

**BYEMAN**  
CONTROL SYSTEM

*WCL-1-4  
RAB-1-9  
RAB-1-10  
RAB-1-11  
RAB-1-12*

~~TOP SECRET~~  
~~(S)~~ NATIONAL RECONNAISSANCE OFFICE  
WASHINGTON, D.C.

THE NRO STAFF

27 November 1967

MEMORANDUM FOR DR. FLAX

SUBJECT: MSFPC Agenda Item No. 3a

NASA representatives, at tomorrow's MSFPC meeting, will request permission to release a policy statement on earth-sensing (see Attachment A). This statement, although stamped TOP SECRET BYEMAN, is proposed for release at the SECRET level.

John Kirk asked me to review the NASA proposal and my comments are in the Talking Paper at the right. The essential problem is that NASA is asking permission to disclose BYEMAN information in a garden-variety SECRET paper. In my paper, I have shown that (1) this is illegal and (2) the need for explanation is endless -- one cannot rationalize satellite reconnaissance policy without telling too much to too many. I recommend, instead, a procedural solution which is cautionary without being "rational."

NASA will object that a procedural solution doesn't solve all of its problems. For example, how does one explain a project cancellation? I trust that we will identify this management problem as NASA's, not the OSD's or the MSFPC's. NASA will always have a residual communication problem; our goal is to get NASA pointed up the road to control, but not to write the control manual.

Over and above the principles involved in this issue, I am disappointed in the NASA draft statement on other grounds.

HANDLE VIA  
**BYEMAN**  
CONTROL SYSTEM

~~TOP SECRET~~  
EXCLUDED FROM AUTOMATIC REGRADING  
DOD DIRECTIVE 52DD.10 DOES NOT APPLY

CONTROL NO Internal  
COPY 1 DF 2 COPIES  
PAGE 1 OF 2 PAGES

Paragraph 1, 2nd sentence. "The global and international nature of space activities is well recognized, but only if the free use of space does not conflict with the prerogatives of individual national sovereignty." This is the reverse of NSAM 2454 policy.

Paragraph 3, 2nd sentence. "...the U.S. has determined that a controlled and gradual evolution of space-borne earth-sensing performance is in the national interest." This is certainly not the case. Espionage is espionage and its revelation, controlled or uncontrolled, will simply put the U.S. out of business.

*Paul E. Worthman*  
PAUL E. WORTHMAN  
Colonel, USAF

~~TS~~ BYE

DEPARTMENT OF THE AIR FORCE  
OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM

Col Worthman,

Would you please  
arrange to discuss  
this with Dr Flax.

He feels that a  
workable solution  
can be found  
based on a "white"  
TS version of the  
NASA draft. He did  
not say how this  
would get around  
violation of Bye  
security structure.

~~TS~~ BYE Maj W

~~SECRET~~Draft Policy Statement~~TOP SECRET~~  
HANDLE  
CONTROL SYSTEM ONLY

1. It is the policy of the United States to avoid any confrontation which might jeopardize the present commitments of the community of nations, both tacit and explicit, to the freedom of space. The global and international nature of space activities is well recognized, but only if the free use of space does not conflict with the prerogatives of individual national sovereignty. ]
2. It is therefore the policy of the United States to carry out its space activities under carefully considered ground rules developed at the highest levels of Government and binding upon all elements thereof. Violation of these ground rules is a serious violation of security as well as a direct contravention of national policy.
3. A particular set of ground rules applies to earth-oriented space systems. In order that civilian space and development programs in such areas as earth resources and meteorology may be carried on without giving rise to grave international questions, the U. S. has determined that a controlled and gradual evolution of space-borne earth-sensing performance is in the national interest.
4. Therefore, without prior approval from the Associate Administrator, no element within NASA will discuss, propose, plan, fund, develop or include in any mission (a) any optical sensor that would provide a ground resolution of 70 feet if operated under optimum conditions from an orbital altitude of 125 nautical miles, or (b) an infra-red sensor larger than 12 inches with an optical figure controlled to one-quarter of a wave length. Position measuring and control (pointing, tracking, stabilization) systems accurate to more than 20 microradians similarly require prior approval.
5. It is the responsibility of every individual in NASA holding a clearance of SECRET or higher to become familiar with this policy and to abide by its spirit as well as its letter. Within each organization, all must work toward developing a high degree of awareness and sensitivity, as well as early and rapid communications, concerning potential problems in these and related areas. It is not the purpose of this policy to inhibit the free development and exchange of ideas, nor to establish arbitrary constraints upon research and development activities; its purpose is rather to channel significant information to the policy level of NASA in order to assess the most constructive direction in which the NASA program should move.

~~TOP SECRET~~ WORKING PAPER  
CONTROL SYSTEM ONLY

PROBLEM:

To find a mechanism for developing a wider recognition in NASA of policy restraints affecting its planning and development of earth-sensing satellites.

DISCUSSION:

On July 11, 1966, the NSAM 156 Ad Hoc Committee issued a national policy statement, "Political and Security Aspects of Non-Military Applications of Satellite Earth-Sensing." This statement defined limitations on NASA earth sensors, accepting "those sensors not exceeding a capability of 'an angular resolution of 0.1 milliradian or finer, or an optical or infra-red image-forming system with a physical aperture greater than 30 cm. and an optical figure controlled to better than 1/4 wave length. '"

This document was issued at the TOP SECRET level in the BYEMAN Security System. Although NASA has 206 employees cleared for specific BYEMAN activities, and therefore eligible to read the document, NASA officials have frequently expressed the desire for some mechanism which would permit a wider recognition of policy restraints affecting its satellite earth-sensors. For example, at NASA Centers, where most of the earth-sensor planning is done, awareness of the policy restraints is limited to a few individuals. NASA also has many consultants - academic and industrial - who are working without knowledge of the limitations definition, or who, if they suspect some sort of limitation, are certainly not aware of its exact nature or purpose.

NASA representatives of the Survey Applications Coordinating Committee have pointed out specific cases - fortunately few - where a report, a speech, or a proposal, bearing the NASA imprint, appears to be in disregard of policy constraints, but is, in fact, the result of the work of unwitting individuals.

Against this background, NASA has asked if there is any way in which it could broaden recognition of earth-sensor policy restraints.

POSSIBLE COURSES OF ACTION:

1. Alternative One. Clear additional NASA employees for access to material in the TALENT-KEYHOLE or BYEMAN security systems.

a. Advantage.

(1) The entire report of the NSAM 156 Ad Hoc Committee could be made available to each additional-cleared NASA employee, giving him a comprehensive background on the "why" as well as the "what" of NASA's earth-sensor limitations.

b. Disadvantages.

(1) It is counter to BYEMAN or TKH basic security policy to augment a billet structure on the basis of access to a single document.

(2) Even after a relatively heavy augmentation of the NASA billet structure, the number of knowledgeable employees would still be far short of what NASA feels it needs for improved security control.

(3) The typical knowledgeable NASA employee would probably still be inhibited from communicating the "what" or "why" of the prohibitions to his uncleared subordinates.

2. Alternative Two. Issue a TOP SECRET intra-NASA document which explains the limitations.

a. Advantage.

(1) Each TOP SECRET-cleared NASA employee who has a need-to-know would have available to him a detailed statement on the "what" and "why" of the limitations.

b. Disadvantages.

(1) This action would violate the security level of the original document, divulging information which is clearly in the BYEMAN security system.

(2) It would inferentially divulge "the fact of" satellite reconnaissance at a security level less than BYEMAN/TKH. License to make such a disclosure has been denied by the Secretary of Defense and the Director of Central Intelligence.

(3) Even if disclosure were permissible, the number of knowledgeable (i. e., TOP SECRET-cleared) NASA employees would still be far short of what NASA feels it needs for improved security control.

(4) The typical knowledgeable NASA employee would probably still be inhibited from communicating the "what" and "why" of the prohibitions to his unclassified subordinates.

3. Alternative Three. Issue a SECRET intra-NASA document which explains the limitations.

The advantages and disadvantages of this alternative are the same as for No. 2, above, with the added hazard, based on hard experience, that the prohibitions would be leaked promptly to the public and trade press.

4. Alternative Four. Issue an unclassified intra-NASA Procedural Statement covering earth-sensors.

Since the disclosure options listed in 1, 2, and 3 above are, in effect, not open to NASA, procedural control appears to be the remaining rational alternative. A statement as simple as the following should be sufficient for NASA's purposes:

"All proposals, plans, or speeches referring to earth-sensors, prepared by NASA employees, consultants, or contractors, must be referred in both draft and final form, for review and coordination, to the Assistant Administrator for International Affairs, NASA Headquarters. Meteorological sensors are exempted from this directive."

a. Advantages.

(1) This procedural directive can be given complete dissemination throughout NASA to all employees.

3

(2) The public and trade press will not find this directive newsworthy.

(3) The fact that all material must be referred to NASA Headquarters in draft form extends Headquarters security control to consultants and outside study groups.

(4) No additional clearances are required within NASA.

(5) The security integrity of (a) the basic policy document and (b) "the fact of satellite reconnaissance" is preserved.

b. Disadvantages.

(1) None