CROSS REFERENCE (TICKLER)

NRL SPECIAL PROJECTS CONTROL NUMBER

NRL B-232-74

Rec'd 8/21/74

~~TOP SECRET~~/HANDLE VIA BYEMAN CONTROL SYSTEM

DATE
7AUG74

ORIGINATOR	SERIAL NO.	ENCLOSURES
NAS 106-5	BYE 59,888-74	(1) thru (10)

DATE REC'D	TICKLER DATE	COPY NO.	RECEIPT NO.
n/c		(3) 4	n/c

SUBJECT

[illegible] FOR [illegible] REPORT

DIST INFO

- [ ] BASIC DOCUMENT ON R/S
- [ ] BASIC DOCUMENT NOT HELD. DESTROY.

ROUTE TO	*	CY NO.	W/ ENCL	SIGNATURE	DATE OUT	DATE RETURN
1000						
7000						
7030		(3)				
1225		4				
Mayo				[signature] 8/22/74		
7032				[initials]		
7033				[initials] 8/22		
Lawton				[initials]		
Frankovic				EDF	8/22/74	
Deniston				~~[initials]~~		
Pettie				DLP.		

CODES HAVING PRIMARY INTEREST CHECK ONE

- [ ] RETAIN INDEFINITELY. (REFERENCE VALUE).
- [ ] RETAIN ______ MONTHS. (INFO MATERIAL HAVING ONLY TEMPORARY REFERENCE VALUE).
- [ ] DESTROY AFTER ROUTING. (NO FURTHER REFERENCE OR INFORMATION VALUE).

DESTRUCTION REPORT NO.	FINISH FILE
	7.2

REMARKS

Item E NRL Action!
please follow up
Action items for NRL have been taken care of! EDF 8/22/74

197
198

NRL INCOMING DOCUMENT
B232-74
3
BYE-59888-74

Transferred
8-21-05

RETURN THIS ROUTE SLIP TO NRL SPECIAL PROJECTS C[...]
DO NOT ROUTE TO OTHER SECTION OR B[...]

ACTION TAKEN BY

NRL CONTROL RECORD NDW-NRL-5216/1005 (REV. 3-72)

~~TOP SECRET~~

CONTROL NO. BYE-59888/74

CY 3

REFERRED TO OFFICE	RECEIVED			RELEASED		SEEN BY	
	SIGNATURE	DATE	TIME	DATE	TIME	NAME & OFFICE SYMBOL	DATE
NRL (1030)							

(OVER)

Handle Via Indicated Controls

BYEMAN-TALENT-KEYHOLE

Access to this document will be restricted to those persons cleared for the specific projects;

EARPOP

....

....

WARNING

This document contains information affecting the national security of the United States within the meaning of the espionage laws U. S. Code Title 18, Sections 793 and 794. The law prohibits its transmission or the revelation of its contents in any manner to an unauthorized person, as well as its use in any manner prejudicial to the safety or interest of the United States or for the benefit of any foreign government to the detriment of the United States. It is to be seen only by personnel especially indoctrinated and authorized to receive information in the designated control channels. Its security must be maintained in accordance with regulations pertaining to BYEMAN-TALENT-KEYHOLE Control Systems.

~~TOP SECRET~~

GROUP 1
Excluded from automatic downgrading and declassification

NRL B-232-74

TOP SECRET ZARF

HANDLE VIA BYEMAN CONTROL SYSTEM

NAVY SPACE PROJECT OFFICE
(S) NATIONAL RECONNAISSANCE OFFICE, PROGRAM C
WASHINGTON, D.C.

OFFICE OF THE DIRECTOR

PME-106-5

MEMORANDUM FOR: DIRECTOR, CENTRAL INTELLIGENCE AGENCY (OSI)
DIRECTOR, NAVAL RESEARCH LABORATORY (1000 AND 7030)
CHIEF OF NAVAL OPERATIONS (OP 955)
COMMANDER, NAVAL SECURITY GROUP
DIRECTOR, NATIONAL SECURITY AGENCY (A81, R24, W2&W34)
DIRECTOR NRO STAFF (SS4, SS4A AND SS7)

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

Encl: (1) Agenda
(2) List of Attendees
(3) Minimum Daily Voltage Plot
(4) Collection Highlights
(5) Project DEPARTURE Presentation Viewgraphs
(6) [redacted] 191530Z Jul 74 CITE Ø778 with Addition as requested by NRL
(7) CONCERT 151523Z Jul 74 CITE 6152
(8) Ocean Surveillance Processing Viewgraphs
(9) [redacted] Comparison Data
(10) CONQUER 171245Z Jul 74 CITE 0261

1. A POPPY TOG meeting was held at the Naval Research Laboratory (NRL) at 0900 on 25 July 1974. The Agenda and a List of Attendees are forwarded as enclosures (1) and (2).

2. The following specific items were discussed:

A. Status. (NRL)

The 7107 satellites are in stable health and performing as expected. No particular problems have been noted within the past month, during which a period of high sun exposure was experienced, clearing up several anomalies that are attributed to low power. The Minimum Daily Voltage Plot (enclosure (3)) shows how the levels have improved over the previous period.

The current satellite [redacted] spacing is:

[redacted]

Warning Notice - Sensitive Intelligence Sources and Methods Involved

HANDLE VIA BYEMAN-TALENT-KEYHOLE CONTROL SYSTEMS JOINTLY

BYE59,888-74

HANDLE VIA BYEMAN CONTROL SYSTEM

CLASSIFIED BY BYEMAN ... EXEMPT FROM GENERAL DECLASSIFICATION SCHEDULE OF EXECUTIVE ORDER 11652 ... DATE ... DECLASSIFY ON ...

TOP SECRET ZARF

Cont No ... Copy 3 of 14 Copies Page 1 of 5 Pages

NRL B-232-74

PME-106-5

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

RF: 5516 MHz +/-18 MHz and 5547 MHz +/-18 MHz
PRF: 401-414 PPS
446-466 PPS
483-484 PPS
625 PPS
719-728 PPS
743-763 PPS
1006.338-1044.811 PPS
2196.604 PPS
SCAN: 4.9 SPR, Circular
[redacted]

Both [redacted] have been advised.

(3) [redacted] has been canceled as an SOI because it has been related to a radar installed on a West German trawler.

(4) Project DEPARTURE personnel (ITT Avionics Division) have been tasked to perform exploitation on [redacted] tapes (analog and digital) that would be expected at a fully manned POPPY NSG site. A briefing by DEPARTURE personnel was presented on this effort and on one signal that is being pursued, having been observed several times (see enclosure (5)). The DEPARTURE analyses enlarges on the normal site capability in that immediate feedback from other overhead (Mission 7338) systems is available through W34.

D. OPSCOMM (SOCOMM) Status. (NSA)

NSA analysts have been using the SOCOMM system in the OPSCOMM mode since the previous TOG and have found that exchanges with analysts at the sites have reduced formal message traffic volume by approximately 75 percent. The kind of W34 consultation that Project DEPARTURE analysts enjoy is becoming available to the POPPY sites by way of this communications mechanism. The routine problem of occasionally dropping synchronization on a circuit was cited as the only recurring problem associated with this arrangement.

E. Engineering Evaluation. (NRL)

Enclosure (6) was cited by the NRL representatives as being the summary of the results of the Engineering Evaluation performed a [redacted] on 10-12 July 1974. Three specific items were pursued and led to the following action items:

[redacted]
CONTROL SYSTEMS JOINTLY

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

(1) NRL will generate a recommendation on revising the task group(s) that exhibit the significant crosstalk discussed in paragraph 2.D. of enclosure (6). NSA POPPY processing is also significantly affected by crosstalk. The purpose is to minimize/eliminate this phenomenon from the data.

(2) NRL will coordinate with NSG to establish a procedure for resolution of the delay timer - which now appears to be voltage-level sensitive. (It was previously reported that the twenty-minute timer was expiring in sixteen minutes.) At current voltage levels the timer performance is consistent, but still fast. A simple procedure for calibrating the timer regularly can preclude the previously experienced problem that the satellites cease collection which still is within view of

(3) SPO will coordinate with NSG, NRO/SOC and NSA/SSSC to obtain further SLM on ocean surveillance emitters of interest as an engineering task to NRL will provide a list of requirements and would process the data.

F. On-Orbit Calibration. (NSA)

The NSA representatives from R24 stated that enclosure (7) contains the latest schedule for 7107 on-orbit calibration, using to collect the data.

G. Ocean Surveillance Processing. (NSA)

An NSA representative delivered a short briefing using enclosure (8) on viewgraphs. POPPY enter the NSA system by the IDDF. Other overhead sources produce reports that enter via the RUSHER interface. The shipborne EOB files were cited as an element of the system that is very difficult to establish and maintain.

The Correlation Scheme leads to a presentation, to an NSOC analyst, of choices for correlation that have been screened by the criteria stated. The emphasis is on spatial relationships, with SEOB the final filter, except for intercepts, where the POPPY established data base is used to compare PRF/PRI ranges against the intercept. This scheme is intended to provide correlation of URSULA intercepts now and eventually to include POPPY uncorrelated navigational radars.

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

Enclosure (9) was presented as a preliminary assessment of what the above scheme might be expected to achieve to improve the number of [redacted] that are correlated.

It must be stressed that the above applies only to SIGINT derived intercepts and correlations. The data base against which any intercepts are matched is totally SIGINT derived.

H. PAPS Documentation. (SPO)

Enclosure (10) was recently received by the SPO. The NSA representative was asked to take these comments on the documentation, by the users, for action.

3. The next TOG meeting will be hosted by the SPO on 29 August 1974.

R. K. GEIGER

AGENDA

STATUS

COLLECTION HIGHLIGHTS

PROCESSING HIGHLIGHTS

OPSCOMM STATUS

ENGINEERING EVALUATION

ON-ORBIT CALIBRATION

OCEAN SURVEILLANCE PROCESSING

PAPS DOCUMENTATION

Enclosure (1) to BYE 59,888-74

LIST OF ATTENDEES

SPO: [redacted]
LCDR Potts

PME-106-4: [redacted]

OP955: [redacted]

NRO/SOC: [redacted]

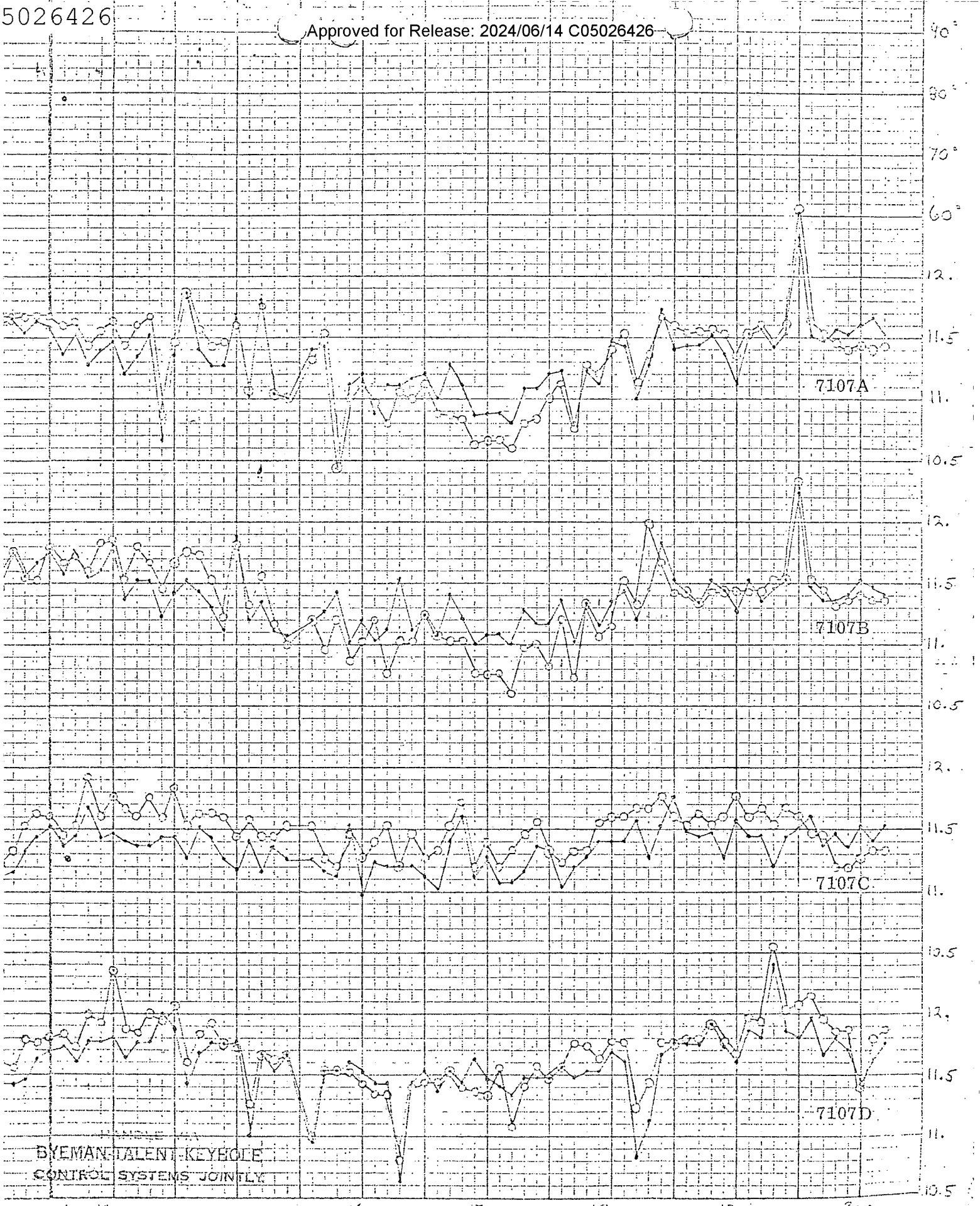
NSG: LT Morgan
[redacted]

NSA: Mr. Gallagher
[redacted]

NSA/ITT: [redacted]

NRL: [redacted]
Mr. Lawton

Enclosure (2) to BYE 59,888-74



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Enclosure 3. Minimum Daily Voltage Plot

Enclosure (3) to BYE 59,888-74

COLLECTION HIGHLIGHTS

OCEAN SURVEILLANCE (25 Jun - 22 Jul 74)

Since the last TOG meeting, there have been a total of 3865 locations. 594 of these were equated to specific ships. 663 intercepts were major combatant associated, but could not be correlated to a particular ship. 47 intercepts of emitters were received since the last TOG, including 2 out of area intercepts; one in the North Pacific and one in the Gulf of Mexico. 2561 intercepts of Merchant associated radars were reported.

monitored the following:

1. The MOSKVA CHG Lenigrad, KASHIN DLG Skoryy, and AOR BORIS CHILIKIN as they continued their southerly transit of the Atlantic enroute to the Indian Ocean. These ships are now, however, out of POPPY intercept horizon.

2. The KRIVAK DDGSP's BODRYY and SILNYY, SVERDLOV CL SVERDLOV, and KOTLIN DDG Nastoychivy as they transited the Atlantic from the Med. West of the U.K., into the North Sea, and eventually to home waters in the Baltic.

3. Kresta II CLGM's ADMIRAL NAKHIMOV and ADMIRAL MAKAROV exited the Barents Sea and transited south into the Med.

4. The KRIVAK DDGSP Doblestnyy upon existing the Med. and transiting north in the Atlantic, West of the U.K., apparently enroute to the NORFLT.

monitored the following:

1. The MOSKVA CHG Moskva, KASHIN DLG Krasnyj Krym, and KOTLIN DDG Nakhodchivyy returning to the Black Sea from the Med.

2. A new KRIVAK DDGSP Doblestnyy entered the Med. from the Black Sea. This was the first out of area deployment of this vessel.

3. Kresta II CLGM's ADMIRAL NAKHOMOV and ADMIRAL MAKAROV as they transited the Med. in response to the Cyprus crisis and positioned themselves Southeast of the Island.

[redacted]

Activity has been at low level in the Sea of Japan/Pacific area since the last TOG meeting.

TECHNICAL INTELLIGENCE AND EOB

Project FLAVOR: 7107 system reporting of SA-6 from the Mideast is down considerably to only 2 or 3 locations a week. Majority of reported locations are now of EW/GCI radars such as [redacted]

During the month, [redacted] were twice tasked to look for the "Variant" [redacted] emitter fitted on target barges for SS-N-13 firings. Intercepts would Tip-off possible firing activity. 26 intercepts of [redacted] radars with parameters of the variant were reported. None were located. It was obvious from the volume of intercepts that there are mor[redacted] in the Soviet Union with the variant parameters than just those fitted on the target barges.

Two intercepts of the [redacted] were reported. One was switching from 416 PPS to 208 PPS PRF. The other exhibited a 365 PPS PRF. This PRF is designated of high interest in the EPL.

[redacted] continues to report occasional intercepts of [redacted] from the Black Sea.

SA-X-8 activity is down. To date, the POPPY system has confirmed locations of these emitters in the areas of Emba, Bogodukhov, Smolensk, and Sovetsk, USSR. Sites are watching intercepts of [redacted] closely expecting deployment int[redacted] shortly.

Seventeen intercepts of 14 different unidents were reported.

[redacted] has again intercepted an "apparent" [redacted] from the Gulf of Mexico. Signal exhibits an 842 PPS PRF but scan, although within EPL limits, does not fit peak values of either [redacted] It would be nice if someone would find out what vessel this radar is on and what it is. Mass production of a new radar with these parameters could seriously hinder [redacted] A head start on this now by making a positive I.D., could save us a headache in the future.

Copy 3-1

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HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

HANDLE VIA
BYEMAN-TALENT-KEYHOLE
CONTROL SYSTEMS JOINTLY

UNIDENTIFIED EMISSIONS
PRELIMINARY ANALYSIS
W34

PROJECT DEPARTURE
ITT AVIONICS DIVISION

Enclosure 5. Project DEPARTURE Presentation Viewgraphs

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HANDLE VIA
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CONTROL SYSTEMS JOINTLY

Enclosure (5) to BYE 59,888-74

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ANALOG PROCESSING OF [redacted] COLLECTED TAPES

PROCEDURE

(1) SEARCH CRITERIA:
- UNIDENTIFIED SIGNALS
- SOI's FOR W22 PANELS
- SPECIAL BANDS OF INTEREST

(2) SEARCH - ANALOG PROCESSING (MISSION 7107)

(3) ACTIVITY REPORTING

(4) DIGITAL (SEL 810A) PROCESSING REQUIREMENT

(5) ANALOG TO DIGITAL TAPE CONVERSION

(6) DIGITAL ANALYSIS → FINAL REPORT

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HANDLE VIA
TALENT-KEYHOLE
CONTROL SYSTEM ONLY

	ORBIT	RF	PRF	SCAN (FRAME TIME)	DATE
A)	11574CD	8590 - 9122 MHz	5524 PPS	1.0 SEC	5 APR 74
B)	11574CD	8590 - 9122 MHz	3268 PPS	0.97SEC	5 APR 74
C)	11491CD	8590 - 9122 MHz	5524 PPS	1.0 SEC	30 MAR 74
D)	11465CD	8590 - 9122 MHz	5347 PPS	.97SEC	28 MAR 74
E)	11478(D ONLY)	8590 - 9122 MHz	5494 PPS	1.0 SEC	29 MAR 74
F)	9178(D ONLY)	8590 - 9122 MHz	5154 PPS	1.0 SEC	13 OCT 73

MISSION 7107

SUMMARY OF UNIDENTIFIED INTERCEPTS

~~TOP SECRET~~ ZARF

~~TOP SECRET~~ ZARF

DOI	RF ± 18MHz (MHz)	PRF (PPS)	LOCATION	ELLIPSE ORIENT	AREA	PW (μs)
29 JUNE 1972	9055	5494.495	52-45N 022-21E	23x8 275		.2
4 APR 1974	9055	5486.513	21-16N 101-13E	30x9 189	CHINA/ VIET NAM BORDER	.1
6 MAY 1974	9055	5758.655	47-52N 021-58E	39x10 269		.2
18 MAR 1974	9082	5515.497	19-29N 109-46E	36x9 236		.1
15 JUNE 1974	9086	5910.624	13-60N 107-57E	15x7 263		.2
25 JUNE 1974	9086	5516.033	49-15N 020-22E	46x10 271		.2
14 JUNE 1973	9086	5497.575	52-02N 024-42E	25x8 272	RUSSIAN/ POLAND BORDER	.2
26 DEC 1973	9086	5519.293	53-14N 024-25E	31x9 265	RUSSIAN/ POLAND BORDER	.1
21 MAY 1974	9086	5479.966	36-57N 340-19E	20x6 093		

~~TOP SECRET~~

ZARF

MISSION 7338 COLLECTION SYSTEM

PARTIAL SUMMARY OF UNIDENTIFIED INTERCEPTS

HANDLE VIA TALENT-KEYHOLE BYEMAN CONTROL SYSTEMS JOINTLY

Approved for Release: 2024/06/14 C05026426

DOI	RF ± 18MHz (MHz)	PRF (PPS)	LOCATION	ELLIPSE ORIENT	AREA	PW (μs)
24 FEB 1974	9086	5520.107	48-31N 023-02E	37x10 285		.2
22 JUNE 1974	9055	5683.694	47-25N 027-54E	23x8 276	RUSSIAN BORDER	.2
24 JUNE 1974	8273	5518.889	54-27N 015-04E	24x9 276		.4
21 MAR 1974	7079	5322.224	54-28N 018-36E	37x9 066		.4

MISSION 7338 COLLECTION SYSTEM

PARTIAL SUMMARY OF UNIDENTIFIED INTERCEPTS (CONTINUED)

Approved for Release: 2024/06/14 C05026426

PRELIMINARY OBSERVATIONS

1.0 SIMULTANEOUS OCCURRANCES WITH [redacted]

- o RF: 8600 MHz TO 9140 MHz
- o PRF: 2765PPS TO 3040 PPS
- oSCAN: RASTER 3.5 TO 4.3 SEC
  CONICAL 39 TO 41 Hz

ALSO SEEN IN UNUSUAL MODE:

- o PRF: 3400 PPS TO 3750 PPS
- o SECTOR SCAN: 1.0 SEC TO 1.6 SEC

2.0 COMPARED TO [redacted] (SCAN THREE)

- o RF: 9290 MHz TO 9440 MHz
- o PRF: 5000 PPS TO 5800 PPS (STAGGERED - SR = 21 TO 20)
- o SCAN: CONICAL 80 TO 87 Hz
  RASTER 3.2 TO 3.4 SEC
  SPIRAL 3.6 TO 4.4 SEC WITH 23 TO 28 Hz

FUTURE TASKING

1. MISSION 7107:
   - DETERMINE LOCATIONS
   - DETERMINE SIGNAL PARAMETERS
2. RESEARCH OTHER COLLECTORS (OTHER DATA BASES)
   - CONVENTIONAL SOURCES
3. ANALYZE & REPORT

QSL I
DE 7310 GA
DE 0333 LET ER RIP

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TWX673
RR RUXQAA RUXQAAS RUXQAAQ RUXQAAL RUXQAAE
DE RUXQAAJ 124 2001530
ZNY XXXXX VVV ZNM
R 191530Z
ST
GUARD 583, [redacted] 090, CONQUER 040, COGNAC 044, CONCERT 053,
CONCH [redacted] 053
GUARD PASS WHIG
CONCERT PASS JUNO

~~S E C R E T~~ 191530Z JULY 1974 CITE [redacted] 0778.
ROUTINE CONCH, COGNAC, JUNO, INFO ROUTINE WHIG, CONQUER, CONCERT,
[redacted]
EARPOP
CONCERT FOR W221, W34
SUBJ: MISSION 7107 PHASE VII ENGINEERING EVALUATION WRAP-UP
1. [redacted] PERSONNEL HAVE COMPLETED A SYSTEM ENGINEERING EVALUATION AT [redacted]. SYSTEM HEALTH REMAINS GOOD. SPACECRAFT VOLTAGES WERE CHECKED ON EVERY REV BEFORE PERFORMING ANY TESTS AND IN EVERY CASE THE VOLTAGES WERE EXCELLENT. SPACECRAFT ARE CURRENTLY IN 100 PERCENT SUNLIGHT.
2. A. ALL BAND OPTIONS HAVE BEEN CHECKED. THE FOLLOWING REPRESENTS THE CURRENT STATUS OF THOSE BAND OPTIONS THAT HAVE

PAGE TWO [redacted] 0778 ~~S E C R E T~~
HISTORICALLY BEEN INOPERATIVE:

	OPT 1	OPT 2
7107A:	NO PROBLEMS OBSERVED	NO PROBLEMS OBSERVED
7107B:	NO PROBLEMS OBSERVED	NO PROBLEMS OBSERVED
7107C:	NO PROBLEMS OBSERVED	BAND 10 & 13 INOPERATIVE
7107D:	BAND 11 INOPERATIVE	SEE BELOW

B. THE FOLLOWING REPRESENTS THE CURRENT STATUS OF THOSE BAND OPTIONS THAT HAVE BEEN HISTORICALLY INTERMITTENT IN THEIR OPERATION:

	OPT 1	OPT 2
7107A:	NO PROBLEMS OBSERVED	NO PROBLEMS OBSERVED
7107B:	NO PROBLEMS OBSERVED	NO PROBLEMS OBSERVED
7107C:	NO PROBLEMS OBSERVED	BAND 4 & 13 INOPERATIVE
7107D:	BAND 10 & 21 INOPERATIVE	BAND 10, 14 & 21 INOPERATIVE

IT SHOULD BE NOTED THAT THE BAND OPTIONS PERFORMED MUCH BETTER THAN IN PREVIOUS EVALUATIONS BECAUSE WE BELIEVE THEY ARE TEMPERATURE SENSITIVE AND THE ENGINEERING EVALUATION WAS CONDUCTED DURING 100 PERCENT SUNLIGHT.
C. SLM OPT #2 STILL INOPERATIVE IN 7107C. SLM OPT #1 STILL

INOPERATIVE IN 7107D. [redacted] NOS 6, 17, AND 18 ARE STILL INOPERATIVE IN 7107D.

2. CROSSTALK WAS NOTED ON 7107A FROM BANDS 14 AND 15 INTO BAND I (134-155 MHZ BAND); HOWEVER, CROSSTALK SHOULD NOT HAMPER NORMAL FIELD SITE PROCESSING. [redacted] DO NOT PRESENTLY EMPLOY ANY TASK GROUPS WITH THE CONFIGURATION THAT HAS OCCASIONALLY PRODUCED CROSSTALK AT [redacted]

3. RECENT TIMER PROBLEMS ON 7107A PROMPTED [redacted] PERSONNEL TO EXAMINE THE LENGTH OF 10 MINUTES SEGMENTS DURING ROUTINE COLLECTION. THE TIMER WAS FOUND TO BE VERY CONSISTENT. WITH ALL READINGS TIMED BETWEEN EIGHT MINUTES 55 SECONDS AND EIGHT MINUTES 56 SECONDS.

3. ALL 7107 SPACECRAFT ARE EQUIPPED WITH COMMAND REGISTER RESET CIRCUITS THAT ARE DESIGNED TO CLEAR THE COMMAND REGISTER TO THE RESET STATE (ALL ONES) IF THE SYSTEM HAS BEEN PARTIALLY ADDRESSED BUT NOT ENABLED WITHIN A CERTAIN TIME SLOT (APPROXIMATELY TWO SECONDS). 7107 DELTA'S THIRD ADDRESS STATE HAS FAILED IN THE "ONE" STATE CAUSING THE COMMAND REGISTER RESET CIRCUITRY TO CYCLE IN AN ATTEMPT TO CLEAR THE COMMAND REGISTER. THE NET RESULT

OF THIS HAS BEEN TO CAUSE SOME OF THE TASKING OF 7107D TO BE IMPROPERLY SET, BY THE COMMAND REGISTER (RESET CIRCUITRY'S MODIFYING THE STATE OF THE COMMAND REGISTER) AT THE SAME TIME THE SPACECRAFT IS BEING ENABLED. THIS HAS BEEN AN OPERATIONAL NUISANCE REQUIRING THAT THE SPACECRAFT BE RE-KEYED SEVERAL TIMES TO INSURE PROPER TASKING. THIS SITUATION IN NO WAY IMPLIES FURTHER DETERIORATION OF 7107 DELTA AND CAN BE EASILY RECTIFIED BY SETTING THE ADDRESS REGISTER TO ALL ZEROS (ADDRESSING TWICE) AFTER ENABLING AND PRIOR TO SETTING THE COMMAND REGISTER FOR TASKING. THIS SIMPLE PROCEDURE WILL INSURE PROPER TASKING WITHIN THE EXISTING CONSTRAINTS PLACED ON 7107D AND WILL ALLEVIATE THE REPEATED RE-KEYING PROBLEM BEING CAUSED BY THE COMMAND RESET CIRCUITRY. THIS PROCEDURE WAS IMPLEMENTED DURING THE ENGINEERING EVALUATION AND CLEARED UP THE IMPROPER TASKING PROBLEM.

4. THERE IS APPARENTLY NO RECORD OF SLM MEASUREMENTS MADE ON OCEAN SURVEILLANCE EMITTERS. THE HIGH DATA DENSITY IN THESE BANDS RAISES QUESTIONS OF FEASIBILITY OF SLM COLLECTION AGAINST THESE TARGETS. SLM COLLECTION AGAINST [redacted] WAS SUCCESSFUL. HOWEVER, SLM COLLECTION OF [redacted] OR OTHER I-BAND SIGNALS WOULD BE BETTER ACCOMPLISHED AT A SITE WITH LOWER

I-BAND SIGNAL ACTIVITY IN ORDER TO AVOID THE HIGH DENSITY ENVIRONMENT AT [redacted] E-2 IMPDET.

~~S E C R E T~~

ST

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CONTROL SYSTEMS JOINTLY

NNNN

QSL 1

DE 8888 GA KKONE FOR U

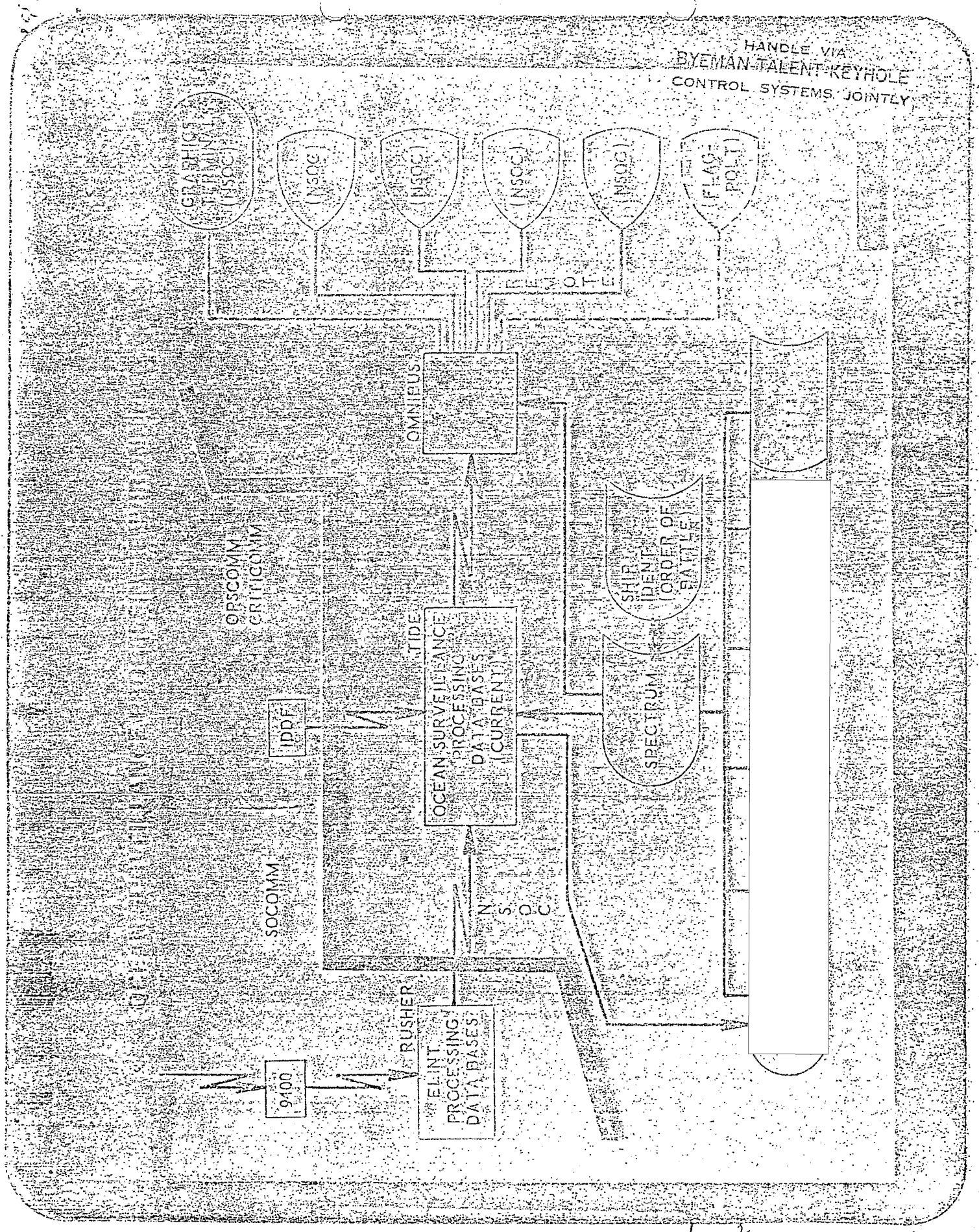
SHCVAAS496
RR RUXQAAS RUXQAAL RUXQAA
DE RUXQTA 308 1961523
ZNY XXXXX VVV ZNM
R 151523Z
BT
XXXXX
JACKAL 752, CONCH 149, CATOR 371, CONQUER 113, GUARD 972,
CALUMET 914, [redacted] 270
JACKAL PASS MADAM, CONSOL
CATOR PASS CHARGE
GUARD PASS WAHOO
CALUMET PASS [redacted]
ZEN/JUNO

~~S E C R E T~~ 151523Z JULY 74 CITE CONCERT 6152.
ROUTINE MADAM, CONCH, CHARGE, CONQUER INFO WAHOO, CONSOL, [redacted]
[redacted] JUNO.
HANDLE VIA BYEMAN CONTROL CHANNELS ONLY
EARPOP
OPS
MADAM FOR [redacted] CONCH FOR [redacted] /CHARGE FOR [redacted]
CONQUER FOR [redacted] FOR [redacted]
SUBJECT: MISSION 7107 ON-ORBIT CALIBRATION
1. FOR PLANNING PURPOSES, THE NEXT SCHEDULED SUBJECT

PAGE 2 CONCERT 6152 ~~S E C R E T~~
CALIBRATION WILL BE CONDUCTED BETWEEN 27 JULY AND 4 AUG 74.
2.FOR KWMADAM: A. ORBIT INFO, FREQS AND POINTING DATA
WILL BE FWD LATER. B.RESULTS OF CAL TO BE SEND TO
[redacted] W243 OF KWCONCERT.
3. FOR KWCONQUER: NECESSARY INFO FOR KWINGOT OPS WILL BE
FWD TO YOU AS SOON AS AVAILBALE.
E-2 IMPDEI
~~S E C R E T~~
BT

Enclosure (7) to BYE 59,888-74

Page 1 of 1 Pages
Page 13 of 13 Pages



Enclosure (8) to BYE 59,888-74
Enclosure 8. Ocean 13 Copies

The [redacted] comparison data tested was from 4 thru 10 April 1974 and the sample totaled approximately 1260 items. The comparison provided the following results:

1. Single ship correlations.

[redacted]	389 items	29 % of the total sample
	172 items	13 % of the total sample

2. Multi-ship correlations.

[redacted]	310 items	24 % of the total sample
	106 items	9 % of the total sample

3. No correlations.

[redacted]	580 items	47 % of the total sample
	984 items	78 % of the total sample

Analysis of [redacted] single ship correlations showed that the predominate correlations were made on [redacted] emitters. Additional emitter correlations represented approximately 5 % of the ~~total~~ sample. [redacted] correlations on these same two emitters represented less than 47 % of the ~~total~~ sample. The higest amount of single ship correlations occurred with the [redacted] and represented 47 % of the ~~total~~ sample.

Multi-ship correlations on [redacted] intercepts appear only two ways; correlated to two ships or correlated to many ships. Those correlated to two ships represented approximately 63 % of the ~~total~~ sample. [redacted] multi-ship correlations are represented four ways; correlated to two ships, three ships, four ships, more than four ships. Two ship correlations of [redacted] intercepts represented 47 % of the ~~total~~ sample. If three ship correlations are added to the two ship correlations the total increases to 67 % of the sample.

Enclosure 9. [redacted] Comparison Data

HANDLE VIA BYEMAN-TALENT-KEYHOLE CONTROL SYSTEMS JOINTLY

AAS378
RR RUXQAAE RUXQAAS
DE RUXQAAL 246 1981230
ZNY XXXXX VVV ZNM
R 171245Z
BT
XXXXX
[redacted]022, CONCH 219

~~S E C R E T~~ 171245Z JULY 1974 CITE CONQUER 0261.
ROUTINE CONCH INFO [redacted]
HANDLE VIA BYEMAN CHANNELS ONLY
EARPOP
THE FOLLOWING RECEIVED FROM [redacted] AND PASSED FOR YOUR ACTION
QUOTE
PAPS III DOCUMENTATION
A. YOUR 021945Z JUL 74 CITE CONQUER 0063
1. AS WE HAVE REPORTED IN THE PAST, PAPS III IS A WELCOME ADDITION TO OUR SOFTWARE INVENTORY. FOR THE MOST PART THE REPORTING ROUTINES ARE EASY TO UNDERSTAND AND SIMPLE TO OPERATE. THERE ARE HOWEVER A FEW AREAS WHERE DOCUMENTATION IS VAGUE OR INSUFFICIENT, AND IT IS THESE AREAS THAT THIS MESSAGE ADDRESSES, IN RESPONSE REF A.
2. WITH THE ADVENT OF PAPS III A NEW PARAMETER "REPORT KEY" WAS ADDED TO EMLOC IN THE PROCESSING DATA BASE. WE KNOW FROM EXPERIENCE THAT A "16" IS USED OF OCEAN SURVEILLANCE EMITTERS AND A "4" FOR

PAGE TWO CONQUER 0261 ~~S E C R E T~~
ALL OTHERS (SITE INTEREST). WE "THINK" THAT A 16 CAUSES A RECORD TO BE IDENTIFIED FOR [redacted] REPORTING, BUT LACK OF DOCUMENTATION OF THE REPORT KEY PARAMETER PRECLUDES A FIRM UNDERSTANDING OF ITS USE. RECOMMEND THAT THIS PARAMETER BE DISCUSSED-EXPLAINED IN VOL III IN THE REPORTING DATA BASE SECTION (FOLLOWING PARA 4.2.3 ON PAGE 4-9.)
3. THE USE OF THE "AND" AND "OR" FUNCTIONS IN THE LIST EDB PROCESSOR REQUIRE EXPLANATION. FOR EXAMPLE IT WOULD BE USEFUL TO SHOW HOW TO "SELECT" ALL [redacted] EMITTERS WITH A PRF OF 695.XXX THRU 720.XXX LOCATED IN THE MEDITERRANEAN SEA DURING MARCH. WE HAVE FOUND THAT VENN DIAGRAMS HAVE BEEN VERY HELPFUL IN EXPLAINING THE AND/OR FUNCTIONS TO OUR PERSONNEL. IT SHOULD ALSO BE POINTED OUT IN THE DOCUMENTATION THAT "SORT" OPTIONS ARE PRIORIZED ACCORDING TO ENTRY SEQUENCE. THAT IS, IF MORE THAN ONE SORT OPTION IS REQUESTED, THE FIRST ONE ENTERED TAKES PRECEDENCE OVER THE OTHER.
4. INSUFFICIENT DOCUMENTATION OF THE HULL FILE PROCESSOR MAY CAUSE SOME CONFUSION WHEN THIS PROGRAM IS INITIATED. PRESENT DOCUMENTATION EXPLAINS THAT THE CONSOLE WILL REQUEST THAT INPUT AND OUTPUT TAPES BE MOUNTED, AND ASK IF ANY ADDITIONAL

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TAPES (INPUT) ARE REQUIRED. HOWEVER, IT ASKS FOR ADDITIONAL TAPES TWICE (ONCE AFTER A PARITY CHECK RUN (?) THROUGH THE TAPE AND AGAIN AFTER THE DATA XFR RUN). PERSONNEL UNFAMILIAR WITH THE PROGRAM ARE SOMEWHAT STARTLED TO LEARN THAT TWO PASSES THROUGH THE TAPE ARE REQUIRED, AND SOME UNCERTAINTY EXISTS AT TO WHEN A YES/NO ANSWER TO THE QUERY "ADDITIONAL TAPES ?" IS REQUIRED.

5. EDIT EDB PROCESSOR - WE RAN INTO SOME DIFFICULT SUTUATIONS WHEN WE FIRST USED THE EDIT EDB PROCESSOR BECAUSE WE DIDN'T KNOW ABOUT INVALID SRN'S. THESE PROBLEMS WERE DOCUMENTED AND FORWARDED TO HRB: WITH THEIR HELP, THESE PROBLEMS HAVE BEEN PRETTY MUCH IRONED OUT. PAPS III MOD I, SCHEDULED FOR INSTALLATION IN AUGUST SHOULD VIRTUALLY ELIMINATE THE INVALID SRN PROBLEM. WE WOULD LIKE TO SEE A NEW SET OF "CARD INPUT EXAMPLES" WHICH DEAL WITH CHANGES IN THE LOCATION, PRF, PRI FIELDS. PRESENT SET OF EXAMPLES IS HAZY AND DIFFICULT TO CORRELLATE TO FEPF CONTENT. FOR INSTANCE, THE CHANGE SUGGESTED IN EXAMPLE FIVE, PART ONE (PG 4-32) DOES NOT EXIST IN THE REAL WORLD. (GRANTED THAT THE EXAMPLE IS PROBABLY MEANT TO DEMONSTRATE THE TECHNIQUE USED RATHER THAN A CONCRETE SITUATION).

WE SPENT A LOT OF TIME TRYING TO MAKE SENSE OUT OF THE EXAMPLE BEFORE WE REALIZED THAT IT MERELY DEMONSTRATED A TECHNIQUE. ADDITIONALLY, PART TWO OF THE SAME EXAMPLE SUGGESTS A CHANGE TO A FIELD WHICH IS NOT EVEN USED (DBL WRD 3). IN ONE INSTANCE WE TRIED TO MAKE A CHANGE IN THE LOCATION FIELDS. WE TRIED SEVERAL DIFFERENT METHODS, ALL UNSUCCESSFULLY. DOCUMENTATION WAS NOT DETAILED ENOUGH TO ALLOW US TO DETERMINE PRECISELY WHERE AND HOW TO ENTER THE LOCATIONAL INFORMATION.

6. IDEALLY, WE WOULD LIKE TO HAVE THE ABILITY TO MADE ADB/EDB CORRECTIONS DIRECTLY FROM THE CRT. THIS WOULD ESSENTIALLY ELIMINATE THE NEED TO PUNCH CARDS AND WOULD SIMPLIFY THE CORRECTION PROCESS. IT WOULD REQUIRE, HOWEVER, THAT DATA RESIDENT ON THE ADB/EDB BE TRANSFERED TO THE MHD.

UNQUOTE

E-2 REPORT

~~S E C R E T~~

BT