was not uncommon to have all of July and part of August pass before details were worked out. In any case, General Greer's organization withheld the local funds authorization in the expectation of having the money transferred to the CIA for commitment. On 8 August, after four weeks of waiting for word, Colonel J. H. Ruebel (of General Greer's staff) wired Colonel Martin a request for information on the progress of the funding negotiations with CIA. Martin replied that Charyk had certified to the CIA that the expenditures were approved and authorized, as provided in the May charter. Nothing more happened. By 11 September

the funds earlier made available to EK and GE had been exhausted and one vital contract stood unsigned. General Greer urgently requested that either funds be released to his CIA procurement officer or that his own organization be provided the necessary money.

Again nothing happened -- except that Dr. Scoville objected to the premise of having CIA handle covert procurement for GAMBIT and [REDACTED]. Not until his October meeting with the CIA's director was Dr. Charyk able to obtain a commitment to honor the terms of the 2 May Agreement.<sup>36</sup>

The process of setting up an operational control facility in Washington in close proximity to the NRO Staff, which had also been specifically proposed in June, depended in large part on having CORONA-experienced people assigned. (This implied transfers from the Langley (CIA) station, then used.) The CIA in August registered agreement with the concept that the facility should be located in the Pentagon but begged the main issue by suggesting an enlargement of the CIA's covert control station at Palo Alto and by urging that General Greer's office contribute a substantial share of the manpower (and Dr. Scoville seized the opportunity to emphasize that the operation of "other than satellite programs" would not be affected by the new

facility). Dr. Charyk accepted these reservations philosophically, asking only that an individual be designated immediately to serve as deputy to Colonel T. J. Herron and to have complete responsibility for functioning of the facility.<sup>37</sup>

As had been the case with the procurement policy issue, the matter was ultimately settled in a meeting between Charyk and McCone during which McCone swung around to acceptance of Charyk's arguments. Although the outcome was of considerable immediate benefit to the objective of a consolidated national reconnaissance program, it caused a worsening of relations between Charyk and Scoville. Scoville was convinced that Charyk would not negotiate in good faith, while Charyk concluded that he had a better chance for concessions when dealing with McCone rather than with Scoville. Perhaps more important to the course of future negotiations, the episodes demonstrated that McCone's behavior was not entirely predictable. In the control center case McCone had specifically and emphatically taken the initial position that a central control point in the Pentagon was not desirable. Almost immediately thereafter, he formally acceded to Charyk's position, which ran directly counter to Scoville's. He had similarly agreed with Scoville in the matter

of a procurement policy before acceding to Charyk's quite different suggestions. In neither case did Scoville take a stand in negotiating with Charyk without first assuring himself that he had McCone's support. But he had learned not to be too confident.

In the summer and fall of 1962, Charyk and Scoville reached agreement on several issues, mostly minor, only to have their agreements negated by McCone's refusal to accept Scoville's judgment. In each instance, Scoville was obliged to contact Charyk and advise the NRO Director of his withdrawal from the agreement. To Charyk, who apparently was not aware of McCone's contribution, these episodes represented evidence of Scoville's flightiness. Thus Charyk came to believe Scoville insincere and Scoville thought Charyk a hypocrite. The tone of their exchanges sharpened. The immediate cause of the differences, though not of the basic difficulty, was McCone -- or McCone's vagrant notions on the management of the reconnaissance effort.

By late September 1962, six months after signature of the work-

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ing agreement that made the NRO an operating organization, it was quite clear to all concerned that the arrangement was not effective -- or that it was not being honored in its essentials, which came to much the same thing. Dr. Charyk, with the apparent support of the 5412 Group and FIAB, had struck out for an authoritative, autonomous agency with effective one-person executive authority over all satellite reconnaissance programs. That objective had been severely handled in working out the 2 May 1962 agreement. Nevertheless, with the appearance of the May 1962 directive it appeared that Charyk had obtained a modest part of what he had sought -- at least an entrée to wider vistas. He considered the NRO to be an operating agency with relatively broad prerogatives, chiefly qualified by a limited authority over covert programs in the keeping of the CIA. A key element was the responsibility for National Reconnaissance Program funding, charged to the NRO Director. Another was responsibility, similarly charged, for dealing with other organizations, particularly the United States Intelligence Board. (Charyk had early attempted to set down the principle that the advance approval of the NRO Director would be obtained before any matter bearing on NRO activities was processed to higher authority.) Although USIB had pointedly urged a

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further strengthening of NRO authorities as early as July 1962, the succeeding three months saw an intensification of CIA's resistance to the far less comprehensive powers then assigned to the NRO. Nevertheless, Charyk had determinedly pushed to make the organization functional. Although he had not succeeded in inducing CIA to accept either the principle or the practice, he had successfully averted a surrender of any meaningful responsibility and he had won on some key issues.

On the morning of 5 October 1962, CIA Director McCone left with Secretary McNamara a proposal for revision of the 2 May agreement. A key element involved the creation of a National Reconnaissance Planning Group -- consisting of McNamara and McCone -- which would make final decisions in those matters of procurement policy, program guidance, and managerial direction of the National Reconnaissance Program which did not require Presidential approval. In the matter of financial management, McCone urged that the NRO Director have no more than review and approval authority for the total reconnaissance program budget and de jure authority to approve the transfer of DOD funds to CIA as decided by the planning group. <sup>38</sup>

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After carefully examining the proposal, Charyk advised Gilpatric that he was flatly opposed to the substitute statement on financial management and that he felt other "minor" changes were more significant than they seemed. In the matter of the National Reconnaissance Planning Group, he offered no objections. But he pointed out the vital importance of having management direction go to the NRO Director rather than to the Planning Group.

The key changes to which Dr. Charyk objected would have certified CIA independence of NRO authority and would also have diluted that authority substantially by altering the funding provisions. Charyk insisted that the NRO had to have the authority to budget for and administer funds of the entire reconnaissance program, using CIA as its executive agent in specified projects. He was equally insistent that funds should be made available to CIA from an Air Force-funded allocation on a project basis, rather than an Agency basis. He objected also to changes which would have reduced the authority of the NRO in matters involving engineering analysis. 39

Apparently concluding that there was no immediate hope of securing Charyk's agreement to a major revision of the NRO charter

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and no way of inducing DOD to accept it without Charyk's approval, the CIA took another tack. In mid-November McCone submitted for McNamara's signature a letter to the Director of the Budget recommending the direct release to CIA of all funds required for the conduct of covert satellite projects. Stung anew, Dr. Charyk impatiently told Gilpatric that "if the NRO is to function it must be responsible for continuous monitoring of financial and technical program status, must control the release of funds to programs and must be able to reallocate between NRP programs." (Charyk also concluded that Scoville had originated the proposal; in actuality, it was composed and submitted without Scoville's knowledge.)

At that point, the NRO Comptroller had advised CIA that funds were available on a project basis although CIA had not requested their transfer -- insisting on having the total allocation without any restriction on its application. Charyk was ready to release funds "as requested and justified" and believed the Bureau of the Budget to be sympathetic to his position. Rather than accept the principle of NRO control, CIA was using funds from uncontrolled sources to support its NRO-assigned programs -- a practice which Charyk believed to be in direct violation of law and which certainly ignored agreed procedures.

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On its face, McCone's November proposition appeared to be somewhat more considerate of the NRO than earlier CIA recommendations. But in making the NRO a coordinating agency without a significant voice in budgeting for any program of which CIA was the executive, the proposal would have neutered the NRO. CIA would be authorized to "explain and justify" "its portion" of the total NRO budget and would have had an excluded-from-review custody of "its own reconnaissance appropriation." As for the program review process which Charyk deemed a sine qua non, the McCone proposal would have prohibited any use elsewhere of funds appropriated for CIA projects.<sup>41</sup>

In the period when these proposals were being forwarded and contested, the United States went through the Cuban missile crisis. Along the way, and over the violent opposition of the CIA, the bulk of the U-2 force was withdrawn from CIA control and transferred to the Strategic Air Command. The move was urged on McNamara by the Air Staff, supported by the Joint Chiefs and the 5412 Group, and approved by President Kennedy.<sup>42</sup> That issue, the emotions it aroused, and the mounting intensity of the controversy over NRO prerogatives brought to the surface the ill-concealed and rapidly

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accumulating personal hostility of Scoville and Charyk. Although Scoville had been designated Deputy Director of the NRO in June, he had never taken up quarters -- part time or otherwise -- in the Pentagon. By late October 1962, he and Charyk were no longer willing to talk directly to one another; written correspondence from one to the other, even of the most formal kind, stopped shortly thereafter. Their differences were fundamental, arising in the deep personal commitment of each to an organization and of each organization to a concept. Scoville was the embodiment of CIA esprit de corps in an organization which -- with considerable justification -- considered itself uniquely more efficient and effective than any other element of the government. Even though relatively few of those CIA people responsible for supporting the original CORONA effort were still involved in that program by 1962, the conception of CORONA as a singularly successful CIA undertaking that produced intelligence data of incalculable value to the nation had persisted.

Again, there was considerable truth behind the legend, though it had been sadly distorted by hindsight and wishful interpretation.

In October 1962, CORONA (or MURAL) still was the only reconnaissance

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satellite program to have returned any intelligence information of value to the nation. The E-1 and E-2 had long since been recognized as the barren offspring of a faulty concept and had been cancelled. The E-4 consisted of five payloads stored in a bonded warehouse. E-5 had been abandoned after a succession of failures (although the payload had survived, somewhat modified, in LANYARD). And E-6 was nearing cancellation after a somewhat briefer but equally discouraging set of recovery failures. GAMBIT's first flight was several months away and at the moment the program was being validly criticized for excessive costs and insufficient progress. LANYARD, the only other photographic reconnaissance satellite system then actually being built for operation, was partly CIA sponsored. Scoville consequently looked on the NRO as an instrument in an Air Force effort to pirate a highly successful program after that same Air Force had miserably failed in four successive attempts to create its own reconnaissance satellites. Not unnaturally, CIA equated NRO with the Air Force, and if the Agency felt that the Air Force as embodied in NRO was an unreliable tool for performing vital functions of satellite reconnaissance, there certainly were valid grounds for arriving at that conclusion.<sup>43</sup>

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Charyk and the NRO Staff had a completely different outlook. They saw the NRO as the embodiment of a new spirit in the national defense establishment. Charyk certainly looked on the NRO as an instrument of the central government that only incidentally made use of Air Force resources. His conception of a national reconnaissance program was much more comprehensive in scope than the narrowly focused approach urged by CIA. As for results, the overhauled SAMOS-GAMBIT program had been in existence only a bit more than two years; it had yet to try its legs. E-6 was cancelled after five failures; CORONA had experienced ten over nearly three years before the first success. In their own way, Charyk and the Air Force project directors were as fiercely confident of success as had been their CORONA predecessors. They acknowledged -- indeed, emphasized -- a point that CIA ignored: that the actual development of the "CIA satellites" had been largely managed and manned by Air Force officers. Charyk certainly came to resent, bitterly and personally, the constant angry resistance to procedures he saw as sensible and necessary. He particularly resented the repeated attempts to bypass him in matters concerning the NRP and to carry distorted versions of his actions to his DOD superiors.

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And Scoville simultaneously experienced precisely the same reactions in viewing the main issues from his CIA post.

The CIA had originated, largely in the U-2 program, a uniquely efficient technique of contract negotiation, contractor selection, and program management. Whether the technique was applicable to large programs did not matter; none of the CIA programs was "large" in the perspective of counterpart Air Force programs. Certain of these techniques had been adopted -- enthusiastically -- by the NRO-owned sector of the Air Force. There was little question that the Air Force variants on such practices were less extreme and hence inherently less risky than the originals; they were also somewhat more formal and cumbersome. From the viewpoint of the NRO, the best of what had been learned in CORONA and the U-2 had been built into NRO procedures; much of the management had been entrusted to Air Force people from the beginning. The CIA had developed, with time, a feeling of historical proprietorship in CORONA and its descendants; the NRO saw the same programs as obvious and natural parts of a larger national activity populated mostly by members of the national military establishment.

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There lay the basic difficulty. It was exacerbated by personality conflicts, particularly pronounced in (or perhaps represented by) the Charyk-Scoville case. That nothing of the sort had occurred while Bissell was the chief CIA spokesman perhaps had less significance than seemed obvious; until after Bissell's departure, there was relatively little to contest -- no NRO charter was in existence, so there could be no controversies concerning its clauses.

In no respect was the charter more than a symbol of a basic incompatibility between NRO's raison d'etre and interest in satellite reconnaissance. The problem had its origins in the Agency's sponsorship of the original U-2 program, a circumstance itself arising in Air Force reluctance to develop an aircraft so unorthodox that it stood apart from others of its design generation. There had been no equivalent Air Force reluctance in the case of CORONA, but so little of the truth of CORONA origins was know<sup>n</sup>, and by so few, that legend overbore fact.

Charyk, who was by late 1962 carrying the weight of the struggle for an effective NRO, appreciated the realities of the situation better than most. By all indications, he was making progress toward his goal of a single national authority to control both the development and

the operation of satellite reconnaissance vehicles. But in early December, he was offered a high executive post in the Communications Satellite Corporation, the pseudo-private company chartered by Congress to exploit the commercial potential of satellite-relayed communications.\* In what remained of his tour as Under Secretary, he made extreme efforts to resolve the principal issues still at stake. Thus, the control center in the Pentagon was equipped and staffed (but not immediately activated), responsibility for processing and printing recovered negatives was consolidated (it had previously been distributed among several participants and funded under a variety of ill-coordinated contracts), essential arrangements for continuing liaison with State and its associated agencies were completed, a unified security system (BYEMAN) was installed (or a start made, which served the immediate need), and the functioning of the Air Force project organization was regularized. Probably more important, Charyk again increased the pressure for a substantive revision of the May 1962 interagency agreement.

\*Rumors of Dr. Charyk's plans to leave began to circulate in the reconnaissance community in December but were not confirmed until late January 1963.

A subordinate issue that had served as a constant source of irritation since its introduction in March 1962 was a CIA-sponsored proposal to develop a re-engineered and enlarged version of the MURAL system. The scheme called for use of a 40-inch F:3.5 lens (scaled up from that used in C'') in a setting that would permit one tube of optics to serve two separate platens, producing a pano-convergent stereo effect. The cost of design and prototype manufacture promised to be moderate; CIA and Itek argued that successful development would provide a system with the implied capability of returning search-category photographs having a resolution on the order of four to five feet.

The proposal, called M-2, was formally presented to the NRO during a program review of 24-25 July 1962. If adopted, it would create a CORONA successor which, by all indications, CIA intended to manage almost precisely as CORONA was managed. Evaluation of M-2 tended to be influenced, in some degree, by that probability. Moreover, in some respects a successful M-2 development might weaken the rationale for a continuation of GAMBIT. The seeds of an exacerbative addition to the continuing dispute between Charyk and Scoville were thus planted.

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In the opinion of at least one CIA evaluator -- Eugene Kiefer -- the M-2 proposal had no more than marginal worth. Kiefer and Lt Colonel H. C. Howard analyzed the results of recent CORONA missions and concluded that improving the general quality of the photography would return higher profits than investing in a new or radically modified system. Improvements in CORONA, they calculated, could result in an average resolution of 10 feet from a 115-mile orbit (average resolution at the time was about 17 feet). The best that could be expected of M-2, allowing the unlikely assumption that no particularly difficult engineering problems would result from the required scale-up, would be on the order of 8-foot resolution. Howard felt that no decision on M-2 should be taken without a very careful preliminary evaluation. Kiefer was still less enthusiastic, noting that changes in the mechanics of camera operation and film transport were so extensive that going from CORONA-MURAL to M-2 would certainly invoke a substantial development risk. He observed that the current resolution capability of CORONA was on the order of four seconds of arc; if M-2 did no better, retaining the same level of resolution on a slightly larger photographic scale, the net effect would be no improvement. In order to obtain the four to five foot

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resolution promised for M-2, Kiefer added, the system would have to resolve one second of arc -- and there was no evidence that any system based on CORONA mechanics, electronics, and optics could better three seconds of arc for any substantive period of operating time.<sup>44</sup>

Dr. Charyk, who recognized at once the striking implications of improving CORONA so as to get an average resolution comparable to that normally obtained for only the best five percent of the film, asked Itek to explore the feasibility of such an approach. Itek in January 1963, replied optimistically. Charyk promptly advised Scoville, who responded, more than a month later, \* that such a redesign of the CORONA system did not seem warranted in light of recent improvements in films, position sensors, and automatic exposure control. He also saw the bearing of the M-2 question on the future of GAMBIT and other NRO systems.<sup>45</sup>

Although the matters in dispute might be such items of detail as precisely what second-generation reconnaissance systems to

\*Scoville and Charyk resumed their earlier correspondence at about the time Charyk's impending departure became generally known, but it was at best a chilly exchange.

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develop or such broad questions as who should prepare and defend NRO budget estimates, the central uncertainty remained the future of the NRO itself. That the organization should be disbanded seemed unthinkable, yet efforts to make it truly effective had been less than successful.

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IV

THE NRO COMES OF AGE

The NRO was, by January 1963, a fixture of a relatively young reconnaissance community that included -- in addition to such old settlers as CIA, the National Security Agency (NSA), and the U. S. Intelligence Board -- the National Photographic Interpretation Center (NPIC), USIB's Committee on Overhead Reconnaissance (COMOR), and the Defense Intelligence Agency (DIA). Although NRO had an official existence dating only to September 1961, it had in effect come into being with the August 1960 NSC decision on SAMOS and its antecedents certainly extended to the February 1958 CORONA decision. In the same month the first recovery of CORONA films had caused the creation of COMOR. NPIC, charged with the exploitation of reconnaissance products as a national resource, was a post-mortem creation of the Eisenhower Administration, dating from the month in which the Bay of Pigs crisis had begun: January 1961. DIA, a consolidation of the intelligence gathering services of the Army, Navy and Air Force, stemmed from the Bay of Pigs crisis of February 1961 and its consequences but had not actually come into being until the following August.

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DIA was manned entirely by people from the individual services and from DOD itself. NPIC drew its contingent from the Army, Navy, Air Force, CIA and DIA; COMOR representation included these plus NPIC itself and also the State Department. (COMOR was concerned with evaluating and selecting targets and setting priorities for both targets and processing.) NRO included representatives from all of the other agencies except State.

Each of these new agencies had acquired privileges and responsibilities earlier reserved either to the individual services or to the CIA, and each had been attacked ("often very severely" in the words of one ranking NRO official) by the several establishments losing functions, people, and money to the new organizations. Although the creation of the NRO had antagonized various subagencies of the individual services (notably the several mapping and cartographic divisions and the Air Force's Air Research and Development Command), effective and lasting resistance to the operation of the NRO had come only from CIA. It was based, almost entirely, on that Agency's maternalistic, proprietary feelings for satellite reconnaissance -- personified in CORONA -- and seemed to be concentrated mostly in what was called "middle management."

The October 1962 decision to put SAC pilots in the CIA's U-2s over Cuba convinced many in the Agency that "the Air Force has usurped the CIA functions by seizing CIA airplanes to fly CIA missions." The fact that SAC pilots would have their own SR-71 version of the A-11 OXCART aircraft, thus replicating the earlier arrangements for U-2 assignment, little eased apprehension. Flight scheduling and operation of satellites on orbit had been an acrimonious issue since NRO's entry into that field; the CIA had consistently refused to share any of the authority for operation of "its own" CORONA vehicles. Finally, there remained unresolved the question of covert procurement: notwithstanding detailed agreements that made covert contracting operations the province of CIA, the Agency evinced a consistent and angry reluctance to assume that responsibility for the whole of the burgeoning NRO program. The Agency desperately wanted to get back to "the old arrangement," particularly resenting any implication that it might become "a service organization." The CIA was reluctant in practice to concede the existence of a national reconnaissance program, a compact management entity; the NRO, as Charyk conceived of it, could be no less and had to be universally acknowledged as such if it was to endure. <sup>46</sup>

At the time of his withdrawal from government service, Dr. Charyk remarked that the main problem facing the NRO had become acute "only recently, with the impasse reached in late December 1962 and early January 1963."<sup>47</sup> Although that judgment was marked more by charity than candor, the NRO Director was subject to no illusions about the identity of the problem. It involved, he said, "the desired nature of the NRO and the responsibility and authority of the Director of the NRO," as well as "the internal organizational discipline essential to the repair of the present difficulties."

Replacement of the inadequate charter was, in Dr. Charyk's view, an essential first step toward stability. Clarity should take precedence over diplomacy. The agreement should state plainly that the NRO was an operating agency and that its director had actual management responsibility for all its projects. This meant, Charyk contended, that the NRO Director should have authority over reconnaissance-concerned elements of both the CIA and the DOD. He should also have complete authority in funding matters. And, harking back to the days when he and Bissell had worked together so harmoniously, Charyk observed that appointments must be made so as to insure that the responsible people "will function as an effective working team rather than as representatives of the DOD and the CIA."

Although phrased in objective abstractions, Charyk's exit recommendations were almost entirely aimed at the CIA. He protested, albeit circuitously, that the CIA's Director tended to deal with NRO through his subordinates rather than directly. He protested the Agency's habit of treating "CIA projects" as distinct from "DOD projects." (He might have added that the CIA still considered the distinction between "DOD project," "Air Force project," and "NRO project" to be a semantic matter of no special consequence.) Finally, he protested the CIA's reluctance to accept responsibility for covert procurement in support of GAMBIT and [REDACTED]. Charyk argued, quite accurately, that since the introduction of a policy of withholding all military satellite payload details there had been no "covert" programs, merely tightly classified programs. He did not add, as he could have done, that a covert satellite reconnaissance program was a fable, a pretense, extinct in the mid-1960s because the United States had long since acknowledged both intent and capability. Nor did he comment on the only obvious alternative to tight security as a cloak for program accomplishment: the use of NASA vehicles to carry clandestine reconnaissance payloads. 48

In the period when the scheduled departure of Charyk was known but while there remained considerable uncertainty concerning the post-Charyk prospects of the NRO, the Under Secretary continued to work toward revision of the May 1962 Agreement. During his last week in office, he completed revision of a CIA draft (apparently prepared by McCone's immediate staff, rather than by Scoville or his immediate associates). Dr. Charyk personally took the revision to Roswell Gilpatric, Deputy Secretary of Defense. Gilpatric, for DOD, signed a slightly modified version on 13 March. It was sent to CIA that day and immediately was approved by McCone.<sup>49</sup>

In the interim between dispatch of the draft revised by Charyk and signature of the final agreement, Brockway McMillan, Charyk's successor as Under Secretary, was named the new Director of the National Reconnaissance Office.<sup>50</sup> This action, coming as it did in the trail of widespread conjecture that Charyk's departure meant dismemberment of the NRO and reversion to the informalities of 1961, was in itself a significant indicator of the stature the NRO had acquired in its year-and-a-bit of existence. It markedly cheered members of the NRO organization, both in Washington and Los Angeles, who had seriously doubted whether the NRO would be continued without Charyk,

so closely had the Under Secretary been identified with the three-year effort to compose a coherent national program.

More important, at least at the time, was the character of the new agreement. If it did not by any means include all of the points Charyk had earlier identified as essential and did not eschew diplomatic phraseology in favor of blunt language, nevertheless, the new charter appeared to be a considerable improvement on the old. The 1962 document had given the Director, NRO (DNRO) "technical management responsibility for all the NRP (National Reconnaissance Program)"; the 1963 document made the NRO "a separate operating agency of the Department of Defense" under the direction of the Secretary of Defense, who was to be the executive agent for the NRP. Requirements for coordinating mission schedules with CIA were absent from the 1963 agreement, but so was the clause governing the assignment of operational control for individual projects. The 1962 clause giving the CIA supervisory authority in engineering analysis of projects for which it was executive agent had been eliminated; in the 1963 compact the DNRO was charged with engineering analysis responsibilities for "all collection systems." DNRO prepared and supported budget requests for all NRO programs under the new arrangement, but CIA budgeted for and supported

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"those NRP tasks which are assigned to the CIA and which are to be funded from NRO resources." In the earlier agreement, CIA had been entirely responsible for funding and supporting projects for which it had executive management authority (i. e., the previously assigned covert programs and any later additions). The formal assignment of contracting authorities remained much as before, CIA retaining responsibility for all covert contracts.

Charyk's contributions to the March 1963 compact were to insure that the Deputy Director, NRO was put in the direct NRO chain of command, that he was not made the administrator of all covert projects (as CIA had urged in February 1963), that guidance to DNRO came directly from the Secretary of Defense, and that the charter included a clause referring to "a single NRP" for which the DNRO was responsible. But Charyk's proposed statement of DNRO responsibility had included "development and operation of" a single program; the final version signed by McCone deleted the "operation" terminology. Charyk also insured that the approved charter provided against the uninvited participation of DOD and CIA staffs in project matters. Finally, and perhaps most significant, he composed and insisted on the inclusion of a broad statement giving the DNRO the authority to

"assign all project tasks such as technical management, contracting, etc., to appropriate elements of the DOD and CIA, changing such assignments, and taking any such steps he may determine necessary to the efficient management of the NRP." Taken at its face value, and employed by a forceful executive, that authorization might well permit the NRO to break through the obstacles of inertia and proprietorship. <sup>51</sup>

Some, but not all, of the most troublesome areas of controversy were eliminated in the March 1963 version of the NRO charter. A close reading of the approved document brought to light some potentially important vagaries. Perhaps more significant, the 1963 charter did not set forth the privileges and responsibilities of the NRO in the clear, unambiguous fashion that Charyk had earlier recommended. Funding authority remained divided, responsibility for operational control was not precisely assigned, and the success of the relationship between the DOD and CIA elements of the NRO could be dependent on the attitude of the individuals in the principal posts. \*

\*The Draft Agreement that the CIA prepared was altered by Charyk himself and then taken directly to Gilpatric. In the main, Charyk's additions, deletions, and modifications, were allowed to remain in the document sent to and signed by McCone on 13 March. The crucial clause covering DNRO responsibilities for operations was

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Some weeks earlier, in the midst of the furor that attended attempts to activate the operational control center in the Pentagon basement, one of the involved Air Force officers had observed that by virtue of the 1962 Agreement, "DOD... ended up splitting with CIA the proverbial horse-and-rabbit stew while agreeing to furnish the horse."<sup>52</sup> The 1963 Agreement gave DOD somewhat more of the stew.

Under the terms of the new agreement, Dr. Scoville was formally named Deputy Director of the NRO and Dr. E. G. Fubini, Deputy Director of Defense Research and Engineering, was chosen to serve as DOD monitor of NRO activities. (Scoville served as the CIA monitor.) McMillan, fully aware of the personal antagonisms that had grown up but determined to establish a workable relationship with his own counterparts in CIA, immediately broached

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altered after Charyk last saw the document -- presumably at the insistence of CIA. Although the sequence of events is uncertain, it appears that Gilpatric must have sent Charyk's draft to McCone for comments about 1 March; in the fact that McCone signed the final agreement immediately on receiving it arises the supposition that the post-Charyk changes insisted on by CIA were incorporated at some time between 1 and 13 March. Charyk, it must be recalled, was not physically on duty after the morning of 28 February (a Thursday). He did not see the final agreement before its signature.

to Scoville the specific matters that had been left hanging since the Charyk-Scoville differences had become so pronounced late in the previous year. The interchange was made somewhat awkward, however, by the fact that Scoville still indicated no intention of taking up offices in the NRO sector of the Pentagon, displayed no sign of having been reconciled to NRO's continuation, and continued to use his CIA staff for immediate support. Charyk was gone, but the institutional animosities lingered.

The underlying causes of friction were not much eased either by Charyk's departure or by the approval of a new formal agreement. The proposal to develop the M-2 high-resolution search system was rapidly becoming a test of the DNRO's authority to decide what new programs should be adopted. Institutional chauvinism intensified. General Greer's efforts to carry out DNRO instructions to exercise operational control of "CIA satellites" met steady resistance; more or less politely, but with devastating consistency, the Program B (CIA) people merely ignored any instructions from McMillan which would have altered their organizational habits. The only immediate improvement was in the matter of activating the control center in the Pentagon basement. McMillan obtained Scoville's agreement to a 1 April transfer of operational control to the complex -- which had been equipped

and waiting since early January.<sup>53</sup>

A most instructive indication of the state of affairs immediately after the transfer of authority from Charyk to McMillan was a message that went from Colonel J. C. Ledford, CIA's Program B manager, to Colonel J. L. Martin, McMillan's chief of staff. Two weeks after the circulation of copies of the new agreement, and following the receipt of a clear order from Dr. McMillan that General Greer was to exercise authority in various matters of CORONA and LANYARD operation, Ledford advised Martin that until "definitive instructions" reached him covering the area of functions and responsibilities, "it is my contention this organization has the responsibility for the development of plans and methods of operation as well as overall security." In effect, Ledford was saying with no particular subtlety, he responded to orders from his CIA superiors -- Scoville and staff -- rather than from McMillan.<sup>54</sup>

This was clearly the sort of organizational indiscipline that Charyk had complained of and which he had attempted to correct by putting the Deputy Director, NRO, in the line of command.

Another sidelight on the continuing difficulties began with a teletype message in which Colonel Ledford chided Itek and Lockheed about shifting effort from CORONA problems to various new proposals, an unwise diversion "... in the light of the recent history of failure,

increased costs and overruns on the CORONA contracts." McMillan, who received a copy of the Ledford message, was at a loss to understand the statements concerning overruns and costs. The financial statements sent him had shown no change over the previous five months. He asked for fuller details.<sup>55</sup> An explanation, if forthcoming, must have been personal, for the files contain no further references to the matter.

The M-2 affair dragged on, concern for a sudden onslaught of CORONA problems notwithstanding. Detailed presentations to a study group on the West Coast did little to resolve the uncertainty about what to develop, but the NRO Staff had concluded by early May that Itek's design involved considerably more than a "simple extension" of CORONA-MURAL technology, as the contractor contended. For the most part, the NRO Staff agreed that the system was technically feasible and that in many respects it would be a desirable outlet for the development talents of Itek, "the most successful satellite reconnaissance team in the U.S.," now that CORONA was approaching the limits of its technical evolution. But there was no consensus in the more pressing issue of what sort of system should be developed against the existing requirements, which satisfied almost no one.<sup>56</sup>

In the discussions accompanying the creation of a budget for fiscal 1964, the CIA had urged the wisdom of developing a reconnaissance satellite that could be operated covertly (a round-the-barn concession of Dr. Charyk's earlier contention that no covert programs then existed). During the spring of 1963, McCone advised Scoville that DOD had decided to put money in the CIA budget to cover preliminary studies of the covert satellite proposal. In a later conversation with Dr. Fubini, Scoville indicated his belief that CIA had been assigned responsibility for the development and that a covert satellite program had been implicitly authorized. Roswell Gilpatric, who learned of the conversation from Fubini, promptly and bluntly told Scoville it had not been his intention to confirm CIA in responsibility for any sort of covert satellite program. Scoville, obliged to defend his motives while disclaiming intent to harm, incautiously cited his chief, John McCone, as the authority for an admitted commitment of resources to a covert satellite development program. But Scoville simultaneously denied the principal charge that he had claimed CIA authority over the development and ended with a plea for a meeting to resolve the question of organizational custody. The Scoville reply was dated 14 June 1963; on the following day he resigned.<sup>57</sup> Whether the events were directly related was conjectural. However, Scoville

had more than once complained that he could not depend on assurances of McCone's support and in his reply to Gilpatric, he said plainly, even undiplomatically, that he had acted on the strength of advice from McCone. The implications were unavoidable.

A belief that Scoville's departure would significantly ease the task of operating the National Reconnaissance Program seemed warrantable. Although assumptions about Scoville's role in a long series of clashes dating from the time of Bissell's departure were almost certainly overdrawn, there was no escaping the fact of Scoville's hostility to the basic concept of the NRO. During the ten weeks of his tenure as Deputy Director, Dr. Scoville had maintained a thorough physical and a psychic segregation from McMillan and the NRO Staff. For information on NRO matters he had relied on daily briefings delivered at CIA headquarters by one of the senior officers who served McMillan in the Pentagon -- generally Lt Colonel Howard or Colonel Worthman. Although his dealings with Dr. McMillan were not marred by the undisguised hostility that had characterized the last months of Charyk's tenure, there had been no real improvement in the interagency relationships. Charyk's legacy had been a reasonably useful charter for the NRO; thus far, McMillan had been able to exploit it to his advantage in some situations in which Charyk would have been obliged to rely on personal diplomacy.

But it was also clear that Charyk's personal influence with McNamara would not be transferred and that the charter alone was an inadequate machine for some of the actions McMillan deemed essential.

Dr. Albert D. Wheelon was named Deputy Director, CIA, for Science and Technology, replacing Scoville in that post. He did not, however, succeed Scoville as Deputy Director of the NRO, or as CIA monitor of the program. The former position was filled by Eugene P. Kiefer, one of Bissell's staff in earlier days. Kiefer, who had been associated with the overflight reconnaissance program from its inception with the U-2, was intimately familiar with the personnel and the problems of the program. (He had also served as a member of the Purcell Board.) Unlike Scoville, Kiefer immediately moved into an office in the NRO complex on the fourth floor of the Pentagon. Partly at Kiefer's urging, McCone named Lieutenant General M. S. Carter (his deputy) to be CIA's monitor of NRO matters.\*

Wheelon's attitude could not be safely predicted, but since Kiefer was the NRO replacement for Scoville, there was an expectation of

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\*The decision not to make Wheelon a successor to Scoville in NRO matters was far from casual. McMillan and McCone discussed the arrangement at some length following earlier advice from McMillan that Wheelon would not be a good choice for the assignment.

brighter days. In theory, Wheelon had no program authority; in fact, Colonel Ledford, Director of Program B, reported to him within the CIA and unless established habits of Agency procedure were abandoned, would respond first to his direction. Although it was not widely known, Wheelon had been one of Scoville's few intimates in the CIA and, through that channel, was moderately familiar with the background of the controversy over NRO functions.

In any case, one development of late spring 1963 seemed to indicate that many of the past troubles of the NRO would vanish. The President's Foreign Intelligence Advisory Board (FIAB) had finally validated the March 13th agreement, characterizing it as well conceived and soundly detailed. FIAB's suggestions for changes were all in the direction of strengthening the prerogatives of the NRO, improving the continuity of its management, and clarifying the relationship between the NRO and policy-making agents of the national executive.<sup>58</sup> The implication of the FIAB report, which had received President Kennedy's approval, was that reconnaissance should become more thoroughly a DOD-managed function. To that aspect of the paper McCone took vigorous exception, pointing out that the March 1963 charter provided for joint management of the NRO (not precisely true, but not a timely subject for argument either) and that neither DOD nor CIA could take full responsibility for

the effort. Giving the assignment to CIA, McCone said, would mean transferring "vast resources" from DOD, while making DOD the exclusive agent would mean "a loss of responsibility and imaginativeness which exists in CIA and which has made many valuable contributions in the field of overhead reconnaissance."<sup>59</sup>

Still a third development was an apparent decline of interest in the covert satellite proposal which had brought on Gilpatric's rebuke of Scoville and Scoville's "...I have been misquoted" exit memo. Dr. Fubini, who had looked into the matter for Gilpatric, recommended that it be forgotten, at least for the moment.<sup>60</sup>

Fubini's report to Gilpatric had in large part been prompted by a minor misinterpretation of the conclusions of the Purcell Panel, a special reconnaissance board, sponsored by Mr. McCone, which had met early in June. \* The board had considered what system requirements should be posed for the near future. Disregarding the stated

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\*Properly the "Panel for Future Satellite Reconnaissance Operations," made up of E. M. Purcell, A. F. Donovan, E. G. Fubini, R. L. Garwin, E. H. Land, D. P. Ling, A. C. Lundahl, with J. G. Baker and H. C. Yutzy as consultants. From a variety of agencies, organizations, and corporations, the panel members were without exception "old hands" at the satellite reconnaissance business. Purcell, Garwin, Land, and Baker had previously headed special panels or boards instrumental in the formation or conduct of the National Reconnaissance Program.

preferences of the CIA's system analysts, the Purcell Panel concluded that "the natural incompatibility of wide coverage and high resolution within a given payload, is becoming more acute... as the art advances." Deciding that the coverage provided by the existent CORONA-MURAL systems adequately satisfied previously stated search-mode requirements, the panel suggested that an attempt to combine high resolution with broad search functions "would not be a wise investment of resources." In the board's judgement, first priority should go to improving the average quality of returns from CORONA rather than to developing a new, higher resolution search system. (Implications for the still pregnant M-2 proposal were obvious.) The panel made a number of rather specific recommendations for research, expressing particular interest in techniques for improving resolution and generally supported the position of NRO technical people on future system requirements. <sup>61</sup>

Largely on the strength of the Purcell Panel report, Dr. McMillan early in July issued instructions to Itek to discontinue work on M-2 and other high-resolution variants of CORONA. In the stead of such activity, the Director NRO wanted Itek to concentrate on improving the capability of the existent systems -- roughly the approach urged by Howard and Kiefer the previous summer and directed (without much effect) by

Charyk in January 1963. Scoville had also promised something of the sort in February, though there was little evidence of much progress in the interim. General Greer, who presumably would have some responsibility for the technical improvement of the CORONA system, promptly suggested that the earlier investment in M-2 development be rechanneled into CORONA improvement efforts.<sup>62</sup>

Having resolved one of the residual issues of the Charyk-Scoville era (whether witting of its existence or not), the Purcell Panel had taken on another by registering confidence in the current structure and organization of the national program. In discussing this outcome with McCone in mid-July, Kiefer and McMillan received assurances that the CIA director was quite satisfied with the establishment "as it is now constituted."<sup>63</sup> Almost concurrently, General Greer's organization completed work on a plan for a follow-on ARGON development that provided for a management structure conforming to the precepts of the new charter -- that is, with the CIA handling covert contracting and security while the project office in Los Angeles directed the technical program. Such an approach was in many respects a departure from the ARGON program arrangement that had been established in the very early days of satellite reconnaissance. It resembled, in general, the sort of structure earlier proposed by

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Charyk for all post-CORONA programs. 64

Taken at their face value and evaluated in the light of the personnel changes of the preceding weeks, the support accorded the redrawn charter, and the apparent efforts by all concerned to make the NRO both effective and harmonious in its activities, such events seemed to signal a new era in CIA-NRO relationships. Admittedly, contention had been diminished through suppression of the CIA viewpoint: activation of the satellite operations facility, elimination of the M-2 proposal, concentration on improving the average quality of CORONA returns, and reaffirmation of the authority of the DNRO (in part by Scoville's dismissal, in part through the Purcell Panel report) had done considerable violence to the feelings of the satellite reconnaissance group in the CIA. But there were no indications during the summer of 1963 that McCone had objections to, or for that matter any firm personal convictions about, the mode of NRO operation. It appeared that Scoville's departure had removed the prime source of behind-the-scenes pressure for which McCone had acted as spokesman. Certainly the summertime disappearance of agitation resembling that of the October-January period seemed to lend credence to such a hypothesis.

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A meeting between Lieutenant General M. S. Carter (McCone's deputy) and Dr. McMillan in late July provided further evidence of the trend. Though taking mild exception to McMillan's plans to expand NRO's authority in the aircraft overflight and contracting areas, General Carter seemed mostly interested in insuring a broader CIA participation in the internal conduct of NRO programs. He urged the DNRO to put additional CIA people on the NRO Staff. Although General Carter made a few unkind remarks about the inappropriate preoccupation of General Greer's project managers with launching schedules rather than the collection of intelligence, the tone of the meeting was strikingly placid.<sup>65</sup>

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Chapter IV

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V

YEARS OF ACRIMONY (1963-1965)

Although the externalities of NRO-CIA friction were less evident by mid-1963 than earlier, the apparent detente was fugitive. CIA disinterest in a strong NRO was as pronounced as ever, though perhaps displayed less prominently. Those within the Agency who had consistently urged a bifurcated National Reconnaissance Program in which the CIA was at least a co-manager with an absolute veto had not changed their views. Opposition to the concept of an NRO seemed to be concentrated mostly in the first two or three echelons below the Director and Deputy Director level of the CIA, lesser management being largely indifferent to organizational abstractions. Apparently, however, a great many Agency people did resent the NRO's doing work that tradition or legend suggested was an Agency prerogative.

CIA opposition to a strong National Reconnaissance Office appeared to stem from three basic sources. First, the Agency held that covert reconnaissance programs were essential to the national interest and that only the CIA could effectively operate such programs. Second,

a substantial faction in the Agency mistrusted the ability of the Air Force to develop and deploy major systems rapidly and at a reasonable cost, and also held that the Air Force could not efficiently conduct any satellite reconnaissance operation. Both the management and the technology of the CORONA program had been well handled; the belief that the CIA had been wholly (or almost wholly) responsible was at the heart of arguments for continuing, unchanged, so successful an arrangement of functions and responsibilities. Third, and particularly important in the 1963-1965 period, simple institutional chauvinism was a constant factor in disagreements about responsibilities and prerogatives. One faction within the CIA wanted to create a strong satellite development capability there. Such people looked on the NRO as a thinly disguised extension of the Air Force, more ambitious than capable. \* In fact, of course, the NRO included many people who favored building a broadly based capability for satellite reconnaissance operations, but they felt --

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\*And much of the Air Staff looked on the NRO group as a not-quite-respectable collection of dissenters under the thumb of the CIA. Air Force officers who were wholly loyal to their NRO responsibilities sometimes felt that the "regular" Air Force had cast them out. At least one CIA staffer seconded to the NRO found himself effectively frozen out of his parent organization because of his stubborn adherence to the spirit as well as the letter of the charter. Some Air Force officers may have felt the same way when the time came for them to move from an NRO assignment to another in the regular service. To be assigned to the NRO in any capacity, particularly in the troubled days between 1963 and 1966, was not uniformly looked on as a wholly happy circumstance.

with considerable justice -- that the need for such a capability had been certified by the National Security Council. That the capability had not been created, many NRO people believed, was largely a consequence of irrational CIA obstructionism, particularly in working level arrangements. The NRO was also infested with institutional chauvinism; it included people who made much of the fact that Air Force people had done about 90 percent of the work in the CORONA project, and it took in the viewpoint that the CIA had done nothing particularly spectacular since CORONA. The basic conviction that satellite reconnaissance should be a national undertaking under the DOD and not the province of one intelligence evaluating agency, threaded through most of the NRO attitude toward the CIA.

In such circumstances, even without the personality differences that appeared from time to time, conflict <sup>was</sup> inevitable. It could be kept from damaging the total national reconnaissance effort only if the senior managers in CIA and NRO were equally dedicated to limiting the causes and consequences of disagreement. But they were not, in 1963.

Yet some factors tended to alleviate the more extreme ill effects of disagreement between agencies. By 1963 the CORONA program was consistently returning good intelligence, and after July of that year there was reasonable assurance of a similarly excellent return from GAMBIT.

Those systems provided perfectly adequate information and they continued to do so during the period of management controversy that followed. Indeed, rather ordinary technical improvements of the basic CORONA and GAMBIT systems caused both the quality and quantity of the product to improve. There was no denying the validity of the need for still better systems, but the fact that executives could disagree violently without substantially degrading the information intake from satellite reconnaissance certainly did nothing to discourage disagreement.

One other circumstance requires notice. From 1960 to late 1963 the NRO sought to enlarge its authority by absorbing functions and responsibilities, though not resources, held by the CIA. The CIA could keep its privileges by simply refusing to let go. But in the end that sort of opposition was sure to be futile because time was on the side of the NRO. To continue to be a major influence in satellite reconnaissance in any post-CORONA period, the CIA would have to establish replacement programs. It was on the creation and validation of such programs that the CIA focused its considerable effort in the years 1963-1965. Here also the NRO had a tactical advantage, because merely to prevent the creation of new CIA-assigned satellite reconnaissance programs was in some respects advantageous to the NRO. Impedence of progress tends always to be easier than making progress. A prime cause of the friction

of the post-1963 years was the CIA's effort to expand its authority by drawing from NRO stocks.

Whether the NRO staff fully appreciated the implications of the power struggle cannot be established. But in fact the CIA could afford to lose quite a lot of its satellite reconnaissance responsibility without losing much that was important to the hard core of the Agency. On the other hand, should the NRO lose much of the authority invested by the charter Charyk had left, there would be no NRO, merely an Air Force-operated satellite program. In retrospect, the stakes seem obvious enough; whether the participants all understood them cannot be certain.

A foretaste of new contentions came in mid-August 1963, scarcely two months after Scoville had left. On instructions from McMillan, General Greer and Colonel Ledford met to discuss plans for developing an ultra-high-resolution reconnaissance system recommended by the Purcell Panel. Their talk was quite amicable, and as General Greer subsequently reported the results to Under Secretary McMillan, they reached agreement on the performance specifications, the content

of the work statement and request for proposal, the technique of source evaluation, and a plan for managing development of the resultant system.<sup>66</sup> Eight days after General Greer entered his recollection of the meeting in a record memorandum, Colonel Ledford privately advised Brigadier General J. L. Martin, newly promoted chief of the NRO Staff, that because of pressures from within CIA he was obliged to deny the substance of the agreement with Greer. He then formally told Under Secretary McMillan that he and Greer were not in agreement on the management structure for a new system. He apologized for not having made himself "entirely clear on this point" but added, in forbiddingly formal terms: "The various approaches to questions of over-all management, contracting and security were discussed informally, but no conclusions were reached. \* \* \* The entire problem of assignment of functions and responsibilities within the NRP is at present a subject being debated at higher levels and any agreement on program management must necessarily await a major policy decision."<sup>67</sup>

Here was a breath of ice to come. If at the time of the Greer-Ledford meeting "the problem of assignment of functions" was being debated somewhere, noise of the debate had not reached either Greer

or McMillan. (It is not unfair to suggest that Ledford was also innocent of such advice, else he would not have been so receptive to Greer's ideas.) McCone, merely days earlier, had expressed himself as entirely satisfied with the functional arrangements specified in the March agreement, and these clearly authorized DNRO to assign and reassign programs as he thought best. The "higher levels" then debating functions must therefore have been in CIA itself.

General Greer had not equivocated in his resume of the meeting. He had said, with an assurance that would have been most uncharacteristic if he had been at all doubtful as to the absolute accuracy of his statements, that he and Ledford had agreed on the details of a management arrangement -- and he spelled out the essentials of that agreement: program direction to be provided by Greer's office, security and contracting to be CIA's concern, Aerospace Corporation to do systems engineering and provide technical direction. So little was Greer awake to the possibility of dissension that he noted almost casually his intention of naming Colonel Paul Heran chairman of the evaluation team and subsequently program manager. \*

\*With all respect for Colonel Ledford's position at the time, and with due regard for the fact that Dr. Scoville had on several

On the day preceding dispatch of Ledford's message, Fubini and Gilpatric had lunched with McCone, Carter, and Wheelon. In the course of the meeting, Mr. McCone discussed the NRO in terms widely at odds with those he had employed three weeks earlier. As though innocent of knowledge of the March agreement, he said he had not expected the NRO to function as a line organization but as a coordinator of existing activities. He argued, in rather extreme terms, that the NRO was not taking advantage of CIA's ability to do "quick and dirty" management jobs. He suggested that there was too much R&D emphasis in the NRO and not enough awareness of intelligence needs. <sup>68</sup>

occasions been obliged to withdraw from agreements he had made with Charyk, it seems impossible to evade the conclusion that Colonel Ledford had essentially agreed with General Greer in all matters Greer specified. The peculiar wording of Colonel Ledford's message tends to confirm that finding. (He did not contradict General Greer's statements about Col Heran, for example, but said "I propose Col Murphy..." not "I proposed...") General Greer was under no pressure to describe an agreement that had not been made, and it is obvious both in the testimony of General Martin and in the context of the Ledford message that the Colonel was being pressed. Finally, there is evidence of Greer's habits; the general possessed an exceptional memory; he would be most unlikely to confuse such straightforward details as these in a matter of hours. To suggest that he deliberately mis-stated the content of the meeting is unthinkable; were it otherwise, Colonel Ledford certainly would have suggested as much. That no such tactic was attempted is perhaps the most convincing evidence.

The reference to an R&D orientation was undoubtedly based on General Greer's stubborn insistence that a sequential proof test be conducted before GAMBIT was committed to routine collection tasks.

It was also quite true, however, that the NRO people generally lacked CIA's concern for processed intelligence as an end product. The viewpoint of Greer's people, in particular, was that film properly exposed and promptly recovered was their "product." The photographic content of the film was a secondary matter and one in which few had other than a secondary interest. In that characteristic lay the core of much of CIA's professional antagonism toward General Greer.

The argument that GAMBIT, which had first flown the previous month, should be given full bore mission assignments at once demonstrated that McCone had been both misinformed and inadequately briefed on the GAMBIT program, its technical complexity, and the sad history of its immediate predecessors. The charge that NRO was not taking full advantage of CIA resources was a stronger restatement of General Carter's earlier protest to McMillan and perhaps had some validity; CIA's role in R&D had been declining gradually for months, though as much was not true for other functions. The main problem

was that few CIA professionals were entirely suited for positions on McMillan's NRO Staff and fewer could contribute significantly to Greer's operation. The allegations about the NRO's improper operation as a line organization and an accompanying hint that CIA would prefer to withdraw from the arrangement were incomprehensible in view of the agreement McCone had approved and so recently re-endorsed. The NRO's functions were plainly stated there and CIA's proposed alterations of the agreement terms at the time of their approval demonstrated the Agency's complete appreciation of their intent and implications. But in the final analysis it was not so much CIA's equivocal attitude that upset the NRO Director and Staff as it was CIA's refusal to accept "final verdicts" as truly final.

On 4 September, Gilpatric met with McCone in the presence of Defense Secretary McNamara. In the interim Fubini had read for the first time the memoir that Charyk had left behind, had briefed Gilpatric on the March 1963 agreement, and had passed along General Martin's suggestion that if the agreement were to be redrawn, it should be along the lines of "greater clarity and less diplomacy" recommended by Charyk. Primed by this information, Gilpatric obtained from McCone a concession that the NRO was operating strictly in accordance with

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the terms of the existing compact. McCone also withdrew his suggestion that the charter should be altered, merely expressing once more his concern that CIA resources were not being fully utilized. Gilpatric, relieved at the apparent passing of what had momentarily promised to be a serious clash between the CIA and the NRO, personally advised McMillan and Fubini of his talk with McCone and its promising outcome.<sup>69</sup>

Taken together, the Ledford incident and the aggressive McCone assault on NRO prerogatives signaled a complete volte face in the CIA attitude that had been evinced before 15 August. On the strength of evidence that he did not record, Dr. McMillan concluded that Wheelon had deliberately brought on the confrontation and was responsible for Ledford's denunciation of the agreement with Greer. That Wheelon had also primed McCone to attack the March 1963 agreement seemed equally evident. McMillan, who had distrusted Wheelon when their forced association began, \* was convinced that Wheelon had

\*Some years earlier, McMillan had challenged the findings of a paper Wheelon presented to one of the major professional societies and a typically heated exchange had followed. McMillan emerged from the incident with the conviction that Wheelon had been intellectually dishonest. General Carter, aware of the fact that the two officials did not get along well, had urged McCone

deliberately stirred up the fuss. He advised McCone through an intermediary that he would no longer deal with Wheelon in matters affecting the NRO. He was being no more than correct, if unfriendly, in that statement, because Kiefer was officially the CIA spokesman in NRO: Wheelon had at that time no official role whatever.

Roswell Gilpatric, essaying the role of peacemaker, brought about a meeting between McMillan and McCone on 11 September. During the conversation McCone again emphasized his determination to insure that all of the resources of both the CIA and the military services were "brought effectively to bear on matters of importance to the NRO." Explaining his earlier remarks about the scope of NRO's functions, McCone said he had not then been aware of the way in which NRO was operationally structured and had also been ignorant about the "special organizational arrangement under which General Greer operates." (These were McMillan's words in recording the conversation.) Again displaying an astonishing naiveté about the arrangements specified in the CIA-DOD agreement, McCone remarked that he was uncertain who

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not to make Wheelon responsible for Program B, as had been suggested early in the fall of 1963. That Wheelon was aware of the incident, and was also aware of McMillan's low regard for him, seems certain.

within CIA the DNRO should work with -- Colonel Ledford or "an individual further up in the organization, or perhaps with two individuals..."

Accepting Mr. McCone's explanation of events and his apparent desire to see that affairs went more smoothly, McMillan withdrew his "statement of reluctance to deal with Dr. Wheelon..."<sup>70</sup> But the Under Secretary was uneasily aware that one day earlier the CIA Director had told McGeorge Bundy that it still was too early to decide whether revision of the March agreement was necessary. Some areas obviously required "clarification," McCone had written.<sup>71</sup>

McCone had inexplicable but frequent vagaries of heart, mind, and memory. He was, moreover, notoriously but unpredictably susceptible to the influence of his staff. To this susceptibility was ascribed an incident of mid-September, when, acting as Chairman of the USIB, he told that body he was considering having Dr. McMillan attend those parts of USIB meetings during which matters of interest to the NRO were considered. Previously, McCone had advised both Gilpatric and McMillan that he was very interested in having McMillan made a regular member of USIB.<sup>72</sup> In the same context, McCone endorsed the notion of having a senior member of the NRO Staff

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assigned permanently to the COMOR; nothing at all came of that discussion, although from time to time various members of the NRO group were invited to appear before COMOR to report on current items.

Perhaps because of his continuing mistrust of Wheelon or his experience in the Ledford affair, perhaps because of the implications of the 22 August discussion, perhaps in consequence of his conversation with McCone on 11 September, Dr. McMillan on the latter date began making and keeping copies of memoranda for record in which he set down, immediately after the event, an account of all significant contacts and discussions with McCone, Wheelon, and other key members of the reconnaissance community.<sup>73</sup> The relationship between McMillan and Wheelon had been gravely affected by the events of August and September. McMillan was convinced that Wheelon would seek his own ends by whatever means, and Wheelon obviously had no high regard for McMillan. Nevertheless, at the insistence of Gilpatric and Fubini, they studiously observed the amenities in later contacts.

The events of late August and early September 1963 probably were even more significant for the future than they seemed at the time. Hindsight made it clear that they were not so much isolated incidents as the opening measures in an artfully designed effort to transform the

NRO into a coordinating agency without broad operating functions.

That the campaign was both deliberate and carefully planned was not immediately apparent, but as time passed and evidence accumulated that conclusion became more and more inescapable. \*

In many respects, a CIA assault on the NRO seemed foolhardy. Apart from the widely known and indorsed intent of the charter itself, the sturdiness of the NRO structure seemed to have been adequately reinforced by the approval of the Purcell Board (a circumstance that McMillan casually called to McCone's attention in a note of 11 September, the day of their conversation about NRO functions)<sup>74</sup> and by the fact that both GAMBIT and LANYARD were working out well in early flights. Until the summer of 1963, any case arguing the capability of the Air Force-managed projects was justifiably suspect. The several predecessors of GAMBIT had development and operational histories that did little to inspire confidence in their sponsors. But GAMBIT was another matter; the first GAMBIT returns represented as great an advance in overhead reconnaissance as had the first CORONA returns three years earlier. Finally, on 13 September, Gilpatric optimistically

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\* Though a dedicated opponent of the "conspiracy theory of history," I must acknowledge that in this instance an exception is fully justified. (R. L. P.)

reported to the President's Foreign Intelligence Advisory Board that notwithstanding some minor differences of viewpoint, "the overall operation of the NRO is satisfactory; that the NRO programs are producing, and will continue in the future to produce important intelligence information; and that a smooth, steady state, and highly effective operation of the NRO is beginning to be apparent." Communications within the reconnaissance community were good; continuity of management was assured; guidance to the NRO was consistent with national objectives; relations between the NRO, DIA, and NSA were clear and workable; and the Secretary of Defense was making every effort to insure that CIA and DOD resources were fully utilized. 75

Confidence that the air would clear was totally unwarranted. Late in October, there was another incident along the lines of the Ledford affair of August, minor in its own right, but oddly portending the future. On 21 October, a member of the NPIC staff, [REDACTED] visited the Los Angeles offices of the NRO to argue for the retention of horizon cameras in the CORONA system. (The cameras had been causing some operational difficulty and through an occasional failure had been endangering the primary film exposure. NPIC felt that the horizon cameras were essential; members of General Greer's staff were of two minds

on the question.) [REDACTED] was somewhat distressed at what he took to be General Greer's casual view of the problem. On his return to Washington, [REDACTED] received an invitation from Wheelon to report on the results of his visit. Not noted for his tact or diplomacy, the NPIC official apparently phrased his report in terms intriguing to his audience. Wheelon had [REDACTED] dictate "some of his remarks" to a CIA secretary and asked him to approve the draft copy of the transcript. Subsequently, Wheelon had the draft typed as a formal memorandum and sent six copies to addressees in NPIC and one copy to Kiefer, the Deputy Director, NRO (but also a CIA official). The paper carried no holograph signature, merely the entry "seen in draft" over [REDACTED] typed name.

Early in November, Kiefer passed a copy of the memo to General Martin. Noting that Lt Colonel Howard was listed as one of the attendees at the [REDACTED]-Greer meeting, Martin immediately asked that officer's advice. Howard, horrified by the tone and content of the paper, said it was "an extremely distorted and inaccurate representation of the 21 October meeting... [which] quotes Major General Greer in a manner substantially out of context with the discussion at the meeting." (Among other badly composed sentences, [REDACTED] had included one charging

Greer with having disparaged both the requirement for precise information and the President's need for such data. It probably was this section, confirming Wheelon in his suspicion that "the Air Force" was not sufficiently conscious of intelligence needs, that brought on the incident.)

Martin called Arthur Lundahl, Director of NPIC, who contacted [REDACTED] who denied any intention of offense and insisted that preparing and circulating the paper had all been Wheelon's idea. Martin immediately passed the information to McMillan, who happened at that moment to be meeting with General Carter and Wheelon. Wheelon, thus confronted, agreed to withdraw the memorandum.<sup>76</sup>

In the meantime, however, Wheelon had acted on a conversation between McCone and Gilpatric, late in October, and established a special research group "to explore the whole range of engineering and physical limitations on satellite photography..." The undertaking, which became the Drell-Chapman Committee, stemmed from a CIA analysis of the variability of CORONA photography that showed, Wheelon remarked, a quality spread "broader than anyone had expected." (The remark suggested a distressing lack of knowledge about some rather substantial work earlier devoted to the same topic; notably, the Purcell

Board, Charyk, Greer, Howard, and Kiefer had all conducted analyses that showed CORONA products to have a most variable quality; while ITEK had for some more than 10 months been devoting particular effort to correction of the defect.) At some length, Dr. Wheelon explained his intentions of having the new working group devise both improvements to the CORONA system and standards for new systems. He asked McMillan, early in November, if the DNRO could make "one or more technical specialists" available to help. He also suggested that NRO reimburse CIA for the incurred expenditures: about [REDACTED] for the first three months.

McMillan's initial reaction was a barbed comment that he would appreciate receiving more advance notice of such new enterprises when they affected basic NRO responsibilities. He completely disagreed with several of Wheelon's concepts, objected to the scope of the group's assignment, had doubts about the propriety of ignoring both program offices and affected contractors in such an inquiry, and had no intention of providing NRO funds for the enterprise. Most of these sentiments were put into an acid letter that, on second thought, was not dispatched. The Under Secretary eventually settled for a conversational reply, relatively mild in tone. <sup>77</sup>

Interestingly enough, to this point Dr. Wheelon had no official role in satellite reconnaissance except that his post in CIA made him Ledford's superior. (The NRO charter did not recognize a situation of that sort, but the CIA had ignored such implications in the charter.) Largely at the suggestion of Mr. Kiefer, General Carter had served as CIA monitor in the interval following Scoville's resignation. McMillan had objected, from the first, to the inclusion of Scoville, and McCone had apparently deemed these objections sufficient. All concerned appreciated that problems of personal relationships were involved. Whether mounting irritation at Wheelon's tinkering caused McMillan to raise a point of order, or whether Wheelon moved independently to acquire an official entrée to the NRO is uncertain, \* but on 8 November McCone formally designated his Deputy for Science and Technology as the CIA monitor for NRO matters -- a CIA counterpart of Fubini. Simultaneously, McCone urged regular meetings between NRO and CIA officials "to review and discuss policy aspects of all NRO programs..."<sup>78</sup> (Carter's appointment seems not to have been officially recorded in NRO files, but it was acknowledged by McCone, McMillan and Kiefer.)

\*The latter is more probable, however.

Following up Charyk's efforts to consolidate CORONA management, McMillan had on 28 October sent a detailed function plan to Mr. McCone. Its approval would, of course, resolve one of the issues that had kept alive the controversy over NRO functions. Evidently uncertain of McCone's reaction, Wheelon on 20 November attempted to enroll Colonel C. L. Battle, former chief of the West Coast DISCOVERER project office, in his counter offensive. After discussing "the mess the program is in at Los Angeles," Wheelon made an open bid for Battle's support. It was adroitly declined, but the incident indicated that little hope should be held for a favorable outcome to forthcoming discussions with McCone about the consolidation proposal. 79

As anticipated, McCone proved obdurate; no progress resulted.

Gilpatric attempted to resolve the mounting dispute over functions by proposing the creation of a special NRP review committee composed of McMillan, Fubini, and Wheelon, with the DNRO serving as chairman. McCone immediately rejected the proposal, favoring an informal committee which would also include General Carter (his deputy) and which would alternate chairmen at succeeding sessions. At roughly the same time, McMillan suggested that Wheelon thereafter contact NRO people only through the Director and abstain from directly tasking CIA members

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of the NRO Staff. Meeting with McMillan a few days later, McCone protested that dictum. When McMillan patiently explained the principle that NRO personnel worked for him and not for their parent agencies, McCone tartly passed off the matter as of no consequence.<sup>80</sup>

The main issue was openly joined during a 10 December meeting between McCone and McMillan. If he had been inclined earlier to consider McMillan's suggestion of consolidating CORONA affairs under Greer, McCone had undergone a Pauline conversion. Even though McMillan's proposals had been trimmed since October, McCone charged McMillan with wanting "to take the whole project over" and warned that (in McMillan's later words) "... he would not stand for submersion of this project into the bureaucracy of the Air Force and that he would liquidate the NRO if necessary to prevent this." The DNRO, taken aback at the vigor of the assault, attempted to turn it away by citing the facts of the situation as he saw them. He was convincing enough to cause McCone to agree to consider the matter further, but there seemed little doubt that this was a concession to the proprieties rather than an indication of a still open mind.<sup>81</sup> McCone's promised response, prepared three days later, consisted mostly of an injunction to maintain the status quo pending his return from a lengthy trip to Viet Nam.<sup>82</sup>

Several skirmishes marked December 1963. Awakened to the fact that the CIA was methodically planning for a still distant future while the NRO centered its attention on affairs of the present, McMillan created an advanced planning office within the NRO Staff to evaluate and recommend in matters involving future research and development projects. He thus tried to counterbalance attractive CIA studies which might quickly be transformed into programs. Responding to the repeated complaints about failure to utilize CIA resources, he formally requested the assignment of four highly qualified CIA people to the NRO. McCone, in the same letter that enjoined against tampering with the status quo of CORONA, cautioned McMillan against Air Force interference in "problems which, through the years, have been matters of mutual interest. . ." to the CIA and some of its contractors.<sup>83</sup> McMillan responded by rejecting Wheelon's proposal that NRO people routinely brief the science and technology staff in CIA on the status of NRO affairs. Such a practice, McMillan observed amiably, was forbidden by "Paragraph V. B. of the 13 March DOD/CIA NRO Agreement." He added an equally casual request that Wheelon send a written advisory of the proposed discussion topics in advance of future meetings of the monitoring group.<sup>84</sup>

The issue of CORONA management, rapidly becoming the heart of the increasingly acrimonious dispute over NRO functions, was invariably treated, from the CIA promontory, as though it immediately involved the entire future of satellite reconnaissance. For reasons largely drawn from the defunct SAMOS effort, Wheelon and his associates had developed a deep mistrust of Greer, his competence and his staff.\* They proceeded on the premise that assigning additional CORONA responsibility to Greer could cause a complete collapse

\*Wheelon, who had come to CIA from the Space Technology Laboratories of Ramo-Wooldridge Corporation, was generally familiar with the unhappy Air Force background in satellite reconnaissance. It is reasonable to suggest that he, like others, held Greer responsible for the unappetizing record of failure, faint success, and program cancellation that had characterized the E-series satellite developments. To one not fully conversant with the inner workings of the West Coast group after it came under Greer, there was little to make the record attractive. GAMBIT still was an immature system that could not reasonably be compared with CORONA and Greer's determination to make GAMBIT fully reliable before committing it wholly to operational missions rankled with the Agency. There, the concern for a systematic GAMBIT proof test program was interpreted as an indication that the Air Force had no appreciation of the pressing requirements for finished intelligence products. That factor, and the previously mentioned tendency of Air Force people to treat "good film" rather than finished intelligence as the object of NRO effort, seemed to outweigh more recent evidence of accomplishments by the West Coast NRO group.

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of the ongoing intelligence collection effort and the demise of planned improvements. They constantly emphasized the historical interest of CIA in CORONA. McCone, beginning in November, adopted the position that CIA was wholly responsible for the creation and evolution of a satellite reconnaissance capability in the United States. Notwithstanding -- or perhaps owing to -- his earlier service as Under Secretary of the Air Force, he entertained and rarely bothered to disguise an abiding distaste for "Air Force bureaucracy" and could not be convinced that the NRO was in any fashion exempt from the contaminants of such an environment. His understanding of the background of the satellite reconnaissance effort was at best rather elementary and seemed to have been acquired from sources only casually familiar with the subject.

The NRO viewpoint, as expressed by McMillan, was that the provisions of the March 1963 agreement were meant to be taken quite literally and that the interests of the nation could be served best by consolidating all aspects of satellite reconnaissance under one executive. In this he believed he had the uncompromising support of the DOD hierarchy. Yet part of the heat of the controversy certainly stemmed from the fact that the NRO, although then only 20 months old (not

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allowing for a 24-month gestation) had begun to display some of the usual characteristics of an organization with vested interests being threatened by an external force. That personality clashes marred the working relationship of NRO with CIA was also important, and was rarely acknowledged. Organizational and personal differences were glossed over or denied, as was generally the case in Washington. But they could not be forever ignored.

Logic was on the side of McMillan and the NRO in their formal dispute with the Wheelon faction of the CIA. CORONA had clearly outgrown its original habitude; efficiency and economy would best be served by restructuring the program to accommodate reality. Unfortunately, for logic, the CORONA issue merely screened a larger dispute over the role of the NRO. Apart from the fact that CORONA probably was not the best issue on which the NRO should choose to make a stand, especially in a free-for-all of the sort then developing, the CIA had some obvious advantages. Not the least of these was Dr. A. B. Wheelon, who, in less than five months of skillful infighting had brought an uncommitted McCone around to unquestioning acceptance of a highly parochial viewpoint, had substantially reduced the DNRO's maneuver room, and had completely stalled the well supported move

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of CORONA into regular NRO channels. Moreover, by his imaginative use of the loosely defined authorities of the CIA, Wheelon had succeeded in securing for his own science and technology subsection a major voice in the future of the national satellite reconnaissance program and had blocked out a number of promising projects that CIA could "manage" with or without help from the main NRO group.

The position of the two antagonists on CORONA was at once obvious and obscure -- obvious because it could be defined as a desire for complete management authority, and obscure because the precise intentions of the two parties were screened behind generalities or discussions of fine detail. By December 1963, CIA had moved from a defense of the CORONA status quo to an open claim for a larger voice in the technical management of CORONA (participation in the "daily health" engineering effort) plus authority to develop a new general search system. In Wheelon's words, that solution would create a "proper role" for the CIA. He would not hear of separating operations from research and development, arguing that the consolidation of program operations had to be complete. It was also plain that one of the reasons CIA wanted responsibility for the "daily health" of CORONA was that it would insure the continuance of a CIA engineering

competence adaptable to the development of new systems. Wheelon frankly stated that objective in a December meeting with Fubini and McMillan. Finally, it was Wheelon's declared intention to "get CIA into the satellite business in a contributing, not just a bureaucratic way." He ascribed this determination to McCone, although on the evidence McCone had abjured any such desire six weeks earlier.<sup>85</sup>

McMillan's proposals to transfer the operational and contracting elements of CORONA to Greer's custody were justified by references to greater efficiency and economy in use of resources (a possibility that the CIA flatly denied in the event). Yet it was clear that McMillan realized the vital implications of a CORONA management decision for the future of the National Reconnaissance Program: there would be no national program if CIA had complete custody of one of the major functions, and particularly if CIA had insular control of program funds.

The ultimate issue, generally denied or avoided by both parties, was again the survival of the NRO. If the question popped unexpectedly to the surface it was dealt with hurriedly, in generalities built around such terms as "national interest," "appreciation of intelligence needs," "efficient management," and the like. The fundamental organizational

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instincts of the two parties were seldom, if ever, acknowledged.\*

In mid-January, Dr. Fubini independently suggested to Mr. McCone a compromise that might resolve some of the problems then interfering with the functioning of the NRO. (He had mentioned the germ of the idea a month earlier.) His proposition was that the CIA should be assigned responsibility for the development and early operation of a new high resolution search system with the understanding that once development had been completed ("after the first 4 or 5 successful flights") the program would be integrated into an Air Force-managed NRO program. As a quid pro quo, he suggested that the same rule be applied to CORONA -- that is, that its ordinary management be assigned to the Air Force. This arrangement, he argued, would exploit the "unique capability of CIA which has been demonstrated in the past in various advanced developments as well as the strength, organization and capability of the Air Force which is uniquely equipped to carry on

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\*On one occasion when Wheelon proposed that CIA be assigned total custody of a new search system development, Fubini asked:

"What happens if there is no future development for broad coverage?"

Wheelon quickly changed the subject, and Fubini did not pursue it.

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operations which have reached a character of routine."\* He added that as part of the general compromise the Air Force would develop a follow-on to GAMBIT "with exactly the same procedure toward the NRO that the CIA has in the broad coverage program."86

\* Dr. Fubini began to play a peculiar role in the continuing controversy during the early months of 1964. He took his assignment as NRO monitor quite seriously, so much so that he began to act as a senior program executive rather than, as had been clearly contemplated when the arrangement was devised, an observer whose primary task was to advise the Secretary and Deputy Secretary of Defense in matters of broad policy. Several factors influenced that tendency. First, it plainly was in Wheelon's interest to expand the authority of the program monitors. The assignment, after all, was his only valid justification for dabbling in the conduct of the NRP as a whole. Fubini was not inclined to dispute or discourage Wheelon's increasing influence because it made his own that much more secure. Second, Gilpatric's time was being taken up with defense of the TFX (F-111) award and the intricate political maneuvering that marked the closing session of the 88th Congress. Fubini stepped into the breach in a way that weakened McMillan's position; he acted as a buffer between McMillan and Gilpatric, stopping McMillan from getting Gilpatric's attention but essentially lacking the authority Gilpatric's assignment carried. Third, Fubini continually assured McMillan that he would look out for NRO's interests -- and he did. But it developed that Fubini's and McMillan's notions of NRO's interests were not always coincident. To judge by his January 1964 correspondence, Gilpatric considered McMillan to be senior to both Fubini and Wheelon in program matters; Fubini (with Wheelon's certain encouragement) reversed that order. Finally, McMillan put a good deal of trust in Fubini, who was both more accessible and more sympathetic than Gilpatric. These developments did not occur all at once, of course, but their substance had become visible by early 1964.

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Mr. McCone's reaction was neither prompt nor direct, but in early February he essentially confronted McMillan with the Fubini proposition, somewhat modified. While hedging on the details of CORONA realignment, he made it clear that the Agency would entertain a proposal to abdicate much of its CORONA authority (tacit, though not prescribed in the existing charter) in return for a free hand in development of a new search system. McMillan, sure of his ground, told Cyrus Vance, Gilpatric's replacement as Deputy Secretary of Defense, that he was strongly opposed to any "deal", particularly one that committed him "... a priori, to conducting an unidentified new development with an unidentified organization whose potential leadership has no applicable development experience, and had repeatedly demonstrated unwillingness to accept direction from NRO." His brief was that the CORONA issue should be settled on its merits "and the other issues on theirs."<sup>87</sup>

McMillan seriously considered attempting to get McNamara to sign a directive assigning the DNRO responsibility for clarifying CORONA management, but in so radical a solution he had insufficient support from Fubini (still intent on acting as program broker) and Vance (new to his post). He also drew up a sweeping directive to

General Greer and Colonel Ledford, assigning complete management responsibility for CORONA to Greer, but in the absence of either McNamara's direct endorsement or a prior consent decree from McCone chose not to attempt its enactment. <sup>88</sup>

Some weeks later, Dr. Wheelon sponsored a message to McMillan from the contracting officer at Lockheed's "black" facility -- a proposal for reducing General Greer's inconsiderable authority in CORONA management. The theme was that Greer's people had limited the probability of mission success by diverting Lockheed's attention to new systems and by increasing the documentation requirements for the CORONA-J (dual capsule) satellite. Separately, and in advance of any DNRO comment, Lockheed was ordered not to respond to directions from Greer (deviously identified as "various agencies of the government"). <sup>89</sup>

In a sort of tit-for-tat riposte to McMillan's letter of 4 December past, Wheelon in March protested the Under Secretary's having named personnel from the Program B office to serve on two study groups, observing that it was "inappropriate for the NRO Staff to be designating individuals in CIA for such purposes." The charter made no such distinction, but considering the de facto situation

McMillan apparently conceded the point in the interests of harmony.<sup>90</sup>

The effect of this action, committed to a formal letter after having been first discussed by telephone, was to increase the separation between Program B elements of the NRO and the remainder of the organization. In practice, of course, the Program B people had been taking their instructions from Dr. Wheelon rather than Dr. McMillan for several months. The fiction of a collaborative, coordinated effort had generally been maintained, nevertheless. It now disappeared so completely that McMillan was unable to discover what CIA-funded studies were being conducted in the satellite reconnaissance field, an area theoretically the province of the NRO, and clearances were refused those Aerospace Corporation personnel who were under orders to do systems engineering work in CORONA.<sup>91</sup>

Earlier, Wheelon had revived Scoville's dormant claim to a covert satellite program and had been rebuked by McMillan.<sup>92</sup> McMillan followed up that minor triumph by calling McCone's attention to the existence of NRO vacancies for which CIA people should be considered, and again received no reply. He raised the question once more early in March, noting that he had been obliged to fill one of the posts, too long vacant, and again asking for nominations. A week later,

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Wheelon replied that the original conversation had, as he recalled, envisioned "a much more broadly based joint staffing of the NRO than is represented by your specific proposals." In passing, he complained about the cool welcome accorded a proposed CIA assignee the previous summer and the subsequent appointment of an Air Force officer to one of the posts McMillan had earlier listed as vacant. (McMillan had filled the position a week earlier and had so advised McCone.) For an epilogue Wheelon added a most interesting paragraph:

The entire question of the NRO and its functioning is now being looked into by the PFIAB. I propose that we postpone incremental solutions to partial staffing problems until broader guidelines are supplied by DCI and Secretary of Defense. I am sure that you are aware of our intense interest in creating a truly joint CIA/Military NRO Staff and our desire to reach an early framework within which this action can be taken.

Advice that the FIAB was analyzing the functions and management of the NRO could scarcely have been news to McMillan, but Wheelon's unabashed acknowledgment that he expected the FIAB to change things about by enlarging CIA's role might have been a mild shocker. McMillan had earlier suggested to Secretary McNamara that "the final price of peace with the CIA, considering the temperament of its leaders, at least is to give them carte blanche for the development of a new general

search system. " Until that was done or until the leadership changed, McMillan added, "there will be continued obstruction of the NRO and contests of its actions on many subsidiary issues. "94

Anticipating the eventual emergence of what he recognized to be the "main issue," McMillan had temporized for more than six months, skirmishing on minor issues and continuing as best he could to negotiate the larger ones. For his pains, he had been subjected to a continuing harassment. In many respects he had received support from Fubini and Gilpatric, although Fubini's increasing tendency to essay the role of independent arbiter had brought on some troublesome moments.\* Contacts with Wheelon remained on the "Dear Bud," "Dear Brock" basis that had characterized the period since November 1963, although the letters so headed frequently were barbed in their content. Personal animosity directed at McMillan -- more often expressed by McCone than by Wheelon -- had by this time extended to his two chief subordinates, Greer and Kiefer. Greer was a regular object of attack, his competence

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\* It is difficult to understand why Wheelon did not take greater advantage of Fubini's attempts to compromise the question of responsibility for a new search system. At all times, Fubini offered more than McMillan was willing to concede and apparently could have held the DNRO to any bargain.

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being questioned at the majority of the meetings where McMillan discussed CORONA affairs with either McCone or Wheelon. Kiefer, who had come to the Deputy DNRO post after a relatively long career in the CIA, had attempted to operate precisely as the March 1963 agreement specified and had been frozen out of his CIA associations by the spring of 1964. He was literally unable to obtain essential appointments with McCone, Wheelon, and their CIA associates; was the constant target of barbed comments by McCone, particularly when he attended USIB meetings (a chore that McMillan had delegated in deference to the possibility that he might be goaded into improper stands or statements if he continued to attend); and, after April 1964, could not in any important way influence the course of events. As was to be expected, the several actors tended to personalize their contacts with their opposites, none of which helped the situation.

The examination that FIAB undertook in the spring of 1964 promised to bring matters to a head. A special panel of the board examined the organization, management, and operation of the NRP, consulted with virtually every key official involved in the activity, visited the various installations, and conferred with the principal contractors. The results were weighed, assessed, analyzed, and studied at length. The CIA had

wanted to be confirmed in possession of both CORONA and a new general search system; NRO had argued for a more comprehensive compliance with the provisions and intent of the 1963 agreement. NRO hoped, with some reason, that the FIAB would recommend a complete consolidation of all satellite reconnaissance activity under one manager -- DNRO. CIA hoped, with apparently as much reason, that the shortcomings of the current program would be so obvious as to cause FIAB to break NRO into sections.

The board concluded, at the end, that:

... the National Reconnaissance Program, despite its achievements, has not yet reached its full potential. Basically, the problem is one of inadequacies in the present organizational structure and support of the national reconnaissance effort. Also, the Program is complicated by the absence of a clear, authoritative delineation and understanding of pertinent roles and missions of the Department of Defense, the CIA, and the Director of CIA in his capacity as principal intelligence officer and coordinator of the total U. S. intelligence effort. In our opinion, action must be directed from the Presidential level in order to correct these difficulties, and to assure that this vital national asset is preserved and strengthened.

It was, on the whole, a dispassionate resume.

The board did not equivocate in its recommendations, again describing the reconnaissance program as a national effort which should

be so defined. The Secretary of Defense should be designated its executive, with authority to task the CIA and other agencies as essential. The NRO, said the board, should be set up as an operating agency of the DOD and headed by a director "responsible solely to the Secretary...for discharging the Secretary's responsibility...." The budget should be consolidated and centrally administered. Full advantage should be taken of the resources and talents of each participating agency. In lieu of the monitoring and review function provided in the 1963 agreement, provision should be made for the DNRO to report directly to the President's Special Assistant for National Security Affairs and to the FIAB itself. The board also recommended continuance of the practice of having the Under Secretary of the Air Force serve as DNRO and added that members of the NRO Staff should "serve solely under the direction and supervision of the Director while so assigned." DOD should have "responsibility for the management, over-all systems engineering, procurement and operation of all satellite reconnaissance systems." The CORONA interagency Configuration Control Board and its requirement for unanimity of decision should be eliminated. Finally, the CIA should retain responsibility for the A-12 and related manned aircraft projects. <sup>95</sup>

The report was submitted to the White House on 2 May. Three weeks later, McGeorge Bundy "at the President's direction" asked for comments and recommendations from both McNamara and McCone. Vance replied (for McNamara) on 2 June\* that DOD concurred in the FIAB findings and upon issuance of the Presidential directive urged by the board would set about implementing the individual recommendations.<sup>96</sup>

But there was no Presidential directive, no DOD implementing directive. Indeed, the FIAB recommendations had no perceptible impact. The only near-term event that might be ascribed to the influence of the FIAB recommendations was a 26 June instruction from McMillan to Greer and Ledford directing arrangements for Aerospace Corporation to replace Lockheed as systems engineering contractor for CORONA. The DNRO's action message specified that the decision had been coordinated with the Secretary of Defense and the Director of Central Intelligence.<sup>97</sup> In a "for the record" memorandum covering the meeting at which the Aerospace decision was confirmed, McMillan carefully noted two separate statements by McCone, at different times, agreeing to the

\*There is no indication in the NRO files of a reply from CIA. In light of the earlier stand taken by McCone and Wheelon, however, it may be assumed that a reply was sent on and that it differed from Vance's.

propriety and the immediacy of the shift. At one point the CIA chief had acidly commented that it had been Charyk's idea to make Lockheed systems engineer for CORONA in the first place, and though that was not an entirely correct observation its expression served to confirm McCone's agreement to a change.

But the fact that McCone seemed to have given up on one aspect of the CORONA management imbroglio did not imply that he had accepted the gospels as interpreted by FIAB. Before leaving McCone that afternoon, Dr. McMillan was exposed to a new assault on Greer's qualifications, a reminder of CIA's historic role in satellite reconnaissance, a charge that he (McMillan) was actually intent on cutting the Agency out of the satellite business (which, by that time, could well have been a very modest approximation of McMillan's desires) and a set of rather explicit comments on mistakes and errors McMillan had made in administering the NRO. The conversation, which included a good deal of uninhibited give and take, also touched on the relationship between McMillan and Wheelon. McMillan maintained stoutly that if the Agency were to keep a satellite role under the NRO the unilateral actions of the past would have to be halted, that he could not accept responsibility for activities in which he had neither control nor cognizance. McCone, as McMillan recalled it, "made a brief acquiescent acknowledgment."<sup>98</sup>

At that moment, there were several pressing matters over which McMillan had neither control nor cognizance, but which he could not ignore. Early in June, he and Fubini were an interested audience for a Philco Corporation briefing during which it became apparent that the company was doing a substantial amount of funded work on satellite reconnaissance. The CIA was paying the bill, although the Philco people would only say that they were "not permitted to reveal the source of funds... (or) to discuss the results of these studies." McMillan immediately advised Vance of "indications that Dr. Wheelon is contracting for satellite system and sub-system 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 the study." Separately, he sent to Mr. McCone his fifth request for information on CIA studies having to do with the National Reconnaissance Program. (CIA had replied to earlier queries in effect, that there was no reason for concern, that the FIAB would sort out responsibilities soon enough.)<sup>99</sup>

Although the disclosure of Philco's reconnaissance studies was disconcerting enough, it had much less relevance to the larger issue of NRO authority than two other developments: the unearthing of a new

search system named FULCRUM and another change of face in the matter of CORONA management. On 25 June, McMillan discussed with General Carter his plans to discontinue CORONA systems engineering contracts with Lockheed and to activate contracts with the Aerospace Corporation. This conversation preceded the directives to Greer and Ledford, but had no direct influence on them. Carter replied that McCone wanted no changes in contracts or procedure until the FIAB affair had been settled, unless he (McCone) personally approved the changes.

These were interesting qualifications: from McMillan's viewpoint, the FIAB report of 2 May and its subsequent handling had rather nicely capped the debate; the CIA obviously felt that a rebuttal of FIAB findings was called for and would influence White House acceptance of those findings. Second, McCone had personally assured McMillan during the 28 May meeting that he approved of the plan to shift systems engineering responsibility for CORONA from Lockheed to Aerospace. McMillan had surely weighed these considerations before sending out instructions to Ledford and Greer. But nevertheless he again misjudged the probable response. On the day following dispatch of directive to Greer and Ledford, McCone expressed new reservations in the

CORONA matter and suggested that McMillan discuss it with Wheelon and Carter. (Their positions were well established; it could not have been a welcome invitation.) McCone apparently advised Ledford, independently, not to comply with the McMillan directive of 26 June. On 29 June, a Monday, McMillan talked at length with Carter and Wheelon. He left the meeting with an undiminished resolution to carry through the plans he had outlined so often. On Tuesday, 30 June, he so advised Carter. At the previous day's meeting, Carter had told McMillan that he and McCone would discuss the matter on his return to Washington the following Sunday or Monday. McMillan, concluding that he was being stalled once again and convinced that McCone would not hedge on his openly stated approval of the change, gave Carter on 30 June a formal notice of intent to activate the Aerospace contract. McMillan's insistence on a written response that same day caused Carter to telephone Vance and subsequently to issue his own statement of intent -- an announcement of CIA's determination to continue the Lockheed contract "on an indefinite basis... pending settlement of the matter."<sup>100</sup>

In passing, Carter advised McMillan that his memorandum on the proceedings of the 25 June meeting "does not conform to my understanding of our discussion..."<sup>101</sup> He separately informed Vance that subsequent

to the last exchange in the involved Carter-McMillan correspondence of 30 June, he had received a telephone call from Mr. McCone announcing the DCI's conclusions, "that the actions proposed by Dr. McMillan should not be taken at this time."<sup>102</sup>

Which put the cat fairly among the mice! McMillan having personally received assurances of McCone's agreement with both the concept and the application, had attempted to carry through the CORONA management reforms in one broad pass, overriding objections from Carter and Wheelon. Perhaps McMillan knew that as yet McCone had not reversed himself. In any case, he certainly assumed that to be the case. Wheelon and Carter, then, were stalling. But the Under Secretary had not succeeded in his object, obtaining instead a new reminder of the distinctions between theoretical authority of the charter under which he was operating and the powers he could actually bring to bear on a given situation. McMillan had moved into a vulnerable position from which no graceful retreat was possible.

There was new evidence of McMillan's vulnerability in the emergence of FULCRUM, a system and a concept that would shortly supplant CORONA management as the focus of the ever more acrimonious controversy over NRO prerogatives.

The origin of FULCRUM remained somewhat obscure. It first appeared as an Itek study funded by CIA in January 1964, shortly after Fubini had tentatively proposed a new search system as a reward for CIA abandonment of its CORONA adamancy. By May, Itek and CIA (Wheelon's group) had constructed a system concept and a development proposal. In its original incarnation, FULCRUM was to be a 5500-pound photographic payload boosted into orbit by a TITAN II. Using a pair of rotating 60-inch (focal length) cameras, the system was intended to give a nadir ground resolution of two to four feet across a ground swath some 360 miles wide. With a capacity for 68,000 feet of 7-inch base film, the system would be theoretically capable of photographing about 11 million square miles of earth on each mission. <sup>103</sup>

FULCRUM was unmistakably a new system embodying new techniques for optics, film transport, boost, and recovery. McMillan and Fubini were first exposed to a formal briefing on the proposal late in June. \* On 25 June, McMillan approved the expenditure of some [REDACTED]

\*It is possible that McMillan was informed of FULCRUM somewhat earlier but that because of CIA security controls was inhibited from any references to it in NRO correspondence. The probability that he was aware of FULCRUM is high; he read some FULCRUM implications into the 12 June briefing by Philco people.

to test an engineering model of the film transport mechanism, one of the most critical elements. He insisted, however, that the tests should be conducted under an NRO aegis and that the DNRO was to be kept fully advised of progress and results. He also specified that the tests were not to be construed as committing either NRO or CIA to a system development program.

In the course of his 25 June meeting with Carter, McMillan had learned for the first time that the CIA was sponsoring a committee (headed by Dr. Edwin Land) to review the FULCRUM concept. The Under Secretary had expressed interest in informing Dr. Land and the committee of other system concepts also being studied by NRO. Polaroid's chief called later that morning to tell McMillan that the committee was about to begin its meeting. Subsequently, General Carter advised McMillan that in respect to FULCRUM he had "made no agreement of any kind, nor did I commit the Agency or the Director to any course of action." By these separate actions he served clear notice on the DNRO that the Agency did not consider FULCRUM to be within the purview of the NRO. <sup>104</sup>

Wheelon's plan for proceeding, as generally disclosed to McMillan on 26 June and confirmed in detail on 2 July, included full

CIA responsibility for both development and operation of the system. McCone was then in the process of proposing to Vance that McMillan be directed to establish FULCRUM as an NRO program and to assign it to CIA for complete management. Such, at least, was McMillan's impression, and over the previous seven months he had developed a fine ear for the nuances of CIA proposals.

Wheelon initially proposed a six-month design effort, costing about [REDACTED] and involving five competing contractors (Itek, GE, AVCO, Lockheed, and Space Technology Laboratories). At the onset, a project office of five to seven people, reporting directly to Dr. Wheelon, would be established in CIA with STL serving as "integration, assembly and checkout" contractor, much as had been done in the early ballistic missile program. (Wheelon said specifically that STL would not be responsible for systems engineering and technical direction, functions the CIA project office proposed to keep.) The proposal was precise, carefully detailed, seemingly quite accurate, technologically conservative, and -- on the whole -- exceptionally well constructed.

In McMillan's opinion, by carrying through such actions the CIA would have established "an independent capability for full scale development of space systems," even though the feasibility of the system in question had yet to be determined. McMillan contended, on substantial

grounds, that to establish such a capability the CIA would have to recruit the bulk of a technical establishment. The DNRO was wholly opposed to the scheme. <sup>105</sup>

In this he had, or believed he had, the support of Dr. Fubini, who pointed out that none of the many committees formed over the past two years had recommended a new search system although each had been exposed to CIA arguments favoring such a development. Fubini had an additional reservation: it seemed to him that the great uncertainty of the CIA proposal was the lack of any assurance that the "very high speed film flow through the proposed FULCRUM system" was attainable. He also pointed out that proceeding toward a new broad-coverage system was unwise so long as the reasons for variable performance in CORONA remained unknown. (The Purcell committee had suggested that neither optical nor mechanical features of CORONA could entirely explain this variability, and subsequent experience with the system supported the contention that its resolution was, within wide limits, very nearly unpredictable.) <sup>106</sup>

McCone did not agree with Fubini. He was convinced of the need for a new search system and wanted to proceed immediately to development. Indeed, at one point during the several meetings of late June, he objected firmly to the commitment of funds to GAMBIT-CUBED, the

very high resolution surveillance system that had evolved from GAMBIT, urging that a search system had priority.

McMillan attempted to head off any fait accompli by forcing McNamara's attention to the matter. With Fubini's support and Vance's approval, he submitted a McNamara-to-McCone memorandum for signature, but in the end it was signed out by Vance. Though the main play failed it did tend to put matters into better perspective. Vance temporized, suggesting that CIA be authorized to do only those tests needed to establish FULCRUM feasibility while DNRO concurrently did comparative studies. By January 1965, he said, a determination of development desirability and a system selection should be possible. He added, "At that time we can discuss the assignment of responsibilities for development and operational employment."<sup>107</sup>

Wheelon either did not await DOD action or, more probably, had advance notice of Vance's intentions. On 9 July, before Vance's letter could reach McCone, he sent to McMillan an outline of "the various tasks for which we require immediate NRO funding." The total was [REDACTED] of which the Agency planned to provide [REDACTED]. Wheelon's task description took in rather more than feasibility studies, including also spacecraft, booster, and "assembly, integration, and checkout" contracts.<sup>108</sup> Subsequently -- by one day -- a detailed cost

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sheet on the first year of FULCRUM arrived at the NRO; it included a figure of [REDACTED] in Fiscal 1965 money additional to the [REDACTED] earlier identified as an immediate requirement. Of this total, only [REDACTED] was to go for camera development; among other lots, [REDACTED] was specified for initial investment in the modification of a launching facility. <sup>109</sup>

Several of the issues thus raised were taken up at a meeting of Vance, McCone, Fubini, and McMillan on 11 August. McCone was brought to accept "in principle" a [REDACTED] funding level for GAMBIT-CUBED, and a set of Vance instructions on FULCRUM, issued a week earlier, was expanded to provide for some system design study work, but under an NRO aegis. McCone again objected to consideration of the CORONA management switch so long delayed, but eventually agreed that McMillan would be allowed to bring the Aerospace Corporation into the contract structure.\* Along the way, Mr. McCone disclaimed

\*In mid-July, Col Ledford had urged Dr. Wheelon to appoint immediately a successor to the departing contracting officer at Lockheed's Advanced Projects (AP) Facility. Ledford's assessment was that it should be done at once to prevent Greer's staff from usurping the function. The action was approved and carried through in less than 24 hours and on 5 August special enabling instructions were issued to the new incumbent.

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any intention of creating a new CIA systems engineering competence. 110

McCone's new concession of the need for unified CORONA management, this time before DOD witnesses, seemed to be unqualified and unalterable. That the CORONA problem had not been solved was probably appreciated by many of the NRO Staff: Greer, who had wearied himself in the CORONA affair for nearly two years, certainly entertained reservations. As for FULCRUM, experience had demonstrated that unwritten and unsigned understandings on the scope of any CIA program tended to be interpreted variously and sometimes acted on with little advance notice. GAMBIT-CUBED was not so plainly a problem; the fact of its steady progress toward operational status deadened efforts to make it a quid pro quo for FULCRUM.

As in previous years, most of the still mounting frustration and acrimony of NRO operations in the closing months of 1964 was channeled into squabbles over details. The details, petty in themselves, were pieces of the larger controversy. That McMillan was unable to direct high executive attention to the central issue was a consequence of two loosely related circumstances. First, and most important, the summer of 1964 was an election summer and though it was abundantly clear quite early in the campaign that the President would win a clear electoral victory, he and the chief members of his cabinet desired a massive

landslide. McMillan was told on several occasions that once the election had been won, his problems would receive immediate attention; in the meantime, the campaign had first call.

Secondly, the only individual in DOD with the stature necessary to face down McCone was Secretary McNamara -- who was involved not merely in the election campaign but also in the steadily worsening situation in Vietnam. Vance, who carried the weight of DOD's authority in matters of concern to the NRO, quite correctly treated the controversy as an issue to be settled objectively. Though generally sympathetic to McMillan's viewpoint and usually supporting it, Vance did not uncritically accept the NRO position. There were some indications that apparently he, and others, were beginning to think McMillan a bit too uncompromising in his stand.

Within the CIA the emergence of FULCRUM as the long-sought successor to CORONA, the system that would put CIA squarely back in the system development business, deflected Wheelon's attention. He devoted much more of his time to forcing that system toward approval than to the older and more tired issues of CORONA management and NRO prerogatives. \* Ledford and Carter took over the protection of

\*It is interesting, though perhaps of no great significance, that Wheelon continued to function as the "CIA monitor" for the NRO although he simultaneously acted as the program director for FULCRUM. Half seriously, members of the NRO Staff referred to FULCRUM as "Wheelon's Bird,"

CORONA from the NRO. There was no appreciable loss of energy with the transition; CIA's privileges and proprietary rights were guarded as fiercely as before. But the defense was less skillful and less subtle, perhaps because Wheelon was not so interested.

On the day following McCone's agreement to accept the Aerospace Corporation as systems engineering contractor for CORONA, McMillan notified Greer and Ledford. (It was impossible not to think back to the previous occasion of such a message, in June, and its consequences.) Five days later the CIA contracting officer at each of the affected plants was advised by his headquarters that existing contracts could be modified to permit "appropriate recognition" of Aerospace. <sup>111</sup>

Realistically, the possibility that such a concession would significantly alter the nature of CORONA management arrangements was never large and it vanished entirely in a matter of weeks. The central episode in this phase of the CORONA management controversy was perhaps the most preposterous of all. It found an Air Force lieutenant colonel defying the Under Secretary of the Air Force, surely an unequal contest even though the colonel invoked the entire strength of the CIA at one point. The immediate contestants were Lieutenant Colonel H. V. Webb, CIA contracting officer at Lockheed-Sunnyvale, and McMillan; implying that he would not be content until he had equalled the achievement that ended in "Bissell's Bird" -- CORONA.

the real antagonists were the CIA and the NRO, and the issue was actual as against ephemeral authority in the CORONA program.

Webb opened the affair early in September with injudiciously worded protests against various technical decisions, invoking the spirit of the Configuration Control Board (CCB), although by virtue of the August agreement the CCB was no longer a controlling authority in CORONA affairs. On the evidence, CIA preferred the CCB system to accepting technical direction from Aerospace (or Greer); yet more than a year earlier McCone had characterized the CCB as an improper body for technical management purposes. Wheelon, briefly turning his attention again to CORONA matters, issued a dictate in November that effectively restored the earlier chain of command; all concerned were advised that Webb would accept instructions only from J. J. Crowley, a CIA employee who was the newly appointed deputy for CORONA matters. Crowley's precise responsibilities still had not been decided, but that was apparently considered non-germain.

Webb, convinced that his duty lay in re-establishing CORONA arrangements of the early period, stubbornly resisted changes brought on by the August Agreement. By November matters had so completely gone awry that Brigadier General J. T. Stewart, successor to Brigadier General Martin as Director of the NRO Staff, was led to complain about

Webb to Colonel Ledford. Stewart pointed out that Webb was tampering with technical decisions that were none of his concern and that he was extraneously dabbling in contractual matters that were only nominally in his province. Webb, who apparently saw himself as a sort of Swiss Guard for CORONA, believed that NRO people were deliberately distorting the record of his "mature and conscientious effort" to further the CORONA program. Reacting to the Stewart protest, Webb observed, rather undiplomatically, that what was needed was a return to the days when "emotionally mature people discuss the needs of the program in an atmosphere of mutual professional respect."\*

Such semantic sniping at NRO goals and agents was not unprecedented and might have gone unpunished if Webb had not chosen to turn away from the CORONA facility the first lot of Aerospace Corporation people who appeared, credentials properly authenticated and under McMillan's instructions, to begin monitoring CORONA engineering. The incident, detailed in a set of memoranda that read like drafts for a scene from H. M. S. Pinafore, brought on a new exchange so bitter that it ended with Ledford's drawing back. But then General Carter, prompted by Webb,

\*George Armstrong Custer was one of the last previous lieutenant colonels to so challenge a general officer.

instructed CIA's CORONA people to ignore instructions from McMillan on procedural matters. Though the effect was to turn back the organizational calendar once again, Webb's victory was a classic of Pyrrhicism: McMillan revoked his (Webb's) assignment to the CIA and had him transferred.\* The CIA was infuriated; Carter personally protested to both McMillan and Vance, but without effect. Though the dispatch of Webb to other quarters was a niggling compensation for McMillan's failure to obtain promised changes in the management procedures at Lockheed-Sunnyvale, it was the only one obtainable.

There can be no question that Webb had substantially altered the mission control arrangements that existed under his predecessor. The reasons for his doing so remain obscure, but it may be conjectured that in a situation requiring the exercise of considerable diplomacy in exercising the authority of two agencies he chose to adopt -- unjudiciously and without reservation -- the most extreme viewpoints of one, the CIA. He challenged the authority of the Under Secretary of the Air Force, but so clumsily that he lost an excellent chance of winning the main battle. The incident was particularly unfortunate in two respects. First, it increased the emotional strain between the NRO and CIA at a critical time. Second,

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\*Webb retired from the Air Force and joined CIA as a civilian employee.

it caused Carter on 8 December to seek and obtain Vance's endorsement of a revocation of McMillan's 30 November directive. Webb's removal, which could scarcely be interpreted as other than a punitive action against a loyal member of the CORONA community -- one who was described as having the complete trust of his immediate superior, though there was evidence that he had not been so highly regarded until his embroilment with McMillan -- was mixed into the more important matter of McMillan's authority to control the CORONA program in accordance with existing understandings. The consequences were disastrous, all around. <sup>112</sup>

Although the entire affair had the flavor of an antique comic opera, it was indicative of a pattern of behavior that had developed by late 1964. Constantly frustrated in efforts to acquire effective management control of the CORONA program, harassed by minor quibbles that suddenly became matters referred to the attention of Vance and McCone, McMillan and the NRO Staff grew increasingly testy. Their role was a difficult one: to progress. CIA had merely to obstruct, to delay, to refuse cooperation. No reliable enforcement mechanism existed, and McMillan's efforts to create one or to invoke the full authority of DOD were unfailingly futile. The contractual arrangement to which Mr. McCone had agreed in August was not carried through. Attempts to secure the con-

tract amendment signature from the various contractors -- particularly Lockheed -- were turned aside by a succession of skillful diversionary actions. A security issue briefly became the focus of attention; it was artificial and ultimately obliged the Agency to defend procedures it had earlier (and independently) planned to discard as insufficient. When the security matter was more or less settled there appeared in its stead a set of objections based on facility custody. This also was artificial (McMillan won the legal argument and it availed him nothing in the end), but that made it no less effective in delaying compliance with the policy to which McCone had agreed in August.

Bickering over the operational control problem was part of the general degeneration of the CIA/NRO interface during the winter of 1964-1965. Owing in part to Colonel Webb's combative instincts and in part to the ragged ends of the various agreements and arrangements covering operational control of the CORONA vehicles, it proved impossible for General Greer to carry out McMillan's instructions. He recommended on 11 November that McMillan issue a clarifying directive that would put the central responsibility for the "technical health" of payloads in his keeping. Greer, the immediate victim of the harrassment, was convinced that nothing less than a consolidation of authority would correct current difficulties, some of which had actually endangered

mission success. McMillan on 30 November issued clarifying instructions, to take effect the following day. General Carter, then acting director of CIA, promptly objected. Failing any response from NRO, and angered by the Webb affair, he went to Vance with the issue. On 8 December, Vance agreed that the procedures in effect before McMillan's 30 November directive should be employed "until such time as the entire matter of command, control, jurisdiction of payload and operational aspects of CORONA have been agreed by DCI and Sec Def." (These were Carter's words.) Ten days later, on 18 December, Carter personally issued instructions to his new West Coast representative (Webb having been dismissed two weeks earlier) to follow the former rules.

On 14 December, McMillan made another trial of strength by personally observing operations from the Satellite Test Facility during the launching of CORONA 1015. Two days before the launching, Colonel Ledford authorized transmission of operational control messages to the STC. (The facts and issues were debatable, to say the least, but it was generally conceded that the formal procedures of pre-December did not require their being sent to the STC.) Carter subsequently complained that after McMillan's departure the practice was deliberately continued. He protested, in pained phrases, the impropriety of using a precedent outside the basic agreement as a reason for changing control

procedures. McMillan's gambit had no lasting effect; like the dispatch of Aerospace people to Sunnyvale it could be described as a tactical victory if one ignored the strategic havoc it caused. The only lasting effect was further to irritate both parties.

The systems engineering contract with Lockheed had been allowed to expire in July 1964, and after that time Lockheed had worked from its own funds in the confidence of eventually being reimbursed -- not an uncommon situation in dealing with covert programs. General Greer had taken all conceivable steps to insure that the appropriate arrangements were made. Efforts to reconfirm the supposed August decision had been generally futile. Early in March 1965, McMillan decided on another attempt to bring the entire matter of CORONA management to a head. He was particularly concerned because of the possibility of one of those events against which he had frequently cautioned -- a payload malfunction that would require instantaneous availability and integration of vehicle condition and payload condition information. But he was also convinced that a directive giving General Greer the authority to override the CIA manager's authority to decide who received information on payload condition would "elicit a paranoid reaction;"<sup>114</sup> he had earlier explained to Vance that CIA had flatly refused his instructions to establish a route for communicating essential payload condition information to

Greer or his representative. He had also attempted to induce Fubini to recommend the complete transfer of CORONA management responsibility to Greer. Failing that approach, in mid-March he sent General Carter a copy of a proposed directive establishing Greer as the single CORONA-responsible officer for operations. It was a third-frontal assault on CORONA management arrangements.

Carter's response took two forms: first, he told McMillan that the CIA CORONA manager would decide what information should be sent to General Greer during a mission; second, he remarked that while a transfer of authority to Greer might be advisable once McCone and Vance had agreed to that measure, neither seemed immediately disposed to take the step. <sup>115</sup> At the end, Carter observed to Dr. McMillan, in lugubrious terms reminiscent of the correspondence of early 1964, that "incremental approaches to a comprehensive plan... are a poor substitute for the broader agreement we have been directed to establish as rapidly as possible." In view of the failure of agreement ("the specific problem of Aerospace has been overrun by the larger question of active CIA participation in the CORONA program"), General Carter advised the DNRO that he had instructed his West Coast contracting officer to reinstate the earlier contract, making it retroactive. That action represented a total defeat for McMillan. As for the problems

arising in CORONA administration, General Carter commented that he believed neither McCone nor Vance favored a shift of complete program responsibility to General Greer, so directives changing procedures toward that goal were inappropriate. Inferentially, Carter was explaining that the most McMillan could hope for was agreement on a limited transfer of contract administration responsibility and the eventual inclusion of Aerospace as a systems engineering contractor.

In McMillan's estimation -- and he was probably correct -- the Carter declamation of 16 March signaled CIA's renewed determination to retain complete responsibility for those aspects of CORONA that "historically" had been in the Agency's custody. Carter's remarks had the tone of a proclamation that CIA would not recognize DNRO's authority to control any important aspect of CORONA. 116

If in 1964 the Wheelon group in the CIA had intended only to fortify custody of CORONA and to create a capacity for developing a new search system, both under the nominal aegis of the NRO, it was apparent by April 1965 that a considerably more ambitious goal had been adopted. In a formal proposal that month, the Agency recommended dissolution of the NRO and CIA assumption of total responsibility for "research, preliminary design, system development, engineering and operational

employment" in all programs assigned it. The NRO Satellite Operations Center would become a CIA facility; DOD agencies would participate in operations only to the extent of supporting activities such as launching, commanding, tracking, and recovering. In place of the DNRO, the Agency proposed the creation of a Director, National Reconnaissance, who would be responsible to an executive committee composed of the Director of Central Intelligence and the Deputy Secretary of Defense. The "DNR" would have no management authority in programs assigned to the CIA but could be delegated management authority for DOD programs, would be permitted to review but not to modify budgets, and would report to the operating head of the CIA in all matters of "policy, coordination or guidance." He would have no staff. <sup>117</sup>

Thus were the lines drawn. McMillan, as Director of the NRO, had initially set out to consolidate functions and authorities assigned to NRO in formal agreements and binding commitments. By what in retrospect seemed an unhappy choice of tactics he had been pushed into defending the continued existence of the organization he headed. And that in less than two years. Indeed his principal defeats followed closely on one another between August 1964 and April 1965. He had begun by attempting maneuvers that would put into effect major and minor agree-

ments enlarging NRO's authority in CORONA affairs. By March 1965 the CIA had given formal notice of its intention to withdraw from any earlier compromise of its CORONA prerogatives, and in April the Agency openly advocated abandonment of the entire NRO concept and abolishment of the organization.

The status of CIA-NRO relationships, at one time relatively clear, had been further confused during early 1965 by arguments over future programs. In July 1964 the USIB had formally called for the development of both a search system and a surveillance system; FULCRUM was the Agency candidate for the former assignment, and it was generally assumed that GAMBIT-CUBED would fill the latter. Greer's organization, and thus McMillan, favored a search system generally known as S-2. In many respects it was more advanced than FULCRUM even though somewhat less ambitious in objective. The FULCRUM versus S-2 issue was not new in 1965, but a confrontation between the two concepts seemed more probable. In February, with dramatic suddenness, Itek Corporation announced that it would under no conditions accept an extension of the FULCRUM project, preferring to forego entirely the prospect of further development work in observation satellite camera systems. Because the company had no other substantial source of income, the decision had a devastating impact. Itek's reason, baldly

stated, was a thoroughgoing distaste for the sort of experience the corporation had recently gone through with CIA. The announcement, intensely embarrassing to Wheelon, who was charged with carrying out the FULCRUM program and who had been more intimately involved with Itek's conduct of FULCRUM than had any other CIA official, immediately heightened the tension of the CIA-NRO relationship. The Itek people had attempted to contact McCone immediately after making their decision on the FULCRUM project, but had been unsuccessful (he was out of town) and eventually had to settle for a quick exchange at a considerably lower level in the organization -- which certainly did nothing to improve CIA reception of the news. The NRO Staff received the news with undisguised glee.

Itek's reasoning was particularly pertinent to the ongoing CIA-NRO argument over functions. It appeared, for example, that Wheelon had specifically and repeatedly refused Itek requests that McMillan be briefed on the status of FULCRUM. McMillan's only written information on FULCRUM at that time consisted of copies of some charts dating from the previous August. (McMillan was particularly angered by the disclosure of Wheelon's attitude, remarking that "the NRO could never function effectively as long as people of the character, and sharing the attitudes, of some of those who had been promoting FULCRUM were in

a position to interfere with the conduct of the National Reconnaissance Program. ") In essence, Itek's decision was specifically a result of CIA insistence on the use of a rotating optical bar technique that the company distrusted. At one technical meeting Itek had questioned the requirement and had encountered a firm CIA denial that there had been any Agency insistence on such an approach. The denial was shown to be a transparent fraud almost immediately. It appears to have been this incident that triggered off the extreme Itek reaction.

Itek had concluded that if the company were to undertake FULCRUM development it would be held responsible for the outcome; corporate officials did not feel they could accept that responsibility without having greater freedom for technical decisions than they had been given during the study phase. Moreover, company officials resented having been asked for what they described as "an oath of loyalty" to the CIA concept -- particularly since they inherently mistrusted the technology on which the concept was based. <sup>118</sup>

In many respects the Itek affair was a further misfortune all around. It confirmed McMillan in his conviction that he was dealing with contrived duplicity and it reinforced his already low opinion of Wheelon. It inhibited consideration of FULCRUM's real merits by introducing a new element of organizational rivalry and by substantially compromising CIA's ability to

develop FULCRUM or an equivalent -- but without lessening the Agency's determination to do so. In the long term, Itek's action cast a shadow of doubt over CIA's ability to carry through any major new development program.

On the other side, some at least in the CIA were convinced that Itek had been given some quid pro quo in recompense for what would in most circumstances be interpreted as a suicidal corporate action. If Itek had not been given some sort of NRO guarantee, went the argument, the company would never have dared act so. Wheelon's staff appeared to have suspected that one or more members of McMillan's NRO Staff had conspiratorially encouraged or even composed Itek's decision and the dramatic announcement of it. Such a scenario, while not entirely implausible given the intensity of personal feeling that existed at the time, was very unlikely. The chief argument against a pre-arranged denouncement was that McMillan had earlier told Itek he distrusted its technical approach and personally favored giving the search system development contract to Eastman Kodak -- a circumstance Itek freely acknowledged even while defending the basic validity of a FULCRUM freed from the unrealistic 120° scan requirement that necessitated reliance on an optical bar technique.

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If the NRO Staff found the incident hilariously enjoyable, CIA reacted with combined anger, indignation, and embarrassment. (There is in NRO files no record of a CIA comment on the matter; presumably, however, it was a topic for discussion between Vance and McCone.) It raised false hopes in the NRO of an early solution to the organizational squabble then going on, but it appears to have left undiluted CIA's determination to retain complete control over selection of a CORONA follow-on system.

Almost coincident with the Tek affair, preceding it by a matter of days, Eugene Kiefer resigned both his CIA post and his appointment as Deputy Director of the National Reconnaissance Office. Kiefer's position had grown increasingly uncomfortable over the winter. With Wheelon's gradual emergence as the chief CIA authority in satellite reconnaissance matters, Kiefer discovered he had an increasingly limited access to McCone and Carter and influence that steadily declined. Kiefer had attempted to function as a senior member of the NRO rather than as a CIA delegate to the NRO. Instead of acting as a punitive instrument of the Agency in his dealings with McMillan, he persisted in attempting to carry out precisely the assignment given him when he became Deputy Director. These factors combined to weaken whatever effectiveness he originally had. By late 1964 he was largely isolated. When Wheelon

replaced Carter as the official CIA program monitor and as McMillan became increasingly rigid in his reactions to events, matters grew worse. As CIA reconnaissance people may have known, Kiefer had been influential in the initial exclusion of Wheelon from any formal program appointment. Because of Kiefer's CIA associations he was never fully trusted by the NRO Staff and he certainly was not able in fact to exert the influence his post nominally had. His close association with McMillan and his stubborn loyalty to the NRO charter cost him all influence with the CIA. Still, he had acted as a moderating influence, and his departure removed one of the inhibitors to the destructive confrontation toward which the Agency and the NRO seemed to be moving. \*

In one instance McMillan's increasingly desperate attempts to secure the attention of either Vance or McNamara paid some dividends for CORONA. The CORONA operations problem had grown more difficult by stages in the period between August 1964 and March 1965. Pre-August arrangements for insuring the interchange of payload-vehicle status information between Greer's people and the CIA payload operations people had been abandoned and no adequate substitute provided. Changes of this nature had begun at Webb's instigation and subsequent to Webb's departure the earlier arrangements had not been restored. Feelings had

\*Kiefer resigned on 18 February 1965; the Itek affair came to a head on 24 February.

run high in the Webb affair, and memories were long.

From December 1964 through early March 1965 the CIA representative at the covert CORONA facility near Sunnyvale had explicitly refused to release to Greer's project people any detailed information on the continuing status of CORONA payloads, offering only "a summary judgment" on "whether the payload is in good health or not." In McMillan's view -- and Greer's -- that denial forced the CORONA project officer responsible for vehicle welfare on orbit to operate without the information needed to perform his duties adequately. Moreover, because the CIA had discontinued use of teletype facilities at the Sunnyvale Satellite Test Center and refused to relay payload commands by a "communication of record," McMillan found himself unable to verify the instructions given to vehicle controllers. He considered the use of a commercial telephone to be a thoroughly unsatisfactory substitute.

The issue was not quite as straightforward as McMillan saw it, nor was his outlook entirely dispassionate. He wanted somewhat more than a restoration of the pre-Webb arrangement, hoping to establish an effective precedent for the introduction of Aerospace Corporation personnel into the orbital performance evaluation process. On the other hand, the Agency position was precariously biased because the changes introduced by Webb and continued in the atmosphere of extreme antagonism that

followed Webb's dismissal did threaten the general well-being of the vehicle-payload combination. That much had been demonstrated during a particularly troublesome flight in February. On the whole, McMillan had much the better of the case.

Appreciating his unusual advantage and increasingly disturbed at what he took to be unreasonable stubbornness on the part of the CIA, McMillan on 5 March personally carried a written statement of the situation to Vance. <sup>119</sup> The Deputy Secretary talked the matter over with Carter and subsequently with McCone, eventually securing their agreement that arrangements at Sunnyvale would be restored essentially to the pre-Webb basis. Vance passed that assurance to McMillan and -- probably because McMillan commented that he had received similar assurances in the past without having seen them honored in practice -- told McMillan to call to his personal attention any substantial departure from the arrangement thus worked out.

Roughly twenty-four hours before the next scheduled launching, McMillan received a copy of the instructions issued to the CIA group at Sunnyvale. Although General Carter had indeed ordered a CIA representative to remain in the Satellite Test Center with Greer's people during "all critical phases of the orbital operation of CORONA 1018," he had also instructed the representative to "discuss" details of payload

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health with Greer's people rather than, as McMillan felt essential, to make available the principal elements of payload performance data.

McMillan's indignant protest to Vance cited not only Carter's instructions but also the gist of a conversation between Colonel Paul Heran (Greer's CORONA project manager) and the designated CIA representative to the STC. The representative had said, in effect, that he interpreted Carter's instructions as confirming earlier arrangements; that no change from the previous mission was contemplated.

As in December, McMillan was on the West Coast for the mission. After unsuccessfully attempting to reach General Carter by telephone, he lost all patience and directed that the launching be postponed one day. No measure so drastic had previously been attempted, but in McMillan's view no provocation so extreme had previously been offered! He followed up the launching suspension by sending to Vance a copy of a directive -- in draft -- that ordered Colonel Ledford to personally attend the launching and control operation and to insure that appropriate payload information was passed to Heran. McMillan proposed issuing that directive unless notified that Ledford had suitably modified instructions given to the CIA people at Sunnyvale.

At that point Vance again intervened. He contacted General Carter and reaffirmed his previous instructions about restoring the pre-August

arrangements. Carter demurred, remarking that representatives of Aerospace Corporation would have access to the data, which had not been the case before August 1964, and Vance conceded the point. (McMillan subsequently dropped that part of his instructions which called for passing payload data to General Greer or "such representatives as he shall designate.") But in any event, both the requisite communications and an exchange of information were resumed during the CORONA 1018 mission. With the proviso that Aerospace people would not have access to it, the information continued to flow thereafter; it was, however, less comprehensive than had been the case before August 1964, and there was no prospect of further improvement.

McMillan had won a minor point but he had been forced to surrender on another major issue: Aerospace Corporation access to orbital data. And in order to bring Carter around he had been obliged to involve Vance both directly and repeatedly. The disadvantages may have come home to him in retrospect, for in a note to Vance, following the completion of arrangements at the STC, he remarked that he would "personally try to minimize any further perturbations in NRO activities, pending a successful conclusion to your negotiations on reorganization."<sup>120</sup>

McMillan had succeeded in restoring some of the essential communications damaged by the Webb episode of the previous fall, but it had cost

him a significant concession on the status of the Aerospace Corporation contract and an equally significant concession that little more could be done until the NRO had been reorganized. Quite probably McMillan had learned that Vance disliked being called on to settle squabbles at the "point of order" level. Finally, the principle McMillan prized had not been established. The final goal of reinforced NRO authority in CORONA affairs seemed no nearer.

Increasingly irritated by the difficulties he was encountering in his effort to manage the NRO, and with fresh memories both of his most recent clash and its pseudo-satisfactory outcome, Dr. McMillan chose the occasion of a 2 April presentation to the President's Foreign Intelligence Advisory Board (FIAB) to make a broad statement of the case for a strengthened NRO. He led into his subject with a stab at the continued absence of a clear decision on a new search system and opened a resume of the management status of the NRO with the remark that "de facto, NRO does not exist."\*

McMillan protested that the existence of the Executive Committee -- McMillan, McCone, Vance, and Fubini (Wheelon was not listed!) -- had the effect of elevating almost all NRO matters to the Vance-McCone level

\*This and subsequent quotations are taken from the notes Dr. McMillan used in his statement. He may have changed his wording during delivery, but the sentiments were not altered; indeed, they reappear in later "essays" forwarded to Deputy Secretary Vance.

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and that Vance had been dragged into "very minor matters" as a consequence. More important, the principals were busy with other matters, meetings were infrequent, and decisions tended to be delayed. "Worst of all," McMillan-added, "many of the agreements arrived at in the ExCom have not been implemented."

It was clear, McMillan continued, that the CIA found direct management control by an "outsider" -- "in particular by one who in their eyes is colored AF blue" -- to be "galling and hard to accept." The CIA people he had to work with, the Under Secretary said, "have a history of obstructing or defying my control." "This," he urged, "lends confirmation to charges of bias on my part." As examples he cited changes within Program B of which he had never been officially informed and instructions to Colonel Ledford not to communicate with the DNRO.

The core of the problem, McMillan believed, was satellite reconnaissance. He briefly went over the events of the previous week's mission to support that contention, observing that although the complement of CIA people involved in satellite reconnaissance had increased from about 5 to about 25 in the past two years, "still there is no one to exercise overall technical responsibility for the CORONA system." In passing he remarked on the "many active efforts to obstruct the exercise of such responsibility."

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In words that had an understandable cast of despondency, McMillan summed up by commenting on the current re-examination of the NRO.

He had two particular points: <sup>121</sup>

1. I believe in a strong NRO. I do not believe that either the CIA or the military are capable of accepting effectively an autonomous responsibility. Both need the discipline of a central problem-oriented management.

2. If you choose a "coordinator" or "tasking" role for the DNRO, don't ask him to be responsible for the budget. Unless the situation that now prevails is changed sharply, the DNRO cannot responsibly spend the taxpayers' money without firm management controls over the way it is spent.

At some point early in April, possibly in response to the FIAB statement, Mr. McCone proposed that the Satellite Operations Center be removed from the custody of the NRO and given to the CIA. He had in mind a physical as well as an organizational transfer. That event prompted McMillan to a long and rather despairing letter to Vance, ending with: <sup>122</sup>

I am convinced that if the Op Center is removed from the NRO, the NRO will be destroyed and the DOD will experience interminable difficulties in getting its requirements recognized. I am further convinced that this fundamental fact is well understood by others and that final irrevocable destruction of the NRO is the primary intent behind the proposal to separate the Op Center.

Yet McMillan seemed to recover quickly from any despondency arising from the McCone proposal, perhaps cheered by the news that

McCone was leaving the CIA. (Word of the impending shift reached the NRO on 12 April; McCone remained, officially, until 28 April.) On 22 April McMillan formally presented and recommended early adoption of a proposed directive composed by Dr. Fubini for the signature of the President. (In all likelihood, the Fubini proposal had been stimulated by a memorandum from General Stewart urging that Vance be asked to sign a letter directing early resolution of the CORONA question along the lines favored by the NRO Staff.) Fubini's directive would have resolved all outstanding issues by enforcing the lines of agreement urged by FIAB a year earlier (2 May 1964) -- the recommendation from which so much had been expected and from which nothing had come. The Fubini proposal would have limited the CIA's influence to the maintenance of a research and development group responsive to the Director, NRO. It went somewhat beyond the words of the FIAB recommendations of May 1964, but, in McMillan's opinion (and presumably in Fubini's), did not violate their spirit. 123

The CIA proposal to abolish the NRO was dated four days after the Fubini proposal and two days before the official transfer of CIA authority from McCone to Vice Admiral William F. Raborn (Retired), once head of the Polaris project. Although the CIA plan may have been hurried to completion by the imminence of McCone's departure, there are some

indications that Raborn was aware of it and that McMillan may not have wished to acknowledge that circumstance. (General Carter left simultaneously, being succeeded by Richard Helms, who had been Mr. Bissell's deputy during the Dulles-Bissell era.) The timing probably was not critical, however; so much had happened to stir up new controversy since the STC confrontation of late March that a direct clash was almost certainly inescapable.

Both Raborn and Helms were unknown quantities. McMillan contacted Raborn almost immediately after the Admiral's assumption of authority, proposing an early resolution of the disagreement over what search system to develop. At about the same time Raborn accepted without quibble a proposal from Vance that FULCRUM funding be cut back from a level of [REDACTED] a month to about [REDACTED] preparatory to "wind [ing] the matter up by May 30."<sup>124</sup>

Separately, McMillan approached Raborn on a personal basis with a plea for careful consideration of specific items included in the CIA estimate of program needs in fiscal 1966. The McMillan budget proposal provided substantially less than the CIA had asked in several areas, notably OXCART, ISINGLASS, [REDACTED] and IDEALIST. Interestingly, McMillan couched his request to Raborn in terms of a personal note to be handled as such until they had discussed its content.<sup>125</sup>

Any expectation that a direct approach to Raborn might sidestep the problems earlier encountered in dealing with Wheelon and McCone was sadly misplaced. Whether Raborn discussed the budget matter with McMillan before 2 June is uncertain (although the absence of any McMillan record of such a discussion would seem good evidence on that point); in any event, Raborn contacted Vance and in the course of a conversation concerning FULCRUM remarked on his understanding that no action on a search system could be taken "until final reorganization of the NRO." Raborn had earlier discussed the issue with Dr. Donald F. Hornig, the President's Science Advisor, who had suggested that the issue be submitted for resolution to a special reconnaissance panel of the President's Science Advisory Committee. (The panel was headed by Dr. Land.)

A new attempt by McMillan to resolve the long-delayed issue of the Aerospace Corporation role in the Lockheed-CORONA contract was similarly unsuccessful. On 14 June, McMillan briefed Raborn on the status of the contracts, identified the objections to their earlier formalization, and commented that such issues had all been resolved to the satisfaction of the Agency. Again attempting to force the issue, McMillan observed that he intended to authorize signature of a revised Lockheed contract in the immediate future. Raborn, after first discussing the

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matter with Wheelon, telephoned General Stewart and asked that no action be taken on the contracts pending further conversations between Raborn and Vance. Simultaneously, on 17 June, Wheelon told Lockheed-Sunnyvale that Raborn did not want Lockheed to sign.<sup>126</sup> The episode was in most respects a repetition of events of the previous August. All it achieved was to indicate that Wheelon had lost no influence with McCone's departure and to suggest that McMillan lacked the strength to force a favorable outcome on a major policy clash with the CIA. And, of course, the Lockheed contract did not change.

The events of that spring were remarkable in several respects. Most obvious in retrospect, though perhaps not seen so clearly at the time, was a marked shift in the tactics Dr. McMillan used in his dealings with the CIA. Until late 1964, Dr. McMillan had generally avoided direct confrontations on other than extremely crucial policy issues. Starting late in 1964, and typified by the events of that December, he began taking a firmer stance and he began arguing smaller issues more earnestly.

There is no single or simple explanation for a change of tactics that was to end, ultimately, in the departure of most of the principals. McCone and Carter went first, but Wheelon stayed on, and in the early summer -- before 10 July -- the NRO Staff learned that Dr. McMillan also was leaving. Eugene Kiefer had resigned the preceding February, spending nearly a

year with the RAND Corporation before rejoining his former chief, Richard Bissell, at United Aircraft. Kiefer had been a moderating influence on McMillan, and so had General John Martin, who in August 1964 had left the staff chief's post in the NRO to succeed General Greer in the West Coast project office assignment. Brigadier General James Stewart, who succeeded Martin in the staff post, was appreciably less patient with the evasiveness of Agency policy and encouraged Dr. McMillan to fight out the small issues as well as the large. But that policy tended to cause relatively minor differences to become questions of prestige on which neither the NRO nor the CIA could surrender without losing much more than whatever points were immediately at issue. Kiefer, who had by late 1964 effectively lost all influence with his associates in the CIA, felt by early 1965 that he was no longer able to exercise a moderating effect on the contacts between the CIA and Dr. McMillan. His resignation followed, and no successor was appointed. With his departure, the confrontations between McMillan and Carter, not the principal Agency spokesman in NRO matters, became both more frequent and more acrimonious. Neither side was willing to temper its stand on issues once joined, so more and more frequently they had to be resolved by appeal to Vance. And Vance, as was particularly apparent in the aftermath of the April argument about controlling CORONA operations,

did not appreciate being called upon to settle NRO affairs on a day-by-day basis.

The consequences of the several confrontations of the spring of 1965 were varied, but from the NRO viewpoint they were almost universally unfavorable. First, and perhaps most important, no progress at all was made in the effort to resolve the matter of systems engineering responsibility for CORONA. The total lack of any progress represented a substantial setback for McMillan. Second, the Land Reconnaissance Panel (part of the President's Science Advisory Committee) merely reaffirmed the findings of earlier panels respecting a follow-on search system: study should continue, but there was no special reason for selecting one among the several system prospects for immediate development. The NRO had hoped for selection of some system other than that advocated by Wheelon's group, a development that would tend to choke off the CIA's involvement in the creation of new satellite reconnaissance systems. There the evidence of CIA obstructionism seemed most evident, and there the chances for a notable success seemed brightest. Third, and tremendously important in its own right, was the issuance of an "agreement" for reorganizing the National Reconnaissance Program. Except in feeding policy suggestions to Dr. Fubini earlier that spring, the NRO Staff had no important role in the generation of what was, for

practical purposes, a new NRO charter.

And fourth was Dr. McMillan's resignation.

The reorganization agreement was largely written in the period between the announcement of Dr. McMillan's resignation (which most of the NRO Staff learned about through the Sunday papers) and the time, nearly 10 weeks later, of his actual departure. Deputy Secretary of Defense Cyrus Vance apparently relied on the advice of Dr. Eugene Fubini in accepting the agreement. Indeed, Fubini may have been its principal author; it certainly incorporated several of the notions he had discussed with various members of the NRO Staff in preceding weeks. Final arrangements were worked out by Vance and Raborn, each relying on his relatively small personal staff for help in matters of detail.\*

In the aftermath of the announcement that he was leaving, but before the report of the Land Panel had been completed, McMillan made one last effort to bring off a fait accompli maneuver against Wheelon. In mid-July he sent to Vance and Raborn a summary status report in which he asked not for support of his actions but for a deferred review of progress. Surveillance system evaluation was somewhat confused in

\*Of the five pre-1966 charters and proposed charters in which NRO functions were defined, that of August 1965 is the only one that left no residue of draft, proposal, or comment in NRO files. Apart from some contributions to papers Dr. Fubini was working on in April and May, the NRO Staff had no inputs at all. While perhaps too much should not be made of those facts, they are interesting enough to require mention.

that Itek, Perkin-Elmer and Eastman Kodak were all performing hardware studies, although a rather substantial NRO commitment to EK had been made and the CIA commitments to Itek and Perkin Elmer were relatively large. (EK was stretched to the limits of its capacity by GAMBIT, GAMBIT-CUBED, a NASA lunar camera project being monitored by Greer's office, and studies associated with the impending decision on MOL -- the Manned Orbiting Laboratory). McMillan reported to Vance that the original Eastman S-2 system still appeared to be the most promising approach, adding that he proposed to select either Itek or Perkin-Elmer to develop an alternate camera configuration. In the spacecraft area, General Electric's proposal had the advantage of Lockheed's and a TITAN IIX seemed to be best suited as the booster. McMillan proposed using a four-capsule re-entry vehicle configuration initially, with the possibility of shifting to sixteen small re-entry vehicles in some future modification.<sup>127</sup>

The reaction from Raborn was strikingly like the reactions of McCone, Carter, and Wheelon to comparable proposals on similar occasions in the past. First, he politely protested McMillan's apparent intention of unilaterally selecting a specific search system for development; second, he invoked the still-pending Land Panel report as a reason for not proceeding precipitately; and, finally, he made the none-

too-diplomatic point that only he and Vance could make the "final judgement on any specific search and surveillance system." Vance had earlier cautioned McMillan to proceed most cautiously in making program commitments to Eastman, but McMillan, who was convinced that the Eastman system was by far the best prospect, had continued to invest in the Eastman approach. The Land Panel proposed no solution, of course, merely urging further study.<sup>128</sup> Raborn's suggestion that McMillan had exceeded the authority entrusted to him seems to have had some foundation. The maneuver, not very skillful in its essentials, ended as catastrophically as its predecessors.

In late June Dr. McMillan despairingly summed up the now massive problem of NRO-CIA relationships both as he saw it and as it appeared to others. In a comment on a paper written by an outsider who had looked into the problem of satellite reconnaissance, he noted:<sup>129</sup>

To caricature... [the] findings somewhat, they paint the situation as one of intense competition between USAF and CIA, in which there is no real mechanism for resolution. Recommendations include "improved communications" and technical reviews by outside experts. It seems to me, rather, that the executive agent [Secretary of Defense] should be urged to exert his authority, not to abdicate it, or to acquiesce in its rejection.

The purpose of the NRO reorganization carried through in the late summer of 1965 was precisely that desired by Dr. McMillan -- to provide a mechanism for resolving increasingly intense competition

between the CIA and the NRO. The basic difficulty was readily defined: although the 1963 charter made the Secretary of Defense the executive agent for reconnaissance and the Secretary had formally delegated his authority to the Director, National Reconnaissance Office, the DNRO was unable in practice to act decisively on key issues. In practice, Dr. Fubini had been exercising much of the authority nominally assigned to the DNRO, while Mr. Vance reviewed or approved -- or even made -- many of the major program decisions. Dr. McMillan's impotence was particularly apparent in matters affecting new program proposals and in problems involving NRO-CIA prerogatives.

From the facts a variety of inferences may be drawn. First, Dr. McMillan had excellent reason to be apprehensive that the authority of the DNRO would be diluted -- perhaps very substantially -- by a reorganization arranged by Fubini, Vance, and Raborn. He obviously was aware of the reorganization discussions, but there is no indication that he participated in them. Second, McMillan had felt obliged to call on Vance for support more and more frequently during the spring and summer of 1965. His approaches to Raborn were largely ignored; Raborn chose to discuss issues with Vance rather than with McMillan, and Raborn's attitude toward the NRO was not much different from that of McCone. Third, McMillan had been unsuccessful in converting Vance

to his viewpoint (as witness his pseudo-success in the matter of CORONA payload condition data), and by engaging the Deputy Secretary of Defense in what had the appearance of rather minor squabbling over administrative details made Vance impatient. Whether McMillan's course was chosen with the advice and consent of Fubini is uncertain, but there is evidence that he believed Fubini supported the classic NRO outlook. Certainly the Fubini "draft Presidential directive" of late April seemed to reflect McMillan's views. But Fubini also figured prominently in the negotiations that led to the 11 August 1965 reorganization paper, which suggests that he was appreciably more willing to see merit in the CIA viewpoint than McMillan understood. McMillan seems to have put too much trust in Fubini's influence, while Fubini wanted to appear a conciliator rather than an NRO extremist. Whether McMillan's resignation was deemed essential to reconciliation of CIA-NRO differences, was prompted by his opposition to the terms of the reorganization, or even was a quid pro quo for CIA concessions remains uncertain, but the connection between the reorganization and the resignation is most difficult to overlook.

The agreement that Vance and Raborn approved on 11 August 1965 put a new face on the National Reconnaissance Office. It substantially reduced the authority of the Director, transferring many of the rights

and responsibilities of that post to a special Executive Committee (ExCom) of three voting and one non-voting members: the Deputy Secretary of Defense, the Director of Central Intelligence, the Special Assistant to the President for Science and Technology, and (non-voting) the Director, National Reconnaissance Office. (In the event of an ExCom impasse, the Secretary of Defense was to sit with the Committee and make the final decision).

Somewhat strangely, the functions allocated to the National Reconnaissance Program were in many respects more clearly defined, and more logically, than those assigned in the earlier and more forceful charter of 1963. It was not clear, however, whether the National Reconnaissance Office had sufficient authority to exercise those functions; the ExCom was in most respects the supreme authority. However, the DNRO was provided with a seat on the ExCom (and also on the United States Intelligence Board when matters of concern to the NRP were on the agenda), and thus acquired a more direct voice in affairs than had been the case with a de facto ExCom composed of Vance, Fubini, McCone, and Wheelon. Whether "a voice" was important remained to be determined.

Certain other differences between the 1963 and the 1965 agreements had particular significance. The Director of Central Intelligence, for example, had acquired specific authority to review and approve the NRP

budget each year and the Deputy Director, NRO, was to "act for and exercise the powers of the Director, NRO during his absence or disability." Another important proviso was that "the NRO staff will report to the DNRO and DDNRO and will maintain no allegiance to the originating agency or Department." The DNRO's authority to modify or alter program assignments was conditioned by a "subject to review by the Executive Committee" clause, as was his budgetary responsibility. <sup>130</sup>

As had his predecessor, Dr. McMillan left a memoir with Secretary McNamara when he departed. It was, in the main, a resume of accomplishment. But in its course he included some comments on the new agreement and on the organization it generated. McMillan thought the document was "intended to palliate some of the frictions which were charged to the prior agreement." He believed "it has weakened considerably the structure provided by that prior agreement..." The dangerous ambiguities, he felt, lay in the definition of the authorities of the Executive Committee and the Secretary of Defense, in omitting references to the reconnaissance operation area where DNRO functions were defined, and in neglecting to provide a "focus of responsibilities for actions undertaken under the NRP." McMillan felt that the shortcomings could be overcome if the Secretary of Defense issued a definitive set of implementing instructions, but that otherwise the day-by-day management of the recon-

naissance program might well require the intervention of the Secretary and Deputy Secretary of Defense. <sup>131</sup>

Even before Dr. McMillan's formal retirement, Dr. Alexander H. Flax, Assistant Secretary of the Air Force for R&D, was named to be his successor as Director, National Reconnaissance Office. The problems that had so troubled McMillan remained also; on the first day of his official occupancy of the post, Dr. Flax was confronted by an announcement that the CIA had discontinued the Program B structure characteristic of the earlier NRO and had substituted a complex pyramidal organization under Dr. Wheelon. <sup>132</sup> But there were early indications that the response might be different: Flax replied to the CIA reorganization notice with the comment that necessary guidelines and working relationships could certainly be worked out. <sup>133</sup>

In October 1965, when Dr. Flax became Director of the NRO, the future of the organization was very uncertain. Specifically, how effectively the DNRO could operate under its new charter remained to be determined.

Notwithstanding the apparent disabilities incurred under the August 1965 arrangement of functions, Flax began his DNRO tenure with some significant advantages. Possibly most important, he had no background of acrimony to overcome in his dealings with the CIA; the personal

differences so marked in the McMillan-Wheelon relationship were absent. But he would have to cope with the substantial backlog of resentment built up on both sides during the extended period of tension between McMillan and Wheelon. And the substantive problems of the previous regime remained. Chief among these were a decision on a new search system, the CORONA management confusion, and differences over the composition of future programs. The great uncertainty was how the newly constructed executive arrangement would work in practice; Dr. McMillan's exceptions and questions were well taken, although possibly more pertinent to the situation in which he had found himself than that which Flax faced.

In 1960 Dr. Charyk had set for himself the task of accumulating the resources and authorities needed to support a truly national reconnaissance effort. He had left the task unfinished, although at the time of his departure what remained seemed to be only to consolidate assigned resources and to implement signed agreements.

Two unanticipated developments interfered with an easy resource consolidation: CORONA did not phase out, and the CIA claimed rights to development of the next generation search system. In the matter of implementing agreements there were similar difficulties, particularly as they affected the extension of DNRO authority over the "CIA sector"

of the national reconnaissance activity. And in attempting to secure control of resources and authorities Dr. McMillan was repeatedly outmaneuvered. At the close of Dr. McMillan's tenure the original task still was incomplete and there was reason to wonder whether the NRO would be continued in anything like the form Charyk had envisaged.

Dr. Flax therefore was confronted not only by the tasks Charyk had left undone, but also by the considerable difficulties created by McMillan's disastrously unsuccessful efforts to carry through Charyk's plan. Nevertheless Flax had one substantial advantage his predecessor had lacked: although it was far from welcome, and although prepared without the apparent knowledge or participation of any of the NRO Staff, a new charter certifying to the permanence of the NRO had been drawn, approved, and issued. Validation of the NRO's mission occurred in the face of a formal CIA recommendation that the organization be reduced to the status of a coordinating agency with no executive authority. Given that the NRO at the time of McMillan's departure was probably less influential than at any time since its creation, much that was encouraging could be found in the reaffirmation of DOD determination to preserve, indeed to strengthen the principle of a National Reconnaissance Office and a National Reconnaissance Program.

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82. Ltr, J.A. McCone, DCI, to B. McMillan, DNRO 13 Dec 63, in NRO Staff files.
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84. Memo, B. McMillan, DNRO, to A. B. Wheelon, CIA, 14 Dec 63, No subj: in NRO Staff files.

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85. Draft notes on meeting between E. Fubini and B. McMillan, A. B. Wheelon, (7?) December 63, in NRO Staff files.
86. MFR, E. Fubini, "Dictated in Mr. McCone's presence," 13 Jan 64, No subj: in NRO Staff files.
87. Memo, B. McMillan, DNRO, to Cyrus Vance, D/SOD, 12 Feb 64, with cy Ltr, McMillan to J. A. McCone, Dir/CIA, 12 Feb 63, No Subj: Both in NRO Staff files.
88. Draft, Unsigned Memo for Signature of R. S. McNamara, SOD, to DNRO, Feb 64; Draft, Unsigned Memo, B. McMillan DNRO, to Directors Program A, B, Feb 64, both in NRO Staff files.
89. Msgs [REDACTED] 6908 and 6909, CIA to DNRO and Lockheed, 13 May 64, in NRO Staff files.
90. Memo, A. D. Wheelon, D/DirCIA to B. McMillan DNRO, 9 Mar 63, no subj; in NRO Staff files.
91. Memo, B. McMillan, DNRO, to D/SOD, 12 Jun 64, no subj: Msg [REDACTED] 4677, SAFSP to SAFSS 18 Apr 64, both in NRO Staff files.
92. Ltr, B. McMillan, DNRO, to A. D. Wheelon, CIA, 15 Jan 64, no subj; in NRO Staff files.
93. Ltr, A. D. Wheelon, D/Dir CIA to B. McMillan, DNRO, 12 Mar 64, no subj; Ltr McMillan to J. A. McCone, DirCIA, 3 Mar 64, no subject; both in NRO Staff files.
94. Memo, B. McMillan, SAFUS, to SOD, 12 Dec 63; subj: Possible NRO/CIA Issues; in NRO Staff files.
95. Memo, Clark B. Clifford, Chmn, FIAB to the President, 2 May 64, Subj: National Reconnaissance Program, in NRO Staff files.
96. Memo, McGeorge Bundy, Pres/Asst for Natl Secy to SOD, Dir/CIA, 22 May 64: Subject, National Reconnaissance Program; Memo, C. Vance D/SOD, to Bundy, 2 Jun 64, Subject, Memo for the President, by the President's Foreign Intelligence Advisory Board, re: National Reconnaissance Program, both in NRO Staff files.

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97. Msg [REDACTED] 1416, DNRO to Maj Gen R. E. Greer, and CIA to Col J. C. Ledford, 26 June 64, in NRO Staff files.
98. Memo for Record, B. McMillan, 28 May 64, Subj: Meeting with Mr. McCone, -- May 28, 1964, in NRO Staff files.
99. MFR, McMillan, DNRO, 12 Jun 64; Memo, McMillan to D/SOD, 12 Jun 64, no subj; Memo, McMillan to J. A. McCone, Dir/CIA, 12 Jun 64, no subject; all in NRO Staff files.
100. Memo, B. McMillan DNRO to Lt Gen M. S. Carter, Actg Dir/CIA, 30 Jun 64, no subject; Memo, Carter to McMillan 30 Jun 64, no subject; MFR, McMillan, 25 Jun 64, no subject; all in NRO Staff files.
101. Memo, Lt Gen M. S. Carter, D/Dir/CIA, to DNRO, Subj: Your Memorandum for Record, dated 25 Jun 64, in NRO Staff files.
102. Memo, Lt Gen M. S. Carter, Act/Dir/CIA, to C. R. Vance, D/SOD, and B. McMillan SAFUS, 20 Jun 64, no subject; in NRO Staff files.
103. Memo, A. D. Wheelon, D/Dir/S&T, CIA, to DCI, 31 Aug 64; Subj: Conduct of the FULCRUM Program; in NRO Staff files.
104. MFR, McMillan, 25 Jun 64; Memo, Carter to DNRO 29 Jun 64; both in NRO Staff files.
105. MFR, B. McMillan, DNRO, 7 Jul 64, Subj: CIA Management of Satellite Projects, in NRO Staff files.
106. Memo, E. G. Eubini, DDR&E to SAFUS, 2 Jul 64, Subj: Broad Coverage System, in NRO Staff files.
107. MFR, McMillan, 7 Jul 64; Memo, McMillan to R. S. McNamara, SOD, 7 Jul 64, no subj; Ltr, C. R. Vance, D/SOD, 8 Jul 64, no subj; both in NRO Staff files.
108. Memo A. D. Wheelon, D/Dir(S&T), CIA to DNRO, 9 Jul 64, subject: Funding for Project FULCRUM; in NRO Staff files.

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109. Memo, Col Ledford, D/Prgm B, to DNRO, 10 Jul 64, Subj: Addendum to Pgm B's FY 65 Budget; in NRO Staff files.
110. MFR, B. McMillan, DNRO, 13 Aug 64, no subj, in NRO Staff files; MFR, Col D. L. Carter, NRO Staff, 13 Aug 64, subj: CIA Planning FULCRUM in NRO Staff files; Memo, Col J. C. Ledford, Asst/Dir/Spec Activities, DDS&T to D/Dir, S&T, CIA 20 Jul 64. Subj: CORONA Operations Officer; Palo Alto Calif.; Msg [redacted] 0892, Ledford to Contr Officer LAC (PA), 21 Jul 64; Msg [redacted] 1679, CIA to Lockheed Contr Ofcer all in NRO Staff files; Ltr C. R. Vance D/SOD, to J. McCone D/CIA 29 Jul 64, no subject; in NRO Staff files.
111. Msg [redacted] 1593, DNRO to Maj Gen R. E. Greer, (Pgm A) and Col Ledford (Pgm B) 12 Aug 64; [redacted] 2316, CIA to LAC et al 17 Aug 64, both in NRO Staff files.
112. Msgs [redacted] 0258, LAC Contr Officer to CIA, 9 Sep 64; [redacted] 0345, same, 17 Sep 64; [redacted] 0346, same, 17 Sep 64; [redacted] 0799, Lt Col Webb, LAC Contr Ofcer, to A.D. Wheelon, B. McMillan, et al, 27 Oct 64; [redacted] 6220, SAFSP to SAFSS, 31 Oct 64; Memo, Col P. E. Worthman to B/Gen J. T. Stewart, D/NRO Staff, 6 Nov 64, Subject, Wheelon Directive to Lt Col Webb [redacted] 1941, DNRO to CIA, 6 Nov 64; [redacted] 0926, Webb to Col J. C. Ledford, D/Pgm B, 6 Nov 64 (the message so offensive to Gen Stewart) [redacted] 7216, Maj Gen R. E. Greer to McMillan, 4 Mar 65; [redacted] 6391, Greer to Stewart, 20 Nov 64; [redacted] 2003, McMillan to Ledford, 21 Nov 64; [redacted] 8403, Ledford to Webb, 28 Nov 64; [redacted] 8654, Lt Gen M. S. Carter, D/Dir/CIA to McMillan, 2 Dec 64; [redacted] 8875, CIA to SAFSP, 4 Dec 64; [redacted] 9045, Carter to McMillan, 9 Dec 64; [redacted] 9198, Ledford to [redacted] LAC facility, 11 Dec 64; all in NRO Staff files.
113. Msg [redacted] 6318, Maj Gen R. E. Greer, Dir/SP, to B. McMillan, DNRO, 11 Nov 64; [redacted] 2050, McMillan to Greer and Col J. C. Ledford, Dir/Program B, 30 Nov 64; [redacted] 8657, Carter to McMillan, 2 Dec 64; [redacted] 9045, Carter to McMillan, 9 Dec 64; [redacted] 9775, Carter to LAC A/P Ofcr (CIA) 18 Dec 64; [redacted] 8677, Carter to McMillan, 2 Dec 64; Memo, Msg, McMillan to Carter 4 Dec 64; (regarding the Webb affair) [redacted] 1100, A. B. Wheelon, CIA, to McMillan, 16 Jan 65; [redacted] 9213, Ledford to STC et al, 12 Dec 64; [redacted] 2100, McMillan to CIA et al.

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114. Draft memo, B. McMillan for C. Vance, 9 Mar 65, apparently not sent, cy in NRO Staff files.
115. Memo, B. McMillan, DNRO, to D/SOD, 5 Mar 65, n/a; memo, B/Gen J. T. Stewart, Dir/NRO Staff to Dr. E. Fubini, DDR&E, 10 Mar 65 w/draft ltr, C. Vance to J. McCone, n/d, n/s; memo, McMillan to LtGen M. S. Carter, D/Dir/CIA, 15 Mar 65, n/s, w/encl, draft Msg from DNRO to Dirs Pgm A, Pgm B, 15 Mar 65; ltr, Carter to McMillan, 16 Mar 65, n/s, all in NRO Staff files.
116. The correspondence on these matters is, to say the least, voluminous. An excellent account of the early contract difficulties is contained in Memo, Maj Gen R. E. Greer, Dir/SP to B. McMillan, DNRO, 21 Sep 64, Subject: LMSC Contracts Utilizing A/P, and attachments; Memo, J. S. Seay, SAFSP, to Greer, 21 Sep 64, Subject: Negotiations on LMSC ICS Contract, and Ltr, R. R. Kearton, V/Pres. LMSC to Greer, 18 Sep 64. A report on security matters, to DNRO, 23 Sep 64, and Ltr, McMillan to Lt Gen M. S. Carter, D/Dir/CIA, 2 Mar 65, summarize the early problems; Memo, McMillan to D/SOD, 5 Mar 65, resumé the affair. The capstone items are detailed in Ltr, Carter to McMillan, 16 Mar 65, all in NRO Staff files.
117. Abstract of CIA Proposed Agreement on NRP, 26 April 1965.
118. There are three sources for information on the Itek episode: memos for record by Col P. E. Worthman dated 24 and 25 Feb 65; memo for record, undated, by Lt Col H. C. Howard, all in NRO Staff files; and a lengthy and detailed memo for record by B. McMillan which recounts the specifics of a meeting between McMillan and the chief officials of Itek. The McMillan MFR is dated 25 Feb 65. It was sent to C. Vance via a covering memo later that day (memo, McMillan to C. Vance, 25 Feb 65, n/s, in McMillan MFR files); the note to Vance mentions a previous conversation between the two concerning the same subject. As the McMillan memos are both dated 25 Feb, it would appear that he saw Vance upon his return to Washington that evening; the meeting with Itek officials took place after 5 p. m. (1700 hours) in Boston. Worthman took the 4 p. m. call from Itek that first disclosed to the Air Force Itek's decision; both McMillan and Wheelon were attending a meeting of the Land Panel in Boston at the time.

119. Memo, B. McMillan, D/NRO, to D/SOD, 5 Mar 65, n/s, in NRO Staff files. An attached note from McMillan's secretary confirms the mode of delivery.
120. Memo, B. McMillan to C. Vance, 24 Mar 65, n/s, encl draft directive to Dirs Pgm A and Pgm B and Msg ██████████ 4855, CIA Hq to CIA Sunnyvale with info copy to DNRO, 23 Mar 65; memo, McMillan to Vance, 29 Mar 65, n/s, w/cy memo, McMillan to Lt Gen M. S. Carter, D/Dir/CIA, 29 Mar 65, all in NRO Staff files.
121. Holograph notes marked "Dr. McMillan used at PFIAB April 2, 1965," in NRO Staff files.
122. Ltr, B. McMillan to C. Vance ("Dear Cy"), 12 Apr 65, n/s, in NRO Staff files.
123. "Talking Paper, NRO Organization," 23 Apr 65; MFR, B. McMillan, D/NRO, 22 Apr 65, subj: Relation of the Satellite Operations Center to the NRO; memo, E. G. Fubini to SOD, 22 Apr 65, subj: Proposed Presidential Directive; all in NRO Staff files.
124. Memo, C. Vance, D/SOD, to B. McMillan, 30 Apr 65, n/s; ltr, McMillan to V/Adm W. F. Raborn, Dir CIA, 3 May 65, n/s; ltr, Raborn to McMillan, 25 May 65, n/s; ltr, Raborn to Vance, 25 May 65, in NRO Staff files.
125. Ltr, B. McMillan, Dir NRO to W. F. Raborn, DIR CIA, 25 May 65, n/s in NRO Staff files.
126. Ltr, W. F. Raborn, Dir/CIA, to C. R. Vance, D/SOD, 3 Jun 65, n/s; ltr, B. McMillan, SAFUS, to Raborn, 14 Jun 65; MFR, B/Gen J. T. Stewart, Dir/NRO Staff, subj: Telephone Call from Admiral Raborn, 18 Jun 65; all in NRO Staff files.
127. Memo, B. McMillan, DNRO to D/SOD and Dir/CIA, 13 Jul 65, subj: New Satellite Search/Surveillance System, in NRO Staff files.
128. Memo, W. F. Raborn, DCI, to C. R. Vance, D/SOD, 20 Jul 65; memo, D. F. Hornig, President's Special Asst for Sci and Tech, to Vance, 30 Jul 65, both in NRO Staff files.

129. Memo, B. McMillan, SAFUS, to C. Hitch, Asst SOD/Fin Mgt, 16 Jun 65, n/s, in NRO Staff files.
130. Agreement for Reorganization of the National Reconnaissance Program, signed by C. R. Vance, D/SOD, and W. F. Raborn, DCI, 11 Aug 65, cy in NRO Staff files. A clause-by-clause comparison of the 1963 and the 1965 agreements was prepared and has special interest.
131. Memo, B. McMillan, SAFUS, to SOD, 30 Sep 65, subj: Comments on NRO and NRP in NRO Staff files. The document is moderately lengthy but deserves to be read if only because it brings to a focus Dr. McMillan's feelings concerning the NRO-CIA relationship, which he clearly believed to lie at the heart of most NRO management problems.
132. Ltr, R. Helms, D/Dir/CIA to A. H. Flax, DNRO, 1 Oct 65, n/s, in NRO Staff files.
133. Ltr, A. H. Flax, DNRO, to R. Helms, D/Dir/CIA, 6 Oct 65, n/s in NRO Staff files.