



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

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IN REPLY REFER TO
Op-0923E/maw
BYE-66466/70
11 DEC 1970

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From: Manager, Program C
To: Distribution List

Subj: POPPY Technical Operations Group (TOG) meeting; report of

Encl: (1) List of Attendees
(2) TOG Agenda

1. A TOG meeting was held at 0930, 10 December 1970, in the Hoffman Building. The list of attendees, and the agenda, are forwarded as enclosures.
2. [redacted] called the meeting to order, and detailed briefly the change in organizational management of Program C which will be effected no later than 5 January 1971. He introduced Captain Robert Geiger, of the NRO Staff, as the newly appointed director of Program C. Captain Geiger spoke briefly concerning the reasons which predicated a change in management responsibilities, and stated that he foresaw little change in the responsibilities of agencies and activities now associated with the POPPY program.
3. Mr. Dix, of NRL, summarized developments which had occurred with respect to calibration of POPPY mission 7106. Meetings had been held with representatives of NSA, and NSA west coast field activities, and it has been generally concluded that the west coast facility could calibrate several of the high priority frequency bands associated with 7106C. Discussions ensued concerning the requirement to plan for in-flight calibration of 7107, and Mr. Mayo provided information on the 60 foot dish at [redacted]. It was agreed that NSA and NRL would work together to schedule in-flight calibration of 7106C, utilizing the NSA west coast dish and calibration van.
4. [redacted] NSG, presented a payload status report on POPPY missions 7106 and 7105. Concerning 7105A, [redacted] reported that the transmitter is decaying; however, [redacted] had worked on improving the data by installing a high sensitivity receiver. He stated that further improvements could be made utilizing a

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pre-amp in the antenna sytem, however, after discussion, it was agreed that such a pre-amp would provide at best on the order of 3/4 db gain, and that the greatest improvement in sensitivity had been realized by deployment of the high sensitivity receiver from NRL. NRL was requested to modify on each receiver from

to provide the same degree of sensitivity, and to provide this capability in the receivers being provided to

noted that 7105C and D balls were closing at a fast rate, and that the rate of closure was increasing.

After discussion, of the NRO (SOC), stated that he would monitor this closure, and work with NRL and NSG to attempt to assure optimum thrusting of 7106D to acquire X-band geolocations. 7105A & B are stable.

updated the committee on the status of 7106A, and stated that the consensus was that this ball was totally inoperable. No further tasking will be accomplished, although the site will continue to monitor this payload approximately twice daily.

Although 7106C ball has some bands which are regenerative, the overall status of this bird is stable. In response to a question from Captain Geiger, Mr. Mayo reported on the status of

7107. He stated that a definitive schedule was in preparation, with block diagrams. These blocks could be met; however, there were several crisis areas which needed resolution at an early

date. For example, assignment of bands, PBX band assignment, and several other items were needed from NSA and NRO no later than 30 January. Mr. Mayo agreed to set up a meeting with

representatives of the NRO and NSA to resolve this problem. Additionally, management decisions were required from NRL to assure orderly progression with the 7107 schedule. Mr. Mayo

reported that he was briefing on these problems on 14 December, and would keep the Program Office informed.

5. reported on construction activities at

He informed the committee that was affecting its move to the new building during the period 9 - 12 December, and that an NRL team was at the site to assist in the move. NSA had sent an Alert message to concerning a high priority signal that had been intercepted by another collector. reported intercepting an identical signal, but without location. Based on the high priority, NSA requested

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that [] provide continued collection and processing capability for 48 hours to attempt to geolocate the signal. After some discussion, it was agreed that NSG would inform the station to shut down and finish the move if there had been no further developments by midnight 11 December. NSA concurred, and stated that this special tasking could be expected to occur at future dates. [] also informed the committee that, due to failure of power cables to arrive at [] and contractor shut down for a three week period commencing 15 December, [] construction completion date was now estimated 15 - 30 March. This should provide an operational capability in April 1971.

6. NRL reported on strides made in utilizing extended theory ephemeris. Mr. Lawton briefed that the extended theory ephemeris had been sent to the field stations since shortly after the last TOG meeting, and that results were beginning to be received.

[] reported that he had examined several [] intercepts, and that he had found improvements in geolocational accuracies on the order of []. He stated that he believed the field stations should examine geolocational accuracy improvements associated with poor quality data to ascertain improvements in accuracies associated with these intercepts. On the basis of what he had seen to date, he doubted that accuracy improvements warranted continued use of extended theory. A discussion ensued, in which single line ephemeris transmissions were discussed, as well as continued use of extended theory. It was concluded that the field stations should continue to utilize the extended theory data, and that the results would be studied by all concerned.

7. [] reported that he had not received the data he had requested from SCF regarding ephemeris information, and requested that this agenda item be continued until the next TOG meeting. Accordingly, this subject will be discussed at the next TOG.

8. NSA reported on the utilization of NPO, or normalized pulse output, on analog recordings. There are many processing advantages associated with this system, and NSA requested that all tapes be forwarded to NSA utilizing the NPO. NRL agreed to provide kits to the field stations which will permit utiliza-

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tion of the NPO. NSA also requested FM recordings. NRL will study the problem, and report at the next TOG. Due to the time and expense associated with converting to FM recording, NRL is unable to make a specific recommendation in this regard at this time.

9. Mr. Price, NRL, reported on the meeting of the [redacted] update committee. He stated that the report, which would recommend augmentation of the [redacted] site to provide automatic antenna tracking, better receiving equipment, and SOI notating, together with a limited analytical capability, without posing a burden on [redacted] should be received by the Program Office in the near future. The plan calls for a six man month effort at a cost of approximately \$170,000. [redacted] voiced support of the plan, and it was generally agreed that this update would provide greatly expanded utilization of the [redacted] facility. The Program Manager stated that he would examine the report, and make specific recommendations to the NRO.

10. [redacted] asked that the sites provide a 10 second calibration signal on all tapes forwarded to NSA, and that this signal be fed automatically from the antenna to the tape prior to data acquisition. NRL agreed that this would be desirable, and will make specific recommendations in this regard in the near future.

11. [redacted] stated that he had recently become aware of the existence of the Reindeer 76 message, which NSG prepares and forwards each week to the NRO (SOC). He requested that NSA be added to the distribution list. NRL and CIA also would like copies of this report. [redacted] talked about the report, and gave the reasons why distribution had been limited in the past. The Program Manager agreed to discuss this matter with the NRO, and provide a decision to interested parties in the near future.

12. The Program Manager adjourned the meeting, stating that he planned no further meetings of the TOG prior to the change in managerial responsibilities. [redacted] thanked each

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member for the outstanding level of support rendered to him,
and to the Program, during the past, and voiced the assurance
that the TOG would continue to provide the same level of
support to the new organization



CAPT USN

Distribution:
COMNAVSECGRU (G-54)
DIRECTOR NRL (CODE 5614)
NRO [redacted]
NSA (K4/SPO) [redacted]
CIA [redacted]

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LIST OF ATTENDEES

[Redacted]

Program Manager
Program Manager's Staff

CAPT GEIGER

NRO
NRO
NRO (SOC)
NRO (SOC)

[Redacted]

LCDR McGRAW
LTJG MORGAN

NSG
NSG
NSG

[Redacted]

MR ABBLANALP

NSA
NSA
NSA
NSA
NSA

MR GALLAGHER

[Redacted]

NRL/Program Manager's Staff

MR DIX
MR MAYO
MR PRICE
MR HAMMARSTROM
MR LAWTON

NRL
NRL
HRB
HRB

[Redacted]

CIA
CIA

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Enclosure (1)

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TOG AGENDA

0930, 10 December 1970

Hoffman Building

1. Program C Organizational Changes (Program Manager)
2. 7106 Calibration Status (NRL)
3. Payload Status (NSG)
4. Status of Construction (NSG/NRL)
5. Extended Theory Implementation (NRL)
6. Ephemeris from SCF (SAFSS)
7. Recording NPO Analogs (NSA)
8. Update of (NRL)

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Enclosure (2)

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