ANNEX A

CANADIAN ARMY

MEDIUM RANGE RADAR ACQUISITION (MRR-A)

STATEMENT OF WORK (SOW)

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1. INTRODUCTION

1.1. Purpose

1.1.1. This Statement of Work (SOW) defines the work effort required for the acceptance testing, production, delivery and support of new Medium Range Radar (MRR) systems as defined herein and in the System Performance Specification at Appendix A1.

1.1.2. The work for the MRR system includes delivery of Integrated Logistics Support (ILS) data to support the MRR system within the Canadian Armed Forces (CAF) in accordance with article 5 herein.

1.2. Background

1.2.1. As part of the Land Force Intelligence Surveillance Target Acquisition and Reconnaissance (LF ISTAR) Omnibus project the MRR sub project will provide the Canadian Armed Forces Commander with the means to locate indirect fire assets including mortars, guns and rockets as well as providing an air surveillance capability.

1.2.2. The Medium Range Radar systems must be transportable, supportable and suited to operate in support of Canadian Armed Forces in all deployed environments.

1.3. Government Supplied Materiel

1.3.1. If required, the Government will provide the Contractor with Government Supplied Materiel (GSM).

2. APPLICABLE DOCUMENTS

A complete list of documents that forms part of this SOW to the extent specified herein shall be supportive of the SOW when referenced in section 3.0 and beyond can be found in Annex D (Applicable Documents) to the MRR RFP.

3. PROJECT MANAGEMENT

3.1. General

3.1.1. In performing and managing this work, the Contractor shall apply accredited project management principles.

3.2. Project Management Plan

3.2.1. The Contractor shall establish and maintain a project management plan to coordinate all plans and activities required to meet the requirements of this SOW. The Contractor shall prepare and submit a Project Management Plan (PMP) in accordance with CDRL 1278-PMP-001 and DID 1278-PMP-001.

3.3. Contract Award Meeting

3.3.1. The Contractor shall conduct a meeting at the Contractor facilities within 30 days after contract award to discuss schedule and work, as well as milestones and deliverables.

3.3.2. The Contractor shall prepare and submit an agenda in accordance with (IAW) CDRL 1278-PMR-003 and DID 1278-PMR-003 and meeting minutes IAW CDRL 1278-PMR-004 and DID 1278-PMR-004 for this meeting.

3.4. Progress Review Meetings

3.4.1. The Contractor shall conduct a Progress Review Meeting (PRM) at the Contractor's facilities on a schedule agreed to by Canada and the Contractor. Any design and technical review meetings required should be integrated with the progress review meetings.

3.4.2. The Contractor shall prepare and submit an agenda IAW CDRL 1278-PMR-003 and DID 1278-PMR-003 and meeting minutes IAW CDRL 1278-PMR-004 and DID 1278-PMR-004 for this meeting.

3.5. Unscheduled Meetings

3.5.1. Other meetings may be requested by the Contractor, Contracting Authority (CA) or the Technical Authority (TA) when issues arise that need to be solved. Upon agreement between all parties that such a meeting is required, the Contractor shall participate in the unscheduled meeting.

3.5.2. The Contractor shall prepare and submit an agenda IAW CDRL 1278-PMR-003 and DID 1278-PMR-003 and meeting minutes IAW CDRL 1278-PMR-004 and DID 1278-PMR-004 for this meeting.

3.6. Post Delivery and Equipment Support Services Meeting

3.6.1. The Contractor shall host a meeting after the last major equipment delivery is complete at a time mutually agreed to by Canada and the Contractor to discuss outstanding issues.

3.6.2. The Contractor shall prepare and submit an agenda IAW CDRL 1278-PMR-003 and DID 1278-PMR-003 and meeting minutes IAW CDRL 1278-PMR-004 and DID 1278-PMR-004 for this meeting.

3.7. Progress Reports

3.7.1. The Contractor shall prepare and submit progress reports IAW CDRL 1278-PMR-002 and DID 1278-PMR-002 for the duration of the contract.

3.8. Final Report

3.8.1. The Contractor shall prepare and submit a Final Report at the end of the contract in same format as the progress reports IAW CDRL 1278-PMR-002 and DID 1278-PMR-002.

4. SYSTEMS ENGINEERING

4.1. General

4.1.1. The Contractor shall maintain system engineering planning and management to ensure that all engineering requirements are met.

4.1.2. The Contractor shall develop the system design requirements to meet the technical, performance, functional and environmental requirements detailed in the System Performance Specification at Appendix A1.

4.2. Product Specification

4.2.1. The Contractor shall prepare and submit a Product Specification in accordance with CRDL 1278-SES-001.and DID 1278-SES-001

4.2.2. The Contractor shall prepare and submit a Software Description in accordance with CDRL 1278-SWS-001 and DID 1278-SWS-001.

4.3. Technical Investigation and Engineering Services

4.3.1. The Contractor shall provide Technical Investigations and Engineering Services (TIES) support, on an as required basis, as per the contract. Support for engineering, training, and repairs are general examples of TIES.

4.4. System Engineering Requirements and Design Review Meetings Guidance

4.4.1. Design reviews shall be held when all the documentation leading to the review has been completed and delivered to the Technical Authority for review.

4.4.2. System Requirements Review

a. A System Requirement Review (SRR) shall be conducted to ensure that the Contractor's Product Specification (CDRL 1278-SES-001) and ICDs (CDRLs 1278-SES-006 and 007) are thoroughly understood by all parties and that appropriate verification methods are identified for all Product Specification requirements not already addressed in the SPS RVTM;

b. Risk items associated with product requirements shall be identified and analyzed, including mitigation plans; and

c. The SRR shall be presented by the Contractor with the use of visual aids and supporting analysis as required.

4.4.3. Preliminary Design Review

a. A Preliminary Design Review (PDR) shall be held to review the conceptual design of any modifications, changes and enhancements to the specifications or any TIES tasks to ensure that the planned technical approach will meet the requirements.

b. The risks shall be identified and mitigation of these risks shall be planned. If identified risks pose problems with the feasibility of the design the PDR will be delayed until sufficient design and testing is completed to prove feasibility.

c. The PDR shall be presented by the Contractor with the use of visual aids and conceptual design that has been implemented in an actual model or modelling software.

4.4.4. Critical Design Review

a. A Critical Design Review (CDR) shall be held to review the detailed design of any modifications, changes and enhancements to the specifications or any TIES tasks to ensure that the design implementation has met the requirements.

b. The risks shall be identified and mitigation of these risks shall be planned. If identified risks pose problems with the design implementation the CDR will be delayed until sufficient implementation and testing is completed to prove the path to final implementation.

4.5. First Article

4.5.1. The Contractor shall produce a first article of the MRR that meets the System Performance Specification at Appendix A1.

4.5.2. The first article shall be tested to ensure the design goals of the design task have been met and that the MRR as a whole meets the System Performance Specifications. The first article test shall be based on the Requirements Traceability and Verification Matrix (RTVM) at Appendix 5.

4.5.3. The Contractor shall establish and maintain an acceptance test plan to coordinate all verification related activities required to meet the requirements of this SOW and the SPS. The Contractor shall prepare and submit an Acceptance Test Plan (ATP) for the first article in accordance with CDRL 1278-HWT-007 and DID 1278-HWT-007.

4.6. First Article Testing

4.6.1. The Contractor shall prepare and submit a First Article Test Procedures IAW CDRL 1278-SES-002 and DID 1278-SES-002.

4.6.2. When the test procedures are approved, the Contractor shall execute the required tests in accordance with the schedule.

4.6.3. A First Article Test Report shall be prepared and submitted IAW CDRL 1278-SES-003 and DID 1278-HWT-009

4.7. Air Surveillance Integration with LCSS

4.7.1. The Contractor shall prepare and submit an Interface Control Document (ICD) of the MRR System for the Air Surveillance communications interface including alarm messages in accordance with CDRL 1278-SES-007 and DID 1278-SES-006.

4.8. Weapon Locating Integration with LCSS

4.8.1. The Contractor shall prepare and submit an Interface Control Document (ICD) of the weapon locating part of the MRR System for the communications interface including alarm messages to the Canadian Armed Forces LCSS in accordance with CDRL 1278-SES-006 and DID 1278-SES-006.

4.9. Acceptance Test Procedures

4.9.1. The Contractor shall prepare and submit an Acceptance Test Description and Procedures IAW CDRL 1278-HWT-008 and DID 1278-HWT-008. The acceptance test should be a subset of the first article test. The Acceptance Test shall be based on the Requirements Traceability and Verification Matrix (RTVM) at Appendix 5.

4.9.2. Upon approval of the test plan by the Technical Authority, the Contractor shall execute the approved acceptance tests.

4.9.3. The Contractor shall prepare and submit an Acceptance Test Report IAW CDRL 1278-HWT-009 with DID 1278-HWT-009.

4.10. Radio Frequency Safety

4.10.1. General

a. The Contractor shall use the Canadian Forces Technical Order (CFTO) C-55-040-001/TS-001 and Health Canada Safety Code 6 to provide guidance on the safety procedures to be applied for all equipment in the MRR System that will be used by the CAF that radiates radio frequency energy.

b. Subject matter experts (SME) provided by Canada will perform RADHAZ Tests in accordance with these requirements at the Contractor's facility. The Contractor shall provide support in terms of setting up and operating the MRR System.

c. The Contractor shall support the SME during all RADHAZ tests. Support will include operation and maintenance.

d. The maximum time required for the RADHAZ test is expected to be 2 days or less.

e. The Contractor shall select and provide the site for testing.

4.10.2. Radio Frequency Survey

a. The Contractor shall provide support to a Radiation Frequency Survey of the MRR system.

b. This support shall include personnel to operate the equipment, a location to conduct the test where the equipment can radiate at full power over its full frequency range and the necessary authorizations and clearances to operate the system.

c. The maximum time required for the Radio Frequency Survey is expected to be 2 days or less.

d. The Contractor shall select and provide the site for testing.

e. RADHAZ tests and Radio Frequency Survey may be combined into a single event.

4.11. High Voltage Safety

4.11.1. For any components within the system that generate high voltages, warnings shall be prominently visible whenever personnel are or can be exposed to these voltages.

4.12. Hazardous Material

4.12.1. For any components in the MRR that contain hazardous materials, there shall be appropriate warnings on the component.

4.12.2. The Contractor shall submit Material Safety Data Sheets (MSDS) for any such materials as part of the proposal in accordance with CDRL 1278-ILS-012 and DID 1278-ILS-012.

4.13. Radioactive Materials

4.13.1. If the MRR contains any radioactive materials the Contractor shall submit a Material Safety Data Sheet (MSDS) for such materials as part of the proposal in accordance with CDRL 1278-ILS-012 and DID 1278-ILS-012.

4.14. Radio/Radar Frequency Management

4.14.1. All radio frequency (RF) equipment used in the MRR system will be certified (or be granted Spectrum Supportability by Industry Canada (IC)) and licensed for use in Canada.

4.14.2. DND will apply for certification and licensing.

4.14.3. The Contractor shall allow for a change in channel(s) within the designed frequency range of the equipment.

4.14.4. If the MRR System RF equipment does not have an Industry Canada Technical Acceptance Certificate (TAC), the Contractor shall be responsible to ensure that the equipment is compatible with existing systems in Canada, which conform to the applicable Industry Canada policies, plans, circulars, procedures and

specifications. These documents are available on the Industry Canada web site at http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf01841.html

4.15. Application for Spectrum Supportability

4.15.1. The Contractor shall properly complete DND 552 Forms "Application for Spectrum Supportability" (attached as Appendix A3) for each type of RF equipment, and submit them as a deliverable item with the proposal in order to support the live fire evaluation.

4.15.2. The values entered on the DND 552 form shall be measured values.

4.15.3. Where the values have not been measured, specified values may be substituted for measured values on the DND 552 form. However, before radio licences are issued, the Contractor shall conduct measurements to confirm that the actual equipment conforms to the specified values on the submitted DND 552 forms, and notify DND of any discrepancies.

4.15.4. If the MRR System equipment is in use by the US military it may already have a US DoD Form 1494. If available, a DoD 1494 form will be accepted in lieu of a DND 552 form.

4.15.5. Industry Canada will assess each DND 552 form and grant or deny authorization to use the equipment in Canada. Industry Canada may stipulate conditions of use.

4.16. Frequency Support - Additional Documentation

4.16.1. The Contractor shall prepare and submit any additional documentation to the Technical Authority that is required to support the licence application procedure, such as Letters of Intent and Engineering Briefs.

4.17. Frequency Support - Contractor's Responsibility

4.17.1. The Contractor's shall ensure that all MRR System equipment is certifiable by Industry Canada and can meet all requirements.

4.17.2. The Contractor shall ensure that any RF equipment that is substituted or modified remains certifiable throughout the project and during contracted operations.

4.18. Field Service Representatives (FSR)

4.18.1. The Contractor shall provide, when tasked, one (1) FSR to the primary MRR System unit, 4 AD Regt, located at Canadian Forces Base Gagetown, New Brunswick, for variable and optional periods as outlined in the ISS SOW at Annex B.

4.18.2. The FSR shall be required, when tasked, to assist and provide additional operator training, first and second level maintenance of the MRR.

5. INTEGRATED LOGISTICS SUPPORT (ILS)

5.1. General

5.1.1. Integrated Logistics Support (ILS) shall be designed to provide for the required operational availability of the MRR Systems as defined in the In Service Support document (Annex B).

5.1.2. Canada's MRR System Operators will perform operator maintenance on the MRR Systems in accordance with Contractor direction, technical manuals and publications.

5.1.3. Canada's MRR System Technicians will perform preventative and corrective maintenance on the MRR Systems in accordance with Contractor direction, technical manuals and publications.

5.2. Supplementary Documents

5.2.1. In addition to the documents referenced in this section on Logistics Support, all other supplementary documents are listed at Annex D.

5.3. ILS Plan

5.3.1. The Contractor shall prepare and submit a draft ILS Plan in accordance with CDRL 1278-ILS-001 and DID 1278-ILS-001 with their proposal.

5.3.2. The draft ILS Plan shall detail the general support concept and concept of operations of the MRR Systems.

5.3.3. The ILS Plan shall include detailed Contractor maintenance and support concepts, training and maintenance activities, and, if available, an explanation of the Logistics Support Analysis (LSA) methodology used to develop the support concept.

5.4. Maintenance Concept

5.4.1. Canada's maintenance concept consists of three levels of maintenance:

a. First Level Maintenance (Operator). The level of maintenance will be performed by the MRR System Operator. It will consist of preventative maintenance, visual inspection and system self-diagnostics tests and any other task in accordance with Contractor approved maintenance plan.

b. Second Level Maintenance (Technician). This level of maintenance will be performed by the MRR System Technician. It will consist of any preventative or corrective maintenance that is deemed to be beyond Operator Maintenance in the Contractor's maintenance plan and may require a protected workshop area to perform the maintenance. The protected workshop area will be provided by the Crown for any required Second Level Maintenance. It will also include the loading of software, replacement and the testing of faulty Line Replaceable Units (LRU) before return to the Contractor for repair. Second Level Maintenance will be done in accordance with Contractor approved maintenance plan.

c. Third and Fourth Level Maintenance. These levels of maintenance will usually be performed by the Contractor and consist of any repairs, upgrades, modifications and LRU replacement that are beyond first and second levels of maintenance.

5.5. Maintenance Plan

5.5.1. The Contractor shall prepare and submit a maintenance plan in accordance with Canada's maintenance concept and in accordance with CDRL 1278-ILS-002 and DID 1278-ILS-002.

5.5.2. The Contractor shall provide all appropriate technical publications required by the CAF MRR System Operators and Technicians for the safe and effective performance of the maintenance procedures.

5.6. Recommended Spare Parts List

5.6.1. The Contractor shall prepare and submit the Recommended Spare Parts List (RSPL) in accordance with CDRL 1278-ILS-003 and DID 1278-ILS-003.

5.6.2. The RSPL shall be based on the mean time between failure (MTBF) data arising from engineering, design and actual operational usage data on component failure rates.

5.7. Initial Provisioning

5.7.1. The approved RSPL shall be the basis of options for the Contractor to provide the approved quantity of repair parts, spares and consumables under this and/or other contract(s) that are/may be associated with the MRR

5.7.2. All spares and consumables held by DND will be held in a static location at the Regimental support area.

5.8. Tooling and Test Equipment

5.8.1. The Contractor shall identify all test equipment necessary to perform first and second level maintenance.

5.8.2. Test equipment includes General Purpose Test Equipment, Special Purpose Test Equipment, General Purpose Tools for Maintenance and Special Purpose Tools for Maintenance. Test equipment is used to inspect, repair, assemble, disassemble, test and otherwise maintain the system.

5.8.3. Special Tools and Test Equipment (STTE) consists of Special Purpose Test Equipment and Special Purpose Tools for Maintenance.

5.8.4. The Contractor shall provide any STTE necessary to perform first and second level maintenance.

5.8.5. The STTE shall be either part of the MRR System or part of a separate tool kit.

5.8.6. The Contractor shall prepare and submit a STTE List in accordance with CDRL 1278-ILS-004 and DID 1278-ILS-004.

5.8.7. The approved STTE List shall be the basis of options for the Contractor to provide the STTE under this and/or other contract(s). The STTE shall be delivered no later than the delivery of the first MRR System.

5.8.8. The Contractor shall be responsible to provide all test equipment throughout the training phase, as all test equipment delivered under the terms of the contract shall be delivered and deemed in-use and unavailable for training. However, if the training is conducted at a Canadian Armed Forces Base and the required test equipment has been purchased by DND as part of the contract and the test equipment has been delivered to DND far enough in advance of the conduct of training, then the contractor may use the test equipment that has been delivered as part of the contract.

5.9. Operation and Technical Publications

5.9.1. The Contractor shall provide all technical publications and documentation required by CAF technicians/operators in theatre and training locations to enable safe and effective performance of the applicable maintenance tasks and proper system training and operation.

5.9.2. Technical publications and documentation shall include, but not be limited to, the following:

a. Detailed system setup and teardown procedures, and all MRR System Operating Instructions, System Operating Limitations, System Emergency Procedure documentation/checklists, System Maintenance Instructions manuals, etc;

b. All Technical Publications, including System Maintenance Instructions and supporting manuals and documentation required for system maintenance and logistics support; and

c. All Interface Control Documents (ICDs) required for Land Command Support System (LCSS).

5.9.3. The Contractor shall prepare and submit the operation and technical publications to a minimum Class 2 Interactive Electronic Technical Manuals (IETM) in accordance with CDRL 1278-ILS-005 and DID 1278-ILS-005. Class 2 IETMs are defined in S1000D Issue 4.1

5.9.4. Updates to the publications shall be provided by the Contractor when there are equipment or procedural changes.

5.10. Training

5.10.1. Training Master Plan

a. The Contractor shall prepare and submit the Training Master Plan (TMP) IAW CDRL 1278-ILS-006 and DID 1278-ILS-006.

b. The training delivered under this TMP shall be sufficient enough to enable Canadian Armed Forces MRR System operators and technicians to operate, manage and maintain the MRR Systems (up to Level 2 maintenance) without Contractor assistance.

5.10.2. Task Analysis

a. The Contractor shall identify the MRR operator, system management and maintenance tasks that are required to use, manage and maintain the MRR IAW CDRL 1278-ILS-007 and DID 1278-ILS-007.

b. The Contractor shall define the minimum level of qualifications or prerequisites required of the individual performing the task for which the training was identified.

c. Training shall be detailed enough to provide MRR personnel the ability to operate, manage and maintain (less Contractor maintenance) the MRR without Contractor assistance.

d. The outcome of the analysis of training shall result in performance objectives and performance checks as described by A-P9-050-000/PT-003, Analysis of Instructional Requirements.

e. The Contractor shall prepare and submit a list of the performance objectives (PO) and performance enabling/checks and rating criteria IAW CDRL 1278-ILS-008 and DID 1278-ILS-008.

5.10.3. Training Design and Development

a. The Contractor shall analyze each performance objective to determine supporting skills, knowledge and aptitudes required to achieve it. The outcome shall be the specification of course content (enabling objectives), lesson plans, training resource list and a course timetable. This work is to be completed in accordance with A-P9-050-000/PT-004, Design of Instructional Programmes and A-P9-050-000/PT-005, Development of Instructional Programmes. This material shall be grouped together to form a Training Package and be prepared and submitted IAW CDRL 1278-ILS-009 and DID 1278-ILS-009.

5.10.4. Training Management

a. An initial Training Working Group (TWG) meeting shall be convened as part of the Contract Award Meeting to provide a forum for the discussion and resolution of training development issues.

b. The TWG shall include a briefing by the Contractor on the draft Training Master Plan. Subsequent meetings shall be convened as required.

5.10.5. Recommended Training Materials List (RTML)

a. The Contractor shall prepare and submit an RTML in accordance with CDRL 1278-ILS-010 and DID 1278-ILS-010 to include training material, training aids, and any other equipment that is deemed necessary for the establishment of Canadian Armed Forces-conducted MRR System operator, maintenance and technical training.

b. Any physical items on the RTML shall be delivered at least thirty (30) days prior to the start of the Contractor training.

5.10.6. Language

a. The training and training material shall be provided in the English language.

5.10.7. Conduct of Training

a. System Instructor Training. The Contractor shall provide one (1) serial of training IAW the approved Training Plan consisting of a course load of approximately ten (10) Canadian Armed Forces personnel for purpose of training MRR System instructors from the Royal Canadian Artillery School (RCAS), 4 Air Defence Regiment (4 AD Regt) and the Project Management Office (PMO).

b. The training shall be conducted at a time mutually agreeable to the Contractor and DND but no later than 6 weeks after the date of the delivery of the first operational system.

c. System Operator Training. Following the completion of Instructor Training, the Contractor shall conduct one (1) serial of operator training IAW the approved Training Plan consisting of a course load of approximately ten (10) CAF personnel with the newly trained CAF instructors involved as observers.

d. The Contractor shall supervise an additional two (2) serials of system operator training conducted by the CAF instructors.

e. System operator training for these serials shall be completed not later than four (4) months after delivery of the first operational System.

f. Technical Training. If CAF technicians perform maintenance actions as part of the Maintenance Plan, the Contractor shall provide one (1) serial of maintenance training consisting of a course load of approximately ten (10) CAF personnel for the purpose of training technical instructors not later than six (6) months after the delivery of the first operational system.

5.10.8. Contractor Training Support

a. The Contractor shall provide total system support as required to maintain equipment functionality during all training serials thereby minimizing any interruption to the conduct of training.

5.10.9. Location of Training

a. The Contractor shall conduct training at Canadian Armed Forces Base Gagetown, New Brunswick, Canada.

b. Delivered systems will be used for training. The Crown will provide access to the delivered systems to the training team one (1) week prior to the start of training at the planned training location**.**

5.10.10. Monitoring Training

a. The Contractor shall allow for a representative of the Technical Authority to monitor the training to ensure that the delivery of the training serials is compliant with this SOW.

5.11. Life Cycle Product Support

5.11.1. Software Life Cycle Support

a. Support of software by the Contractor including upgrades and improvements to the software system stability shall be provided as part of the warranty for one (1) year. The software warranty period begins with delivery of the first system.

b. Minor software upgrades that improve the software system stability shall be provided for the period of the contract performance. Minor upgrades shall be performed not more than twice per calendar year.

c. Major software upgrades that represent a significant increase in system capability shall be presented by the Contractor as an option to the Technical Authority when available.

5.12. Identification Markings of the MRR

5.12.1. The Contractor shall assign unique item identifiers (UII) to accountable hardware and software items.

5.12.2. The Contractor shall ensure that ‘unique item identifiers’ are marked on hardware, on software media, embedded in software code and electronically embedded in alterable firmware.

5.12.3. The Contractor shall identify serialized defense materiel with Unique Item Identifiers (UII) as mandated by: A-LM-505-702/JS-001 Materiel Management Instructions, Materiel Management Instruction (MMI 1702) – Unique Identification And Standardized Marking Of Materiel and as described in draft DAOD 3010-0. The implementation of the requirements identified in draft DAOD 3010-0 shall be in accordance with draft DAOD 3010-1 and NATO STANAG 2290. All accountable hardware and software shall be serialized.

5.12.4. The Contractor shall generate UIIs in accordance with DAOD 3010-0, DAOD 3010-1 and NATO STANAG 2290 for items selected by the Technical Authority**.**

5.12.5. The Contractor shall:

a. affix the assigned UII to each respective item prior to the DND or the CAF acceptance of materiel in accordance with DAOD 3010-0, DAOD 3010-1 and NATO STANAG 2290;

b. apply and position markings in accordance with D-02-002-001/SG-001; and C-02-006-002/AG-000, Information Markings on Canadian Armed Forces equipment; and

c. ensure markings in effect at the date of contract award are of such quality as to remain machine readable for the expected life of the item.

5.12.6. The Contractor shall make available electronically the following identification data set elements:

a. EID;

b. UID;

c. original part number;

d. original batch and lot number;

e. serial number;

f. current part number;

g. current batch and lot number;

h. item description;

i. NATO Stock Number (NSN) or permanent stock control number PSCN) (when available);

j. contract number;

k. contract line number;

l. ship-to location;

m. ship date;

n. unit of purchase;

o. weight;

p. volume;

q. height;

r. depth; and

s. width.

5.12.7. The Contractor shall apply and position markings on interior containers and shipping containers per Paragraphs 3.7.1, 3.10.2, 3.11.1 and 3.11.9 of D-LM-008-002/SF-001 and as detailed below:

a. On Shipping Containers:

i. apply the following markings in human readable format:

(1) Identification Markings:

- NATO Stock Number;
- Nomenclature;
- Quantity / Unit of Issue;
- Protection and date markings; and
- Contract Serial Number (as shown on the Contract).

(2) Special Markings:

- Manufacturer's Part Number; and
- Manufacturer's Batch / Lot Number.

ii. apply the following markings using a GS1-128 linear barcode, with the data replicated in human readable form beneath the barcode:

(1) NATO Stock Number;

(2) Contract Serial Number;

(3) Manufacturer's Part Number; and

(4) Manufacturer's Batch / Lot Number.

b. On Interior Containers, including unit packs:

i. apply the following markings in human readable format:

(1) Identification Markings:

- NATO Stock Number;
- Nomenclature;
- Quantity / Unit of Issue;
- Protection and date markings;

- Contract Serial Number (as shown on the Contract); and
- Serial Number(s).

(2) Special Markings:

- Manufacturer’s Part Number; and
- Manufacturer’s Batch / Lot Number.

ii. apply the following markings using a GS1-128 linear bar code, with the data replicated in human readable form beneath the barcode:

(1) NATO Stock Number;

(2) Contract Serial Number;

(3) Manufacturer’s Part Number;

(4) Manufacturer’s Batch / Lot Number; and

(5) Serial Number(s).

iii. apply the Unique Item Identifier marking(s) using a PDF 417 barcode in accordance with STANAG 2290.

5.12.8. Barcodes shall be applied to the outside of any packaging material through which the barcode is not easily machine readable.

5.13. Configuration Management

5.13.1. While the principles of configuration management apply to both hardware and software, there are differences in the implementation and thus a separate process shall be necessary for software configuration management.

5.13.2. The Contractor shall prepare and submit a Configuration Management (CM) Plan in accordance with CDRL 1278-ILS-011 and DID 1278-ILS-011.

5.13.3. The Contractor shall perform configuration management in accordance with the approved CM plan throughout the acquisition and in-service phases of this contract.

5.13.4. Contractor-initiated changes to the configuration of the system as delivered (accepted baseline), including replacement of delivered repair parts, spares, and consumables, modifications to systems, and changes to publications shall be to the account of the Contractor for the period of the contract.

5.13.5. The Contractor shall recommend for DND approval which items be designated as configuration items, using criteria presented in the Contractor's CM Plan.

5.13.6. The Contractor shall identify the configuration baselines that will be used to manage the product configuration, and subsequently use these baselines to maintain configuration control.

5.13.7. The Contractor shall determine (and subsequently prepare) the configuration documentation needed to define each configuration baseline for each type of configuration item.

5.13.8. The configuration documentation shall progressively define functional requirements, design constraints, interface characteristics, test requirements and other technical data required in the project.

5.13.9. The Contractor shall establish an engineering release system for configuration documentation, and use that system to issue the correct and current configuration documentation for use by functional activities (such as test and evaluation, maintenance planning and production).

5.13.10. The Contractor shall maintain traceability between product units and their respective manuals, warranties and life cycle support obligations.