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From: Dr. William K. Krebs, Vertical Flight Human Factors Program Manager  
To: Vertical Flight TCRG

Subj: VERTICAL FLIGHT HUMAN FACTORS FOURTH QUARTER '02 REPORT

1) Fourth quarter report for each project is listed below.

- a) NVG lighting requirement. Milestone two report entitled "Theoretically Acceptable Alternative NVIS Assessments" was delivered on time. The purpose of this report was to describe and document possible alternative methods of assessing night vision imaging system (NVIS) lighting compatibility with night vision goggles (NVG). A baseline measurement methodology has been established and numerous alternate methods and their associated test equipment have been identified. Some methods require observers to (subjectively) view resolution charts while other methods (e.g., measuring NVG luminance output levels) are purely objective. The next phase is to perform lab studies to assess each method's ability to achieve baseline or better performance for the lowest cost and ease of implementation.

*All indications indicate that this project is on track to complete year 1 milestones as planned.*

- b) NVG resolution requirement. The researcher received funds in September 2002 and has begun work on the project.

*All indications indicate that this project is on track to complete year 1 milestones based on modified schedule due to*

- c) Simultaneous Non-interfering Operations - Quantify VFR Navigation Performance. The researcher's progress has slowed due to the contract (refer to d) has not been awarded. The researcher has not been able to invest a lot of time in the development of the simulation environment or coordinate with the helicopter flight test plan. The researcher has invested some resources to develop the eye tracker.

*Indications are that there are minor risks to the activity being completed as*

*planned, however these delays are attributed to the parallel contract not awarded (refer to d).*

Rotocraft Precision Visual Flight Rules Simultaneous Non-Interfering Human Factors Project. Awaiting approval from contracts to award the contract.

*Indications are that there are minor to major risks to the activity being completed as planned. The AAR-100 Vertical Flight human factors program manager has increased pressure to ensure the contract is awarded by October 11<sup>th</sup>, 2002.*