THE

NATIONAL RECONNAISSANCE PROGRAM

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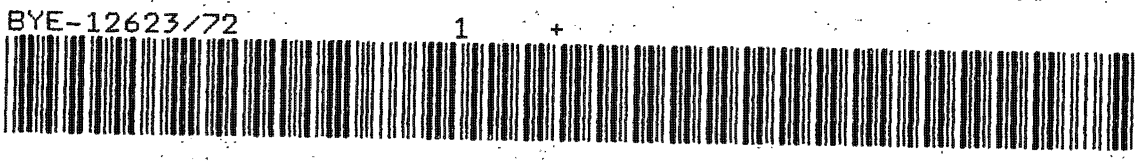

CONTENTS

THE NATIONAL RECONNAISSANCE PROGRAM

I. Summary

This document supplements the briefing provided by Dr. McLucas and discusses the National Reconnaissance Program, briefly describing content, goals, budgets and issues, together with a summary of national policy applicable to the program and comments on key interagency relationships. The Deputy Secretary of Defense serves as Chairman of the Executive Committee of the National Reconnaissance Program.

The National Reconnaissance Program comprises intelligence collection overflight operations of the Department of Defense and the Central Intelligence Agency. The program is predominantly satellite reconnaissance, using photographic and electronic sensors. Aircraft operations are also conducted within the program. The program is one of intelligence collection and usually has relied upon developments within the DOD of boosters, launching facilities, and tracking and control networks. Technology advances within the program have generally been restricted to operational sensor development with only occasional benefit to other activities, due to specific applications orientation.

Satellite reconnaissance is a quasi-legal espionage activity conducted covertly by the National Reconnaissance Office. Satellites are vulnerable vehicles which need a permissive environment for successful operation. The United States government is deeply dependent on overflight reconnaissance, and particularly satellite reconnaissance, for intelligence information.

The long-term goals of the NRP include enhancing collection capability and reducing costs. An important consideration is to insure adequate collection capability to monitor all possible arms limitation agreements. In addition to the recently directed development of an electro-optical imaging satellite, new program possibilities include improved electronic intelligence satellites, [redacted] and very long-lived satellites. sub43

National satellite reconnaissance policy recognizes the need to operate reconnaissance satellites with great discretion, develop tacit acceptance of these operations as a reasonable national activity, and avoid embarrassment to our allies or confrontation with our enemies in carrying out our operations. These policies, and the special security arrangements resulting from them, have been primary forces in protecting United States reconnaissance operations from the threat of international

confrontation. A National Security Council directed inter-agency study group is currently evaluating the physical threat to our satellite programs in light of the present Soviet anti-satellite capability. The NRO has devoted much effort in recent years studying the problem and developing potential countermeasures.

NASA's and ACDA's interests in earth-sensing satellites require special consideration which can be, and is being, provided through close coordination and cooperation between those agencies and the DOD. The NRO has made U-2 capability available to NASA for civil earth-sensing activities. ACDA is sponsoring a series of technical reports on NRP satellite systems oriented toward the verification of a SALT.

Currently of internal interest to the NRO and being studied are an advanced telemetry collector and an optimum future mix of photo satellites. The emerging trend of longer-life, more sophisticated satellites, coupled with fewer launches, impacts on these analyses.

In its continuing efforts to transfer capability accruing from the national programs to more specific defense requirements, studies are underway which examine the integration of an NRO satellite with a non-NRO satellite and the potential for tactical use of national collectors.

II. The Program

The National Reconnaissance Program is a single, national program dedicated to the collection, through overflight, of intelligence to meet the needs and objectives of the United States Government. The Secretary of Defense is the Executive Agent for the Program, managing resources of the CIA and DOD in carrying out the mission; he receives program recommendations from an Executive Committee made up of the Deputy Secretary of Defense, the Director of Central Intelligence, and the President's Science Advisor. The Program is managed by the Director of the National Reconnaissance Office, who is an official of the Department of Defense. The technical aspects of the program are reviewed by the Land Panel, a special panel established by the President's Science Advisor. Managerial aspects are reviewed by the President's Foreign Intelligence Advisory Board.

The Program is covert and comprises the development, management, and operation of satellites and aircraft, for photographic or electronic overhead reconnaissance of denied areas of the world (peripheral reconnaissance is a separate responsibility managed by the Joint Chiefs of Staff). The cost of the Program is approximately [redacted] per year. sub43

The National Reconnaissance Program is responsive directly to the intelligence collection requirements and

priorities established by the United States Intelligence Board. The National Reconnaissance Office sends its plans and schedules for both satellite and aircraft reconnaissance overflights directly to the 40 Committee of the National Security Council for operational approval.

A. Program Background

The essential background of the National Reconnaissance Program begins shortly after the May 1, 1960 loss of a U-2 aircraft engaged in overflight reconnaissance of the Soviet Union. In the aftermath of this event, faced with the loss of reconnaissance capability over the USSR, President Eisenhower directed the National Security Council to review intelligence collection alternatives, such as satellite reconnaissance. As a result of this review and subsequent deliberations, the reconnaissance satellite projects of the Department of Defense and the Central Intelligence Agency were consolidated into a single, national program to be managed by a special arrangement designed to enhance covert operation and assure successful achievement of program objectives. By the spring of 1962 these organizational adjustments culminated in the establishment of a National Reconnaissance Program which was to be managed by a National Reconnaissance Office--a single, national agency responsible for satellite

photographic and signal intelligence collection operations, satellite mapping and geodesy, and aircraft overflight reconnaissance.

B. What the Program Does

The National Reconnaissance Program uses aircraft and satellites as its collection vehicles.

The satellite vehicles carry sensors which collect (1) broad coverage search and surveillance photography (2) high resolution spotting and surveillance photography and (3) signal (communication and electronic) intelligence.*

A typical broad-coverage satellite photographic mission produces photography of about twenty million square miles of land mass at ground resolutions of 2.5 to 8 feet, of which 70 percent is cloud-free. Such a mission also produces special coverage suited specifically to mapping and charting purposes. The current system became operational in 1971 and is an improved search and surveillance system providing significantly longer satellite life, broader area coverage, and finer resolution than its predecessor which became operational in 1960.

A high resolution satellite photographic mission returns about 15,000 photographs with ground resolutions

*Details on these projects are given in the Appendix.

of [redacted] to three feet. The current system became operational in 1963 and has been improved repeatedly to increase its orbital life and resolving power.

Some satellites are designed and operated to collect electro-magnetic signal emissions which originate from Soviet or Chinese Communist radars and communication devices. The collected intelligence reveals the status, locations, and characteristics of key weapon systems such as the Soviet anti-ballistic missile system.

C. National Importance of the Program

Most of this nation's information on USSR strategic offensive systems has been acquired by satellite reconnaissance. In the case of operational ICBM sites within the USSR, our dependence on satellites has been total. Similarly, strategic defensive systems, like the Moscow and Tallinn systems, have been positively detected and identified within the first 45 days of construction by satellite photography and observed closely and repetitively from that time forward.

Information providing the basis for significant reassessment of Soviet and Chinese Communist ground force strength and capability to supply and reinforce units in conflict along the periphery of Communist nations is derived largely from satellite reconnaissance, either directly or

by implication. The Defense Intelligence Agency estimates that 65 percent of what the U.S. knows about the strength, equipage, and disposition of Soviet ground forces--90 percent for the Chinese--is attributable to satellite intelligence.

In special categories like observing the Lop Nor Test Site, or locating SAM defenses in Southeast Asia, satellites have been practically an exclusive intelligence source.

In the field of electronic signal intelligence, NRP satellites routinely provide detailed information on Soviet and Chinese electronic order of battle locations, surface to air missile related radars and Soviet ABM radars in a virtually continuous electronic surveillance of the entire Sino Soviet land mass. Communications intelligence vehicles provide locations of most Soviet and Chinese emitters and dedicated collection from selected links. sub43

sub43

from pre-launch checkout to re-entry or on-orbit operation.

Today the United States depends on the National Reconnaissance Program for most of its strategic and tactical information on the world's closed societies. This dependence would be magnified further by U.S. withdrawal from foreign bases.

III. Policies Supporting the Program

When the first U-2 photography of the USSR was produced (in 1956), President Eisenhower directed that it be protected--as an ultra-sensitive espionage product--in a special security system. In 1960, when the first satellite reconnaissance photographs were produced, President Eisenhower directed that they be similarly protected and placed them in a compartment of the same special security system.

During 1961 and early 1962, the Soviets made a number of private overtures to the U.S. protesting the use of satellites for reconnaissance. In 1962, the question of the legitimacy of satellite reconnaissance began to appear as an important pre-condition to international negotiations on disarmament and on the peaceful uses of outer space. In response to increasing pressure, the President asked a Committee of Principals, acting under the leadership of Ambassador U. Alexis Johnson, to formulate a national policy which would (1) maintain United States freedom of action to conduct reconnaissance satellite operations unilaterally, (2) prevent foreign political and physical interference with those operations, (3) prevent accidental or forced disclosure of the details of the operations or end-products of the United States reconnaissance program, and, at the same time, (4) permit the United States

to continue to work toward disarmament and international cooperation in space.

A national policy supporting these goals was recommended by this Committee, approved by the President on July 10, 1962, and issued in NSC Action 2454. Essentially, the policy enjoins the United States to (1) operate its reconnaissance satellites with great discretion, (2) work toward developing tacit acceptance of these operations, and (3) avoid embarrassment to our allies or confrontation with our enemies.

The Committee of Principals, the NSAM 156 Committee, is still charged with review of satellite reconnaissance policy planning. The Committee is maintaining interest in the public acceptability of Earth Resources Satellite programs as well as the information aspects of satellite reconnaissance as it pertains to SALT ratification.

As a result of careful satellite reconnaissance policy planning, the United States is enjoying, at this time, an international political situation which provides all the advantages of tacit acceptance without the hazards inherent in open discussion or confrontation. It is critically important to nourish the conditions which contribute to such an atmosphere, for reconnaissance satellites require a permissive environment--political and physical--for successful operation.

IV. Long Term Goals of the NRO

The NRO plans to continue to:

A. Conduct a covert program to collect intelligence through the overflight of denied territory.

B. Seek methods to reduce the cost of such collection.

C. Improve the responsiveness of collection systems to intelligence needs.

D. Advance satellite reconnaissance techniques in order to improve collection capabilities and respond to new collection needs.

V. New Programs

Although satellite reconnaissance is conducted as a covert program, its hardware and techniques are developed, procured, and used in "the open," whenever possible. For example, the program uses Air Force launching facilities at Vandenberg Air Force Base, it shares the Satellite Test Facility at Sunnyvale, and uses satellite recovery capabilities in Hawaii. The bulk of the program's hardware--boosters and spacecraft--is readily available to any organization. As a general rule, only the payload is handled under special security. The NRP budget for new technology reflects this arrangement, being oriented essentially toward improved payloads.

At present, photographic satellites return data by ejecting capsules which are aerially recovered. It has long been desired to return imagery electronically, thus permitting nearly immediate intelligence analysis. Further, an electronic imaging satellite might have a longer useful life on orbit and thus be more economical than present systems. Recent decisions have led to a program start which will result in a system of very long-lived electro-optical imaging satellites which will be operating after 1976.

[redacted] sub43

If the Space Transportation System becomes a reality, satellites of the NRP will be transported to orbit by the shuttle. The potential impact on the NRP is being examined at this time. While introducing several problems, the shuttle concept may afford a replenishment or repair capability for extending the life of the reconnaissance satellites. Present sizing and configuring of the shuttle are based on NRP payload requirements.

Studies and limited developments are underway in areas such as [redacted] sub43

[redacted] sub43

[redacted] sub43 Such techniques can augment current reconnaissance capabilities and will be evaluated during the 1970's.

VI. Trends

The increasing success of satellite intelligence collection and the increasing sensitivity of the U.S. to international confrontation have caused a decreasing emphasis on covert aircraft programs. The NRP budget is now about 95 percent devoted to satellite systems. As satellites have become more effective, it has been possible to reduce the launching rate substantially while increasing intelligence collection. It seems quite clear that there is a steady trend toward long-lived satellites. With continuing pressure to reduce the overall intelligence budget coupled with the direct interest of the Congress in sizing the NRP budget, we are constantly seeking ways to achieve our mission at reduced cost.

VII. Possibilities of Satellite Interdiction

Since the legality of satellite espionage is an unsettled matter, the possibility of some nation attempting to destroy U.S. reconnaissance satellites has long been a matter of concern. The Soviets have an apparent existing capability to destroy U.S. satellites in near-earth orbit. Despite this apparent capability, National Intelligence Estimates conclude that it is extremely unlikely the Soviets would take hostile action against our reconnaissance satellites in any circumstances other than as a preclude to general war. While China probably now has a marginal capability to interfere with our satellites through the use of nuclear weapons, no fully developed Chinese anti-satellite capability, either nuclear or non-nuclear, is anticipated for some time. On the basis of these estimates, there has been little attempt to provide physical protection for current satellite operations, although a certain amount of research has been accomplished.

Recently, Dr. Kissinger requested a review of the Soviet threat. A study group, chaired by ODDR&E, is presently accomplishing the review.

VIII. Relationships

A. NRP Relationships with NASA

For some time, NASA has been approaching use of satellite-borne sensors to locate and study earth resources. Experiments involving hand-held cameras operated by GEMINI and APOLLO astronauts have not been politically offensive to other nations, largely because the photographs are at a fairly gross resolution, the "targets" are carefully selected, the film is reviewed by a United States Intelligence Board security panel before it is released to the public, and hostile states such as the USSR and Red China are either not overflown or not now photographed. Future possible NASA applications, involving oceanography, forestry, geology, geography, and agriculture, must be planned and controlled very carefully, for the line between economic research photography and economic intelligence photography is very thin and casual experimentation could trigger challenges to the legitimacy of not only the NASA earth-sensing program but of the National Reconnaissance Program. In 1966, Ambassador U. Alexis Johnson's satellite reconnaissance policy committee, the NSAM 156 Committee, met again and developed policy to cover this potential danger area. Within the guidelines established by that committee, NASA and the NRO have been proceeding on a

cooperative basis in planning a NASA earth-sensing program which will meet our nation's scientific needs without jeopardizing its ability to gather intelligence from space. More recently, the 156 Committee recommended the approval of Dr. Kissinger for NASA to be permitted to fly a higher resolution earth terrain camera on its forthcoming SKYLAB mission.

In addition, the President's Science Advisor, with the endorsement and support of the Director of Central Intelligence and the Deputy Secretary of Defense, sponsors a committee with membership from the non-defense agencies which identifies ways in which space intelligence photography can be used by these agencies within the present security and policy regulations and provides a channel for passing these needs to USIB's Committee on Imagery Requirements and Exploitation. This committee has had a strong positive influence in coordinating the needs of the civil community and assisting to plan a reasonable earth-sensing program.

B. NRP Relationships with the Arms Control and Disarmament Agency

The SALT talks have brought the Arms Control and Disarmament Agency directly into satellite reconnaissance policy considerations. In 1968, concerned that the USSR

would not agree to on-site inspection, the NSAM 156 Committee proposed to negotiate with the USSR on the assumption that the United States was prepared to accept "enforcement by maximum, or if necessary, exclusive reliance on national means of verification..." (for the United States, this expression means "satellite reconnaissance"). In addition, in order to support its proposal, the Department of State recommended declassifying the fact that the U.S. is conducting satellite reconnaissance, disclosing to the Soviets that reconnaissance satellites are our main reliance for verification, briefing Congress on our reconnaissance capabilities, and informing the press and public--gradually but officially--along the same lines. After discussion within the United States Intelligence Board and key affected government agencies, it was decided that disarmament discussions with the USSR could proceed effectively, and possibly more effectively, by restricting the U.S. delegation to use of the expression "national means of verification" with no reference to our satellite reconnaissance program. It was pointed out that disclosure is an irreversible step which could have profoundly adverse effects on national security. As the talks have progressed, it has become apparent that this philosophy

was a workable one. "National technical means of verification" is presently the term contained in the draft agreements.

The NSAM 156 Committee was recently requested to review the impact of the SALT ratification process on the NRP. The Committee is considering the issue at this time in the working group. It might be decided that the "fact of" satellite reconnaissance would be revealed if it would assist in the ratification process. The NRO feels that this would be unwise.

IX. NRP Charter

The present NRP operating charter is an Agreement between the DOD and CIA dated 11 August 1965. It is the third of a series of Agreements, the first two being inefficient in that no direct chain of command was established. The present Agreement was based on the recommendations of the President's Foreign Intelligence Advisory Board. The Agreement has served its purpose well; however, the DNRO has recommended to Mr. Laird that current NRP management procedures would be strengthened with substantial authoritative backing such as a National Security Council Intelligence Directive or alternatively, a revised charter which accounts for 6 1/2 years of evolution.

SS-5

11 August 1965

AGREEMENT FOR REORGANIZATION OF THE NATIONAL RECONNAISSANCE PROGRAM

A. The National Reconnaissance Program

1. The NRP is a single program, national in character, to meet the intelligence needs of the Government under a strong national leadership, for the development, management, control and operation of all projects, both current and long range for the collection of intelligence and of mapping and geodetic information obtained through overflights (excluding peripheral reconnaissance operations). The potentialities of U. S. technology and all operational resources and facilities must be aggressively and imaginatively exploited to develop and operate systems for the collection of intelligence which are fully responsive to the Government's intelligence needs and objectives.

2. The National Reconnaissance Program shall be responsive directly and solely to the intelligence collection requirements and priorities established by the United States Intelligence Board. Targeting requirements and priorities and desired frequency of coverage of both satellite and manned aircraft missions over denied areas shall continue to be the responsibility of USIB, subject to the operational approval of the 303 Committee.

B. The Secretary of Defense will:

1. Establish the NRO as a separate agency of the DoD and will have the ultimate responsibility for the management and operation of the NRO and the NRP;

2. Choose a Director of the NRO who will report to him and be responsive to his instructions;

Excluded from automatic regrading;
DoD Dir. 5200.10 does not apply.

3. Concur in the choice of the Deputy Director of the NRO who will report to the DNRO and be responsive to his instructions;

4. Review and have the final power to approve the NRP budget;

5. Sit with members of the Executive Committee, when necessary, to reach decisions on issues on which committee agreement could not be reached.

C. The Director of Central Intelligence will:

1. Establish the collection priorities and requirements for the targeting of NRP operations and the establishment of their frequency of coverage;

2. Review the results obtained by the NRP and recommend, if appropriate, steps for improving such results;

3. Sit as a member of the Executive Committee;

4. Review and approve the NRP budget each year;

5. Provide security policy guidance to maintain a uniform system in the whole NRP area.

D. National Reconnaissance Program Executive Committee

1. An NRP Executive Committee, consisting of the Deputy Secretary of Defense, the Director of Central Intelligence, and the Special Assistant to the President for Science and Technology, is hereby established to guide and participate in the formulation of the NRP through the DNRO. (The DNRO will sit with the Executive Committee but will not be a voting member.) If the Executive Committee can not agree on an issue the Secretary of Defense will be requested to sit with the Committee in discussing this issue and will arrive at a decision. The NRP Executive Committee will:

a. Recommend to the Secretary of Defense an appropriate level of effort for the NRP in response to reconnaissance requirements provided by USIB and in the light of technical capabilities and fiscal limitations.

b. Approve or modify the consolidated National Reconnaissance Program and its budget.

c. Approve the allocation of responsibility and the corresponding funds for research and exploratory development for new systems. Funds shall be adequate to ensure that a vigorous research and exploratory development effort is achieved and maintained by the Department of Defense and CIA to design and construct new sensors to meet intelligence requirements aimed at the acquisition of intelligence data. This effort shall be carried out by both CIA and DoD.

d. Approve the allocation of development responsibilities and the corresponding funds for specific reconnaissance programs with a view to ensuring that the development, testing and production of new systems is accomplished with maximum efficiency by the component of the Government best equipped with facilities, experience and technical competence to undertake the assignment. It will also establish guidelines for collaboration between departments and for mutual support where appropriate. Assignment of responsibility for engineering development of sensor subsystems will be made to either the CIA or DoD components in accordance with the above criteria. The engineering development of all other subsystems, including spacecraft, reentry vehicles, boosters and booster interface subsystems shall in general be assigned to an Air Force component, recognizing, however, that sensors, spacecraft and reentry vehicles are integral components of a system, the development of which must proceed on a fully coordinated basis, with a view to ensuring optimum system development in support of intelligence requirements for overhead reconnaissance. To optimize the primary objective of systems development, design requirement of the sensors will be given priority in their integration within the spacecraft and reentry vehicles.

e. Assign operational responsibility for various types of manned overflight missions to CIA or DoD subject to the concurrence of the 303 Committee.

f. Periodically review the essential features of the major program elements of the NRP.

2. The Executive Committee shall meet on the call of either the Deputy Secretary of Defense or the Director of Central Intelligence. All meetings will be attended by the DNRO and such staff advisors as the Deputy Secretary of Defense or the Director of Central Intelligence consider desirable.

E. National Reconnaissance Office

1. To implement the NRP, the Secretary of Defense will establish the NRO as a separate operating agency of the DoD. It shall include the SOC which shall be jointly manned.

2. The Director of the NRO shall be appointed by the Secretary of Defense. The Director NRO will:

a. Subject to direction and control of the Secretary of Defense and the guidance of the Executive Committee as set forth in Section D above, have the responsibility for managing the NRO and executing the NRP.

b. Subject to review by the Executive Committee, and the provisions of Section D above, have authority to initiate, approve, modify, redirect or terminate all research and development programs in the NRP. Ensure, through appropriate recommendations to the Executive Committee for the assignment of research and development responsibilities and the allocation of funds, that the full potentialities of agencies of the Government concerned with reconnaissance are realized for the invention, improvement and development of reconnaissance systems to meet USIB requirements.

c. Have authority to require that he be kept fully and completely informed by all Agencies and Departments of the Government of all programs and activities undertaken as part of the NRP.

d. Maintain and provide to the members of the Executive Committee records of the status of all projects, programs and activities of the NRP in the research, development, production and/or operational phases.

e. Prepare a comprehensive budget for all aspects of the National Reconnaissance Program.

f. Establish a fiscal control and accounting procedure to ensure that all funds expended in support of the National Reconnaissance Program are fully accounted for and appropriately utilized by the agencies concerned. In particular, the budget shall show separately those funds to be applied to research and exploratory design development, systems development, procurement, and operational activities. Funds expended or obligated under the authority of the Director of Central Intelligence under Public Law 110 shall be administered and accounted for by CIA and will be reported to DNRO in accordance with agreed upon procedures.

g. Sit with the USIB for the matters affecting the NRP.

3. The Deputy Director NRO shall be appointed by the DCI with the concurrence of the Deputy Secretary of Defense and shall serve full time in a line position directly under the Director NRO. The Deputy Director shall act for and exercise the powers of the Director, NRO during his absence or disability.

4. The NRO shall be jointly staffed in such a fashion as to reflect the best talent appropriately available from the CIA, the three military departments and other Government agencies. The NRO staff will report to the DNRO and DDNRO and will maintain no allegiance to the originating agency or Department.

F. Initial Allocation of Program Responsibilities

1. Responsibility for existing programs of the NRP shall be allocated as indicated in Annex A attached hereto.

(signed)
Cyrus Vance
Deputy Secretary of Defense

(signed)
W. F. Raborn
Director of Central Intelligence

ANNEX A

The following assignments for the development of new optical sensor subsystems are made to take full advantage of technical capability and experience of the agencies involved.

1. The CIA will develop the improvements in the CORONA general search optical sensor subsystems.

2. Following the selection of a concept, and a contractor, for full-scale development, in the area of advanced general search, the CIA will develop the optical sensor subsystem for that system.

3. The Air Force (SAFSP) will develop the G-3 optical sensor subsystem for the advanced high-resolution pointing system.

4. SAFSP will develop the optical sensor subsystems (manned and unmanned) for the MOL program.

The Director, NRO will, in managing the corresponding over-all systems developments, ensure that:

1. The management of and contracting for the sensors is arranged so that the design and engineering capabilities in the various contractors are most efficiently utilized.

2. The sensor packages and other subsystems are integrated in an over-all system engineering design for each system, with DNRO having responsibility for systems integration of each over-all system.

D. Tactical Application for Satellite Reconnaissance

We are entering the era of tactical reconnaissance by satellites. The USIB has recognized ocean surveillance as a valid requirement; other tactical uses, Army and Air Force, are being defined. There will be some organizational and operational problems in applying the covert and centrally managed NRP satellite resources to these tactical purposes. Nevertheless, satellites are inherently adaptable to many purposes and many customers; therefore, to avoid fragmentation and duplication of effort, a firm high level management control, like the NRO, will continue to be useful.

DATA APPENDIX

INFORMATION ON ACTIVITIES OF THE NRP

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INFORMATION ON ACTIVITIES OF THE NRP

1. Photographic Satellites

a. CORONA. A medium resolution, broad-coverage search system which began operating in 1960 was phased out in 1971. Typically, seven or eight 10-14 day CORONA missions were flown per year and, on the average, each provided about 7.0 million square miles of photography at resolutions of seven to twelve feet. The final two CORONA vehicles serve as back-up to HEXAGON.

b. HEXAGON. A second generation search system which covers 20 million square miles per 45-day mission at resolutions of two and one-half to five feet. HEXAGON covers a swath of 280 miles from a normal operating altitude of 82 miles--about double the swath of CORONA. With its improved resolution, HEXAGON also satisfies many surveillance requirements. First flight was in mid 1971, the second in January 1972, and three or four successful launchings per year are planned for the program's lifetime, which is estimated to be ten years or more.

c. GAMBIT. A high resolution surveillance/technical intelligence system which began operating in 1963. Typically,

four GAMBIT missions are flown per year and an average mission returns 15,000 photographs at ground resolutions of [redacted] three feet. Mission life has been extended to 20 days with a 27 day lifetime expected to be realized during the Spring of 1972.

sub43

2. Signal Intelligence Satellites

a. POPPY. A long-life, broad-band SIGINT search system for locating new and unusual signals and determining their position. POPPY is also used to locate selected radars for updating the Electronic Order of Battle (EOB). This satellite is flown in a 500 n.m. orbit and has an operating life of over one year.

b. STRAWMAN. A multi-purpose, broad-band, high-sensitivity, near-earth-orbit (275 n.m.) SIGINT system whose primary function was to determine the technical characteristics of known radars. It also had a good capability for locating new signals and providing locations for EOB updating. The final STRAWMAN was launched in July 1971.

[redacted]

[redacted]

f. P-11. This name refers to a special purpose secondary satellite responsive to a wide variety of SIGINT needs. Most frequently it is used for directed coverage of a specific nature, such as anti-ballistic missile search, technical

intelligence collection on certain radars, and low capacity multi-channel COMINT. P-11s are launched as secondary payloads on other satellites (e.g. HEXAGON), separated at altitude, and then spin-stabilized in orbit.

3. NRP Financial Program (Millions TOA)

	FY 72	FY 73	FY 74	FY 75	FY 76	FY 77
Aircraft and Support	$ 45.8	$ 48.1	$ 49.8	$ 50.8	$ 51.5	$ 52.3
Satellites						
NRP Total						

sub43

Aircraft and Support Programs:

U-2 Aircraft Support:						
CIA-NRP	6.1	6.2	6.6	6.7	6.9	7.0
(a) Air Force	14.0	12.1	12.3	12.5	12.6	12.8
Subtotal	20.1	18.3	18.9	19.2	19.5	19.8
Mission Support: (Photographic Materials and Processing, Area 51 Operations)						
NRP	20.8	26.0	26.9	27.4	27.7	28.1
R&D Support: (Countermeasures R&D, General R&D)						
NRP	4.9	3.8	4.0	4.2	4.3	4.4
Aircraft and Support Total	45.8	48.1	49.8	50.8	51.5	52.3

(a) Starting with FY 1974, these charges may move from the NRP to regular Air Force budget.

Satellite Programs:

Photographic Systems:						
Corona	13.1	-	-	-	-	-
Hexagon	206.1	218.2	222.5	242.3	249.0	254.7
Gambit	133.9	130.8	135.3	133.2	145.5	137.0
Subtotal	353.1	349.0	357.8	375.5	394.5	391.7
Comint/Elint Systems:						
Strawman	4.6	2.2	-	-	-	-
Poppy	18.1	18.5	19.6	20.9	20.3	19.5
P-11	22.1	21.2	21.8	22.9	24.1	25.3

	FY 72	FY 73	FY 74	FY 75	FY 76	FY 77
Mission Support: (Satellite Control Facilities, Westover Photo Facility, Propellants, Misc. Operating)						
NRP	83.4	87.5	93.4	90.6	88.9	88.6
R&D Support: (Applied Research, Advanced Development, Vulnerability R&D, Photo R&D, Misc. Development)						
NRP	31.4	28.1	24.9	26.2	26.9	27.6
Satellite Total						
Satellite Planned Launches:						
Photographic Systems:						
Corona	2-3	-	-	-	-	-
Hexagon	2	3	3	3	3	3
Gambit	4	4	3-4	3-4	3-4	3-4
Subtotal	8-9	7	6-7	6-7	6-7	6-7
Comint/Elint Systems:						
Strawman	1	-	-	-	-	-
Poppy	1	-	1	-	1	-

sub43