

TOP SECRET

RSEAS SITE AUGMENTATION

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14 Aug 70

1. The recommended augmentation of the three existing Navy manned POPPY ground facilities [redacted] indicates an immediate deployment of a second SEL 810A computer to [redacted] and the deployment of one Perishable Data Extractor (PDE) to [redacted]. The additional [redacted] computer would be utilized until the acquisition of an SEL Model-86 computer, at which time the SEL 810A would be returned to CONUS for use in a CONUS facility. After on-site check out and engineering evaluation, including determination of such items as mean time between failures, the decision would be made either to retain the other SEL 810A at [redacted] or to return it to CONUS for other uses. The PDE's would become an integral part of the processing facility at each location. The recommended equipment augmentation, therefore, is:

Site	Equipment
[redacted]	Perishable Data Extractor, SEL Model 810A,* SEL Model 86 Perishable Data Extractor Perishable Data Extractor

\*Temporary deployment of existing equipment, pending acquisition of Model 86

2. The additional <sup>maximum</sup> capability to be derived from deployment of this equipment, in terms of processing, is summarized below:

Site	National	Ocean Surv	NSA (Cost effect on)
[redacted]	Increased 400%	Incr. 1000%	Reduced
	Increased 80% (Approx)	Incr. 80%	No change
	Increased 80% (Approx)	Incr. 80%	No change

The increased capability for [redacted] is derived from increased computer capacity, coupled with digital formatting accomplished by the Perishable Data Extractor (PDE). For example, utilizing the Model 86 permits processing of X-band signals within approximately 50 minutes after intercept, with additional locations becoming available approximately at one minute intervals. This compares with the ~~maximum~~ <sup>presently</sup> attainable processing capability in X-band, utilizing existing equipment, of 9 hours, with additional locations at intervals of approximately 10 minutes. Increased collection capability is recommended, and can be obtained by optimizing frequency band assignments in mission 7107, by employing the fifth spacecraft of mission 7107 for providing certain operational capabilities in the ocean surveillance arena, by utilization of the third transmitter in each of the four primary spacecraft for ocean surveillance, and by including S-band coverage in the X-band pair. This combination of improve-

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ments could increase [ ] collection opportunity by 40 - 50 percent.

3. The cost, both one time, and recurring, of adopting this proposal is summarized below:

	FY71	FY72	FY73	FY74	FY75	TOTAL
A. One Time Cost						
Equipment	1173		1173*		1173*	1173K(3519)*
B. Annual Cost (A)						
(Recurring)						
Personnel	84					84
Equipment	33	33	33	33	33	165
<b>TOTAL</b>	<b>1075K</b>	<b>33K</b>	<b>33K</b>	<b>33K</b>	<b>33K</b>	<b>1422K(3768)*</b>
			(1206)*		(1206)*	

\* After evaluation of SEL Model 86 at [ ] it is recommended that consideration be given to deployment of a SEL Model 86 at [ ] in FY 73, and [ ] in FY 75.

Advantages of implementing this proposal, from a cost standpoint, are that initial costs are small, and additional annual recurring costs are negligible.

4. Personnel required to implement the recommended augmentation are 15 enlisted personnel at [ ] who would be utilized to man the augmented SEL 810A. If the decision were made to redeploy both SEL 810A's to CONUS, the CCP billet structure now existing at [ ] would be unchanged. If the decision were made to keep one SEL 810A at [ ] as redundant equipment, the 15 augmented billets would be required on a continuing basis.

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Norwegian Sea

NorFleet Op Areas

GI/UK Gap

E. Med/Black Sea

Western Med

Vlad/Petro

Sea of Japan

N. Pacific

S. China Sea

Str. of Malacca

Suez Canal

E. Indian Ocean

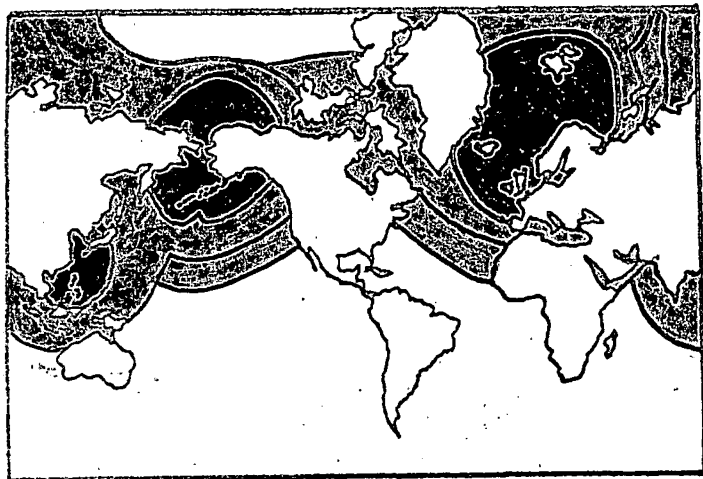
Phil Sea

W. Coast U.S.

E. Coast U.S.

0 10 20 30 40 50 60 70 80 90 100 110 120 130

TIME IN MINUTES/DAY PER SATELLITE SERIES

RED - 60-130 MinutesGREEN - 15-60 MinutesBLUE - 0-15 Minutes~~TOP SECRET~~ ~~EARPOP~~HANDLE VIA BYEMAN  
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SCHEDULE

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← DECISION 1 SEP

Facilities

NONE REQUIRED

Equipment  
SEL 810A

Ship Arrive IOC →

Ship 810A to CONUS

Ship 810A to CONUS

SEL 86

Order & Software

Ship Install  
Arrive Check-out

IOC - Model 86

PDE

Order Ship

Install IOC-PDE  
Checkout

Personnel

Identify  
Order & Train

Reassign Personnel

DECISION 1 SEP

Facilities

NONE REQUIRED

Equipment  
PDE

Order Ship

Install IOC-PDE  
Checkout

SEL 86

Decision Order

Personnel

NONE REQUIRED

DECISION 1 SEP

Facilities

NONE REQUIRED

Equipment  
PDE

Order Ship

Install IOC-PDE  
Checkout

SEL 86

Decision Order

Personnel

NONE REQUIRED

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MAR 71

MAY 71

JUL 71

JAN 72

JUL 72

JAN 74

JUL 74

71

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FUNDING (FY-71)

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SITE

RECOMMENDED FUNDING AUTHORITY 1,2  
NAVY NSA NRO

Equipment

SEL 810A-Ship/re-ship 24,000

SEL 86

Computer, including  
shipment and install

858,000

Software

115,000

PDE

50,000

Personnel

42,000\*

42,000\*

Recurring Costs

Equipment O&amp;M

11,000

\*Personnel required should be derived from billets currently occupied at [ ] Recommend combination of voluntary one year extensions, and absorption from forced reduction in other assigned missions at [ ]

Equipment

PDE

50,000

Recurring Costs

Equipment O&amp;M

11,000

Equipment

PDE

50,000

Recurring Costs

Equipment O&amp;M

11,000

TOTALS

\$116,000

\$257,000

\$891,000

<sup>1</sup>Recurring costs for equipment O&M in succeeding Fiscal Years should be borne by NRO and included in annual 770C budget.

<sup>2</sup>Costs for SEL 86 computers for [ ] should be borne by NSA as improvement to total POPPY processing system.

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OCEAN SURVEILLANCE FACILITY

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1. Summary. The desirability of obtaining an ocean surveillance processing and training facility on the east coast of the continental United States has been examined. The facility has been determined to represent a valid requirement, due in large measure to the lack of coverage of known ballistic missile hold areas for Soviet SSBN's, the increasing scale of Soviet surface unit deployments into this area, and the necessity for establishing a training facility to standardize operating procedures, and to relieve operational units of the necessity of conducting large scale on the job training. A careful survey of available facilities on the East Coast indicates an optimum location at [REDACTED]

This decision was influenced by the following factors: availability of support and security facilities; availability of communications; low RFI; and maximum coverage of the major threat areas.

Total cost of this facility is \$1,462,000, itemized as follows:

Non-recurring

Equipment - \$372,000\*  
Building - \$815,000

*Fig. Aug 58  
165/158*Recurring

Personnel - \$250,000  
Equipment O&M - \$25,000

\*Predicated on acquiring new equipment, refurbishing equipment from [REDACTED] and utilization of the SEL 810A currently deployed to [REDACTED] Command and interrogation functions will be accomplished from the [REDACTED] engineering facility.

Personnel necessary to provide a cadre for training, and to man the operational site, total 1 officer and 42 enlisted personnel, as itemized below:

Officer in Charge  
Material Maintenance Men (5)  
Digital Processors (6)  
Collection Operators (16)  
Collection Supervisors (4)  
Analogue Pre-processing/ (4)  
and analysis  
Senior supervisor/analysts (3)  
Training supervisors (4)

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EQUIPMENT

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The following primary listing of equipment would be available at [redacted] Some of the equipment, such as the 810A computer, would be acquired from [redacted] other equipment would be refurbished; still other equipment must be acquired new.

Digital

A-70-D  
SEL 810A computer mainframe  
TM-11 digital tape transporters } (3)  
Magnetic tape control unit  
Moveable head disc  
Fixed head disc and controller  
Analex Line Printer  
Graphics display console  
High speed paper tape reader/punch  
Paper tape spooler  
X-Y plotter  
Perishable Data Extractor 50K  
Support Spare Package

*redeployed*

Sub-total - \$165,000

Analog @ c

PRIM + SEC

CEC GR 2800 analog tape recorder  
Tektronics 565 oscilloscope (w/3al PI)  
Distribution Amplifier (DA-1)  
CEI speaker  
ESL pulse rate synthesizer  
Video disc recorder  
Brush Oscillographic recorder (8 ch)  
Astrodata 6200 time code translator  
Electronic counter HP 5216A  
Test oscillator HP 204C  
Timing generator Tek 184  
Audio signal monitor AM01  
Oscillographic recording camer Poloroid manual  
→ Support spare package

290-158

Sub-total - \$158,000

Flooring, air-conditioning, installation, and incidental costs

Sub-total - \$ 49,000

TOTAL - \$372,000

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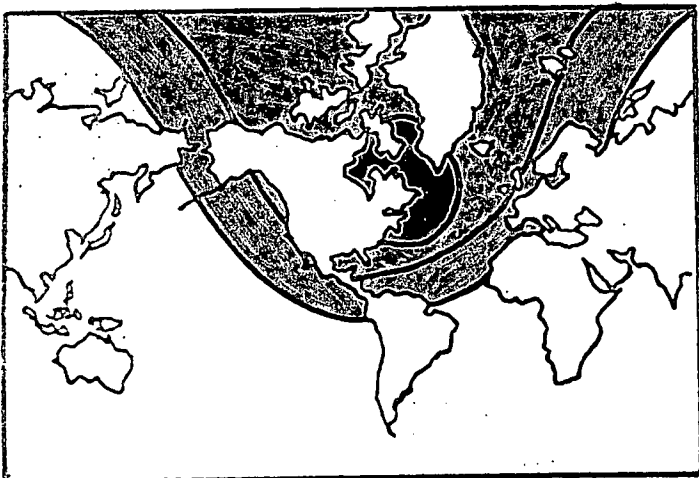
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2. Coverage. Unique coverage provided by a ground processing facility at [ ] for selected geographic areas is provided below:

Cuba:	30-50 minutes per day
Mid-Atlantic:	50-80 minutes per day
Soviet SSBN Patrol:	50-100 minutes per day
Panama Canal:	10-30 minutes per day

Coverage obtained both from [ ] is reinforced by [ ] particularly in those areas of primary strategic importance; ie, SSBN patrol areas, choke points, areas through which Soviet surface and sub-surface units must pass for out of area deployments, and major operating areas. Specifically, the coverage from [ ] in minutes per day POPPY satellite series, is as shown.

RED	-	100 plus minutes
GREEN	-	30-100 minutes
BLUE	-	0-30 minutes

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SCHEDULE

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\*SITE CONSTRUCTION

PERSONNEL

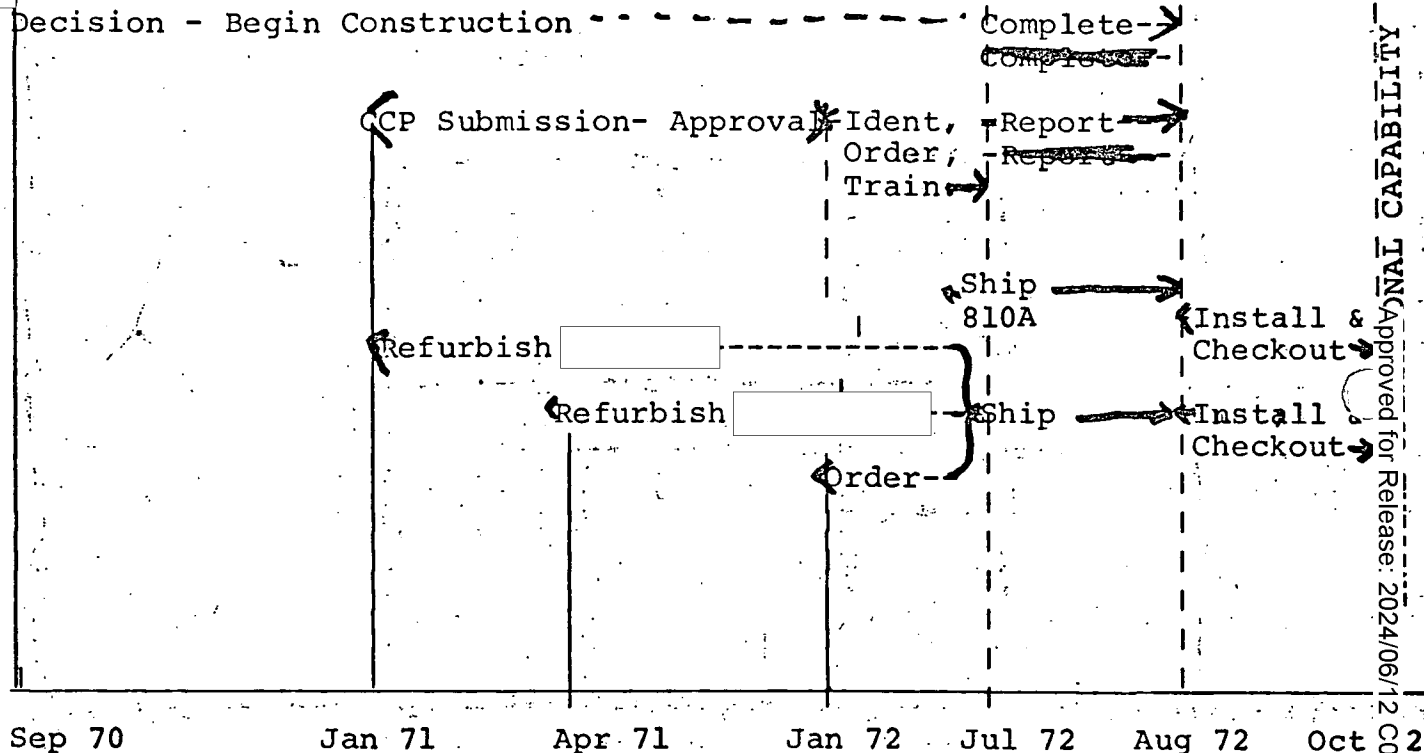
EQUIPMENT

SEL 810A

Refurbish

Refurbish

Order New Equipment



\*Pacing Factor

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## FUNDING

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~~TOP SECRET~~ [redacted] ph 1 above, non-recurring funding totals \$1,187,000, while recurring funding total \$275,000. The following funding is recommended:

Non-recurring

Equipment - \$372,000 - NSA  
Building - \$815,000 - Navy

Recurring

Personnel - \$250,000 - To be shared equally between NSA and Navy (direct support assets)

Equipment O&M - \$25,000 - NRO

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