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10 DEC 1968

on NOV 26 1997

MEMORANDUM FOR: Director, National Photographic Interpretation Center

SUBJECT : Request for Test and Evaluation Support

1. The Design and Analysis Division, OSP has under development equipment to assist in the determination and recording of the area coverage achieved by a CORONA mission by assessing the film from the panoramic cameras. This piece of equipment, referred to as the ACP Device, is basically a light table with a clamping device to hold in position one frame at a time while allowing an operator to move a stylus about delineating those areas of acceptable versus non-acceptable coverage (cloud cover, areas of defocus, insufficient illumination, etc.). This stylus movement is recorded in terms of film coordinates, meshed with appropriate ephemeral data and projected to ground coordinates through software, and results in an output of acceptable coverage attained in terms of WAC cells (approximately 12 x 18 n. m. in ground dimensions).

2. It is expected that the ACP Device will improve the accuracy of recording acceptable coverage as it will use the panoramic frames as its data source. As you know, the present procedure used by AMS involves extrapolating the excellent, fair, and poor coverage from the index camera photography. This procedure is vulnerable from the standpoint that SI units will be omitted from certain of the remaining CORONA missions. Further, the [redacted] system will not have a comparable index camera, and thus it will be necessary to use the main camera imagery for making assessments of acceptable coverage. It is expected that the present ACP Device will lead to equipment optimized for [redacted] coverage assessment.

3. Upon acceptance of the ACP Device from the contractor, [redacted] in early January 1969, OSP

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proposes to initially install the equipment at NPIC and request that NPIC personnel perform hardware test and evaluation and operational suitability testing of the device. [redacted] of this office has been working with personnel in both the Engineering Support Division and the Applied Photo Science Division of [redacted] Group to set forth appropriate test procedures. Basically, these will involve three phases: 1) the testing of the electro-mechanical aspects of the hardware; 2) the integration of hardware and software; and 3) the use of the equipment by operational personnel to determine suitability for operational use. This last requires personnel skilled in making image quality judgments and probably should culminate in running the photography from one bucket through the process under controlled operational conditions in order to assess time and manpower factors. I understand that estimates of NPIC manpower to perform this evaluation have been made by your personnel and do not appear excessive.

4. The development of this ACP Device has been in response to SOC needs. [redacted] of that office has been kept continually informed as to the progress of the project, and he concurs in the concept of initially installing the equipment at NPIC for evaluation purposes. Providing the device proves feasible he will then address where it should be located for routine operations.

5. The initial cooperation of your people during investigations and discussions involved in this project has been outstanding and has been representative of the sort of inter-office relationships that give strength to this Agency. I look forward to further close association.

6. Any questions regarding this project may be addressed to [redacted] extension 4101, and he will be glad to be of service.

[redacted]

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