

APPENDIX 2 TO ANNEX K

CANADIAN ARMY

MEDIUM RANGE RADAR (MRR)

PROOF OF COMPLIANCE INSTRUCTIONS

1. General

- 1.1 For the purposes of evaluation the bidder is required to provide documentation and/or statements of compliance in support of their claimed performance against each mandatory and rated desirable requirement. The type and level of documentation for each of the requirements is identified and outlined in this document.
- 1.2 The technical configuration referred to in the paper evaluation, the proof of compliance documentation, and the technical configuration of the system delivered for the purpose of live fire evaluations shall be of the same technical configuration specifically the antenna, signal processing, display and power sub-systems.
- 1.3 For the purposes of evaluation and proof of compliance the power input for all bidding systems shall be limited to 60kW or below.

2. Mandatory Requirements

- 2.1 Mandatory Requirements are divided into two categories:
 - a. Mandatory requirements with Proof of Compliance are those that the bidder shall provide a Proof of Compliance Report. These requirements are outlined in paragraph 2.3 of this document; and
 - b. Mandatory requirements without Proof of Compliance are those that the bidder shall provide a statement of compliance. These include all other requirements which are not listed in paragraph 2.3 of this document.
- 2.2 For those mandatory requirements listed in paragraph 2.3 the Bidder shall provide reference to the Proof of Compliance Report in Appendix K3 and Appendix K4.
- 2.3 Mandatory Requirements with Proof of Compliance
 - 2.3.1 The following is the list of mandatory requirements referenced from Appendix 1 to Annex A-ACQ; System Performance Specification (SPS) document:
 - a. 3.1.3 Weapon Locating, including:
 - i. 3.1.3.2 Location Range – 3.1.3.2.1, 3.1.3.2.5, 3.1.3.2.6;
 - ii. 3.1.3.3 Minimum Calibre;
 - iii. 3.1.3.5 False Location Rate;
 - iv. 3.1.3.6 Location Accuracy (Mortars, Guns & Rockets); and
 - v. 3.1.3.7 Probability of Location; and
 - b. 3.1.5 Air Surveillance, including:
 - i. 3.1.5.2 Range for 1 m² Targets;

- ii. 3.1.5.4 Altitude;
- iii. 3.1.5.5 Elevation; and
- iv. 3.1.5.6 Accuracy.

3. Rated Requirements

- 3.1 The bidder must provide documentation supporting their claimed performance specifications.
- 3.2 Only supporting documents certified and/or verified by third-party independent entity, as defined in paragraph 5, will be considered as an acceptable substantiation for each claimed performance.
- 3.3 The supporting documents can include but are not limited to test and/or validated simulator results validating the performance specification claimed.
- 3.4 The bidder's MTBCF performance documentation shall be supported by mathematical derivation and calculation as described in MIL-HDBK-217F and MIL-Std 1629A.

4. Live Fire Evaluation

- 4.1 Performance specifications as listed in Appendix 6 to Annex K: Live Fire Evaluation are the subject of confirmation.
- 4.2 Persistent failure, as defined in Appendix K6, of the Bidder's radar system in meeting any of the mandatory requirements during the live fire evaluation shall be rated as failed.

5. Bidder's Proof of Compliance Report

- 5.1 There are two acceptable sources of Bidder's Proof of Compliance Report for the Mandatory Requirements with Proof of Compliance and any claimed desirable performance:
 - a. NATO or Allied Governmental institution or agency; and
 - b. Any independent organization recognized by a NATO or Allied Government.
- 5.2 Certified data includes, but is not limited to, results of live fire, validated simulation or exercises validating each specific performance requirement by the above agencies.
- 5.3 The Bidder's Proof of Compliance Report will be prepared in Bidder's format. The Bidder shall submit the report with the proposal. The report may include:
 - a. Blake Charts;
 - b. Live Fire Data;
 - c. Simulator Description;
 - d. Proof that the simulator is validated by the Live Fire Data; and

- e. Simulator Data where Live Fire Data is not available.
- 5.4 The projectile mean Radar Cross Section (RCS) (which varies for wavelength and weapon size and type) and the target cross section fluctuation loss model shall be included for any performance related analysis (such as Blake charts) to specify the performance of the proposed system.
- 5.4.1 The nominal target RCS to be used in the in performance analysis shall be as follows:
- a. Guns - 105mm, 155mm - 0.0027 m²;
 - b. Mortars – 60mm, 80mm, 120mm - 0.01 m²;
 - c. Rockets - 107mm - 0.0027 m²; and
 - d. Rockets – 122mm – 0.01 m².
- 5.4.2 If there is any discrepancies between the bidders results and the nominal target RCS, the bidder must clear state these and show how it affects the comparison between the Live Fire Data and the performance analysis.