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- Letter, Hqs SAC, Gen Power to AFCCS, Gen White, 16 June 1960, TAB A, and additional letter, 24 June 1960, TAB B.
  - b. Letter, Hqs USAF (AFDSD-AT), subj: "(U) Exploitation of Initial SAMOS Data", to ARDC, w/info to CINCSAC, ADC, AMC & AFEND, dated 1 June 1960,
- 1. Reference b. transmitted the recent instructions of SAFUS directing changes in the SAMOS program and the submission of a revised development plan.
- 2. General Power's letter comments on reference b. and makes recommendations relative to the revision of the SAMOS plans.
- 3. Reference b. included some questions of an operational nature which had been raised by SAFUS and on which further guidance was to be provided by this headquarters. This guidance is entitled "Supplemental Hqs USAF Guidance to ARDC, SAC and ADC Concerning SAMOS" and is included herewith as an attachment to the proposed reply to General Power's letters. This guidance, TAB D, is concurred in by AFODC, AFADC, and AFDDC. It is not concurred in by AFCIN. General Walsh's letter of non-concurrence to AFORQ which pertains to this guidance is attached as TAB E.
- 4. The proposed reply to General Power's letter comments on the difficulties faced in this program and outlines the action necessary to overcome them.

#### RECOMMENDATIONS:

- 5. That the Chief of Staff approve TAB D, "Supplemental Headquarters USAF Guidance to
- 6. That the Chief of Staff sign the proposed reply to General Power which includes the

JOHN L. NARTIN, JR.

Colonel, USAF

Deputy Assistant for Advanced

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- 1. Ltr, Gen Power to Gen White, 16 Jun 60,
- 2. Ltr, Gen Power to Gen White, 24 Jun 60, TAB B, who seek.
- . Ltr, Hqs UBAF, 1 Jun 60, TAB C
- "Supplemental Hqs USAF Guidance to ARDC, SAC, ADC Concerning SAMOS, TAB D

5. Ltr, Non-Concurrence, AFCIN, 21Jun60, TAB B 57 50 or THIS FORM MAY BE USED 6. Proposed Ltr to Gen Power, \$12 APCCS, TAB P

HEADOUARTERS
STRATEGIC AIR COMMAND
Offuit Air Force Base
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1 6 JUN 1960

General Thomas D. White Chief of Staff United States Air Force Washington 25, D. C.

Dear Tommy:

General Wilson's recent letter to ARDC with SAC as an information addressee, directed ARDC to develop a revised Development Plan for Samos. Ground rules were laid down to develop a program reduced in scope and along less sophisticated lines. This same letter also went on to stress that questions concerning command and control, operational facilities, and user relationships still continue to be a matter of considerable discussion. (8)

During the past year and as recent as 21 May 1960, I have expressed to you on several occasions, my grave concern about the lack of progress in the Samos program and the urgent necessity for this system in the Strategic Air Command. In view of SAC's requirements for priority intelligence and the potentiality of Samos for improving the operational effectiveness of this command, it is inconceivable to me that we are still questioning the operational requirement for or the assignment of this system. (S)

I recognize that the questions on system reliabilities, readout versus recovery, degree of sophistication, program scope, etc., are all certainly understandable. By the same token, however, these same questions are not going to be resolved to everyone's satisfaction for years to come. There always will be new ideas and suggestions for product improvements. Recognizing this, it appears absolutely essential to me that we should vigorously concentrate our entire efforts on obtaining a basic, operational usable system at the earliest possible date, in order to obtain usable intelligence data for employment of the ICBM and manned aircraft force. Later on, after the initial system

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product improvement. This procedure, of course, is the same one that has been and is currently being utilized in transitioning manned aircraft and ICBM systems from ARDC to SAC.

specifically I recommend that the basic system to be developed by ARDC for SAC be defined essentially the same as that described in paragraph 3 of General Wilson's letter. In this connection, it will be necessary for ARDC to plan for and install an operational control center in an existing facility on Offutt AFB. At this juncture, since the question of where to locate the data processing facility and the operational control center still seems to be under discussion, in some areas, I would like to review past actions on these facilities. (8)

The Strategic Air Command, on 5 August 1959, was delegated by the Vice Chief of Staff the responsibility for operational planning for employment and control of the Samos system. Further, in a letter from General Wilson to General Schriever, 7 August 1959, it was directed that the control and data processing capability for Samos would be established at Offutt AFB. Accordingly, SAC has conducted its preliminary operational planning in response to the above directives. As a result of numerous planning conferences, ARDC, AMC, ADC and SAC have unanimously agreed and each command has published mutually supporting detailed plans specifying that: (8)

- a. The operational control and data processing elements of Samos should be installed in existing facilities on Offutt AFB. (8)
- b. An interim data processing capability should be installed in existing facilities on Offutt AFB. This facility is required in conjunction with the very first R&D launch.
- c. Data handling must be co-located with the operational control for efficiency of operation and to permit close day to day coordination of efforts between these two integral parts of the systems. (8)

d. One integrated sames and Midas control center located in existing facilitles on Offutt AFB is essential in view of the highly inter-related use that the sames and Midas make of common ground support equipment. Co-location of these two facilities will permit considerable monetary savings.

Subsequent to the above actions, Hq USAF, on 25 Feb 1960, submitted to the Secretary of Defense operational plans for Samos and Midas. These USAF plans were in complete consonance with the jointly developed plans of ARDC, AMC, ADC and SAC. Subsequent to 25 Feb 1960 the Secretary of Defense forwarded the USAF plans for Samos and Midas to the JCS for comments and recommendations. (8)

In view of the above actions and recognizing that ARDC (AFBND) has previously briefed the AFBNC as to why the operational control centers for Samos and Midas should be co-located at Offutt AFB, adjacent to the data processing facility, it is strongly recommended that no action be taken to change existing plans to locate these facilities at Offutt AFB. Any indecision on the part of the USAF, at this time, as to where to locate these facilities will undoubtedly be used to great advantages by external agencies.

I am sure that you recognize the long range benefits that will accrue to the USAF from locating the operational control and data processing features of Samos at Offutt AFB. These operational facilities will without a doubt expand, over the years, into control of other instrumented satellites and manned space systems. Accordingly these facilities should be firmly integrated into the command and control structure of the USAF, by locating them at Offutt AFB. (8)

In conclusion I wish to emphasize that during the past year the Samos and Midas programs have been subjected to numerous reviews, repeated re-direction of efforts, continual re-examination of technical efforts, etc. To date, none of these exercises have resulted in a clear cut course of action. Consequently, it has not been possible to go ahead with long lead time items required for early operational facilities. This situation simply cannot be allowed to continue, in view of the U-2 incident and the dire need

for strategic intelligence and tactical warning. I am sure that you will agree with me that it is absolutely essential that the Samos and Midas programs be gotten off of dead center. Maximum efforts must be taken to develop, as soon as possible, a basic, operationally useable system. The sophistication and any required increased scope of activities should come later.

This correspondence is classified SECRET because it reveals planning information concerning the SAMOS reconnaissance system. (U)

Sincerely,

THOMAS S. POWER

General, USAF

Commander in Chief

HEADQUARTERS STRATEGIC AIR COMMAND UNITED STATES AIR FORCE OFFUTT AIR FORCE BASE, MESRASKA



General Thomas D. White Chief of Staff United States Air Force Washington 25, D. C.

24 JUN 1960

Dear Tommy

Reference is made to your letter of 16 June regarding the need to develop some well-organized interim plans for exploitation of any possible data from Reconnaissance Satellite tests. My immediate concern lies in the responsibility you have placed on SAC to have a processing capability available in time for the SAMOS launches scheduled to begin in September.

As you know, the processing of any take from the R&D launches was to have been carried out by a joint ARDC-SAC effort. This was to be accomplished at a facility to be established here at Offutt and designated as "Early-Fix". Recently, the funds for this project were frozen. Therefore, this facility cannot be made available in time for the first few firings.

As a result of the funds freeze action, we have developed a plan to provide a processing capability sufficient for the R&D launches. This plan consists of three steps or phases that will minimize any slippages in construction programs. Step I will utilize existing personnel, equipment and facilities of the 544th Reconnaissance Technical Group here at this headquarters. This capability is already in being with the exception of a few items of equipment peculiar to the SAMOS system. These items are scheduled for completion prior to the first launch and can be readily installed in the existing facility of the 544th RTG. This arrangement can take care of the immediate situation, and adequately process the data from the first few launches. However, as the number of launches increases, it is essential that the balance of the SAMOS equipment be installed in the "Early-Fix" facility (Step II) in an orderly

progression. Since the 4999th Data Processing Squadron (ARDC) has been activated at Offutt and has already been partially manned there will be no interruption in changing from Step I to Step II. Step III provides the equipments and facilities necessary for final system evaluation and makes optimum utilization of all expenditures incurred in Step II. This over-all plan provides for the growth of the system in an austere manner. It further provides for growth in an operational intelligence environment that does not exist elsewhere.

Since receipt of your letter of 16 June a message from your headquarters to AFRCE-MR directs immediate termination of the "Early-Fix" construction contract. It is important that this directive be rescinded and the attached proposal be implemented as soon as feasible.

I am attaching a copy of this plan for your information. I have sent the original to General Schriever with the recommendation that it be incorporated in the new SAMOS exploitation plan. It should then provide the means of accomplishing our dual responsibilities in a mutually acceptable manner.

Sincerely

THOMAS S. POWER General, USAF

Commander in Chief

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DEPARTMENT OF THE AIR FORCE HEADQUARTERS UNITED STATES AIR FORCE WASHINGTON 25, D.C.

MEPLY TO ATTN OF:

AFDSD-AT

SUBJECT

(U) Exploitation of Initial SAMOS Data



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INFO TO: CINCBAC

ATY

AMC

ATPRACT

- 1. By letter of 20 April 1960, the Director of Defense, Research and Engineering approved in principle the Research and Development Plans for DISCOVERER, SAMOS and MIDAS, dated 15 January 1960. Separate correspondence as to specific changes and funds pertaining to this approval is being prepared; however, questions of operational command, operational facilities and user relationships for the SAMOS recommaissance satellite continue to be matters of considerable discussion.
- The Under Secretary of the Air Force directed on 27 May 1960 that the R&D exploitation and operational plans for SAMOS be re-evaluated. The Under Secretary stated that there is considerable technical uncertainty as to the character and quality of the information that may be obtained by the different payloads of this system and that the operational interest and the character of the initial operational programs will be strongly conditioned by the results of the R&D program He noted that a very elaborate plan had been originally conceived for the operational control, data handling, data utilization, data volume, and data display elements of the SAMOS and MIDAS operational systems, but that approval of such a plan with authorization for expenditure of funds has not been forthcoming. This delay has occurred because of concern that the assumptions on such items as technical capabilities, schedules, data quality, frequency of coverage, payload reliability and lifetime, computer requirements, optimum camera types, etc., are open to considerable question and can affect in a major way the type of operational system that will ultimately be required. If, as a result of the R&D experimental flight program, recovery rather than readout turns out to be the best primary means for satisfying the bulk of the operational requirements, then the ground complex required for handling such data will be enormously simpler than if complete reliance is placed on readout to meet these requirements.
- 3. It is directed that a revised SAMOS Development Plan be prepared and submitted as soon as possible within the ground rules specified below. Deviations for valid reasons will be considered and may be presented as alternate plans.

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- a. In order to have parallel R&D tests of readout and recovery systems, re-examine all applicable camera equipment, both on the shelf and in development, and make recommendations for the introduction of an additional recoverable payload development program with associated schedules and cost.
- b. Endeavor to achieve the earliest flight dates for the different payloads with priorities in this order: photographic recovery, photographic readout, ferret. Consideration is to be given to possible delaying elements and added insurance against such delays.
- c. Make provision for the minimum essential capability to handle in a reasonable fashion any operational take from the R&D flights:
- (1) Include facility details, schedules, costs, manpower, and subsystem descriptions.
  - (2) Initial readout is limited to two sites.
- (3) No wide-band data links authorized except Vandenberg-
- (4) No provision is to be made for alternate satellite control centers: control to be exercised originally from Sunnyvale center.
- (5) Capability will be limited to that required to handle one operating readout satellite at a time.
- (6) System should be planned to permit growth capacity if R&D program results are promising and decision is made later to use readout primarily.
- (7) Processing capability should be adequate for recovered as well as readout data.
- (8) Personnel staffing and training should be geared to the modified program. The present activities in this regard appear to be completely out of scale and out of phase time-wise.
- (9) Provision will be made only for essential elements of subsystem I. Complexity and computer requirements introduced into this subsystem as a result of ferret payloads should be carefully reassessed. The very limited value of possible data from F-1 and F-2 militates against sophisticated data handling system. Subsystem I appears to have been greatly over-engineered, at least for the ferret aspects of the program.
- (10) Computer programming problems, schedules and computer requirements for photographic readout payloads will be re-evaluated to determine whether it is reasonable to anticipate extensive pre-determined selective area coverage on request by intelligence in the R&D flights now scheduled. The interim facility requirements should be planned accordingly.

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- d. Determine the effects of the above on MIDAS and prepare necessary revisions to the MIDAS plans.
- 4. The proposed SAMOS interim operational capability should be located in the area where it is desired to establish the final operational facility and control center, if appropriate, or can consist of an augmentation to the R&D capability with Air Force personnel rather than contractor personnel responsible for the operation. The plan for this capability must include recommendations for its location with justification for the choice. The current plan is to use a very small portion of the old Martin bomber plant in Omaha with overlapping control systems for MIDAS and SAMOS. The Under Secretary questions the desirability of this plan and reports that CINCNORAD believes this is unacceptable and that MIDAS control, readout, display, etc., must be integrated in a common location with other defense subsystem elements such as those related to BMEWS. Therefore, questions of the following types must be considered in making a new plan for the interim operational capability:
- a. Should the Air Force plan ultimately to establish the complete operational data handling, display and control elements of SAMOS and MIDAS at the old Martin Bomber Plant?
- b. If not, or if there is serious question as to such desirability, is it sound to reactivate a minute area of this large plant for the interim operational equipment?
- c. Should the entire complex be considered as basically a "peacetime" operation with survivability of all or part of the equipment of little
- d. Is it necessary or desirable to co-locate data handling and processing facilities with future control centers and should the SAMOS and MIDAS control centers be integrated?
- 5. Request this headquarters be notified of the earliest possible date that the requested plans can be formally submitted for appropriate briefings and presented to the Air Force Ballistic Missile Committee. ARDC is to act as team captain for the preparation of these plans with other commands participating as necessary. Further guidance will be provided by this headquarters on the questions in paragraph 4.

/signed/ Roscoe C. Wilson

ROSCOE C. WIL SON Lt General, USAF Deputy Chief of Staff, Development

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Request 1800 mourtake such a study to detendine:

- (1) In it possible to harden (or disperse) sufficient facil-
- and be hardened to allow described exploitation of Sambs during and immediately after the first hours of general war? This question should be answered in two parts. Part one to be based on the assumption that part two on the assumption that recoverable systems eventually become the major operational configuration.
- (3) The noted funds required by fiscal year to herden facilitites required by each accumption above. Assume for this purpose that a go-sheed will be given in late of 61.

Since it is recognized that many of the case personnel currently of page! in revising the depaltment plan will be required to conduct this study, it will not be required until I deployment.

- C. Reference questions a and b. The summer to question the is directly dependent upon the finial position in question a. Since a restly of the "practing" ys "envised mility of the system jute eventual use of the Reptin Sumber Plans is insertion, the position of this headquarture is that a mail arms of bills famility should not be ractivated at this time for the interim sporational emploisation equipments. The action directed by paragraph ) c of the reference letter should sensition all feminic methods of converting the Resolution of the interim to the this is a photographic feminical function described in mind that this is a photographic feminical function described in mind that this is a photographic feminical function described in mind that this is a person will be subbonized only if it can be shown that this is the maps officient and commercial method of separation that this is the mand officient and commercial method of separation in the thic Reptiato, one of the reduced to standard fermate, is a different function and involves other factors. He standard fermate, is a different function and involves other factors. He standard fermate, is a different function stury of the exploitation problem using Mind estimates of reasonable Resolution." This shady will comment and total workloads. The object of the standard will consider all facilities available to the summer and total workloads. The object
- ploitation of the had take.
- (2) Time-phased requirements and justification for additional

AFORG RM/Col Shimon/sm/76541/24 Jun 60

The galdenes in passagesphe 3 e 1 through 10 of the referenced letter will be used by ARS in estimating recessable the take and by ARS in consisting the above study. The BAC study should be provided this headquarters by 1 sugast.

- It must be recognised by all concerned that the above guidance, as well as that emission in the letter referenced in perspect I alone, has persons begineries in the Kides program. Because of the joint use of many facilities, integration of the operational sentral sentral sentence for the two systems appears escential. It is obvious that, at least for the man few years, both systems will be characted out of the Sungvelle facilities, logic probably will force integration of the combol centers. However, the require out for integrating the filles display generating facility and the Sames data processing facility is not espable of another. Since the Sungvelle facility probably is not espable of another, the Midse display generating equipment, some other logation must be found. The MEAD complex in Golorado, where the Middle communication lines torminate, and where other marking functions are performed, appears to be a ctreat peachtility. Logacet AlM and AM provide their vices on the facility in Colorado, AMC vices should be provided when the reviews development plan is smallted and AMC views should be provided when the reviews development plan is smallted and AMC views should be provided when the reviews development plan is smallted and AMC views should be provided when the reviews development plan is smallted and AMC views within 10 days thereafter.
- A. In midition to the atments specifically equested in the proposing paragraphs, all addressess are invited to essent on any of the ideas and policies discussed.



## United States air Force WASHINGTON 25, D. C.

2 1 JUN 1960

Subject: Letter of Nonconcurrence

TO: AFORQ (General Smith)

- 1. ACS/Intelligence does not concur with para 2a: "This headquarters does not consider it desirable. . . to co-locate data handling. . . " There is no reason to oppose co-location. The present USAF Development Plan, as its predecessors over the past two years for Calls co-location at Offutt AFB.
- 2. With reference to para 2c, ACS/I believes that an area of the bomber plant should be prepared as soon as possible. The R&D program is scheduled to run until 1963. An R&D data processing facility should be made available as programmed in the present USAF Development Plan to receive the data processing equipment already paid for by the Air Force, now undergoing test at TRW, Denver. TRW plans to ship this equipment to Offutt AFB on or about 31 March 1961. The facility should be prepared for it.

Major General, USAF Assistant Chief of Staff, Intelligence

2 Atchs 1. AFHQ 50, dtd 16 Jun 60 w/l atchProposed ltr to AFDDC w/l atch Ltr to ARDC, SAC, ADC 2. Ltr fr AFCIN-3 w/1 atch (S) Cy of Plan (U) AFIC, SAMOS Exploitation Plan, R-16-60

AFDSD/AT, Maj Howard/71791/tw/28 Jun 60

(V) MADO

General Thomas S. Power Commander in Chief Stretegic Air Command Grautt Ava, Nebraska

-JUN 2 9 1960.

Daniel Bossey

Like Folly expreciate and completely understand your deep and continued conferm what regard to the lack of clear out desintties and etsectast purmaters and the lack of clear out desintties and standard purmaters are problem other than operational which I fees in this program. As a result of these problems, it is shundantly clear that the Air Perse will not be allowed to implement at this time the current concept of an operational sAMOS as defined in the 15 January 1960 Berelopment/Operational and Operational Plans. In my judgment, the plan requested in General Wilson's 1 June 1960 letter, and the additional guidance provided heregith in the attachment to this letter, adequately define the scope of the best SAMOS program which we can sail.

in the Statement, including the provisions for an interim operational capability. This sembility will semisted of the provision, within the state of the provision, within the state of the provision, within the state of the program of attack the state of the program of attack the state of th

I feel that IV is secential that the Liv Street Species the Sact, although this food pot make the Ale Porce cole amploites of the realisting intelligence control or orbit data settleval, data reproduction injection consist and sentimental as the settleval, data reproduction is required to assist and sentimental as the settleval, data reproduction is required to a sentimental tagen. To achieve does not include control to the sentimental tagen. To achieve does not include for other decision vill not be have by the Liv Yorks head. Individual to achieve the sentimental by these agencies.

is is of the upsoes importance that the Air Porce establish a salable plan

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proceed at the maximum possible page. Beautiless of possible or againty, the entire matient's resources must be used in whatever any stay can experient to the earliest fights evaluability, and the Air Surce mist operate this system as a national asset responsive to all participating agencies.

I believe that the revised development plan that is to be presented to this beedgiarters early in July, if completely responsive to the above guidance, will get SAMS off deed center and on to a stable track.

Sincerely

THURIST B. WHITE Chief of Staff

Applemental Her DEAF Child ANDC, BAC and ADC Concerning SANOS"

Cal Martin

AFDSD-AT, Coord Cy AFDDC AFODC AFCVC AFCCS, Ofc of Sig .