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NCE 94-162

11 March 1959

PROJECT CORONA

1. The original outline of the CORONA Project (Document No. COR-0013) was submitted for approval on 15 April 1958. As then planned it called for twelve flights of the CORONA vehicle during the calendar year 1959. The total separately accountable cost was estimated as slightly over 30 Million Dollars, made up of 24 Million Dollars to be provided by ARPA for second stage vehicles and 7 Million Dollars to be funded by the Central Intelligence Agency for the classified payload.

2. Under date of 8 August 1958 a report on this Project was submitted which pointed out that the original cost estimate was incomplete on two grounds. First, it contained no allowance for the Thor boosters (first stage vehicles) on the assumption that these would be furnished by the Air Force. Second, it included none of the costs that would be incurred with either four engineering flights to be carried out before the first CORONA launch as part of the development of the CORONA vehicle or of three biomedical flights planned in part for cover purposes. This report gave a revised figure of 49 Million Dollars as the cost of the CORONA flights including Thors but still excluding the associated flights referred to above.

3. Rather extensive discussions took place in the early autumn of 1958 concerning the cost of the whole program, since christened the DISCOVERY program, in the context of the ARPA budget for FY-1959. In the course of these discussions it appeared that certain cost estimates had to be revised upward. Moreover, it appeared that if an appropriate share of development and facilities costs were allocated to CORONA the total cost would come to something in excess of 60 Million Dollars, although it was recognized that the allocation of these overhead items between related programs is essentially arbitrary. When this cost study was completed in October, it still appeared that the entire DISCOVERY program of nineteen flights (twelve CORONA plus four engineering plus three biomedical) could be funded within existing budgets.

4. During late autumn of 1958, a further study was made of both the DISCOVERY and SENTRY (WS-117L) programs by ARPA and the Air Force. In November, decisions were made concerning the ARPA FY-1960

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budget. As a result of these revisions, and in the light of the program review just concluded, the decision was made by ARPA to cancel four of the twelve CORONA flights and two of the three biomedical flights and thus to reduce the DISCOVERY program from nineteen to thirteen flights. This decision was influenced by the expectation that the Air Force would be prepared to fund additional flights using CORONA vehicles and payloads which would be scheduled late in CY-1959 and in CY-1960, so that the ARPA cut would be more than made good.

5. Under these circumstances, production schedules were left unchanged and development continued at full speed pending further studies of (a) intelligence requirements during 1959 and 1960, (b) the effects of modifications in the SENTRY program, which contemplates the use of an Atlas-boosted vehicle, larger payload, and more sophisticated equipment, and (c) the availability of funds. These investigations led to the following conclusions:

a. There is a high priority requirement for photographic reconnaissance of the USSR both in 1959 and in 1960 by numbers of flights sufficient enough to give complete coverage twice in each year. Because of the prevalence of cloud cover, twice over coverage will be required to give even moderately complete photography of the more important areas. The most important single objective is to require further evidence on the status of the ICBM program during the phase when construction of launch sites may be expected to be in progress.

b. The SENTRY program could not be accelerated to provide the required coverage in 1960.

c. The extended CORONA program can be financed within approved Air Force and Department of Defense budgets.

6. Accordingly it is proposed that the presently reduced CORONA program of eight flights in 1959 be augmented by twelve additional flights, four to be restored in 1959, and eight to be conducted in 1960. On this basis there will be a total of twenty CORONA flights. The requirement for twelve in 1959 as against eight in 1960 reflects an anticipated improvement in systems reliability and performance. The whole DISCOVERY series will

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include in addition to the twenty CORONA flights, four engineering flights as originally planned (one of which has aborted and a second carried out with nearly full success) and one biomedical flight which is largely for cover purposes.

7. The proposed restoration of four flights in 1959 and an addition of eight flights in 1960 will require additional funding in the amount of 67.1 Million Dollars, of which 30.4 Million Dollars will be in 1959 funds, 34.6 Million Dollars in FY-1960 funds, and 2.1 in FY-1961 funds. The breakdown of additional cost by purpose and funding agency is shown on the attached table. In accordance with the decision made at the inception of CORONA, all of these additional funds, with the possible exception of the cost of additional payloads, will be transferred to ARPA which will authorize procurement by the Ballistic Missile Division, ARDC. Procurement of additional payloads may be undertaken by CIA (as with the initial CORONA program) or by BMD depending on the requirement for security. BMD will act as executive agent for the DOD and the CIA in the operational phase including launching, tracking, and recovery operations.

8. The maintenance of security, that is effective concealment of the true purpose of these missile flights, will be exceedingly difficult at best and will give rise to serious problems. The DISCOVERY series has been described as a developmental activity. Specific ostensible missions are being defined for each flight and data will be accumulated ostensibly resulting from the DISCOVERY flights to be furnished on an unclassified basis or with low classification to interested persons. No matter how carefully cover explanations are developed and supported, however, it is impossible to prevent speculation in the technical press and by Communist governments to the effect that the DISCOVERY flights involve reconnaissance of some kind. Accordingly, even if security is successfully preserved, that is any unauthorized disclosure by persons witting of the true purpose of DISCOVERY is avoided, the cover for this operation may be eroded. If it is desired to preserve the cover and deny the true purpose of the 1960 flights as well as of those scheduled for 1959, a decision to this effect should be made immediately so that administrative and security procedures may be designed with this end in view.

1 Attachment
(1 page)

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Total 3 pages

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Attachment to
COR-0372



DISCOVERER EXTENSION

| <u>SCHEDULE</u> | <u>CY-1959</u> | <u>CY-1960</u> |
|-----------------|-----------------------|--------------------|
| 8 Original | May 1 | |
| | June 1 | |
| | July 2 | |
| | August 2 | |
| | September 2 | |
| 12 Extension | October 2 | May 2 |
| | November 2 | June 2 |
| | | July 2 |
| | | August 2 |

COST ESTIMATES

(In Millions)

| <u>FY-1959</u> | | <u>FY-1960</u> | <u>FY-1961</u> |
|------------------|--------------|----------------|----------------|
| <u>OSD</u> | <u>AF</u> | <u>AF</u> | <u>AF</u> |
| <u>Emergency</u> | <u>Funds</u> | <u>Funds</u> | <u>Funds</u> |

LOCKHEED SECOND STAGE VEHICLES

| | | | |
|-----------------------------|-----------------|------|-----|
| 8 Vehicles for 1960 | 6.2 | 15.3 | |
| 4 Vehicles for 1959 | 11.4 | 3.9 | |
| 8 Launchings in 1960 | | 3.0 | 1.0 |
| 4 Launchings in 1959 | | 2.0 | |
| 8 Payloads for 1960 flights | 2.4 | | |
| 4 Payloads for 1959 flights | To be furnished | | |

THOR BOOSTERS

| | | | |
|---------------|-------------|-------------|------------|
| 12 Launchings | | 6.8 | |
| 12 Vehicles | 5.6 | 4.0 | |
| RADC | .9 | 2.8 | .9 |
| Support | | .7 | .2 |
| TOTAL | 20.0 | 10.4 | 2.1 |

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THE SECRETARY OF DEFENSE
WASHINGTON

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Dear Mr. President:

The Advanced Research Projects Agency, in conjunction with the Department of the Navy, proposes an interim electronic intelligence collection capability which can be accommodated in the Department of Defense's navigation satellite development program. This proposal, which employs existing electronics components and requires minimum additional research, has the capability to obtain critical intelligence on Soviet defenses and technological development in an inexpensive and reliable manner.

The system, tentatively designated as Project CANES, has been coordinated with the Director of Central Intelligence, who has expressed his approval. It provides for a collection capability at an earlier date than that provided in SENTRY (recently redesignated as Project SAMOS). The planning envisions a completely covert program, thus avoiding political repercussions and undue publicity. Further, the system has several operational safeguards to reduce interference and to provide considerable flexibility for decision as to its use.

The Department of Defense and the intelligence community believe that this proposal is a complement to, and not a substitute for the SAMOS satellite system, and that it offers an early opportunity to check assumptions relating to the latter system at very low cost. It also will provide a significant intelligence input.

The estimated cost of the proposal is \$700,000, of which the Navy Department already has allocated \$375,000. The Department of Defense is prepared to fund the remaining \$325,000 from money available to ARPA.

Your approval to proceed with the technical development and planning is respectfully requested. It is, of course, understood that your approval will be required before the actual launching occurs.

Thomas S. Gates

Downgraded to Secret
Date: 22 AUG 2006
Chief, Declassification Branch, WDS

Approved

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