

## Description of Requirement for 0475-EX-ST-2009

This filing is for the express purpose of performing ground compatibility testing of an aircraft with a MESA radar installed. Boeing will be performing ground compatibility testing of modified Boeing 737-700 aircraft that has a MULTIPLE-ROLE Electronically Scanned Array (MESA\_) radar installed. Before company program personnel conduct flight testing of this airframe with the MESA radar operating, compatibility testing of the NAVAIDS and communications systems during MESA radar operation must be performed to ensure the safety of personnel and the airborne platform. During the test cycle, ground operation of the platform systems will be in two to three four hour blocks. It is necessary to employ the MESA radar at full power during the test to ensure maximum exposure to possible interference on other aircraft systems. While it is necessary to use the radar through a complete 360 degree pattern around the aircraft, limited sector blanking can be accomplished without detriment to the test. Previous testing of this nature has had a FAA limitation to sector blank +/- 5 degrees from bearing to 473030N 1221750W, 332.4 degrees in reference to true north in the frequency band of 1328-1357 MHz. Test personnel are prepared to follow this limit.

Due to the classification of the MESA radar, please refer to previous classified filing (0276-ex-pl-2002) for specific frequencies and emissions required for this testing. Boeing test personnel are willing to participate in discussions with appropriate coordinating agencies to provide further detail of its operations during this ground testing.