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Approved For Release 2004/05/05 : CIA-RDP78B05171A000600010085-0

NPIC/D-71-70

MEMORANDUM FOR: Assistant Deputy Director for Intelligence

SUBJECT : Request for Approval of a Research and Development Contract for the Development of Dry Silver Reproduction Equipment [redacted] from FY-1970 Funds

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1. This memorandum requests approval to commit funds for a research and development contract. The specific request is stated in Paragraph 7.

2. In 1954, NPIC entered into a cost-sharing, no fee, contract with the [redacted] for the development of a highly promising, proprietary, photo reproduction process. Under this contract, research and development of basic materials, along with the development of experimental reproduction techniques and equipment, has continued to date. Certain of these dry process materials have reached fruition and are now ready to be phased into the Center to fulfill pressing operational requirements. The following two pieces of equipment will be the first prototype units of dry silver, heat processed, reproduction equipment to be designed for specific functional use in the Center:

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a. The Center has a current requirement for photographically enlarged working prints for use by both graphics personnel and by the photo interpreters. The result of this development will be an enlarger which can be operated under ambient light conditions in normal work spaces. This enlarger/viewer/printer will allow graphics personnel to compose rough drafts of briefing boards and viewgraphs without requiring photo lab support. These layouts, when approved, can then be sent to the photo lab for high-quality, finished copy. This process would expedite delivery and eliminate costly and time-consuming remakes. The same equipment would permit photo interpreters to produce, on a quick response basis, enlarged working copies for annotation and would be useful in providing detailed requests for services; i.e., a required missile dimension or the required measurement of a particular part of a submarine can be identified on the enlargement produced at the PI work station for the subsequent guidance of IEG/PHD during measuration. The PI's present alternative is to rough sketch the image or to obtain a photo lab enlargement at a later date. In addition to relieving the photo laboratory of a large volume of small, special order requests, this reproduction process will allow operational personnel to be more selective and to compose their own enlargements with a quick response capability.

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b. There is a current photo interpretation requirement for equipment to produce quality photo reproductions right at the PI's work station using the available "work copy" in film positive form. This equipment will enable the interpreter to make varying "density cuts" of imagery to enhance the interpretability of certain features and to produce individual stereo pairs for his historical reference file without cutting sections of the film from which he is working. In the past, this requirement has been partially filled by a diazo (ammonia processed) system which was developed about five years ago. Wear and aging of the previously developed equipment, combined with the inherent problems created by ammonia leakage--with resulting toxicity and corrosion problems--have resulted in the gradual retirement of these printer/processor stations, despite the fact that the user requirement still exists. This requirement will be accentuated by newer acquisition systems which produce greater volumes of film while at the same time providing fewer copies of the materials for exploitation. The experimental materials and printing and processing techniques developed under NPIC funding have recently undergone experimental evaluation by NPIC operational personnel. The results from that evaluation have provided significant inputs to this proposed study and operational configuration breadboard. This task is designed to optimize the light sources, printing and processing techniques and to define specifications for the new heat processed (non-ammonia) diazo film reproduction units. Actual equipment fabrication will be undertaken in FY-71 under Phase II of this development.

3. Regular monthly progress/financial reports, five copies of an Operator Maintenance Manual and a critical spare parts list are stated as deliverable items along with the Enlarger Reader/Printer. [redacted] has proposed a ten-month schedule for delivery of the finished equipment which will use the new dry silver enlarging paper developed under our research contract. Since this equipment is essentially a series of modifications to a successful piece of equipment developed by the U.S. Navy, the technical risk involved is minor.

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For the production of the dry diazo photo interpretation reproduction station, the [redacted] has proposed a two-phased program. Phase I is defined as a six-month study/breadboarding effort, under which we will establish the technical standards, specifications, and the optimum engineering configuration required to provide the best quality reproductions. Phase II is proposed as the actual design and construction of

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an operational prototype based on the results of Phase I. Funding for only the Phase I portion is recommended at this time. This will be followed by a critical evaluation period and a detailed definition of specifications prior to actual construction of the prototype. The risks here are not concerned with technical feasibility but with how well the system can be optimized to provide the photo interpreter with the highest quality reproduction with the greatest ease of operation at his work station. Hence, the technical risks are considered to be small.

4. At the present stage of development, the dry silver materials and processing involved is still proprietary to the [redacted] Therefore, sole source procurement is essential. 25X1

5. No immediate follow-on effort is presently planned for the Enlarger/Reader Printer. However, it is expected that after successful operational testing, the concept of a roomlight, near real-time, enlarging capability will be adapted to various other NPIC operations. For the Dry Diazo Printer, the Phase II prototype design and fabrication effort is planned to follow the Phase I study/breadboard program. The exact definition and, hence, the costs involved will be determined by the critical evaluation of Phase I and the parameters established by this evaluation. The present estimate for the prototype and fabrication is [redacted] Phase II will be a FY-71 project.

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[redacted]

7. It is requested that approval be granted for the commitment of funds for this contract in an amount not to exceed [redacted] to be charged to FY-70 R&D funding. 25X1

ARTHUR C. LUNDAHL
Director
National Photographic Interpretation Center

Attachments:
1. [redacted] Proposals (2)
2. Forms 2420 (1)

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Assistant Deputy Director for Intelligence

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