

From: Kevin Davenport

To: Behnam Ghaffari

Date: August 14, 2014

Subject: FCC File No. 0520-EX-PL-2014

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Message:

Lockheed Martin is integrating an HF radio system on the MH-60R naval helicopter. Since the MH-60R platform does not currently have an HF radio system the electromagnetic effects on existing MH-60R avionics systems is unknown and needs to be tested. Additionally, HF Radio communication checks need to be performed at line-of-sight and beyond line-of-sight distances.

Lockheed Martin plans on performing Electromagnetic Compatibility (EMC) and Electromagnetic Interference (EMI) testing. This testing will be accomplished by flying to an altitude of 500 ft and transmitting on the HF radio using one of the frequencies listed in the FCC Experimental License while observing other MH-60R avionics systems for signs of interference or performance degradation. Critical receivers on the MH-60R platform will be instrumented to measure the signal received while the HF radio system is transmitting.

HF radio communication checks will be performed in Owego, NY by flying to a point 100 miles from Owego. Communication will then be established with the Owego tower on one of the authorized HF frequencies. Signal quality and strength will be recorded as the aircraft flies a cloverleaf pattern.

HF radio beyond line-of-sight communication will be checked in Owego, NY and Patuxent River NAS, MD by flying to an altitude of 3000 ft and establishing contact with Gander Radio or with an HF Global Communications System station. Signal quality and strength will be recorded once contact is established with the distant station.

The results of the above testing will be analyzed to determine HF radio system performance and to identify any interference issues that may need further mitigation.