

Exhibit 1

Statement of Purpose

7. **If all the answers to Items 4, 5, 6 are “NO,” include as an exhibit a narrative statement describing in detail the following items:**

- a. **The complete program of research and experimentation proposed including description of equipment and theory of operation.**

Exhibit 2 provides a description of the equipment that will be used.

Personnel will record commercial antennas' radiation pattern, beam steer angle side lobe level, gain, null fill, half power beam width, cross-polarized response, and front-to-back ration within the specified frequency bands in the elevation and azimuth planes. The antenna-under-test with slant +/- 45 degree linear polarization will be illuminated for these measurements.

- b. **The specific objectives sought to be accomplished.**

The test facility will be used for evaluating and verifying the performance of commercial cell site antennae.

- c. **How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along lines not already investigated.**

Measuring the cell site antennas' performance characteristics will enable a more definitive use of the PCS frequencies that are licensed to T-Mobile. Being able to determine parameters such as the beam widths, side lobe levels, and front-to-back would help T-Mobile to select the most effective antenna solutions in controlling the RF power being radiated while delivering cell phone service to our customers. Current emphasis is for the containment of that radiated signal to minimize interference to other operators and T-Mobile.