[redacted]

14 December 1964

To: [redacted]

From: [redacted]

Subject: MISSION 1014 EVALUATION

Reference: IDC from [redacted] same subject, 10 December 1964

1. In general, the statements of referenced IDC are correct and are concurred with. The presence of more than usual amounts of haze and smoke in a winter atmosphere has been verified through review of reports on Missions 9062, 1004-1, and 1004-2 on file in the Government Office.

2. Referenced IDC also notes that adverse effects of underexposure occurred above 55° north latitude. From a technical standpoint underexposure should have begun at 44° north latitude on the master camera and 50° north latitude on the slave camera. However, the degree of underexposure should not be severe at the onset but should progressively worsen to the point where degradation becomes severe.

   This is generally when the sun angle is approximately 7 degrees or less. Comparing the statement "underexposure above 55°N" to the known operations below 7 degrees solar angle shows that approximately 2000 frames were programmed above 55°N and that approximately 1600 frames were below 7° solar angle (both cameras). This leads to the conclusion that the amount of underexposed photography was in good agreement with normal predictions. To assure that this is not coincidence or unsupported opinion, an analysis of density measurements should be made for verification.

3. Referenced IDC also recommends that Mission 1015 be flown with a Wratten 25 filter and 0.250" slit on the master camera and a Wratten 21 filter and 0.175" slit on the slave camera. From the

[redacted]

[redacted]

standpoint of photographic exposure a more optimum configuration for the intended Mission 1015 program would be a Wratten 25 filter and 0.300 slit on the master and a Wratten 21 filter and 0.200 slit on the slave camera. However, the camera manufacturer states that the use of 0.300 slit is not tolerable. Under these circumstances and the strong desirability of continuing use of the Wratten 25 filter for winter missions, the best choice is the configuration recommended by the referenced IDC. It should be realized that this configuration predicts adverse underexposure beginning at approximately 53° - 56° N latitude. No operations are expected to begin above 60°N latitude.

[redacted]

Senior Staff Engineer
Department 60-60

[redacted]

cc: [redacted]

[redacted]