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NPIC/P&DS/P-6-994  
1 September 1966

MEMORANDUM FOR: Assistant for Plans and Development, NPIC

SUBJECT: Micro-Wave Drying

1. [redacted] from Westover AFB, gave me the following particulars on their request for contractual assistance on electronic micro-wave drying for photographic processors:

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a. The current capabilities of bulk processing at Westover and in the field are dryer limited (120'/minute processing vs. 52'/minute drying). PSD has the same problem.

b. Micro-wave drying has been used outside the photographic area for some time for many drying applications.

c. [redacted] is building micro-wave guides and at the present time [redacted] is using such a guide in a prototype film dryer for 35mm., B&W at 200'/minute. This prototype should be completed in about one month. The primary reason for developing this dryer at [redacted] is for color. The speed capability for color was not known by [redacted] but excessive speed is not our problem. Twenty-feet/minute, more than adequate and [redacted] believes that the drying speed for paper or film of any type should be around 100'/minute in 9½" widths.

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d. [redacted] is not interested in building processors for reconnaissance film, but [redacted] will supply the micro-wave guide for such applications.

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e. [redacted] has submitted a proposal to Westover for a high-speed paper or film dryer using the [redacted] micro-wave technique and components. This proposal is for [redacted] for a prototype dryer capable of 200'/minute on a "new low gamma" film base and 100'/minute on any B&W film or paper in widths up to 9½". Even though color was not a specific requirement in this proposal, [redacted] sees no reason the dryer could not do color prints or paper.

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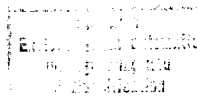
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f. [redacted] has the funds for this development and would like our assistance in getting a sole-source contract with H-F as soon as possible.

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2. [ ] (DD/S&T) stated that since this procurement was unclassified, and their charter for contracting is limited to code-word items, this contract should go through the Office of Logistics. He felt that this would still be faster than Westover's route through [ ] Also, OL is currently contracting with [ ] and this might be handled as an add-on. In either case (new contract or old one), we might be able to combine the [ ] development with a specific development of our own for our purposes. Also, we would be in an excellent position to monitor the effort closely. 25X1
3. The P&DS current TPPD shows [ ] in FY-67 for a study and [ ] in FY-68 for a developmental model of a color film/print dryer. In discussions with Development Branch, [ ] has indicated that they may want to make a separate dryer for film and one for paper if the study or separate studies so indicate. I understand [ ] really wanted something off-the-shelf, if possible, and we just convinced him a study was necessary in spite of the urgency of his requirement. 25X1  
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4. The capabilities and limitations of the electronic micro-wave drying technique should be thoroughly investigated to determine if a study is required. [ ] also informed me that several companies are looking into micro-wave techniques (including [ ] and the potentials are great across the board. [ ] however, has been building successfully operating equipment for some time and are under sub-contract to [ ] 25X1  
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5. [ ] is sending a copy of the [ ] proposal to P&DS and we can review it in detail while communicating with the Office of Logistics regarding contract activities. 25X1
6. [ ] suggested that one of our development people go up to [ ] and have a look at their 35mm. prototype. 25X1  
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7. I realize that color, and especially problems of curl, is different in cut sheet or briefing board type prints than a continuous processor. However, [ ] could see no reason this technique could not be applied. We do have print straighteners, and drying takes the long time period. Speed, of course, is not our problem, as previously stated. It may be possible to control emulsion layer drying by a series of micro-wave evaporative gates. On the other hand, since the device is relatively small, we may be able to move the gate over the film or paper instead of moving the material through the gate. 25X1
8. I recommend that P&DS delay any procurement activity on a color film/paper dryer study (Project 10047) until this technique is thoroughly evaluated.

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Chief, Plans Branch, P&DS, NPIC

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