6. Memorandum From the Deputy Under Secretary of State for Political Affairs (Johnson) to Secretary of State Rusk and Secretary of Defense McNamara/1/

Washington, January 21, 1964.

/1/Source: Johnson Library, National Security File, Intelligence File, TKH Jan 1964-Feb. 1965, Box 1 Top Secret; [*codeword not declassified*]. Copies were sent to William Bundy and Brockway McMillan (DOD); Wheelon and Cline (CIA); and Ambassador Thompson, Chayes, and Hughes (Department of State).

MEMORANDUM FOR
State--Secretary Rusk
Defense--Secretary McNamara
CIA--Mr. McCone
ACDA--Mr. Fisher
White House--Mr. McGeorge Bundy
White House--Dr. Wiesner
White House--Dr. Welsh
White House--Mr. Johnson
NASA--Mr. Webb
USIA--Mr. Murrow

SUBJECT
Possible Disclosure of Satellite Reconnaissance

Conclusions:

Following discussions among your representatives, we have concluded that no additional action to disseminate more knowledge of our satellite reconnaissance capability is required at this time in support of our disarmament and other policies.

This memorandum summarizes our findings on the nature of present official and unofficial knowledge of U.S. satellite reconnaissance, and on ways in which wider knowledge might affect allied and Soviet acceptance of our disarmament proposals.

State of Allied Knowledge of U.S. Satellite Reconnaissance Program:

As a result of actions taken following the review of the political and public handling of the U.S. satellite reconnaissance program under NSAM 156/2/ in the summer of 1962, all NATO heads of government, Foreign Ministers and NAC Permreps were told officially of our reconnaissance satellite program--the fact that we had it, that it was developing well and was directly benefiting the alliance, and finally, that the U.S. must maintain it at all costs. A somewhat similar briefing was given to several selected neutral officials. None of those briefed [*2 lines of source text not declassified*] were shown pictures, and no details of the quality or extent of coverage were given. Changes have occurred in four NATO Governments and in the NAC since these briefings, and we have made arrangements to brief the appropriate [*3 lines of source text not declassified*].

/2/NSAM No. 156, May 26, 1962, requested the Department of State to organize an interagency committee to review the negotiations on disarmament and international cooperation in outer space. For the workings of this committee, see *Foreign Relations*, 1961-1963, vol. VII, Document 226.

A list of foreign officials who have been briefed on the program is at Tab A./3/

/3/This two-page list is not printed.

Much satellite-derived information is presently being incorporated into NATO planning documents, particularly the Target Data Inventory which provides exact locations on such military targets as Soviet SAM, MRBM and ICBM launch pads. This information is classified Secret and there is no attribution of source. The nature of the data is such, however, that we must assume that many of the more than 500 non-U.S. NATO officials who have access to the TDI deduce its overhead photographic origin.

We are aware of no basic disagreement within NATO on the accuracy of our intelligence, and thus find no present necessity for additional disclosures to our Allies, either in terms of briefing more people or of giving more details about the program.

Non-Bloc Attitudes:

We have examined NATO and other non-Bloc press coverage of reconnaissance satellites but, with the exception of the U.S. press, find nothing of significance. We plan to query selected U.S. Embassies in an effort to determine more clearly the level of public and official awareness of the U.S. satellite program and attitudes toward it. If our experience with recent proceedings of the UN Outer Space Committee is a valid indicator, most non-Bloc states tend to accept space reconnaissance as a fact of life and to view attendant political considerations with indifference. This situation is satisfactory from our standpoint.

Soviet Statements on and Awareness of U.S. Satellite Reconnaissance Program:

Over the past 18 months we have noted a decline in Soviet press articles and statements on U.S. satellite reconnaissance. The Soviet press regularly reports "secret" launches of U.S. "spy" satellites, but these are only two or three sentence summaries of U.S. press agency stories, usually without Soviet comment. We have seen little else in the Soviet press since last summer on any aspect of reconnaissance satellites, and certainly nothing to compare either with earlier Soviet assaults on such activity or with recent U.S. articles on this subject. There has been no Soviet commentary yet on these U.S. articles adverting to extensive U.S. space reconnaissance operations.

In the UN Outer Space Committee negotiations, the Soviets have relaxed (but not abandoned) their position of long standing on banning reconnaissance satellites, at least to the extent of making agreement possible last fall on general principles of space law, without reference to reconnaissance. It is clear that the Soviets have taken this action without prejudice to future negotiations, but it does represent a significant shift in Soviet tactics.

The new Soviet attitude may result in part from experience they have acquired with reconnaissance satellites. In the last year the USSR has launched a large number of recoverable satellites, some of which carried low resolution cameras. We have intercepted Soviet video transmissions of pictures from these cameras. It is quite possible, given the 10,000 lb. weight of the Soviet Cosmos vehicles, that higher resolution cameras were aboard as well. Khrushchev hinted as much when he told Spaak last summer that the Soviets were photographing the U.S. and even offered to show Spaak some pictures. Adzhubey is reported to have made a similar statement in Finland in September 1963.

On the basis of the inconclusive evidence we have acquired in the last year or so, we believe that (a) the Soviets are certainly aware of the program, although probably still uncertain of its precise scope and quality; (b) they are prepared for the moment to live with it, in part because there is no feasible alternative open to them to stop it, and (c) they are probably engaged in a reconnaissance effort of their own. As they acquire first hand experience, their awareness of the strength and weaknesses of space reconnaissance may have some influence on their future proposals in space and disarmament matters.

Relationship of Satellite Reconnaissance to Current U.S. Disarmament Proposals:

At Tab B is a study, prepared by ACDA, attempting to gauge the impact of satellite photography on the principal current arms control proposals under consideration in ACDA, and on the contribution satellites can make in monitoring agreements already in effect, i.e., the test ban and the resolution against bombs in orbit.

A separable first stage proposal on strategic nuclear delivery vehicles and production cutoff would, of course, be heavily dependent on our unilateral reconnaissance capabilities. The degree of this dependency may well have to be revealed in part to make a separable first stage proposal acceptable to our Allies and domestically. Until a U.S. position on this matter is fully worked out, however, we cannot usefully anticipate possible solutions to this problem.

U. Alexis Johnson

Tab B

The Contribution of Satellite Photography to the Verification of Current Arms Control and Disarmament Proposals

Problem

The United States has developed an observation satellite system which is now able to furnish reasonable quality and reasonably timely photography of any area in the world which may be of interest. This unilateral capability effectively provides the "open skies" coverage of the USSR which was requested by President Eisenhower in 1955 as part of a disarmament agreement. It is clear that possession of this photography changes the requirements for ground or other types of inspection as part of the verification of a number of different proposed arms control agreements although it does not obviate the need for complementary means of data collection. This brief discussion has been prepared as an attempt to gauge the impact of satellite photography on the principal current arms control proposals under consideration in the U.S. Arms Control and Disarmament Agency.

Capabilities of Current Satellite Photography

Currently the most important single U.S. intelligence asset is satellite photography. Since the first successful recovery of a Keyhole vehicle in August 1960, there have been about 30 recovered missions, providing cloud-free, usable photography of approximately 90 percent of the USSR. The quality of the photography has now reached the level, in some instances, of early U-2 photography, and long focal-length camera systems, first successfully used in the summer of 1963, can now provide even better materials on selected targets. With photography from the normal search mode, using the KH-4 camera system, photo-interpreters can detect objects as small as 6 to 10 feet on a side. [*8 lines of source text not declassified*]

Satellite photography will be of particular value in the investigation of suspect locations. It is particularly well suited for the identification of new construction activity, for example, and existing photo interpretation procedures include, as a matter of course, the examination of comparative photographic coverage of a given area to detect changes. Tunneling and digging operations, requiring the dumping of spoil, would be readily apparent, for example.

The appearance of new transportation nets, even if only a few dirt roads into a relatively inaccessible area, is readily identifiable.

For nearly four years photography from earth satellites has been an important source of information on the ground force in the Soviet Union. The extensive high level photography from aircraft (Talent) of military installations and training areas acquired during the period from mid-1959 to mid-1960 is still useful to photo-interpreters for comparison with photography from satellites (Keyhole). Usable Keyhole photography acquired since mid-1960 covers virtually all of the USSR, East Germany, Poland, and Hungary. This photography is good enough to locate and describe military installations including such details as the dimensions, and probable functions of buildings. It can reveal whether installations are currently in use, although the extent of usage at any time cannot be determined. Military training areas, firing ranges, tank moving-target ranges, and vehicle driving courses are easily discerned, and the photography can reveal whether such facilities have been in recent active use. However, it cannot pick up major land combat equipment. Enhanced image resolution offers the hope for sufficient further improvement to eliminate this difficulty. However, there is no certainty that overhead photography can provide a complete and independent confirmation of the existence of a unit or of its strength in manpower and equipment.

Arms Control and Disarmament Proposals

1. *Comprehensive Nuclear Test Ban Including Underground Tests.*

The evidence of actual underground nuclear testing, both in the United States and the Soviet Union, has already been detected in photography. The major deterrent to effective use of satellite photography is likely to be lack of adequate coverage resulting from weather conditions or long time lapses between photography. Few areas in the USSR remain which have not yet been photographed, and none of these is readily accessible by existing transportation facilities. Certain portions of the USSR, however, provide more information than others. In far northern latitudes, light conditions generally preclude much usable photography during winter months. Meteorological conditions also hamper interpretation in places--the Kamchatka Peninsula and the Kuriles, for example, are nearly always cloud covered, as is the Baltic area. On the other hand, desert areas between the Caspian Sea and Lake Balkhash are nearly always cloud-free.

The time between photographic missions covering a given area varies considerably, depending on the location of the area under study. Although to date an average of at least one mission per month has been orbited, the areas covered by each mission vary, and few areas receive repeated coverage on consecutive missions. With the added factor of unfavorable cloud conditions, it is frequently possible that a specific target may not be covered more frequently than every six to eight months. On the other hand, some areas located near significant targets, such as ICBM sites or known R&D facilities, and in desert areas where cloud conditions are generally good, are covered nearly every time a satellite is

programmed.

[2 paragraphs (22 lines of source text) not declassified]

2. *Strategic Nuclear Delivery Vehicles, Interim Reduction and Production Cut-off.*

The current proposal specifies armament reductions and curtailment of test and production for the following major strategic weapons categories: ICBMs and IRBM/MRBMs; heavy and medium bomber aircraft with air-to-surface missiles; submarines equipped to deliver weapons by ballistic or cruise missiles; and ABMs.

[2 paragraphs (7 lines of source text) not declassified]

a. *Land Based Missiles:*

Satellite photography has permitted the identification of all or nearly all the fixed launch facilities for strategic missile systems in the USSR and would provide an effective check on Soviet declarations of such bases as well as initiation of new launch site construction. [2-1/2 lines of source text not declassified]

b. *Submarine Launched Missiles:*

[1 paragraph (6 lines of source text) not declassified]

c. *Heavy and Medium Bomber Aircraft:*

[1 paragraph (6 lines of source text) not declassified]

d. *Production of Strategic Weapons:*

[1 paragraph (18 lines of source text) not declassified]

3. *Fissionable Material Production Cut-off*

Satellite photography is admirably suited to support any arms control agreement on the cut-off of production of fissionable material. Installations capable of contributing significantly to the fissionable material stockpile of any of the nuclear powers would, of necessity, be sufficiently large and characteristic to be detectable by all present reconnaissance systems. In fact it is believed that essentially all of the important elements of the Soviet AE production complex have been so photographed and identified. Thus Soviet declarations of production sites could be confidently checked by satellite photography and decisions made on the Soviet compliance. A solid basis would be provided for reaching a decision on inspection to locate an undeclared facility. Construction of a new AE production facility could also be detected and probably identified well in advance of actual operation.

[2 paragraphs (13 lines of source text) not declassified]

4. *Nuclear Free Zones*

The proposal provides for the prohibition of nuclear weapons from defined geographic regions, such as Latin America. Photographic satellites could provide broad-base coverage on which to establish a base or mosaic of large-scale military activities in a particular region. It would be a useful means of obtaining wide area coverage to be used for targeting more specific collection means such as low altitude or ground observation.

[1 paragraph (8 lines of source text) not declassified]

5. *Other Proposals*

Photographic satellites would have limited applications in providing background information pertinent to the enforcement of a number of other arms control measures.

a. *Observation Posts and Surprise Attack:*

Satellite photography would have only limited value in support of the observation post proposal. In general the time delay in obtaining reliable coverage of any area make this source unattractive as a unique source for detecting any surprise attack or clandestine maneuver. Furthermore, the quality of the [*12 lines of source text not declassified*].

b. [*less than 1 line of source text not declassified*]

[*1 paragraph (6-1/2 lines of source text) not declassified*]

c. *Bombs in Orbit:*

The US and the USSR have agreed to a UN resolution forbidding the orbiting of nuclear weapons. Verification is by unilateral means and, presumably, the orbiting of the number of large, low-orbit satellites sufficient to have real military significance would be noticed even though intentions were not known. [*6 lines of source text not declassified*]

d. *Conventional Armaments and Force Levels:*

[*1 paragraph (5 lines of source text) not declassified*]