MEMORANDUM FOR THE RECORD July 15, 1969

SUBJECT: Revisions to the NRP Annex to the STG Report

The attached three documents comprise the comments we received on our draft NRP Annex to the STG Report. Check marks, in pencil, show changes accepted. We accepted everything except Dr. DuBridge's request that we excise all references to an Arms Control Satellite and the CIA request that we tout CORONA as an earth resources satellite.

PAUL E. WORTHMAN
Colonel, USAF

~~TOP SECRET~~

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RESULTS OF PALLEY-ALLEN CONVERSATION ON STG REPORT

(June 27, 1969)

1. Parallelism in format of the DOD and NRO report will be enhanced by having a "Summary" section at the beginning of the report. Mention:

- DOD space base supporting the NRP
- CIA intelligence base supporting the NRP
- Technology of the NRP is devoted almost exclusively to sensors. Such things as DRS, precision attitude systems, SGLS are developed in the DOD.
- NRO report is an annex to the STG report.

2. ERTS. Show that NRO and DOD optical technology is readily available to NASA for ERTS.

3. Add payload dimensions (in Appendix).
Add orbital attitudes (nominal (in Appendix)).

4. Revise MOL section to be in consonance with cancellation and to show plan to study high resolution possibilities.

5. Re-write space shuttle sentences to show it as a concept to be considered in cost reduction and flexibility studies.

6. Mapping and charting. Mention that we carry these cameras as passenger payloads. The DOD report will contain a white write-up on mapping and charting.

7. Meteorology satellite. The DOD report will cover this. NRO Staff will help solve the problem of security restrictions (now timely).

8. Interdiction. We will soften our comment and refer to the DOD report.

9. "Summary." Present summary section at end of report needs to be renamed and rewritten.

10. Dependence on reconnaissance satellites. Mention impact of base losses.

11. Secondary payloads. Mention that we have carried and will continue to carry, as possible, secondary payloads (in M/C/G section?).

12. Projections to 1985. Footnote present charts to extrapolate present 1979/80 values to 1985.

15. [redacted] Add a phrase pointing out advantage of this sensor.

Worthman

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THE WHITE HOUSE

WASHINGTON

BYE 11,901/69

June 26, 1969

MEMORANDUM FOR

Director, National Reconnaissance Program

This memorandum responds to your request for comments on the draft, "National Reconnaissance Program Annex to the Space Task Group Report," dated 4 June 1969.

I think the technological trends and the Program projections that are summarized in this report are reasonable estimates of what we can anticipate for the NRP in the next decade and I concur in these sections of the report.

I would, however, suggest the changes indicated in the attached pages for the paragraph titled "NRP Relationships with NASA: Post-Apollo Goals." I would also change DOD to NRO in the last two lines of page 18.

In addition, I think we should delete the references to an Arms Control Satellite. It seems to me that the policy review of such a proposal falls within the purview of the NSAM 156 Ad Hoc Committee and should be taken up there rather than being suggested at this time to the Space Task Group. This is an important question, however, and I suggest that, as a separate action, the EXCOM consider the proposal and decide whether to encourage a 156 Committee review.

Lee A. DuBridge
Science Adviser

cc:Mr. Packard
Mr. Helms

Attachment - Excerpt from cy 3 of BYE 12894-69
(pages 13, 14-a and 14-b w/suggested changes)

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NRP Relationships with NASA: Post-APOLLO Goals

For some time, NASA has been exploring the 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 an inter-agency 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, U. Alexis Johnson's satellite reconnaissance policy committee met again and developed policy to cover this potential danger area. ~~As a result,~~ Within the guidelines established by that committee, NASA and the ~~DOD are now~~ 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.

In addition, the President's Science Advisor has ~~sponsored policy studies and requirement conferences in an effort to determine how available space intelligence photography can be applied to the needs of the civil government without hazarding the security of the National Reconnaissance Program. These studies and conferences have been~~, 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 the 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 COMIREX. 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. In order to encourage further progress, consideration should be given to allotting a small but regular percentage of film from each search satellite to these purposes.

There are two ~~new~~ areas in which NASA could benefit from closer technical ties with the ~~Department of Defense~~ NRO. First, the DOD maintains a reconnaissance wing of SR-71 aircraft whose main purpose, in the event of war, is nuclear strike assessment. Both DOD and CIA maintain U-2 aircraft units. At present, some of these aircraft fly training missions and some are stored in flyable condition. Some SR-71's

and ~~possibly~~ U-2's ~~could be~~ have already been made available for ~~NASA~~ civilian earth-sensing surveys. Photography from SR-71's ~~should be~~ these aircraft has been and can continue to be very useful to NASA and its user community in developing baseline mosaics and in evaluating the possible return to be expected eventually from satellite photography. ~~In addition, aircraft like SR-71's offer many advantages over satellites as sensor carriers: their operating cost is much less than that of satellites, a wide choice of sensors is possible, the survey of a nation can be carried out faster by aircraft than by satellites, aircraft can be selectively employed, and they need offer no political risks. An intensive program of earth-sensing from aircraft over selected cooperating countries could provide a useful assessment of the utility of earth resources surveys prior to embarking on a very expensive satellite program.~~ This support should be continued and strengthened.

Second, NASA has concluded that its initial earth resources satellite will be more cost-effective if it uses an electronic imaging system, rather than film-recovery cameras. It is also quite possible that highly refined electronic imaging sensors will permit economy and improvement in NRP operations in the future. It may be appropriate and mutually advantageous for NASA to make a significant commitment to advancing the technology of high resolution electronic sensors to replace film-camera systems.