

R

14 December 1970

(1st

regular monthly report)

~~SECRET~~



~~SECRET~~



HANDLE VIA
BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

12 December 1970

TABLE OF CONTENTS FOR MONTHLY STATUS REPORT

- I. HISTORIC FUNDING SUPPORT for NRL effort: Chart #1
- II. NRL MANPOWER for FY-70 and FY-71 Chart #2
- III. SUBTOTAL ROUTINE OBLIGATIONS FY-70 & -71 Chart #3
- IV. OPERATIONAL SUMMARY
 - 1. Chart #5
 - 2. Chart #6
 - 3. Chart #7

V. PERT SCHEDULE DISCUSSION

<u>Problem Areas</u>	<u>Possible Solutions</u>
1. Early Critical Path.	<u>Chart #4</u>
2. SOLRAD SCHEDULE.	Allocate it lower in priority
3. Support Services	
ESD.	Assign higher priority
SUPPLY	Assign higher priority
PUBLIC WORKS	Assign higher priority
4. Man-Hour Shortage.	Hire
	Contract work outside NRL
	Extend work hours (Overtime)
	Schedule extension.

VI. PREDICTIONS:

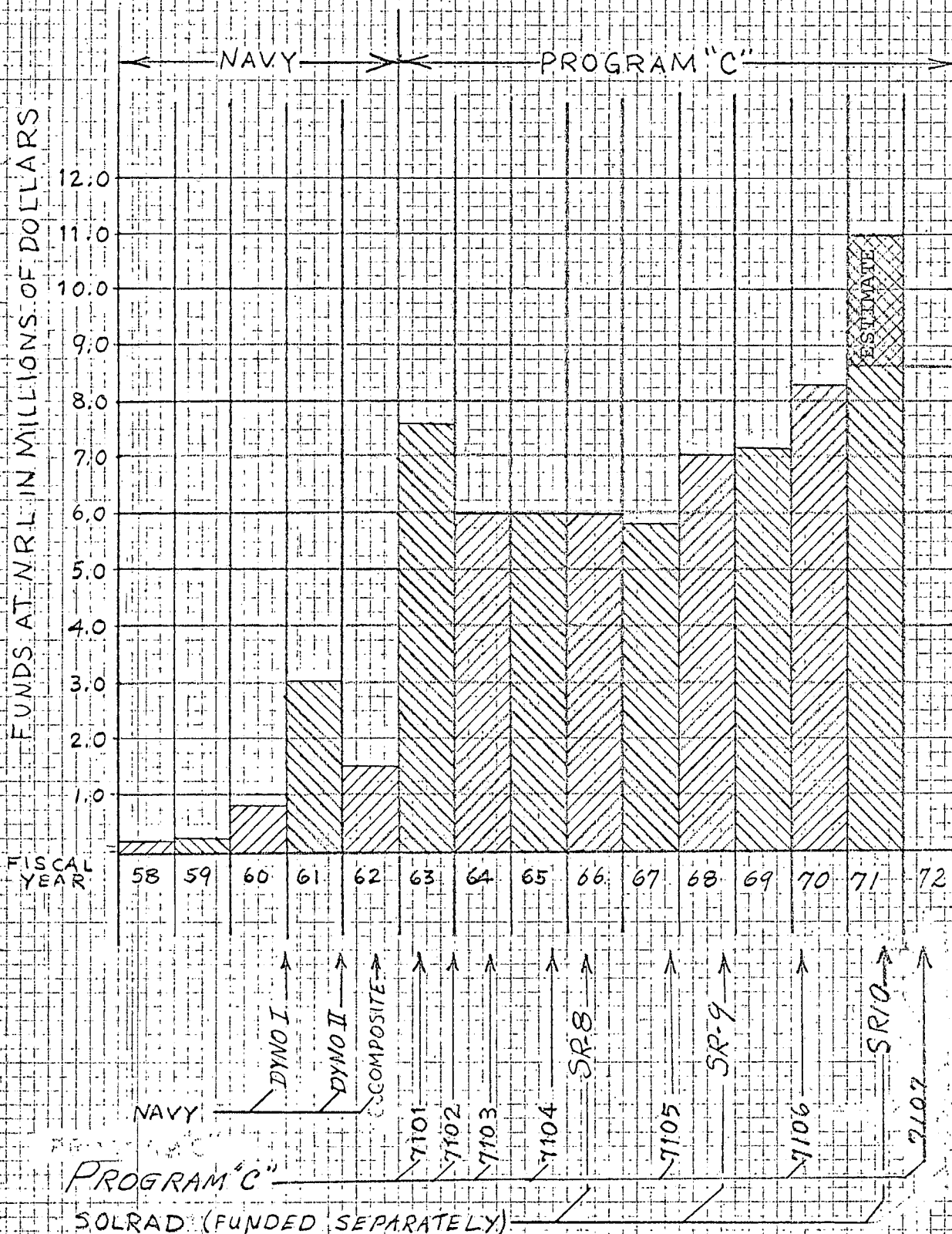
- 1. Costs. Budget Deficiency to be supplemented by NRO but in the interim we must commit Subtotal Routine \$ toward Major Procurements that are Schedule items.
- 2. Schedule Implications of Schedule Slip Chart #8

~~SECRET~~

HANDLE VIA
BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

HISTORIC FUNDING SUPPORT



~~SECRET~~

HANDLE VIA
BYEMAN
CONTROL SYSTEM ONLY

FY 70

FY 71

~~SECRET~~

FY-69
Div.

Est
FY-71

PROGRAM "C" NRL MANPOWER

FY-69
ESD

Scientific
Divisions

Est.
* FY-71

* FY-69
OT.

ENG. SERV.

Est.
* FY-71

Div.

ESD.

Overtime

7106
LAUNCH

7106B/D
FAILURE

O.T.

CHART # 2

JUL

~~SECRET~~

MAR

MAY

JUL

SEP

NOV

JAN

MAR

MAY

VIS

JUL

SEP

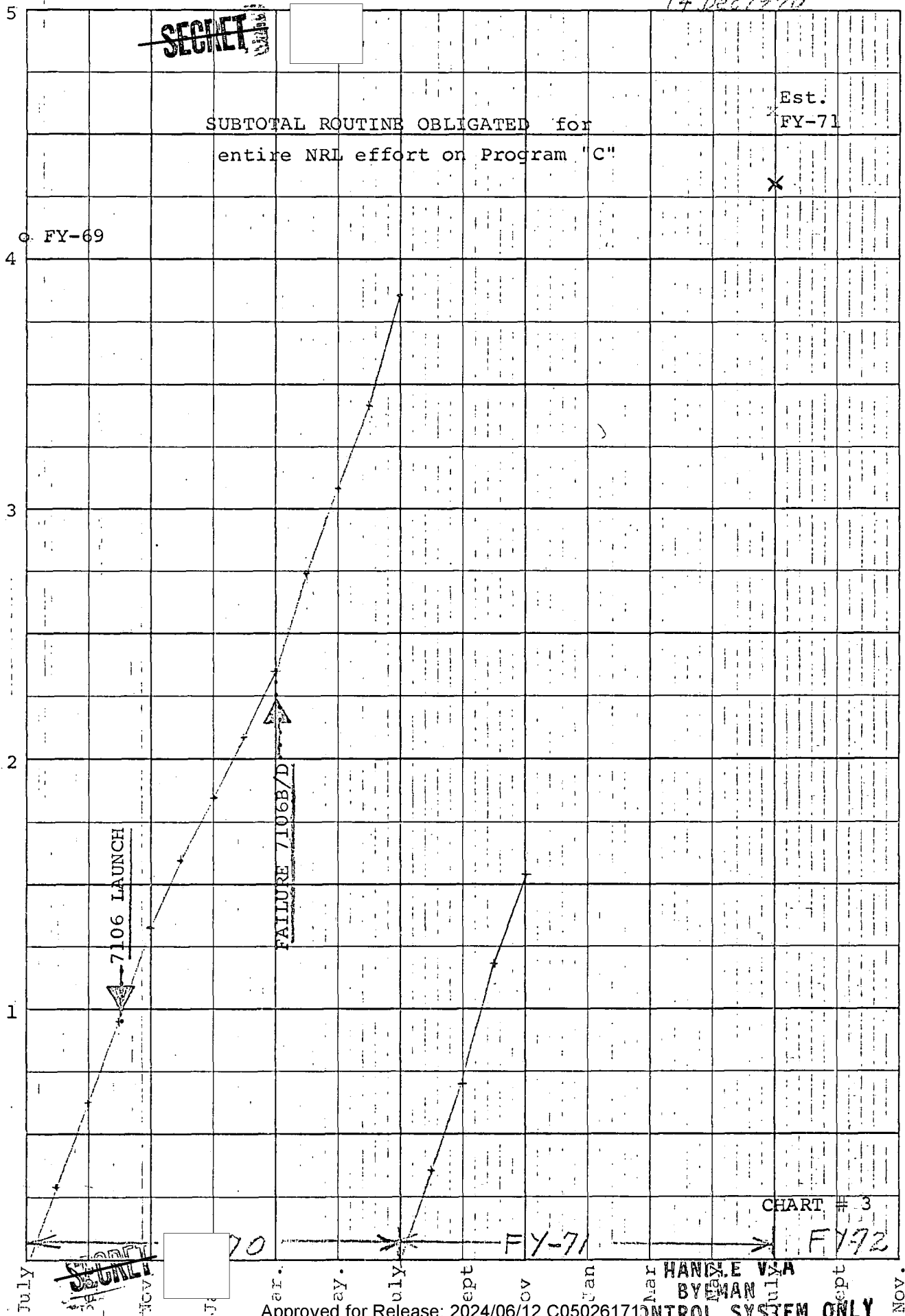
CONTROL SYSTEM ONLY

1/4 X 4 TO THE INCH 46,0250
7 X 10 INCHES
KEUFFEL & ESSER CO.

Man-Hour X 1000

7107

14 Dec 1970



~~SECRET~~

NOVEMBER OPERATIONAL SUMMARY FOR Program "C"

11 Dec 1970.

I- SHIP SOI's

<u>Period</u>	<u>7105</u>	<u>7106</u>	<u>Total</u>
28 Oct - 03 Nov	46	73	119
4 Nov-10 Dec	74	36	110
11 Nov- 17 Nov	93	35	128
18 Nov- 24 Nov	60	89	149
25 Nov- 01 Dec	93	26	119

II- National SOI's:

[REDACTED]	43 reports.
[REDACTED]	4
[REDACTED]	7
(DOG HOUSE)	1
[REDACTED]	44
[REDACTED]	17
[REDACTED]	1
[REDACTED]	24

III- UNKNOWN SOI's Reported:

17-103 (166-200 MHz)	49 reports.
17-104 (835-970 MHz)	1
17-105 (166-200 MHz)	1

IV- Emitters geopositioned and reported:

[REDACTED]	68
[REDACTED]	19
[REDACTED]	3
[REDACTED]	1
[REDACTED]	4
[REDACTED]	1
[REDACTED]	3
[REDACTED]	2
[REDACTED]	2
[REDACTED]	61
[REDACTED]	9

173

~~SECRET~~
 HANDLE VIA
 EYEMAN
 CONTROL SYSTEM ONLY

~~SECRET~~

OPERATIONAL SUMMARY FOR

NUMBER...PROGRAM "C"

12 December 1970

SUMMARY FOR (No Digital Capability)

I- SHIP (SOI)

Mission

Period

7105. 7106. . . Totals

28 Oct til 3 Nov.	61	65	126
4 Nov ---10 Nov	65	7	72
11 Nov 17 Nov	36	7	43
18 Nov 24 Nov	48	4	52
25 Nov 01 Dec	46	1	47

II- National SOI's

	1
	1

III- UNKNOWN SOI's

13-72 (3275-3615 MHz) seen 1 time	
13-76 (836 - 971 Mhz)	3
27-65 (2677-2930 MHz)	3
27-71 (3600-4050 MHz)	1
13-69 (6690-7350 MHz)	1
13-47 (3595-4050 MHz)	1
13-65 (2675-2933 MHz)	1

~~SECRET~~HANDLE VIA
SYSTEM
SYSTEM ONLY

~~SECRET~~

NOVEMBER OPERATIONAL SUMMARY FOR Program "C"

12 Dec. 1970

I- Ship SOI's Reported:

<u>Period</u>	<u>7105</u>	<u>7106</u>	<u>Totals:</u>
28 Oct - 03 Nov	12	7	19
04 Nov - 10 Nov	10	2	12
11 Nov - 17 Nov	1	1	2
18 Nov - 24 Nov	11	6	17
25 Nov - 1 Dec	9	1	10

II- NATIONAL SOI's Reported:

27-069 (2557 - 2693 or 5920 - 6750 MHz)	1 Reported.
27-060 (Regenerative signal ?)	1
27 -70 (2920 - 3125 MHz)	1
27-071 (3590 - 4050 Mhz)	7
27-072 (836 - 971 MHz)	1
27-073 (652 - 857 MHz)	1
27-074 (164 - 200 MHz)	2
27-075 (2678-2933 MHz)	2

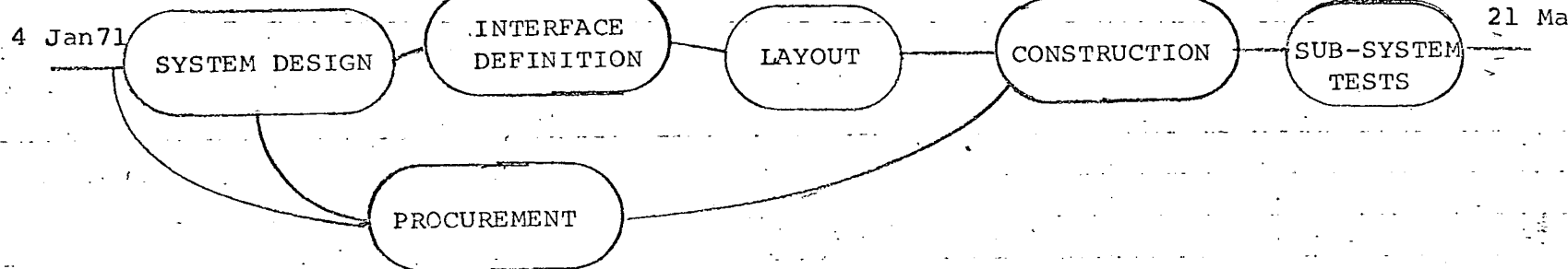
II- Emitters Geopositioned and reported:

~~SECRET~~HANDLE VIA
PROGRAM
SYSTEM ONLY

~~SECRET~~

EARLY CRITICAL PATH DESCRIPTION

29 Jan 71



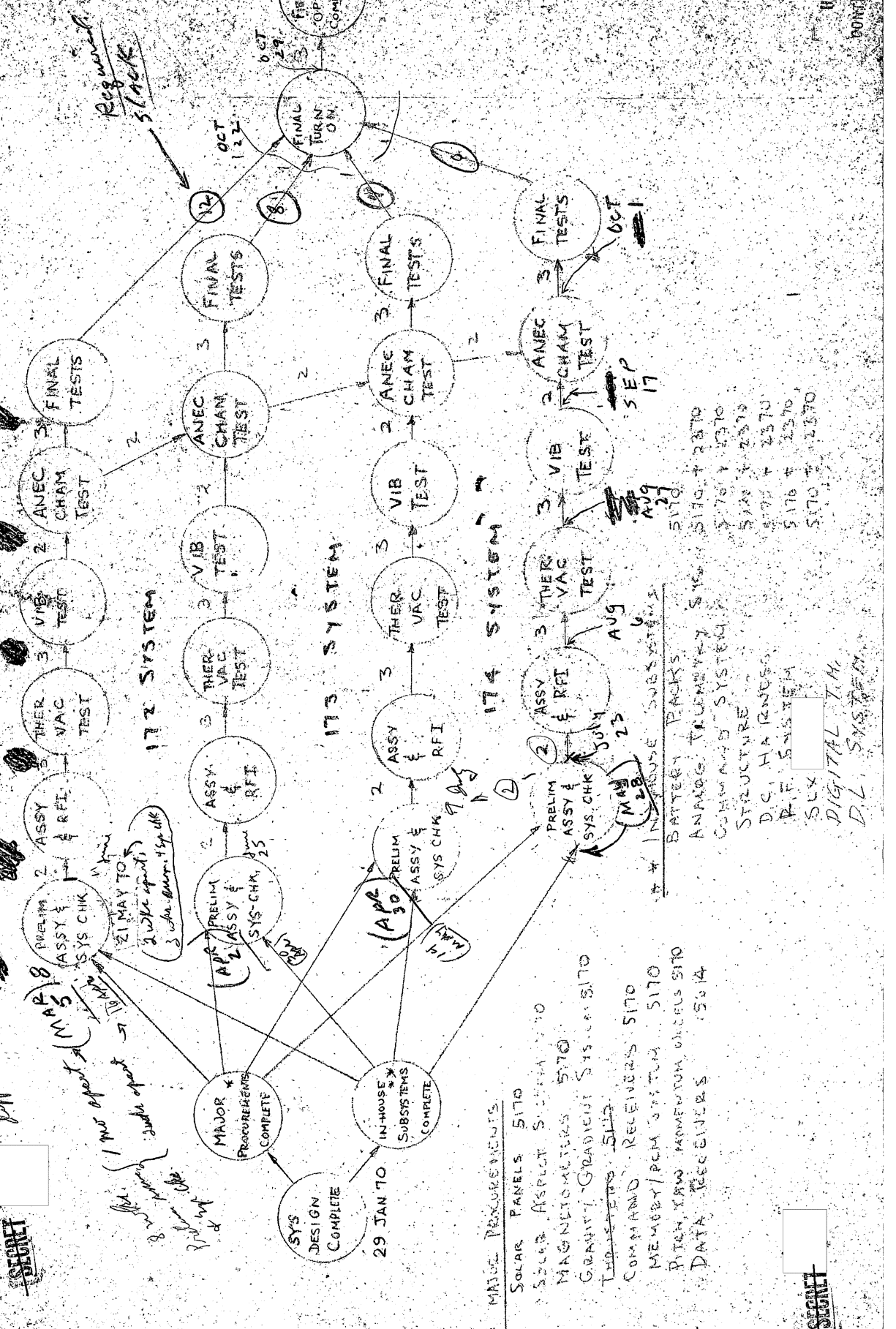
MAJOR PROCUREMENTS:

- 1- Solar Panels
- 2- Magnetometers
- 3- Gravity Gradient Systems
- 4- Command Receivers.
- 5-Memory/PCM system
- 6- Pitch,Yaw Momentum Wheels
- 7- Solar Aspect System

HANDLE VIA
RYENAN
CONTROL SYSTEM ONLY

SHEET NO. 1 OF 1
JOB NO. 100-100000-100000
PROJECT 100-100000-100000
SCHEDULE

~~SECRET~~



~~SECRET~~

HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY~~SECRET~~

DE 9321 GA KKK

DE7910 AND TFC FOR U

TW629
RR RUXQAAJ
DE RUXQAA 469 3460111
ZNY XXXXX XEX
R 120110Z
BT
XXXXX

133

~~SECRET~~ 112335Z DEC 70 CITE CHARGE 5649.

WHIG

CORONA/EARLGE

WHIG FOR

CESAR FOR

1. IN RESPONSE TO

INQUIRIES ON 19 NOV
1970, THE FOLLOWING INFORMATION IS PRESENTED ON THE ADDITIONAL
COST PER MONTH FOR A LAUNCH DATE SLIP OF POPPY VEHICLE #2707:
(FY 1972 DOLLARS)

DEC	.425
JAN	.500
FEB	.685
MAR (& FOLLOWING)	.935

THESE COSTS ARE BASED UPON SOLE USE OF THE THOR/AGENA LAUNCH CREWS
BY POPPY AFTER THE LAST CURRENTLY SCHEDULED LAUNCH OF THE CORONA

PAGE 2 CHARGE 5649. ~~SECRET~~

PROGRAM IN NOVEMBER 1971.

2. CORONA, WHICH USES COMMON LAUNCH PERSONNEL WITH POPPY, IS
CONSIDERING AN EARLY 1972 LAUNCH. IF THIS BECOMES A REALITY,
THE APPLICABLE COSTS FOR A POPPY SLIP WOULD DECREASE DUE TO
CONTINUED SHARING OF THE THOR/AGENA LAUNCH EFFORT.

~~SECRET~~

BT

~~SECRET~~HANDLE VIA BYEMAN
CONTROL SYSTEM ONLY

TOR 0830
12-14-70
5614
5600
5170
1000
4000

~~SECRET~~

7/8/70

VIA

SUBJECT: Program C Funding

A. Past

	Py 69	Py 70
Total	12,651	10,621
NRL		7,921

B. Future

Approved by EXCOM 25 Nov 69.

	FY 71	FY 72	FY 73	FY 74	FY 75
Cost	13.6	14.4	12.1	12.1	12.1
launches		1			
Rides				1	

- Launch every two years
- FY 73 - 75 Assume Piggyback Ride

C.

FY 71 Budget

NRL Payload	7950
AGENA	600
BTL Guidance	250
Integration	1500
Thorad Booster Launch	2000
AGENA Launch	1300
Total	13,600

5650

NRL About 8m/year level of effort.

	WEST COAST	FY 71	FY 71
BOOSTER	850		1.5
INTERFACE	1500		0.1
LAUNCH	3300		1.8
	5650		2.4

~~SECRET~~

HANDLE VIA

CONTAIN SENSITIVE INFORMATION ONLY

Page Denied

1330 14 Dec 70

~~SECRET~~

[redacted] moved on 1st Program C review
for [redacted]

[redacted] made the introductory remarks, indicating that a detailed management review had never been required either by NRC or the NRO. Previous reporting had been primarily in response to [redacted] of the NRO. [redacted] then briefly described each heading on the table of contents, remarking that nothing was included concerning the new Navy space organization because of lack of information.

[redacted] indicated that his meeting at 1530 Tues, 15 Dec. with Admin's Harlfinger & Cook might provide new information. He also said that Mayo, Wilhelm, & Day should stand-by for the meeting but not plan to attend.

1st item for action:

[redacted] suggested that the monthly review include a discussion on future technical aspects of the program, progress on internal studies, and program support in [redacted] analysis.

~~SECRET~~

CONFIDENTIAL

~~SECRET~~

~~SECRET~~

Re [] lco indicated the need for predicting cumulative values for manpower, overtime, major & minor procurements, sub total routine, and schedules. (use dashed lines on curves)

2nd action item.

[] wants the schedule presented as a bar graph to indicate predicted and actual performance.

[] indicated that the bar chart, (historical funding) need not be included in the future.

ACTION:

MMTO

NSA

→

PETE

NRO

→

Discussing on supplemental funding indicates that NRL will have to negotiate with NSA for certain items, plus make separate application to the NRO for funding the O6 failure analysis.

LONG RANGE

[] indicated that in order for the program to be able to quickly respond to changing tactical requiremts some flexibility must be provided in the budget.

~~SECRET~~~~SECRET~~

HANDLE VIA
RYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~

Mayo said that the previously submitted FY-72 cost estimate of \$8.2M was being increased \$2.0M by [redacted] because of the upward re-adjustment of the FY-71 budget

[redacted]

[redacted]

Other action items:

ACTION:

Pete
with help

#3. 5170 prepare a chart through FY-76 indicating division of work load and schedules for 7107, Solrad 10, Solrad 14i, and [redacted]

ACTION:

Mayo

#4. Prepare a report for the month of Nov. showing the number of ship locations provided by [redacted] indicate whether or not such locations were sent to FOSEF [redacted] if not, why not. [redacted]

~~SECRET~~

HANDLE VIA
STEAM
OR ROL SYSTEM ONLY

4

#5 Find out whether tasking is
[redacted] reporting.

MAYO

~~SECRET~~~~SECRET~~

#6. Is 7105 ocean surveillance
capability being used to maximum?

#7. Report on status of [redacted]
requested. Prepare chart showing
coverage of med. [redacted]

MAYO

MAYO -

Include

with other [redacted]

planning

#8. Investigate use of hard wired
recognizer at [redacted]
or [redacted]

#9. Determine if FY-71 projected
salary costs include possible
raise in Govt. salaries in Jan.

BOTH

#10. Determine reason for \$600K error
in NRL cost accounting print out.

MAYO

Use
data more

#11. Adjust future reporting dates
to use NRL accounting info.

BOTH

#12. ⁵¹⁷⁰ Prepare memo to [redacted]
regarding the PW work in Dtd 59.
duplicate desired completion date.

PETE

BOTH

#13. ⁵¹⁷⁰ Call [redacted] Sec. to set up
[redacted] with ESO, Supply, & PW.
Present schedule inspecting [redacted] systems.

~~SECRET~~HANDLE VIA
FEDERAL
CONTROL SYSTEM ONLY

~~SECRET~~

5

PETE

#14

start action to hire engineers
(4 or 5) for 5170 (decrease ratio of Eng/Tech)

H.D.L.

FW, RIM

#15

Code 5614 to become a branch
by 1 Jan!

(Hire admin assist first)

PETE

#16

5170 can proceed with a
time and materials contract
for critical fabrication work.

PETE

#17

5170 has approval for limited
overtime for engineers on an
as required basis.

ALL

#18

show cost & manpower charts
to [] before next meeting.

PRIVATE

#19

suggests asking Bruce Wald
to do computer tradeoff studies,
hardware vs software.

MEETING

(Ed, Pete, Todd
FW)

#20

suggests using []

Ditto

[] branch for support
in software development.

Ditto

#21

Refine NRC role in ocean
surveillance.

Get feedback

on 12/15

meeting from

first

#22

Look at simple, quick reaction
system for ocean surveillance.

mentioned []

location []

HANDLE VIA

BYEMAN

CONTROL

~~SECRET~~

Notes on Program Review 1130 14 Dec '70

~~SECRET~~

_____ given on C from med.

8400

_____ (intro)

65-12

tech. No prior Review, NRC or NRCO

Admin. coord.

_____ only review

Bump.

Quarterly review written up by _____
discuss table of contents.

New organization - discuss at next meeting.

_____ Tues mty - Harlberger & Cook
may have new info
(Reid, Pett, Dix - stand by)

_____ include future
technical aspects of program, progress on
internal studies, program support,

Predictions, \$, manpower, scheduling.

Item I - non recurring presentation

Major discuss uncertainty FY '62

Supplemental funds said to be approved.

NSA identified funds held back.

06 failure analysis not included.

~~SECRET~~

_____ - discuss readiness & responsiveness

operational require. need flexibility
in budget.

HANDLE VIA
COMINT SYSTEM ONLY

'72 indicated at \$8.2 M, []

~~SECRET~~

[] add \$2.0 M to this figure.

Supp. given on 08 funding.

may be much larger, or not at all.

Put code marks on chart #2

O.T. (DID) 22% of normal,
says need more people.

Over on FY-71 estimated O.T. $\approx 30\%$.

[] concerned)

How justify 12-14 hrs overtime on
a regular basis?

Too many technicians some of the time

[] free does ESD have prob,
" how about termination?

said could not do internally.

Proposing use of 3rd RCA satellite.

Prototype? should be like final
system.

→ Action Item - look at 5170 future
schedule, FY - - - 76

7107, Solrad 10, Solrad 1K1,

[]
(Postphone Solrad 10)

Station Summary.

[] GTS that ask why no P-100 data,
10 days some times no data.

Wed only 40-60 Soviet ships.

OSIF Roda, daily summary

HANDLE VIA

SYSTEM ONLY

~~SECRET~~

10% of info on SI channels,
[redacted] not HK-DF
month of Nov.

why didn't more data get to
FOSIF Roda - 6th Fleet needs data
4 to 6 hrs on location data
Comm link USA 4.0 to FOSIF

should be E not SI

send msg. Lat, Long, range
unrequested. (No PCF - hull
correlation)

Msg. go from FOSIF Roda to USA 17
supporting correlation by Geo
location, [redacted] then reports
same signal using this
designation.

→ Over of whether Tasking is limiting
reporting on ship locations.

→ what % of available coverage is being
used for ship locations 7105
[redacted]

Ship SOI, NAT SOI
unk. SOI may explained format

Ques by [redacted] on msg from Taskman,
[redacted] man hrs/day trade for equipment
modernization.

~~SECRET~~

HANDLE VIA
RYEMAN
CONTROL SYSTEM ONLY

Discussion of Med. coverage from

~~SECRET~~

man.

suggest. [redacted] recognizer
at [redacted] to provide
selected locations.

Hard wired processor

Chart 3,

Ques. - are FY-71 projected
costs adjusted for Jan 71 pay inc?
Figures do reflect increased
costs sent to NRC.

Ques on showing major
(cumulative) procurements? Need this
minor procurements?

Discussion of 600K error on NRC
print out. Resolve this

Put extrapolation (linear) on
all curves.

Adj future mty to use
NRC data.

~~SECRET~~

HANDLE VIA
STEAM
CONTROL SYSTEM ONLY

Desc. on Pert
whilhelm

~~SECRET~~

1) SOLRAD impact, if can't
make Feb. 15, must slip to ¹⁰ May.

_____ guess on orig sched.

critical sched May,

what are reasons, printedckt board

_____ guess on SOLRAD 9 left,
does it affect launch of 10?

There is a fuel depletion prob, may
run out in June.

Ques, are prob. hardware or people.

Up to now - hardware.

Bottleneck on layout, only one guy
available. _____

Major procurements (sole source),
need quick action in supply.

_____ wants bar chart summary
of critical items to indicate
slip. Milestone chart

Ques by _____ on changes, incorporates
as result of 06 failures.

DZ multi, end system,

failure analysis is essentially complete.

~~SECRET~~

HANDLE VIA
CYTRAN
CONTROL SYSTEM ONLY

Over on detail bubble chart -
what date on construction.

~~SECRET~~

[] = 28 man months for construction.

ESD can provide 4 to 6 people,
\$170 supply 2.

Public works says prob. not
met schedule for 4th floor.
When required comp.

→

send letter to [] on PW

→

Over on meeting with supply, ESD, PW
(call Sally & set up mtg.)

ESD can hire temp. people to help.

Time & mth contract, [] says OK

Bender,

→

Permanent employees hard to get
(asked for 9 engineers, start section)

suggest letting technicians go
& hire engineers.

Discussion on OT,
overworking engineers,

~~SECRET~~

[] decision needed on overtime, yes
as req'd, hire engineers, 4-5,
Temp. or time & mth,

CONTROL SYSTEM ONLY
4-5

Long Term projection reqd.

~~SECRET~~

launch by 1 Jan?
admin. asset,

cost print out

show charts to [] before
next [] mtg.

Software for [] hardware []

System analysis group?

Bruce Wald? []

ask him to look at computer
trade off, hardware vs software,

choosing frame, change to
software for Pappy support
(Long term)

[] 7106 down to one ball
make chimer copies of 7106?

Build spares?

Launch vehicle?

Define NRC role in ocean
surveillance?

~~SECRET~~

Look at simple system for
ocean surveillance []
[] 2 band ea.

SECRET VJ
OYERAN
CONTROL SYSTEM ONLY

~~SECRET~~

Request NRL comptroller to release
subtotal routine funds for
[] ediate major procurement. Funds
will be replaced when 22M
additional funding arrives.

→ NRL will not accept internal
NRL fiscal restraints as an
excuse for launch delay!

NRL accounting error? Investigate

~~SECRET~~

HANDLE VIA
CYBERAN
CONTROL SYSTEM ONLY

~~Top Secret~~

12 December 1970

TABLE OF CONTENTS FOR MONTHLY STATUS REPORT

- I. HISTORIC FUNDING SUPPORT for NRL effort: Chart #1
- II. NRL MANPOWER for FY-70 and FY-71 Chart #2
- III. SUBTOTAL ROUTINE OBLIGATIONS FY-70 & -71 Chart #3
- IV. OPERATIONAL SUMMARY
1. Chart #5
2. Chart #6
3. Chart #7
- V. PERT SCHEDULE DISCUSSION

Problem AreasPossible Solutions

- | | |
|---------------------------------|-------------------------------|
| 1. Early Critical Path. | <u>Chart #4</u> |
| 2. SOLRAD SCHEDULE. | Allocate it lower in priority |
| 3. Support Services | |
| ESD. | Assign higher priority |
| SUPPLY | Assign higher priority |
| PUBLIC WORKS | Assign higher priority |
| 4. Man-Hour Shortage. | Hire |
| | Contract work outside NRL |
| | Extend work hours (Overtime) |
| | Schedule extension. |

VI. PREDICTIONS:

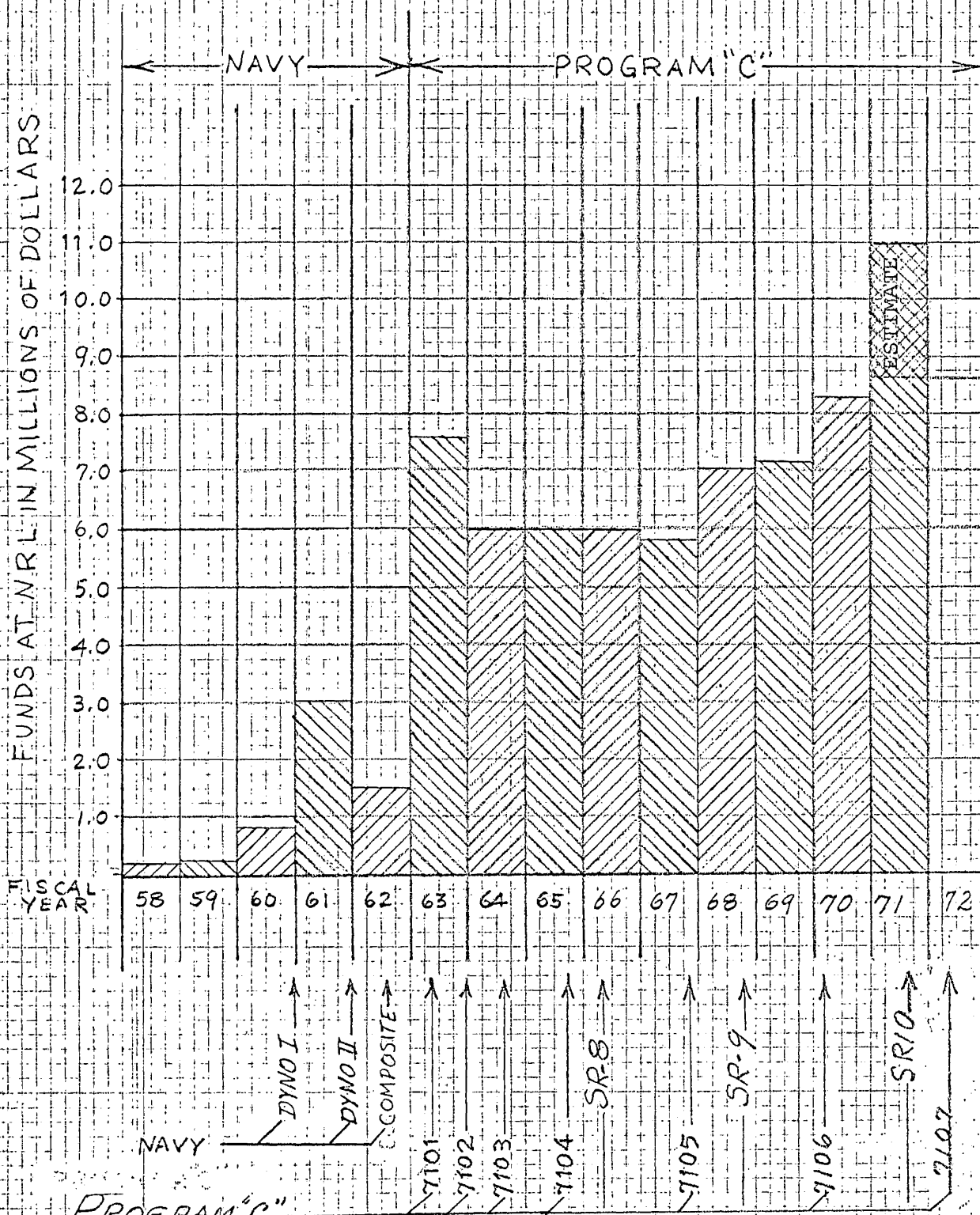
1. Costs. Budget Deficiency to be supplemented by NRO but in the interim we must commit Subtotal Routine \$ toward Major Procurements that are Schedule items.
2. Schedule Implications of Schedule Slip Chart #8

Handle via BYEMAN
 Talent-Keyhole
 Control system only joint

~~Top Secret~~

~~Top Secret~~

HISTORIC FUNDING SUPPORT



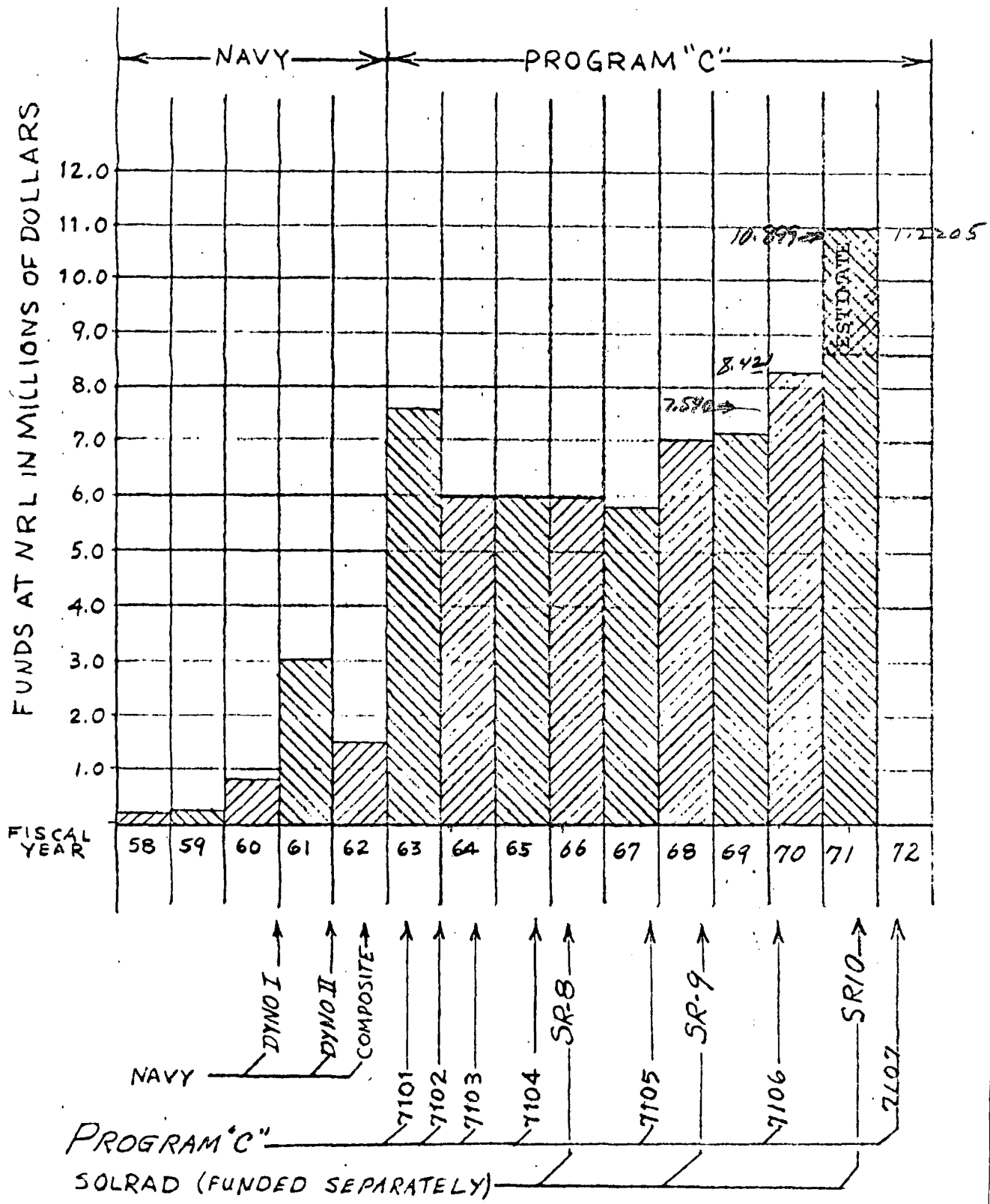
PROGRAM "C"

SOLRAD (FUNDED SEPARATELY)

Handled Via BYEMAN-TALENT KEY
Systems jointly~~Top Secret~~

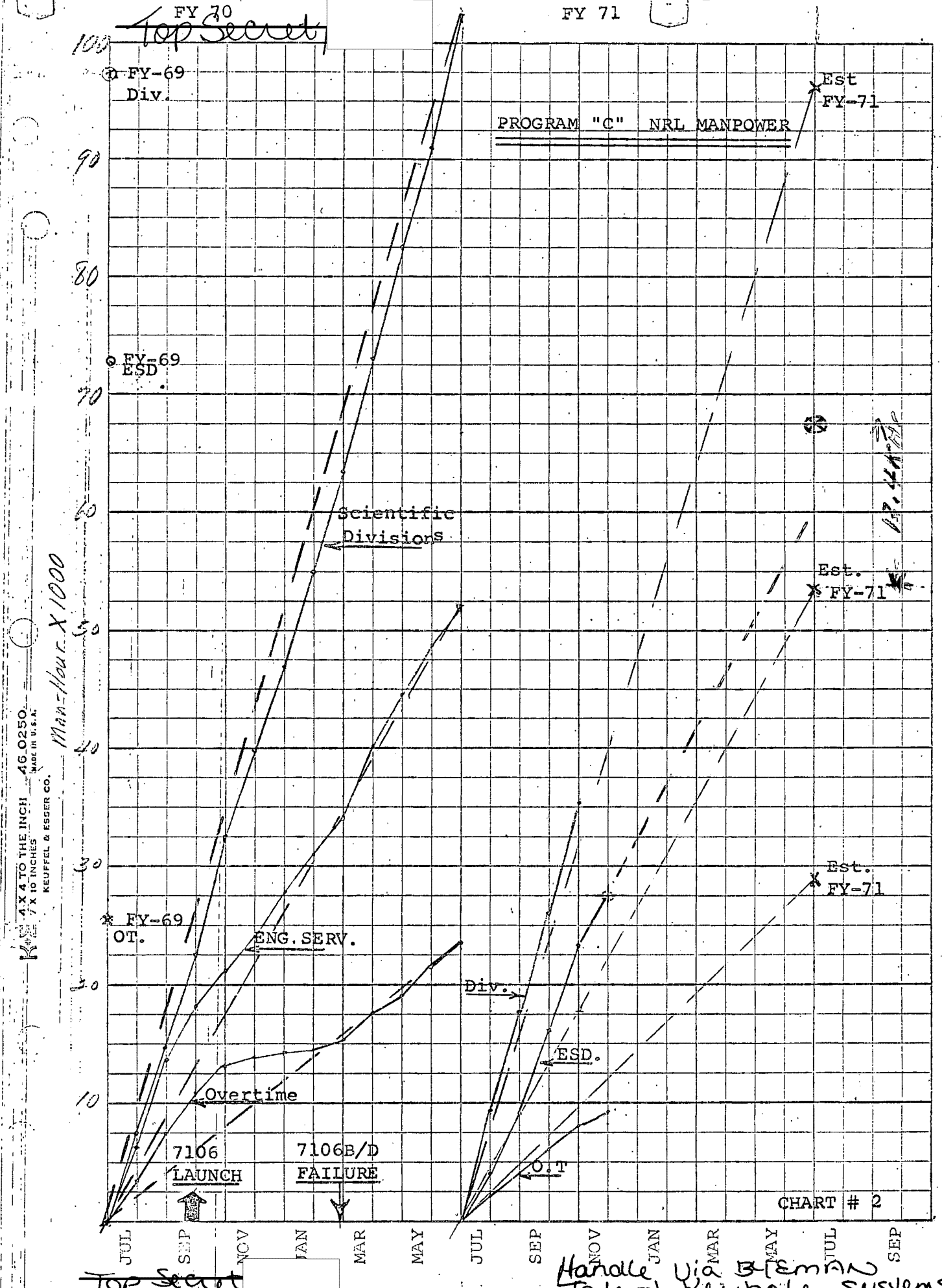
~~Top Secret~~

HISTORIC FUNDING SUPPORT



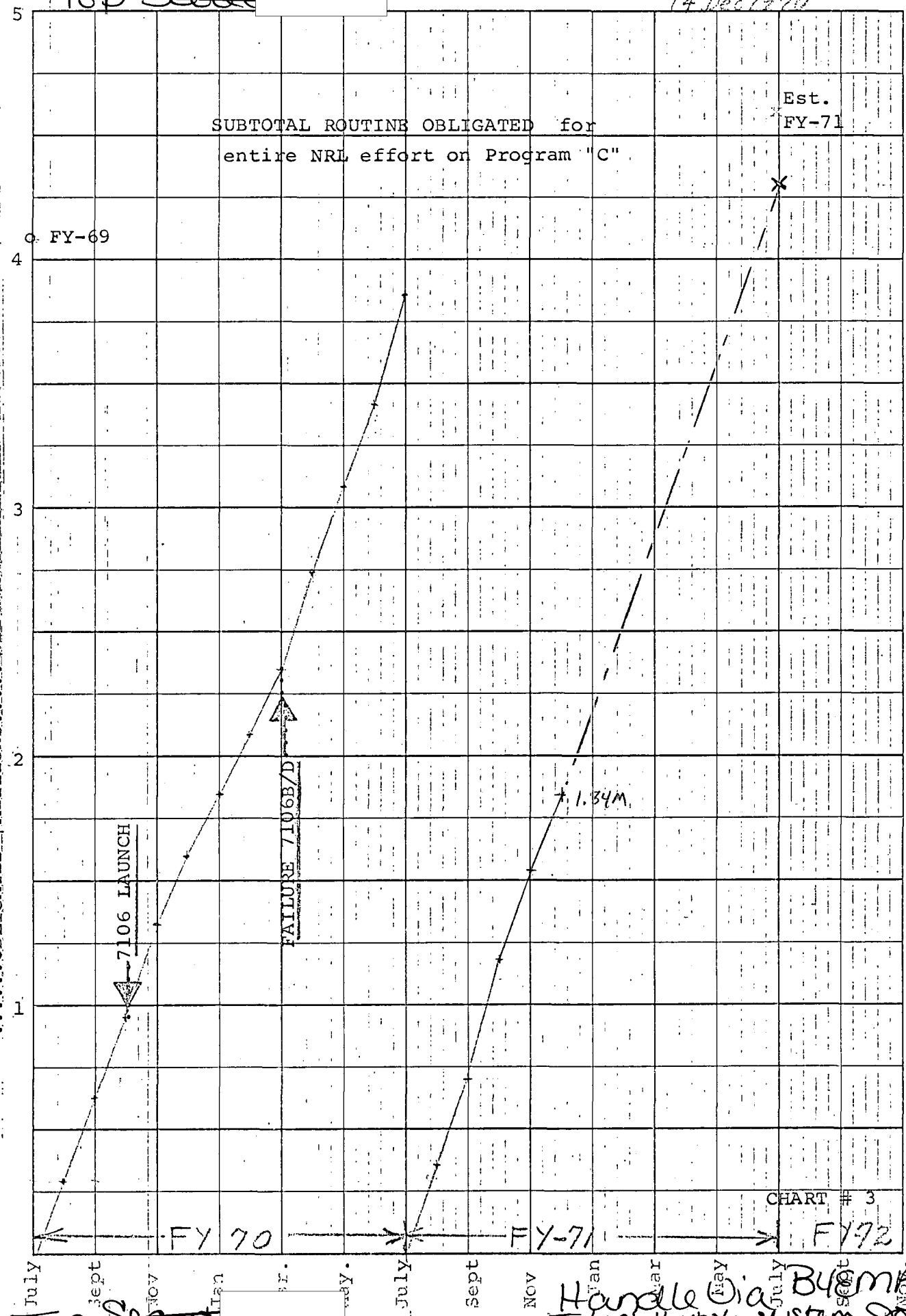
Handle Via BUEMAN
Talent Keyhole System
only

~~Top Secret~~



~~Top Secret~~

14 Dec 1970



SUBTOTAL ROUTINE OBLIGATED for
entire NRL effort on Program "C"

Est.
FY-71

o. FY-69

CHART # 3

FY 70

FY-71

FY 72

~~Top Secret~~

Handle via BYEMAN
To Point Keyhole system jointly

~~Top Secret~~

NOVEMBER OPERATIONAL SUMMARY FOR Program "C"

11 Dec 1970.

I- SHIP SOI's

<u>Period</u>	<u>7105</u>	<u>7106</u>	<u>Total</u>
28 Oct - 03 Nov	46	73	119
4 Nov-10 Dec	74	36	110
11 Nov- 17 Nov	93	35	128
18 Nov- 24 Nov	60	89	149
25 Nov- 01 Dec	93	26	119

II- National SOI's:

	43 reports.
	4
	7
(DOG HOUSE)	1
	44
	17
	1
	24

III- UNKNOWN SOI's Reported:

17-103 (166-200 MHz)	49 reports.
17-104 (835-970 MHz)	1
17-105 (166-200 MHz)	1

IV- Emitters geopositioned and reported:

	68
	19
	3
	1
	4
	1
	3
	2
	2
	61
	9

173

Handle Via BUEMAN
Talent Keyhole system
Gintley

~~Top Secret~~

~~Top Secret~~

OPERATIONAL SUMMARY FOR NOVEMBER...PROGRAM "C"

12 December 1970

SUMMARY FOR [REDACTED] (No Digital Capability)

I- SHIP (SOI)	Mission #		
<u>Period</u>	7105.	7106.	Totals
28 Oct til 3 Nov.	61	65	126
4 Nov ---10 Nov	65	7	72
11 Nov , 17 Nov	36	7	43
18 Nov 24 Nov	48	4	52
25 Nov 01 Dec	46	1	47

II- National SOI's

[REDACTED]	1
[REDACTED]	1

III- UNKNOWN SOI's

13-72 (3275-3615 MHz) seen 1 time	
13-76 (836 - 971 Mhz)	3
27-65 (2677-2930 MHz)	3
27-71 (3600-4050 MHz)	1
13-69 (6690-7350 MHz)	1
13-47 (3595-4050 MHz)	1
13-65 (2675-2933 MHz)	1

Handle Via BYEMAN
Talent+ Keyhole System
Jointly

~~Top Secret~~

~~Top Secret~~
NOVEMBER OPERATIONAL SUMMARY FOR Program "C"

12 Dec. 1970

I- Ship SOI's Reported:

<u>Period</u>	<u>7105</u>	<u>710624</u>	<u>Totals:</u>
28 Oct - 03 Nov	12	7	19
04 Nov - 10 Nov	10	2	12
11 Nov - 17 Nov	1	1	2
18 Nov - 24 Nov	11	6	17
25 Nov - 1 Dec	9	1	10

II- NATIONAL SOI's Reported:

27-069 (2557 - 2693 or 5820 - 6750 MHz)	1 Reported.
27-060 (Regenerative signal ?)	1
27 -70 (2920 - 3125 MHz)	1
27-071 (3590 - 4050 Mhz)	7
27-072 (836 - 971 MHz)	1
27-073 (652 - 857 MHz)	1
27-074 (164 - 200 MHz)	2
27-075 (2678-2933 MHz)	2

II- Emitters Geopositioned and reported:

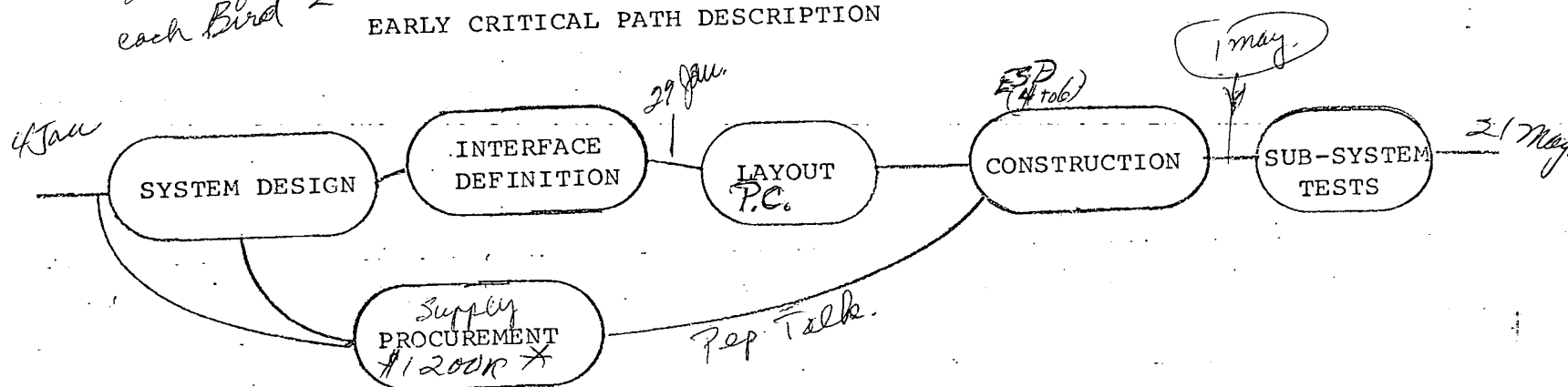
Handle Via **Byeman**
~~Talent-Keyhole~~
Control systems jointly

~~Top Secret~~

~~Top Secret~~

dates for 1st Bird
each Bird 2 weeks later.

EARLY CRITICAL PATH DESCRIPTION



* (1) Sole Source Contracts
Component (switches).

Handle Via BUEMAN Talent-Keyhole
Control Systems Jointly

~~Top Secret~~



NAVAL RESEARCH LABORATORY

WASHINGTON, D.C. 20390

IN REPLY REFER TO:

4000-274:AB:sor

11 December 1970

Mr. Howard O. Lorenzen
c/o Naval Postgraduate School
Monterey, California 93940

Dear Howard:

I am sorry that I did not have a chance to meet with you before you went off to Monterey. Unfortunately, I was called away by a death in the family and was out of the Laboratory for a few days. When you have read through the entire letter - especially the last two paragraphs - you will realize, I am sure, why I am not waiting your return (the end of December) to take up this matter.

As you may already know, [redacted] is expecting to retire on or about 15 February 1971. The occasion of his retirement has been the cause for an intense and detailed examination of the organization of the Laboratory. It appears that certain major reorganizations are long overdue and, during the interregnum that will occur with the departure of [redacted] and in the period before [redacted] arrives to take over as Code 5000, it is appropriate to undertake certain reorganizations.

In essence, the hope of this reorganization is to streamline the 5000 Area and give it more of a central theme and unity. In addition, the 7000 Area, which in the past has largely been a collection of unrelated Divisions, will be broken up and re-established as a Space Sciences and Technology Area. The mission of the 6000 Area will be extended to include Materials and General Science. According to present plans, we are considering the disestablishment of three Divisions, specifically, Code 5100, Code 5600, and Code 7800. These will be replaced by two new Divisions. We would like to create a new Division, Code 5700, which would be possibly called Tactical Electronic Systems or Tactical Electronic Warfare. We would also create a new Division, Code 7900, called Space Applications, which together with Codes 7100 and 7700 would constitute the new 7000 Area.

According to present planning, I would like Code 5700 to be constituted from an assemblage of Code 5605 [redacted], Code 5640 [redacted], Code 5650 [redacted], Code 5260 [redacted], and Code 8110 [redacted]. The hope here would be to create a tactical electronic systems division that had a broad scope, ranging from acoustic countermeasures to IFF and EW, as applied to both ships and aircraft. I believe the association of these four Branches would be mutually beneficial. Code 8110 is, in fact, designing what is essentially an underwater [redacted] system. They would profit immensely from an association with [redacted] group, Code 5260, is a group of extremely fine engineers who are knowledgeable in signal processing, pattern recognition, fast circuitry, and digital logic. I believe

HANDLE VIA
PNEUMATIC
MAIL ONLY

4000-274:AB:sor
11 December 1970

~~SECRET~~ [redacted]
that their capabilities are seriously under-utilized as long as they remain in Code 5200, which incidentally I would like to develop entirely as a components Division.

I would think that this new Division should be led by [redacted] has certainly demonstrated the maturity and ability that marks him as potentially one of the finest Division Superintendents at NRL. I think this would be a real chance for [redacted] to advance his career, and it would give him a broadly based group with strong engineering talents to work with.

I would like you to undertake leadership of a new Division called Space Applications. This group would consist of Jim Trexler, Code 5610, Reid Mayo, Code 5660, [redacted] Code 5160, and Pete Wilhelm, Code 5170. This Division would contain 135 people and would represent one of the strongest Divisions in the entire Laboratory. The responsibilities of such a group are obvious, and I am sure that you see the logic of such an association. Given the close coupling that must obtain between Reid Mayo and Pete Wilhelm, it is really rather foolish to have these two Branches in separate Divisions. They should be under the guidance of a common Division Superintendent. In addition, by making the talents of Code 5130 available to this Division, a strong software support group could be developed which would fill a void, which is needed to support Reid Mayo. Both [redacted] group would provide excellent backup for satellite constellation calculations, data processing, data formatting, computer programming, and orbit computations. This Division would be in close affiliation with the scientific and computational support capabilities of Codes 7100 and 7700, and would be part of the Navy's lead laboratory team in space science and technology.

I do not at present have a candidate for the 7000 position. Judging by our experience in finding a replacement for [redacted] it will probably take about 18 months until we have selected a new Associate Director for Space Science and Technology. In the interim, I shall have to count on the wisdom and experience of our Division Superintendents to lead the laboratories efforts.

While there are many other Branch and Sectional changes which would take place under the reorganization outlined in enclosure (1), the ones of particular interest to you would be the disposition of Codes 5620 and 5630. I have given much thought to the operation of these two Branches, and I have concluded that it would probably be most beneficial if they reverted to Code 5400, the Communications Sciences Division, from whence you and they came some years ago. I feel that Misner and Sheets should work in close cooperation with the people in 5400 who are involved in propagation work. In addition, the familiarity with communication technology that resides in the Division should be of great help to them in satisfying their sponsors' requirements. Finally, as you may know, the Laboratory is tasked to study

[redacted]
HANDLE VIA
SECURITY
CONTROL SYSTEM ONLY

~~SECRET~~
~~SECRET~~4000-274:AB:sor
11 December 1970

intercept techniques in an entirely new area and frequency range. This study now resides in Code 5400. Code 5400's expertise in propagation and signal processing was central to the decision to assign the work to that area. However, the engineering know-how and capability inherent in Codes 5620 and 5630 are indeed necessary, if we are to complete this program in a successful manner.

A perusal of the working plan for the reorganization will indicate that a large number of changes are scheduled to take place. The plan is not firm, and it is still subject to a degree of reclama. However, it has the general assent of the RAC, [redacted] Admiral Holmquist, and Dr. [redacted]. I certainly will make any detailed adjustments or changes that are appropriate. I am sure that you will agree that this realignment will give the Laboratory a stronger and more functional organization that will allow us to bring our talents to bear in addressing Navy problems. The Laboratory has for a long time been subject to the criticism that its talents are balkanized amongst many non-interacting Divisions and that there is little means of coupling our research program into our more system-oriented Divisions. I believe that the proposed reorganization satisfies all of these objectives.

Please review the proposed reorganization with great care. Our target date for implementing this reorganization is 15 February 1971. It is extremely important that all objections and suggested variants be considered before 1 January 1971. If you would like to discuss the details with me, please do not hesitate to return to NRL as soon as you can.

Sincerely,

[redacted]
Director of ResearchCopy to:
Code 1000

HANDLE VIA

RECEIVED

CONFIDENTIAL ONLY

Monthly

COMMENTS ON CHARTS PREPARED FOR FIRST/PROGRAM STATUS REPORT (12 Dec 70)

CHART # 1

~~TOP SECRET~~

REPORT @ NRL.

The information in this chart not been checked with the NRL comptroller office, but will be in the near future. While the fiscal files in NRL Codes 5614 and 5170 are not complete in this matter there ~~are~~ ^{is one} ~~xxxxxx~~ points in time where a summary has been made and that was 28 Feb 62:

From ^{early} FY-58 through 28 Feb 62 the following facts are evident:

	<u>Code</u>	<u>Total Funds</u>	<u>Routine</u>	<u>Major Proc.</u>
<i>Mayo</i>	5430(5614)	\$1665K	← = \$791K	✦ \$874K
<i>w/hold</i>	5170	2294	← = 1337	✦ 957
	4130	1	1	-.-.-
	5230	6	6	-.-.-
	5260	5	5	-.-.-
	6260	15	15	-.-.-
 	7120	476	← = 251	✦ 225
	7310	1	1	-.-.-

Totals for All Codes
Funds Obligated on NRL
efforts since FY-58 til

28 Feb 1962 \$4463K out of a total of \$5,740K Received.

There was at the beginning of our sponsorship by the NRO a period of fixed level funding with little detail required by the NRO on the allocation of expenditures.

During the early NAVY years Program "C" and SOLRAD efforts were combined in the same launch operations but after the NRO can into the act there was no reason for a ~~xxxxxx~~ cover-story for out Luanches so the two efforts separated, except the Code 5170 continued to serve both efforts with the Spacecraft engineering and Launch operational support.

There was significant Carry Over During the transition years and immediately following the beginning of NRO support. However this carryover has dwindled to the point where this past year there was less than \$176K to get the FY-71 started.

During FY-71 \$1,220.5K has been received for the Augmentation of the Program for NAVY Purposes (Ocean Surveillance) and these funds must have special accountability and separate NRL Problem #, 56R06-29A). The cross hatched area at the top of the column marked FY-71 is for the \$2M anticipated Budget Deficiency Supplement which is anticipated in the next several weeks. The New Program Director Capt Geiger has said that a stern memo is affixed to the memo which approves these funds. st get on-with the Schedule impacting Major Procurement so why can't we temporarily from our Subtotal Routine fund?

Handwritten:
Nardleira
Byeman / Talent - Keyhole
Attol Systems Gently

MANPOWER CHART: This chart relates three areas of NRL Manpower, the Scientific Divisions, Regular and Overtime and in addition the manpower in ESD which is expended toward Program C Efforts. On the Left Margin is the endpoints for FY-69, for reference, then moving horizontally across the chart, the next [redacted] inches is FY-70 and the next three inches is FY-71. At this point vertically there are the three endpoints for FY-71 which are derived from the Sept A-1 estimates. If one connects these FY-71 End-Points to the start of FY-71 one can see that both Division and ESD levels being experienced are higher than the "Linear Extrapolation" of the straight line-FY-71. This departure for ESD must be investigated further so that the particular Code (5614 or 5170) can be discerned and an explanation made and the FY-71 estimate appropriately adjusted, to fit the 1/3 year experience.

The Division manpower rate is slightly above the linear extrapolated amount since August, but in October it seems that there was another slight increase. An explanation for this is needed.

Subtotal Routine is plotted on the next Graphic in much the same manner so that FY-69 Endpoints are given at the left margin with FY-70 and then FY-71 as one moves horizontally across the chart from left to right. The linear extrapolation is shown as the straight line connecting the beginning of the year with its estimated End-point. September FY-71 was a heavy month particularly in Code 5614 where Subtotal routine was over \$270K where the average for all other months this year is \$163.K. This \$270.3K is not explainable by the minor procurements for Sept which were \$ [redacted] along with the Major procurements from our STUB-BOOK which show another \$ [redacted] for September. One does not see the same picture when using JOSR reports and the local procurement book. Part of the explanation may lie in the precise time when the stubs are charged against the problem code and reflected in the JOSR summary.

Operational Summary for Month of November for each of the [redacted] sites are given on the next three charts; First [redacted] Summary.

The # I entry gives for each week the number of ship signals which are reported by the site, using the receiver operator and QC analysts reports as the basis of this summary. Both Mission 7105 and 7106 are compiled separately.

The next Item II is for the NATIONAL SOI, (National Signal of Interest) as opposed to Navy signals of interest.

The Item #III is for the UNKNOWN emitters which since the first of Jan 1970 have been given a sequence number by the site which first isolated it. These numbers give the Crypto designator for the Site, [redacted] uses [redacted] for their signals and [redacted] for theirs; thus the first unknown signal after Jan 70 was identified as 17-01, the tenth signal thus identified would be 17-010. These Unknown signals are examined by NSA and in many cases they are explainable as a variant of a known emitter or a malfunction of the collection platform or something else so a second list has developed and that is one in which the known or explainable emissions are removed from the site's UNKNOWN list. This is generated at NSA on request and may be available as often as weekly if desired. We have only used it at about monthly intervals. It can be seen that [redacted] does intercept certain signals which were first reported out of [redacted] and thus carry 27-xxx number identification. This example illustrates the Cross dissemination of these "UNK" lists among the Program C sites and further adds order to the previous chaos in the treatment of these unknown emitters.

Note that [redacted] summary has an Item IV for signals which have been geographically [redacted] Note the last emitter thus reported is one of the [redacted] ion is one more very important element in its ultimate [redacted] and summary of all locations has been the vital [redacted] clue in the resolution to SA-4 and SA-6 associations during the last 3 yrs.

Page Denied

Page Denied

Page Denied

Page Denied

Page Denied

Page Denied

Page Denied

Page Denied

14 Dec - 70

Monday Review

Admin Assistant 3400

GS-12

~~TOP SECRET~~

out of a job.

upping rights.

Geyer wants part of [redacted] staff.

III consists of Program

Developments for the future

what progress on studies ^{hardwired} vs ^{through} internal prog support.

stupid vs hardwired processors.

Pred. Cost & Schedule OK

Direction of future program.

Dr. B.

O.T. = form of cheap labor

Capt S.

Action Item: Timation 27 Birds.

(3x9)

5120

outboard School

manpower 16 5 year period.

Soldad Hi 74

~~TOP SECRET~~handle via
Byeman / Talent - Keyhole
Control Systems jointly

Josey Poto CSOZ Summary.

Last 20 days 6th Fleet. Not getting Proj "C".

In med 40 TH-60 ship
for ~~TOP SECRET~~

HA DF

10 sighting.

Look @ 173 [] files

- ① how many in med.
- ② when seen.
- ③ Identify the msg report.

For 4 to 6 hours later.

Brown & Poto link not used.

SI version hat & Long unequated.

[] want 70 coverage med vs. []
comparison of 6th fleet. ^{with} [] reports

[] recognizer: 6th fleet.
Indic: [] wants Proj "C"

Can see = Extrapolated

~~TOP SECRET~~

that. linear

Handle via
By Mon/Jalst-Keyhole
Control Systems Jointly

~~TOP SECRET~~Major
Labor

Solid Schedule

(15 Feb)

Aug 1970

(May look OK)

Nov

R.F. Systems

Feb PC Boards

Incl SR-9

Hardware probs to date

Shifting to People program

Temporary up to 1 yr WAE's (ESD)

(ESD/5170 30% understrength
15% OT worked

• Time & costs

Temp hire WAE

Permanent Employees

not his priority

Tangle no Tech

Engines: Look @ critical

Trade Tech for engineers contract out.

* Action 4-5 more people

ESD, Supply, PW

Meeting

Solid - get ready for next launch opportunity 10 May

OT Policy: Professionals

Handle via

~~TOP SECRET~~

le badly

Byeman/Palant-Keyhole
Control Systems Jointly~~TOP SECRET~~

long ~~TOP SECRET~~ [] staff can handle.

need Admin Assist.

Donovan terminology
std cost. curves. for next mty.

additional studies

Software for '87
Hardware for '902

[] good if he will look at
Syst architecture tradeoffs

Software vs hardware ^{OSIS work}
multi prog computers. in Priority above all excepting
after 1 Jan.

long term.

[] Branch for software.

~~TOP SECRET~~ []

Handle via
Byeman/Jalant-Rayhole
Control Systems Jointly

1304

Approved for Release: 2024/06/12 C05026171

05 3 1/2 yrs old.

(to help the ~~SECRET~~ ~~Long Term~~ ~~repl...~~ ~~ASAP~~ ~~bring along~~)

Simpler than Pappy

1-2 channels

[C/S.]

Direct System.

Quick
contract as much as possible

What cost?

How long would it take

Impact on 7107??

TOP SECRET

Handle via
Byeman Halbert-Keyhole
Control Systems jointly