EXHIBIT FOR QUESTION 7: PURPOSE OF EXPERIMENT

a) Saab is proposing to use the SG-4A radar for US Navy and other Department of Defense and Department of Homeland Security missions. To accomplish this, Saab Defense and Security must test the radar in its standard configuration, and in modified configurations, against the specific requirements of each proposed radar mission. Initial candidate applications for the SG-4A are with the Navy and as a ground based sensor for Unmanned Aircraft Systems (UAS). In order to evaluate the ability of the SG-4A to meet mission requirements, the radar must be tested and demonstrated against those requirements while in the specific configuration being proposed.

   The SG-4A uses a mechanically rotating antenna that electronically scans the search volume from the horizon up to 70 degrees in elevation at either 30 or 60 revolutions per minute. The radar uses medium Pulse Repetition Frequency (PRF) pulse Doppler waveforms having a small change of PRF from scan to scan. The radar also has a stop-and-stare mode using the same pulse Doppler waveforms. The radar antenna has ultra low sidelobes to minimize radio frequency transmissions outside of the main beam and to minimize susceptibility to radio frequency interference from other sources. The radar is frequency agile and uses up to 29 center frequencies within the 3.0 to 3.3 GHz band.

b) Saab's objectives in testing the SG-4A radar include testing and demonstrating the radar's ability to detect and track aircraft and other objects under a variety of ground and weather clutter conditions. It is anticipated that some of these tests and demonstrations will be witnessed by US Navy and other customer personnel as part of the US Government procurement process.

c) The SG-4A program of experimentation will contribute to the development and expansion of radio art by applying Active Electronically Scanned Antenna (AESA) to radar applications that currently use passive reflector antennas or older phased array antennas. The advantages of AESA technology should allow new radar modes and functions, significantly improve a radar's ability to operate in land, sea, and weather clutter, and provide additional capability against intentional radio frequency interference, i.e., jamming.