

CLASSIFIED MESSAGE



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UNIT: H/OSP
EXT: 4251
DATE: 21 SEP 68

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TO :
FROM: Declassified and Released by the NRO
CONF: In Accordance with E. O. 12958
INFO: on NOV 26 1997

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[REDACTED] INFO [REDACTED]
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[REDACTED] FOR [REDACTED]
[REDACTED] FOR [REDACTED]
[REDACTED] FOR [REDACTED]

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CITE [REDACTED]
[REDACTED]
1104

SUBJECT: ANALYSIS OF SO-180 ENGINEERING TEST ON MISSION 1104

REF: A. [REDACTED]
B. 11 SEP 68 MEETING AT [REDACTED] BETWEEN [REDACTED] AND [REDACTED] AND [REDACTED] AND [REDACTED] AND [REDACTED]

[REF MESSAGE OUTLINED [REDACTED] ORIGINAL REQUIREMENTS FOR [REDACTED] ANALYSIS OF THE MISSION 1104 SO-180 TEST. ADDITIONAL ANALYSIS BY [REDACTED] OF THIS TEST IS INDICATED TO ASSIST IN EVALUATING THE FUTURE USE OF SO-180 AND TO ASSIST IN EVALUATING THE ACCOMPLISHMENTS OF THE TEST.]

1. THE ORIGINAL ENGINEERING TEST PLAN (AS PRESENTED TO COMIREX) CONTEMPLATED FLYING AGAINST THREE MAJOR QUESTIONS INVOLVING

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(1) RICE CROP ESTIMATION IN CHINA, (2) ATOMIC ENERGY FACILITIES AND (3) UNDERGROUND ANTENNAS. THE ORIGINAL PURPOSE OF THESE TESTS WAS, THEN, AS FOLLOWS:

A. AGRICULTURAL ASSESSMENT

(1) "FACILITATE THE MONITORING OF THE CONDITION OF AUTUMN HARVESTED CROPS IN THE SPECIFIED AREAS OF COMMUNIST CHINA AND ANALOGOUS AREAS OF TAIWAN, JAPAN, AND THE U.S., FOR WHICH GROUND TRUTH IS AVAILABLE."

(2) "SURVEY THE WATER LEVEL OF RESERVOIRS AND SOIL MOISTURE CONDITIONS AS A CHECK AGAINST COLLATERAL WEATHER INFORMATION."

B. ATOMIC ENERGY FACILITIES

OF PRIMARY INTEREST WAS TO EVALUATE IF FLUORINE DISEASED VEGETATION COULD BE DETECTED IN THE VACINITY OF AE FACILITIES, AND TO DETERMINE IF THE CHEMICALS IN WASTE PONDS ASSOCIATED WITH AE FACILITIES COULD BE IDENTIFIED IN THE SO-180 COVERAGE.

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IN THIS REGARD, WE HAD SUGGESTED THE ACQUISITION OF SEVERAL DOMESTIC SITES AS A TEST.

C. UNDERGROUND ANTENNAS

THE TEST ASSUMED THAT RECENTLY CONSTRUCTED UNDERGROUND ANTENNA SITES MAY HAVE CAUSED A DISTURBANCE TO THE VEGETATIVE COVER, AND HENCE, BE IDENTIFIABLE IF THIS VEGETATION DISTURBANCE WAS INDICATED ON THE SO-180.

2. UNFORTUNATELY, VIRTUALLY NONE OF THE ABOVE TARGETS FOR THE TEST WERE COVERED. NONE OF THE PRIORITY RICE GROWING AREAS IN CHINA WERE COVERED, NOR WERE ANY OF THE GROUND TRUTH AREAS IN JAPAN, THE U.S. OR TAIWAN. NONE OF THE DESIRED DOMESTIC AB FACILITIES WERE COVERED, AND ONLY ONE OF THE FOUR DESIRED UNDERGROUND ANTENNA AREAS WAS COVERED. FURTHER HAMPERING THE ANALYSIS OF THE SO-180 COVERAGE, OF COURSE, IS THE SEVERE STATIC MARKING CAUSED BY THE FAILURE OF THE PRESSURE MAKE-UP SYSTEM.

3. THERE ARE, HOWEVER, SEVERAL PASSES OF THE SO-180 WHICH

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CONTAIN IMAGERY COMPARABLE WITH THE BEST THAT COULD BE EXPECTED, GIVEN THE INHERENT LOW RESOLUTION OF THE FILM. INFORMAL DISCUSSIONS WITH [REDACTED] INTERPRETERS AND THE [REDACTED] MESSAGE FOR 1104-2 ^(copy) INDICATE THAT THERE IS, PROBABLY, ENOUGH GOOD SO-180 COVERAGE TO ENABLE AN ANALYSIS OF ITS POTENTIAL TO BE ASSESSED.

4. IN THIS REGARD, [REDACTED] DESIRES [REDACTED] TO CONDUCT AN ANALYSIS OF THE POTENTIAL USEFULNESS OF SO-180 IN THE J-3 SYSTEM, AND TO PROVIDE ANSWERS TO THE FOLLOWING SPECIFIC QUESTIONS.

A. IS THE RESOLUTION IN THE J-3/SO-180 COVERAGE ADEQUATE TO DO MEANINGFUL ASSESSMENT OF THE STATUS OF CROPS. OF PARTICULAR INTEREST WOULD BE RICE. HOWEVER, OTHER MAJOR CROPS SHOULD BE CONSIDERED. THE RELATIVE ABILITY OF SO-180 AND 3404 TO ADDRESS THIS QUESTION SHOULD BE EVALUATED. IF THE RESOLUTION OF THE SO-180 IS ADEQUATE TO ASSESS CROPS, THE LEVEL OF ASSESSMENT ABILITY SHOULD BE ADDRESSED. FOR EXAMPLE, COULD THE MAGNITUDE OF CROP YIELD BE EVALUATED? COULD THE HEALTH (VIGOR) OF THE CROPS BE ASSESSED? COULD THE CROP TYPE BE

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B. IS THE SO-180 BETTER SUITED TO IDENTIFY, LOCATE AND ASSESS THE MAGNITUDE OF FLOODING? OF PARTICULAR INTEREST IS FLOODING THAT WOULD HAVE A MAJOR IMPACT ON CROP STATUS. HOWEVER, FLOODING THAT COULD HAVE A MAJOR IMPACT ON CIVILIAN AREAS SHOULD BE CONSIDERED.

C. THE USE OF THE SO-180 TO EVALUATE THE NATURE OF VARIOUS CHEMICAL PROCESSES BY ENABLING IDENTIFICATION OF CHEMICALS AND/OR MINERALS IN SETTLING PONDS SHOULD BE EVALUATED. IT IS UNDERSTOOD THAT THE COVERAGE OF THE MINERAL EXTRACTION BEDS AT THE DEAD SEA MAY BE USEFUL IN THIS EVALUATION.

D. THE ABOVE QUESTIONS ARE A LIMITED NUMBER THAT POTENTIALLY COULD BE ANSWERED BY THE USE OF THE SO-180, AND SHOULD IN NO WAY HAMPER [REDACTED] EVALUATING THE SO-180 FOR OTHER PURPOSES. SPECIFICALLY, [REDACTED] DESIRES [REDACTED] TO CONDUCT A THOROUGH STUDY OF THE SO-180 COVERAGE TO DETERMINE

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OTHER USES VIS-A-VIS THE 3404 (OR IN COMBINATION WITH 3404) TO WHICH THE SO-180 MAY PROVIDE ANSWERS. DETAILED ANALYSIS IN THIS REGARD IS REQUESTED.

E. DETAILED ANALYSIS OF THE SO-180 FROM MISSION 1104 MAY CONCLUDE THAT, IN FACT, SUFFICIENT COVERAGE WAS NOT OBTAINED TO ENABLE A POSITIVE AND VALID ASSESSMENT OF ITS USEFULNESS IN THE J-3 SYSTEM. IN ANY EVENT, RECOMMENDATIONS ON THE DESIRABILITY OF FLYING ADDITIONAL TEST LOADS OF SO-180 (AND THE TARGETS AGAINST WHICH IT SHOULD BE FLOWN) IS DESIRED.

END OF MESSAGE

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