

28 July 1961

Declass Review, NIMA/DoD

MEMORANDUM FOR: Chief, Technical Plans and Development Staff

SUBJECT: Trip Report to the West Coast - 17 - 21 July 1961 25X1A

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25X1A During the period covered by this report, I traveled to Los Angeles, California, to visit with [redacted] and [redacted] and to review with these two corporations the status of existing contracts.

1. [redacted] Los Angeles, California. We have two contracts with them, both unclassified. The first contract is the development of an Image Quality Meter. In its original conception, this device was tended to view a piece of arially exposed or other exposed film, and the readout on three selected dials would yield acutance, granularity, and resolution as found within the image area. It was a noble idea but, as we have gotten into the project, we also learned more about the nature of images so we have begun to learn that what seems so bright and hopeful in the early stages is now, in a technical sense, an impossibility. This device can, however, give us relative information on each of these image characteristics and in that format it will be an addition to our laboratory. The mechanism is complete except for some final tuning and debugging. [redacted] suggests, at a cost of [redacted] an additional work order to cover the installation of two control mechanisms. The first of these is a selective sensitive trigger mechanism in the resolution counter. Such a mechanism would permit the operator to control the sensitivity of the device so it would note whether it was dealing with high-contrast resolutions or low-contrast resolutions. Second suggestion: modification would cover the installation of a variable sensitivity noise filter. Since one of the problems most seriously affecting high resolution measurements is the noise level in film, it is desirable to be able to adjust the sensitivity of the resolution counter so that we could filter out random noise characteristics and this is the device which [redacted] now proposes to be added. The mechanism on its delivery, particularly if we go for the suggested modifications, will be a useful instrument. It will, however, require a highly skilled technician to be used. It will also require a highly skilled technician to evaluate the results derived from it. As of this moment, the proposal for the additional work is pending. Delivery date without that work will be sometime around the first of September. Delivery date, if we undertake the work, will be somewhere around late October.

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The second contract with [redacted] covers development of an electronic image enhancement mechanism. This device will scan an image using a scanning point of light, transferring this scan into an electronic signal. It will modify the signal in terms of gain, intensity, noise

amplitude frequency, etc., to improve image quality and it will then re-convert the electronic signals using fluctuating light reimaged as scan lights on the film to rebuild the modified picture. This particular project has been bedeviled by a number of fairly major designed problems and, in each case, it has required some backup and recovery of task ground before a selected solution can be executed. As a result, [redacted] indi-

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[redacted] incidentally presumes everything goes reasonably well from here on out. As of this moment, I am hopeful of a successful conclusion to this project if we go along with it. I have had some fairly severe doubts about the machine in the past; all of them based on vibration problems. I saw a demonstration in Los Angeles of the effect of vibration on image quality using the machine and there is no appreciable degradation. The machine should, therefore, be able to meet high resolution characteristics.

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2. [redacted] California. This report

covers the development of a high-resolution multi-format rear projection film viewer, known as Project [redacted] (Unclassified) As of 20 July 1961. Messrs. [redacted] proposed to have models 1 and 2 of the high acuity viewers available in their shop completed ready for test of acceptance. To facilitate that test program I have shipped to them rolls of 70mm 5" and 9" film. I have also shipped a high resolution target array and the information of how to use that array. They should not only assist in testing, but should serve as the material to do their final tune-up and debugging. As of my 20 July visit, the project appeared to be on schedule, and, so far as one could see looking at parts and pieces, they were utilizing excellent fabrication techniques and quality control in the construction of the devices. There is no indication at this time of the possibility of an overrun on this contract. I have made arrangements for [redacted] to be in Los Angeles on

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or about 15 August 1961 for the test and acceptance of these two first instruments. I will be in contact with [redacted] while I am on vacation. I shall, prior to that date, make arrangements either to be there personally or have someone else there representing NPIC to do the formal test and acceptance on the machines. Assuming acceptance, these first two machines will arrive at NPIC on or about 1 September along with Messrs. [redacted] and [redacted] to do the installation and final tune-up work. We have a

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second contract with [redacted] covering the fabrication of a number of additional viewers. This contract is essentially static and pending the acceptance of the two prototypes, there is nothing being formally done on the fabrication of the machines. I did question [redacted] about the feasibility of modifying their measuring systems to eliminate the need for manual measurements to establish a point of origin for cross-wire measurements. The subject is open, their engineers are examining the possibility of such a technique and will contact us prior to the finalizing of any designs. We have had a modification contract with [redacted]. The contract is

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essentially complete. Their East Coast representative, [redacted] is preparing to leave this area and move for at least a lengthy TDY to the [redacted] area, the home factory. I have made every effort to have all the machines here in NPIC, either ours or Army equipment, tuned and maintained prior to [redacted] departure. In that direction, I have requested that [redacted]

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FAB, and the Army representative give me a complete list of the discrepancies in their machines, those in turn have been turned over to [redacted] and he has [redacted] completed prior to [redacted]

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his departure on or about 1 August for the West Coast.

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NOTE: This represents the information as of COB 26 July 1961