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MEMORANDUM FOR COLONEL JOHN L. MARTIN, JR.

SUBJECT: Brief Review of Development Work Proposed by Eastman Kodak Company, Dated 1 August 1962

The work proposed is extremely broad in nature. The broad description of the objectives makes it impossible to separate the work into fixed categories. However, it does range from positively right and we need it soon, under the NRO; to don't know if it is needed and if it is, it isn't in the NRO charter to do it.

Category I

Research work which should be accomplished under NRO sponsorship as a Black contract.

| <u>Section</u> | <u>Item</u>                                   | <u>Estimated Cost</u> |
|----------------|-----------------------------------------------|-----------------------|
| 3.2            | Negative Processing                           |                       |
|                | Improved Present Techniques<br>Frame-by-Frame |                       |
| 3.4            | Titling and Lacquering (Design & Build)       |                       |
| 3.6            | Printing Exposure Determination               |                       |
|                | Film Reader-Recorder<br>Printer Control       |                       |
| 3.9            | Waxer (Design & Build)                        |                       |
| 3.13           | Handling Extra Thin Material (Study)          |                       |
| 4.4            | Latensification (Experiment)                  |                       |
| 5.4            | Acquisition Equipment Recommendations         |                       |

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Category II

Desired outcome of production efficiency - new equipment if required should be developed under R&D contract.

| <u>Section</u> | <u>Item</u>                                                                                           | <u>Estimated Cost</u> |
|----------------|-------------------------------------------------------------------------------------------------------|-----------------------|
| 3.1            | Inspection and Presplice<br>Negative Dryer<br>Ultrasonic Splicer for Wet Negatives<br>Infrared Viewer |                       |
| 3.3            | Negative Quality Inspection & Breakdown                                                               |                       |
| 3.10           | Inspect & Breakdown (Study)                                                                           |                       |
| 3.11           | Pack, Label and Ship (Study)                                                                          |                       |

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Category III

Being done on other contracts (not Black). EK could advise on approach and recommend changes. If not adequate, contract should be changed or new contract let with EK to supplement current work.

| <u>Section</u> | <u>Item</u>                                                                                                                                           | <u>Estimated Cost</u> |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 3.7            | Printing<br>Exposure Control Printer<br>Contrast Control Study<br>Contrast Control Printer<br>High Density Light Source<br>Frame Detector and Counter |                       |
| 3.8            | Dupe Processor<br>Semi-automatic Splicer & Roll Changer<br>Surface Defect Scanner                                                                     |                       |

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Category III (Continued)

| <u>Section</u> | <u>Item</u>                                                                                                        | <u>Estimated Cost</u> |
|----------------|--------------------------------------------------------------------------------------------------------------------|-----------------------|
| 3.8a           | Reversal Exposure Processor<br>Engineering<br>Fabricate                                                            | 25X1                  |
| 3.12           | Chemical Mixing Study                                                                                              |                       |
| 4.3            | Image Quality Evaluation<br>Measurements<br>Automation of Data Reduction<br>Grainability Measurement<br>Attachment |                       |
| 5.3            | Laboratory Quality Monitoring                                                                                      |                       |

Category IV

Work, whenever a requirement exists, should be competitive and ER should be encouraged to participate.

| <u>Section</u> | <u>Item</u>                                                                             | <u>Estimated Cost</u> |
|----------------|-----------------------------------------------------------------------------------------|-----------------------|
| 3.5            | Cleaning and Waxing                                                                     | 25X1                  |
| 4.2            | Portable Film Processing Laboratory (Trailer)<br>Development & Engineering<br>Prototype |                       |
| 4.9            | R&D Processor for Quality Control<br>Purchase<br>Alter for Exotic Processing            |                       |

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**Category I**

Work which is not NRO responsibility - should be contracted for thru NPTC, DIA or the services.

| <u>Section</u> | <u>Item</u>                                                                                                                                    | <u>Estimated Cost</u>                                                   |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 4.1            | <p>Yans Development (Continuing Effort for Three Years)</p> <p>Labor<br/>Computer Time<br/>Samples<br/>Laboratory Equipment</p>                | <div style="border: 1px solid black; width: 100%; height: 100%;"></div> |
| 4.5            | <p>Image Enhancement Techniques</p> <p>Electronic<br/>Mechanical</p>                                                                           |                                                                         |
| 4.6            | <p>Exploitation Equipment</p> <p>9 x 9 Balarger<br/>Stereo Microscope Viewer<br/>O &amp; D Printer<br/>Photo Etcher<br/>Archival Converter</p> |                                                                         |
| 4.7            | <p>Reversal Equipment</p> <p>Engineering<br/>Build Prototype</p>                                                                               |                                                                         |
| 4.8            | <p>RF 40</p> <p>Engineering<br/>Build Prototype</p>                                                                                            |                                                                         |
| 5.1            | <p>Survey of PI Equipment and Exploitation Devices</p>                                                                                         |                                                                         |
| 5.2            | <p>PI Training Study</p>                                                                                                                       |                                                                         |
|                |                                                                                                                                                |                                                                         |

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