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on NOV 26 1997

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MEMORANDUM FOR: Deputy Director for Central Intelligence

SUBJECT: The CORONA Program

1. The attached document is for your information. It reviews briefly the Agency's position in the CORONA Program since the foundation of the National Reconnaissance Office. It further demonstrates that the Agency has a proper and valid role to play in CORONA although such a claim is not shared or endorsed by the Air Force.

2. From its content one may conclude that the NRO has sponsored or collaborated in many attempts to nullify or subjugate CIA's position in CORONA. We have cited several examples which establish our position and illustrate our case.

3. We have strived to present the facts objectively and with emotional calm. We hope that you will find this document helpful.



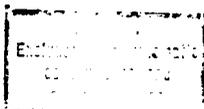
[Signature]
Chief, Special Projects Staff
Directorate of
Science and Technology

Attachment

APPROVED:

HUNTINGTON D. SHELDON
Acting Deputy Director
for
Science and Technology

Date



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ATTACHMENT TO:
[REDACTED]

CORONA

Dr. McMillan's willful cancellation of the CORONA Mission 1018 launch on 23 March 1965 culminates a series of actions dating back to the early days of the NRO to force the Agency either out of the satellite reconnaissance business or submit its activities to the desires and control of the Air Force.

The first NRO Agreement was signed on 6 September 1961. With Air Force personnel directing and controlling the NRO activities, the mechanism of that organization has proven a most useful instrument for the Air Force to implement its desires. As far back as 22 November 1961, the Air Force decreed its intention to eliminate CIA from the satellite reconnaissance program, when the then [REDACTED] Chief of the NRO Staff, proposed to CIA the NRO functions and responsibilities for satellite reconnaissance. In that document, he proposed that the technical management responsibility for all projects, black and white, should be vested in the Air Force. He submitted that the Air Force should generate appropriate directives to transfer the total technical responsibility for ARGON, MURAL (CORONA) and Navy programs to the Air Force. Since there were only

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two more launches scheduled in CORONA, and one unassigned payload, [REDACTED] conceded that no change should be made in the present technical management structure of that program. He later went on to reaffirm that the CORONA program should remain the complete responsibility of CIA, since there were only two more shots. This acknowledgment by [REDACTED] although revealing the Air Force's intention to take over all satellite programs, clearly established the fact that CORONA was then the responsibility of CIA. By way of explanation, MURAL was the cryptonym given to the employment of two cameras to obtain stereo coverage as opposed to the single camera initially used in CORONA. Since then, the stereo program has dropped the term MURAL and continued with the original name of CORONA.

There are other documents in that period of time which also give testimony to the fact that CIA had a clear responsibility for CORONA payload. In the paper prepared by Mr. Gene Kiefer of CIA on 29 November 1961, referring to the CORONA program, he stated that primary cognizance for management and technical direction of the hardware aspects will remain within CIA for photographic payloads and nose cones. He further observed that CIA would continue with primary cognizance for operational planning and control of the payload operation and target

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coverage. CIA's primacy in the CORONA payload was noted again by Mr. Richard Bissell, Deputy Director for Plans, in a 7 December 1961 letter to Mr. Patrick Coyne, Executive Secretary of the President's Foreign Intelligence Advisory Board. In that letter Mr. Bissell acknowledged that the present allocation of responsibilities with respect to CORONA/MURAL/ARGON were as follows:

A. The Air Force had primary responsibility for:

- (1) launch scheduling and launching,
- (2) orbit and recovery operations,
- (3) development and procurement of boosters, orbiting vehicles, and [REDACTED] payloads.

B. The CIA, on the other hand, had primary responsibility for:

- (1) targeting,
- (2) operational planning and control of payload operations,
- (3) development and procurement of photographic payload and nose cones, and
- (4) security.

In spite of CIA's clearly defined history for the responsibility of CORONA payloads there have been repeated efforts by the Air Force to divest the Agency of this role.

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Back in July 1962 Dr. Joseph Charyk, the then Director of the NRO, advised the various program directors of the organization and functions of the NRO. In that paper he commissioned the Director of Program A (Air Force) as being responsible for the National Reconnaissance Program's satellite effort, while the Director of Program B (CIA) was "responsible for the national reconnaissance programs conducted by the NRO through utilization of CIA resources."

In spite of the momentum which was given to the Air Force to usurp and control the satellite efforts, the Agency tenaciously held on to its CORONA position through the control which it had over the payload contracts and its management of the AP Facility in Palo Alto. By the end of 1963 the outright discord between the Air Force and the Agency in the CORONA program prompted many to seek various solutions. Dr. McMillan, who had replaced Dr. Charyk as Director of the NRO, offered his solution which would place the entire CORONA program including the CIA assets under the Air Force [REDACTED]. The Agency not only found itself a victim of a frontal assault to dispose it of its satellite interests, but also more subtle methods, which prompted the DCI, on 13 December 1963, to advise Dr. McMillan that he considered it essential that no action be taken within the NRO or its contracts structure at that time and that the status quo be maintained until he could consider the matter further.

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He emphasized that the resources of both CIA and the Air Force in fields related to aerial photography, both aircraft and satellites, must be preserved. He noted, however, that he had been informed by several sources that major contractors no longer felt free to meet with CIA officials and discuss problems, which through the years had been matters of mutual interest, without first securing Air Force permission. The Director went on to state that that statement extends both to problems related to existing programs and to discussions of new concepts. He cautioned that any such limitation, whether the result of a directive from a procurement officer or a subtle hint would, in his opinion, violate the basic tenet of the NRO Agreement, which provides for the full utilization of the resources of both the Air Force and CIA.

Up to this period of time in the CORONA program, the Agency interacted with a small group of officers in SSD under the title of [REDACTED]. On several occasions, Dr. McMillan had proposed that this office be subordinated to [REDACTED] and that [REDACTED] head up the CORONA program. Dr. Wheelon reported to the DCI and DDCI on 13 March 1964 that although two requests from Dr. McMillan had been disapproved by the DCI regarding the transfer of [REDACTED] cables from the West Coast indicated that [REDACTED] office was to be dissolved, its people transferred, and its function recreated under [REDACTED].

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as the [REDACTED] Office directed by [REDACTED] Dr. McMillan later admitted the transfer in an 18 May 1964 memorandum.

By April 1964, the responsibilities within CORONA had become so confused by Air Force unilateral action that the Agency's Director of Program B cabled the D/NRO stating that "Recent events and communications force me to request formal clarification and definition of my responsibilities and functions concerning the AP Facility and CORONA payload management." Undaunted, the Air Force continued to act as it wished even to direct CIA contractors. By the end of 1964 Dr. McMillan chose to ignore openly any role for CIA in satellite programs. In his year-end report to the President's Foreign Intelligence Board he stated that the Director, Program A, concentrates on satellite photography and [REDACTED] reconnaissance, while the Director, Program B, furnishes some procurement and security services to [REDACTED]

[REDACTED] At that point in time, the Agency was not only involved in CORONA, but had satellite developmental studies underway in [REDACTED] using NRO funds.

The year 1964 also witnessed the D/NRO's pressure to insert [REDACTED] into the CORONA operational program. This effort reached somewhat of a climax in November when

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the CIA resident manager at the AP Facility reported that Aerospace personnel were engaged in seeking information regarding the payload, including operational information. The Agency's reluctance to permit [REDACTED] representatives to acquire operational information resulted in a directive from the D/NRO that CIA issue instructions to the AP manager to release the requested information to the Aerospace personnel. CIA responded by authorizing the AP manager to provide the payload information requested to [REDACTED] in their capacity as general systems engineers. In spite of this compliance, the D/NRO issued cabled instructions under [REDACTED] to both the Air Force and CIA, outlining new communications procedures and mission responsibilities effective 1 December. In effect, this cable deleted the AP Facility from the CORONA communications network and transferred all of its responsibilities to the Space Tracking Center (STC) under command of [REDACTED]. Additionally, it granted the STC not only the technical assessment and analysis of the payload, but also all on-orbit camera and targeting information. This action was immediately appealed by General Carter to Secretary Vance and Dr. McMillan and an agreement reached with Secretary Vance that no changes would be made to the procedures effective on 30 November 1964 until such time as a solution of the CORONA program

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organization could be achieved. Parenthetically, it should be noted that actual implementation of [REDACTED] would have crippled the CORONA program since the CIA AP Facility plays such a vital role in it. Even [REDACTED] [REDACTED] realized this fact and countered [REDACTED] with the suggestion to the NRO that the AP Facility be retained within the communications network, though under Program A. The NRO recognized that it had to respond to the decision of the DCI, DDCI, and Secretary Vance and cabled instructions some ten days later reinstating communications procedures which were in effect prior to the infamous [REDACTED]. The D/NRO then took measures which to some extent circumvented the reversal of [REDACTED] by personally visiting the STC. With his presence, he registered the demand for operational targeting information which heretofore had never been sent the STC. The Agency did not object, since it recognized that the D/NRO might personally desire that information and agreed with the exception to the communications procedures. When Dr. McMillan left the STC, he ordered the NRO to continue sending the information to the STC, thereby successfully accomplishing one of the major objectives of [REDACTED] in spite of the Carter/Vance agreement to the contrary.

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The recitation of this determination by the NRO calls to mind other incidents which betray a relentless program by the NRO/Air Force to unseat and subordinate CIA in CORONA. Such actions by the Air Force have often placed the harmony and well-being of CORONA in jeopardy. To enumerate, during the Spring of 1964, prompted by a desire to meet the launch schedules established for CORONA, the then Captain Johnson of [REDACTED]'s staff directed the contractor to deviate from proven environmental tests on the CORONA cameras M-25, M-26 and M-27. The normal environmental testing of four days, at Capt. Johnson's directions, was reduced to one. When the CIA technical representative at the AP Facility learned of this deviation, he raised strong objection, supported by the Systems Engineering Group, he asked for the complete results of the testing accomplished. Upon examination of the test data, he pointed out that the deviation invalidated the test of those instruments for susceptibility to corona discharge markings. Unfortunately, System M-25 was already at Vandenberg and had been accepted by CIA before the information of the shortened test was discovered. To meet the launch date, it was decided to allow the system to fly; however, the booster failed and hence orbit was not achieved. The CIA representative,

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however, refused to certify System M-26 for flight until a rerun of the environmental test was conducted. Capt. Johnson of [REDACTED]'s staff directed the contractor to ship Systems M-26 and M-27 to the Base without additional testing and [REDACTED] office accepted responsibility for their flight readiness. Capt. Johnson bought off on System M-26 for the Government and that system was flown as Mission 9062. The film returned from that mission was largely unuseable due to corona discharge marking. The CIA representative's recommendations were then accepted as valid; System M-27 was returned to environmental test and the results confirmed a bad roller which again, in all probability, would have caused corona discharge had that system flown. This particular incident highlights the need for CIA participation in the CORONA program to ensure that that program is conducted for its intelligence value and not necessarily for the sake of a launch schedule. The absence of intelligence philosophy was manifested again by Air Force personnel in Washington on 4 February 1965 when Col. Buzzard of the NRO Staff indicated that the CORONA launches would take place according to the established schedule, although Mr. [REDACTED] of CIA contended that CORONA was an intelligence reconnaissance program and the missions

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would be flown in response to intelligence requirements, not precisely against launch schedules.

On Mission 1013 an unexplained anomaly caused the camera to make excessive unprogrammed cycles on its first revolution about the earth. The quality of the telemetry, however, was poor and the camera status could not be precisely established until after Rev 2. It was learned that although the camera system had started prematurely on Rev 1, it had turned off normally when the "off" signal was received from the stored camera program in the vehicle. The next revolution on which the vehicle would be acquired by a tracking station was Rev 6. During the ensuing five hours, the CIA representative meticulously studied all available data. From this data and his intimate knowledge of his payload, he concluded that the camera was operating normally and that if the targeting requirements demanded it, he would activate the system on Rev 6. He instructed the STC Field Test Force Director (FTFD) to send the appropriate command instructions to the tracking station; however, the Air Force FTFD, acting upon telephone instructions from [REDACTED] organization and on the advice of [REDACTED], called the controller and directed that the payload be put in the "off" mode. Before the CIA representative could counter these instructions the vehicle faded over the horizon. Later evaluation of the telemetry confirmed

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that the CIA analysis had been correct and that the payload had been performing normally. In fact, it continued to perform normally throughout the mission. It is difficult to assess the resultant loss of intelligence information by this improper interference of Air Force and [REDACTED] personnel.

On this same mission there was an important intelligence requirement on Rev 14 which passed over Cuba. This pass was lost due to the fact that the Air Force had allowed a new and inexperienced man to be on duty alone in the STC during the active operation of the camera. Because this newly assigned officer obviously did not understand the workings of the system, he failed to send the requested command and, in fact, sent one that had not been authorized. The NRO immediately placed blame on the CIA representative and directed an investigation by [REDACTED] and [REDACTED] into CIA communications practices.

Although CIA was never officially advised as to the findings regarding this specific incident, we have subsequently learned from Col. Murphy of [REDACTED] staff that the error did not rest with CIA but with the Air Force.

It is interesting to note that although the Agency was being constantly assailed and pressured by the Air Force, it remained cooperative and responsive to

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program needs. On Mission 1014 it was learned that the orbital ephemeris developed by the Air Force proved unuseable for the mission. The orbit was to have been designed for maximum Cuban coverage, but due to the Air Force's contractor using a wrong orbital decay factor in their computation, the orbit developed had serious gaps in the primary areas of interest. By the time the error was discovered, it was too late to correct without slipping the flight. CIA proposed a new orbit, went to work with its computers, and on the same day produced the desired orbit, thereby achieving a minimum delay.

The progression of time proved an irritant to reasonableness on the part of the Air Force and this is best highlighted by the Webb incident. In an unprecedented act, the D/NRO, exercising his authority as Under Secretary of the Air Force, directed the transfer of Lt. Col. Vern Webb, who was an Air Force officer assigned to CIA and in behalf of the Agency headed our AP Facility. On 2 December 1964 Col. Webb received military orders directing that he report on 3 December for duty at the STC. Reassignment on such short notice is most extraordinary and the hypocrisy of the urgency was revealed when Col. Webb was assigned to the routine duty of investigating delinquent Air Force officers.

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This act by the D/NRO left our AP Facility critically undermanned, and this condition was aggravated by the requirements of an impending CORONA launch. General Carter appealed this action to Dr. McMillan without success.

Precipitous action by the Air Force caused yet another perturbation in January 1965. While undergoing a routine test a [REDACTED] recovery vehicle forebody (ablative shell) failed. Upon investigation the Air Force learned that the forebody's age since manufacturing was 27 months. The contractor cited the fact that his manufacturing specifications only called for a shelf life of 12 months. Without further consideration or regard for programmatical impact, the Air Force directed that no forebodies which exceeded a calendar life of 12 months would qualify to be flown in the CORONA program. It should be noted that no forebodies had ever failed in flight, although many used in both CORONA as well as [REDACTED] had ranged as much as 20 months old. CIA advised the Community immediately of the catastrophic effect which the Air Force direction would have on the CORONA program; in essence, standing that program down from operation for at least 3 to 4 months. The Agency undertook an investigation to assess the facts at hand and to ascertain the actual limitations on forebodies calendar life. CIA

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noted that in a study approved by both Air Force and CIA contractor personnel the calendar life had been established at 36 months. CIA then commenced a test program to investigate the aging effects of forebodies. As a result of this test, forebodies calendar life has been established conservatively at 17 months. Again, uncoordinated and unilateral direction by the Air Force threatened a catastrophic impact on the CORONA program.

There are other examples which reveal that the Air Force's reluctance and failure to coordinate with CIA had programmatic impact. In September 1964 CIA registered its uneasiness at an Air Force proposal which would turn off the Stellar Index Camera pipeline in deference to a new Index camera which had yet to be developed. CIA's fears proved warranted and provision was made to continue procurement of the present system until the new one could be developed and tested.

In spite of such observations by the Agency, the D/NRO and the Air Force have continued to provide little in the way of information to CIA regarding requirements for CORONA flight units or spares. Recently it was discovered that the Air Force had issued production instructions to the AGENA contractor without a follow-up requirement being passed to CIA for the payload contractors.

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As a result Lockheed had produced AGENAs yet the necessary payload components had not been ordered.

These series of incidents have provided fertile ground for the latest and most dramatic NRO action. On 15 March 1965 Dr. McMillan proposed to General Carter that the Agency be directed to release all information on the condition and operation of the payload to the Director, Program A, or to any CORONA-cleared person as the Director, Program A may designate. General Carter did not concur in this proposal, but asserted that CIA is responsible for the operation and control of the CORONA payload and that he would not be a party to any directive which would dilute the effectiveness of the payload control, confuse the chain of command decisions, or permit unnecessary distribution of payload and operational information. Had the Agency not held its ground regarding this point, the major objectives of [REDACTED] would have been achieved; namely, the targeting information already being supplied to STC by the NRO could be tied together with the payload telemetry readings and hence the Air Force would have the means at hand to duplicate the Agency payload command functions.

To insure that there would be no further interference during the scheduled launch of Mission 1018 on 23 March the Agency sent a cable reaffirming the responsibilities

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of CIA vis-a-vis the payload, yet assuring the Air Force that information regarding the payload which could in any way affect the health of the vehicle or bear on the decision to de-orbit would be provided the Air Force. When Dr. McMillan received this word, he cancelled the scheduled launch of Mission 1018 on the grounds that CIA was not providing the Air Force with information essential for the conduct of the operation. He stated that since August 1964 CIA had been withholding payload data from the Air Force and that two incidents occurred during Mission 1017 which could have had serious effects on the health of the vehicle yet CIA continued to withhold the data. In subsequent discussions between the DCI, DDCI, Secretary Vance and Dr. McMillan, it was ascertained that Dr. McMillan's statements were inaccurate and incorrect. It was further demonstrated that the Agency had been supplying more information since August than at any time prior to that date. The two incidents which Dr. McMillan referred to caused no problem, CIA's decisions had been proper, and that in fact appropriate Air Force representatives had been fully informed of all details at all times. Dr. McMillan later admitted to General Carter that the Air Force did, in fact, have full details concerning the incidents.

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Summary

In looking back over the history of the CORONA Program, it becomes apparent that CIA does not claim any more for itself than that which it originally held and developed from the outset of the CORONA program. Specifically, this centers about the technical responsibility for the payload and the on-orbit control of the camera program. On the other hand, the Air Force and the NRO have worked incessantly in challenging CIA's foothold in satellite reconnaissance. The Agency has deferred from highlighting the failures and misdirections perpetrated by the Air Force, though history will testify that the failure of hardware under the Air Force's responsibility dramatically exceeds the minor mishaps in the camera operation. For the sake of the program, the Agency has attempted repeatedly to seek a mutual solution to CORONA management. Unfortunately, to date these efforts have been thwarted, rebuffed or ignored by the NRO/Air Force. During the latter part of 1964 and in early January 1965, members of the CIA staff in Washington conducted informal and without portfolio negotiations with [REDACTED] of the NRO Staff. It was hoped that these negotiations could lead to a CORONA agreement which would be acceptable to both parties. On 12 January 1965 General Carter tabled at the NRO Executive Committee meeting an agreement on

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CORONA management which was taken word for word from an agreement proposed by [REDACTED] Dr. McMillan has yet to concur with this agreement, but in its place seeks piece-meal solutions which would strip the Agency of its present responsibilities.

It is submitted that the Agency has done everything to reach a satisfactory solution in CORONA yet preserve its original responsibilities. Air Force response, however, would suggest that unless the Agency agrees to total submission, an agreement is not desired.

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CENTRAL INTELLIGENCE AGENCY

OFFICE OF THE DEPUTY DIRECTOR

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