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(U) Appendix F - CORONA, ARGON, and LANYARD

Note (Effective 10/13/03):

1. (U) Information in this appendix has been incorporated from the CORONA, ARGON, and LANYARD (CAL) Declassification Guide and more recent instruction. The DNRO approved the CAL Guide in May 1996 as part of a systematic declassification review (SDR). That SDR was completed in November 1997.

2. (U) As a result of incorporating it into the RRG, the CAL Declassification Guide no longer has to be consulted as a stand-alone document for 25-year-old CAL related information.¹⁰³

1. DEVELOPMENT

Redact:

(U) See paragraph 2 below.

Release:

a. (U) "Facts about" the CORONA program concept that called for first concealing the program with its overt cancellation as an ostensibly experimental part of the umbrella project WS-117L, only to be followed by its covert resurrection.

b. (U) Fact of and details about the CORONA program cover attributing an animal-carrying purpose to DISCOVERER missions.

c. (U) fact that in April 1962 the Air Force changed the CORONA program cover from that of DISCOVERER being experimental satellites to the announcement that further launches involved secret military satellites. At the same time, the Air Force announced a new directive classifying all information regarding military satellites and eliminating series designations for DISCOVERER, SAMOS, and MIDAS.

d. (U) Details about the design and operation of the Itek panoramic and frame cameras used in the CORONA, ARGON, and LANYARD satellites (KH-1 through KH-6).

e. (U) Any other information not specifically identified for redaction below.

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2. PARTICIPANTS AND RELATIONSHIPS

Redact:

- a. (U) Any tradecraft details concerning cover arrangements used by the CIA, Lockheed Missiles & Space Company (LMSC), and Hiller Helicopter Corporation for the leasing, staffing, and operation of the Hiller Helicopter plant in the CORONA Program.¹¹⁸ (Effective 9/16/04)
- b. (U) Except as identified below, any references to a CIA covert procurement relationship with any contractor.
- c. (U) Names of NRO contractor personnel unless they are identified under a. **Release** below or acknowledged in Appendix B.

Release:

- a. (U) Names of elected or presidentially-appointed Government officials guiding CAL development or using its product. When reflected in the context of being users of the CAL product, military flag officers are considered to be presidentially-appointed Government officials whose names can be released. (e.g., CINCSAC or CINCPAC articulating opinions about the value of CORONA to their operational planning). Names of flag officers assigned to the NRO or otherwise involved in system development or operation will not be released unless they are acknowledged in Appendix B.
- b. (U) Fact of CIA's management role in CORONA for classified procurement and maintenance of security.
- c. (U) Fact of and non-security-related details about the roles of following contractors:
 - Aerospace Corporation
 - Lockheed Missile and Space Company
 - Itek Corporation
 - Fairchild Camera & Instrument Corporation
 - General Electric

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- Douglas Aircraft Corporation
- Space Technology Laboratories (STL)
- (U) Bell Telephone Laboratories (BTL). BTL had a contract with the Pacific Missile Range to provide radio guidance commands to all first stage burns from VAFB (Thor, Atlas, Titan, and possibly Delta).
- (U) Eastman-Kodak Company and its roles in film technology research and processing the CAL mission film at its Hawkeye facility in Rochester, NY.
- (U) Autometric as an ARGON contractor

d. (U) Fact that the Hiller Helicopter plant, also known as the Advanced Projects Integration Facility, or Advanced Projects Facility (APF, or simply AP), in Palo Alto, California, served until 1969 as a cover in which the CORONA second stage Agena satellites, Itek cameras, EKC film, and General Electric reentry capsules were assembled and tested before shipment to Vandenberg AFB.¹¹⁸ (Effective 9/16/04)

3. FUNDING

Redact:

(U) All other information not identified for release below.

Release:

(U) Fact that the CORONA program started with initial funding of \$7M from the CIA.

(U) Funding figures for the DISCOVERER Program (CORONA's cover project) found in Air Force (but not Program A) documents included additional items such as the care and feeding of chimpanzees. DISCOVERER Program funding was presented to Congress each year for approval, appear in congressional records, and may be released.

4. OPERATIONS - GENERAL

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Redact:

a. ~~(S//TK)~~ Information in a fact of context that indicates or implies a small "piggyback" ELINT detection package (called SOCTOP) was carried on board DISCOVERER XIII.

(b)(1)
(b)(3)

b. ~~(S//TK)~~ Information indicating or implying in a "fact of" context that any other SIGINT or vulnerability detection piggyback payloads were carried on CAL missions.

c. ~~(S//TK)~~ Fact of and details about

d. ~~(S//TK)~~ Methodology used by agents to retrieve mission hardware on foreign soil.

Release:

a. (U) AFP numbers associated with the CORONA, ARGON, LANYARD imaging satellite programs:⁹⁶ - 162, - 241, -622A, -846, and specific CAL mission numbers in the following blocks: 1000, 1100, 8000, 9000.

b. (U) Fact that CORONA carried color and infrared film on some missions.

c. (U) Fact that CORONA carried a payload called OSCAR (Orbiting Satellite Carrying Amateur Radio), and other scientific "piggyback" payloads such as radiometric experiments for MIDAS and X-Ray and Gamma Ray sensors tested for VELA HOTEL that were not directly related to intelligence operations. The fact of "piggyback" payloads in general can be acknowledged since these were registered with the UN. [CAUTION: see redaction guidance below.]

d. (U) All CAL spacecraft ephemeris data.

e. (U) Health and status data for all CAL spacecraft.

f. (U) Spacecraft system lifetimes for all CAL missions.

g. (U) CAL spacecraft maneuverability data.

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h. (U) Fact that the DISCOVERER II capsule might have been recovered by the Soviets after reentering and returning to earth on Spitzbergen Island, and fact that Norwegian authorities may have provided credible evidence of that possibility.

i. (U) Fact of the resemblance of the loss of the DISCOVERER II capsule, and its probable recovery by the Soviets, to the book Ice Station Zebra by Alistar MacLean and the movie of the same name.

j. (U) Fact that an individual formerly possessing CORONA access was the technical advisor to the movie "Ice Station Zebra."

k. (U) Details about procedures for film capsule recovery by air or on the water.

l. (U) Fact that Corona film was flown from Hawaii to Rochester, New York, and, after it was developed at EKC, from Rochester to NPIC in Washington, D.C.

m. ~~(S)~~ Details about the recovery from Venezuela of an errant CORONA mission 1005 capsule in summer 1964, except any information dealing with CIA agent recovery methodology.

n. (U) Computer Programs/OSP/relating to CORONA satellite operations:¹¹¹ (Effective 03/31/04)

1) (U) CORONA Target Program (CTP): orbit-by-orbit camera operation selection based on weather (WX) forecasts and on displays of operational information and accomplishments.

2) (U) CALICO: determined camera operations and displayed operational information.

3) (U) CACTUS: listed target locations for photo-interpreting.

4) (U) COMET: determined orbit selections.

5) (U) LETHAL: program for automatic command and control of the satellite.

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(U) Proposed releases about the internal operations of the 6594th Recovery Group and 6593rd Test Squadron should be referred to Air Force Space Command.

5. OPERATIONS - MGS and RTS

Redact:

a. ~~(S//TK)~~ Redact specific details about the Mission Ground Station (MGS) or Remote Tracking Station (RTS) commands that were uplinked to the satellite, i.e., orbit adjustment, deorbit, camera operations, SIGINT payload operations, etc.

Release:

a. (U) See RRG section 1.9.1 regarding release of locations of MGS associated with CAL missions.

b. (U) Fact that the following U.S. remote tracking stations supported DISCOVERER (CORONA) and/or SAMOS reconnaissance satellite programs.¹⁹ (Note: CORONA/DISCOVERER 19 carried a non-recoverable MIDAS radiometer to collect earth radiation background data. Three additional remote tracking stations supported this radiometric mission and are releasable: Cape Canaveral, Ascension Island, and Woomera, Australia.)

- 1) Annette Island, Alaska
- 2) Fort Greeley (aka Donnelly Flats), Alaska
- 3) Fort Stevens, Oregon
- 4) Kaena Point, Hawaii
- 5) Kodiak (aka Chiniak), Alaska
- 6) New Boston, New Hampshire
- 7) Ottumwa, Iowa
- 8) Palo Alto, California
- 9) Point Mugu, California

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- 10) Vandenberg AFB, California
- 11) Christmas Island
- 12) Guam

c. (U) The fact of and names of tracking ships and aircraft can be released in association with CAL launches.

d. (U) References to the generic command function of the AFSCF or the dedicated MGSs. For example, information that mentions explicitly or in context the fact that an unspecified MGS or RTS provided and/or relayed uplink commands to a satellite vehicle would not be considered sensitive. [CAUTION: See related redaction element above.]

6. TRAJECTORY, TRACKING, TELEMETRY

Release:

~~(S)~~ Any data associated with the trajectory, tracking, and telemetry of the CAL program's boosters and satellite vehicles. [CAUTION: In accordance with RRG section 1.9.1, do not betray location of any RTS that might have processed such data.]

(b)(1)
(b)(3)