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GUARD 0212

GUARD PASS TO COGNAC

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PRIORITY COGNAC

EARPO

FINANCIAL PLANNING ESTIMATES FOR FY 74 THRU FY 77 FOR
PROGRAM "C"

A. DNRO MEMO TO DIR PROGRAM C OF 11 FEB 1971, BYE-12574-71

B. DIR PROGRAM C MEMO TO DNRO OF APRIL 1971, BYE-52236-71

1. [] WELCOMES THE OPPORTUNITY TO CONTRIBUTE TO THE LONG RANGE PLANNING FOR THE POPPY PROJECT AND SUBMITS IN ACCORDANCE WITH THE GUIDANCE RECEIVED IN REF A, THE FOLLOWING FINANCIAL ESTIMATES FOR THE YEARS FY 74 THROUGH FY 77. THESE COST ESTIMATES UTILIZE 1971 DOLLARS AND DO NOT TAKE ANY ECONOMIC COST GROWTH INTO ACCOUNT. THE BASIS FOR THESE LONG RANGE COST FORECASTS DEPENDS HEAVILY UPON THE NORMAL EVOLUTION OF THE POPPY SYSTEM. SPECIFICALLY EXCLUDED ARE ANY COST ESTIMATES FOR "AUGMENTATION OF PROGRAM C FOR OCEAN SURVEILLANCE." THE PLANNING ESTIMATES ARE BASED UPON THE FOLLOWING ASPECTS OF CURRENT POPPY TECHNOLOGY:

A. TOTAL INTERCEPT CAPABILITY OF ENTIRE WEAPON SYSTEM AS REQUIRED BY CURRENT USA GUIDANCE. THIS GOAL IS COUPLED WITH THE TDOA GEOPOSITIONING CAPABILITY SO THAT GEOGRAPHIC-LOCATION DATA-SORTING WILL BE ATTAINED ON-SITE THROUGH CONTINUATION OF CURRENT SOFTWARE AND HARDWARE DEVELOPMENT. THUS, ASSOCIATIVE FILTERS WILL BE USED TO ISOLATE THE VARIOUS ELEMENTS OF A WEAPON SYSTEM AT THE EARLIEST POSSIBLE OPPORTUNITY.

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THAT BOTH SPACECRAFT AND ON-SITE PROCESSING AND CONTROL WILL BE OPTIMIZED TOWARD THE WIDEST POSSIBLE RANGE OF CRITICAL OPERATIONAL EXPLOITATION.

C. THESE FUTURE POPPY MISSIONS WILL CONTINUE TO USE MAIN-BEAM RADAR INTERCEPT TECHNIQUES ALONG WITH THE FULL RANGE OF PARAMETRIC MEASUREMENT CAPABILITY (TOLERANCES TO BE SPECIFIED BY THE COMMUNITY). FURTHER EXTENSION OF THE COME-FILTER TECHNIQUE OF MISSION 7107 ALONG WITH A NEW DEVELOPMENT OF THE SPACECRAFT COLLECTION-ANTENNA ARRAY SELECTION WILL PROVIDE DISCRIMINATION ON THE BASIS OF DIRECTION OF SIGNAL ARRIVAL. THESE TWO TECHNIQUES WILL COMBINE TOWARD THE OPERATIONAL SOLUTION OF REDUCING THE EXTERNAL DATA VOLUME OF THE WEAPON FREQUENCY SPECTRUM SUCH

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COOPERATIVE SPACECRAFT IN THEIR INITIAL ADJUSTMENTS.

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E. ISOLATION OF THE PRIORITY DATA (THAT WHICH IS TIME-CRITICAL) WILL CONTINUE TO BE EMPHASIZED THROUGH DEVELOPMENT OF HARDWARE AND SOFTWARE TECHNIQUES SO THAT THE COLLECTION SITES CAN ISOLATE AND PROCESS BEFORE THE NEXT PAIR OF SPACECRAFT ARRIVE. AS THE TIME REQUIRED FOR THE ISOLATION AND PROCESSING OF THIS TIME-CRITICAL DATA IS REDUCED, THE SITE WILL BE ABLE TO EITHER HANDLE MORE SPACECRAFT OR EXPAND THEIR ROLE INTO FURTHER DATA PROCESSING IN SUPPORT OF THE COMMUNITY. IN ANY CASE, THE GOAL OF CONTINUED BALANCE BETWEEN THE CAPABILITIES OF COLLECTION SITE SYSTEMS AND SPACECRAFT SYSTEMS WILL OCCUPY THE GREATEST EMPHASIS IN THE EVOLUTION OF THE FUTURE POPPY MISSIONS.

F. AS A COROLLARY TO THE LAST ITEM, THESE MISSIONS WILL BE TIME-PHASED IN THEIR ORBITS SO THAT THEY OPTIMIZE THEIR TIME OVER THE COLLECTION SITES THEREBY PROVIDING AN ALMOST CONTINUOUS OPPORTUNITY FOR THE SITES TO EXPLOIT THE FUTURE TIME-CRITICAL HARDWARE AND SOFTWARE AGAINST THE WIDEST VARIETY OF OPERATIONAL PRIORITY TARGET AREAS AND TARGET WEAPON SYSTEMS.

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TABLE I. FINANCIAL PLANNING ESTIMATES FOR POPPY THRU FY 77

LINE ITEM	FY 74	FY 75	FY 76	FY 77
I. SPACECRAFT	\$ 7.10	\$ 7.40	\$ 7.70	\$ 8.00
II. GROUND SYSTEMS	3.60	3.70	3.90	4.00
III. GROUND OPERATIONS	.3	0.37	0.40	0.45
IV. FACILITIES & TEST EQUIPMENT	0.80	0.80	0.80	0.80
V. SERVICES	1.35	1.38	1.40	1.45
	\$13.20M	\$13.65M	\$14.20M	\$14.70M

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