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SOLICITATION AMENDMENT

MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

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Electronics, Simulators and Defence Systems Div.
/Division des systèmes électroniques et des systèmes de simulation et de défense
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Title - Sujet High Risk Search Equipment	
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Client Reference No. - N° de référence du client W8476-195904	Date 2019-07-03
GETS Reference No. - N° de référence de SEAG PW-\$\$QF-030-27278	
File No. - N° de dossier 030qf.W8476-195904	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-07-16	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Hamilton, Indra	Buyer Id - Id de l'acheteur 030qf
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Signature	Date

Solicitation No. - N° de l'invitation
W8476-195904
Client Ref. No. - N de rf. du client
W8476-195904

Amd. No. - N de la modif.
File No. - N du dossier
030qf W8476-195904

Buyer ID - Id de l'acheteur
030qf
CCC No./N CCC - FMS No./N VME

ANNEX A

STATEMENT OF WORK

HIGH RISK SEARCH EQUIPMENT & MULTI-THREAT DETECTION TOOLS

This documents consists of this page plus one-hundred & twenty-two (122) additional pages

STATEMENT OF WORK
FOR THE
HIGH RISK SEARCH EQUIPMENT & MULTI-THREAT DETECTION
TOOLS



NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document shall continue to apply.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

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1.0 SCOPE

1.1 Purpose

- 1.1.1 The purpose of this Statement of Work (SOW) is to define the work requirements for the High Risk Search Equipment & Multi-Threat Detection Tools (HRS-TOOL), which will be used by the Canadian Armed Forces (CAF) field engineer sections in the roles of intermediate and advanced search teams.

1.2 Background

- 1.2.1 Both intermediate and advanced search teams will be deployed in support of Battle Groups during overseas and domestic missions. The role of the intermediate search teams will be filled by the field engineer sections that will operate with the maneuver elements of the Battle Group. Advanced teams will be deployed on deliberate search operations or called forward as a result of discoveries made by intermediate search teams involving too high a risk for an intermediate team.

1.3 Intended Use

- 1.3.1 The intended use of the HRS-TOOL is to provide a suite of detectors that are designed to find hidden objects that are of interest to search teams. Stand-off detectors must detect a variety of targets in a variety of conditions. The detectors will be used to search vulnerable points, caches, factories and confined spaces where there is a suspected explosive threat.
- 1.3.2 The HRS-TOOL project will also include a suite of general access and search tools, providing the user a capability to safety approach and gain access to the threat.

1.4 Acronyms and Abbreviations

ABCA	America, Britain, Canada, Australia
AP	Anti-personnel
BVS	Bolstered Ventilation and Stability
CAF	Canadian Armed Forces
CADPAT (TW)	Canadian Pattern (Temperate Woodlands)
CD	Compact Disk
CDRL	Contract Data Requirements List
CFB	Canadian Forces Base
CFTO	Canadian Forces Technical Order
CNCGL	Controlled & Non-Controlled Goods List
CSR	Contract Status Report
DID	Data Item Description
DMC	Demilitarization Code
DND	Department of National Defence
DPA	Defence Product Act

DSD	Dual Sensor Detector
DTMF	Dual-tone Multi-frequency
ECL	Export Control List
ECCN	Export Control Classification Number
EHS	Environmental Health and Safety
EHSIR	Environmental Health and Safety Impact Report
EME	Electromagnetic Environment
GPR/MD	Ground Penetrating Radar & Metal Detector
GSM	Government Supplied Material
gsm	Grams per Square Meter
HRS	High Risk Search
HRS-TOOL	High Risk Search Equipment and Multi-Threat Detection Tools
HVA	Handheld Viewing Aid
IAW	In Accordance With
ILS	Integrated Logistics Support
ILSM	Integrated Logistics Support Manager
IP	Initial Provisioning
IPC	Initial Provisioning Conference
IPGC	Initial Provisioning Guidance Conference
ITAR	International Traffic in Arms Regulations
LIS	List of Items to be Supported
MOPP	Mission Oriented Protective Posture
NATO	North Atlantic Treaty Organization
NCAGE	NATO Commercial and Government Entity
NCR	National Capital Region
NDID	National Defence Index of Documentation
NLJD	Non-Linear Junction Detector
NSN	NATO Stock Number
OEM	Original Equipment Manufacturer
OQRC	Operator Quick Reference Card
OS	Operating System
PA	Procurement Authority
PIC	Programmable Interface Controllers
PIR	Passive Infra-Red
PMP	Project Management Plan
PPB	Provisioning Parts Breakdown

PSPC	Public Services and Procurement Canada
SDS	Safety Data Sheet
SOW	Statement of Work
SPTD	Supplementary Provisioning Technical Documentation
STTE	Special Tools and Test Equipment
TA	Technical Authority
TLAD	Top Level Assembly Drawing
TMDE	Test, Measurement and Diagnostic Equipment
USML	United States Munitions List

2.0 APPLICABLE DOCUMENTS

2.1 References

2.1.1 Whereas mentioned, the following Standards must be used for the preparation of deliverables to the extent specified in this SOW:

GOVERNMENT FURNISHED INFORMATION

<u>REFERENCE NUMBER</u>	<u>PROMULGATION DATE</u>	<u>REFERENCE TITLE</u>
C-01-100-100/AG-008	2017-11-02	WRITER'S GUIDE FOR TECHNICAL DOCUMENTATION
C-02-007-000/AG-001	2016-01-01	CONTROLLED TECHNOLOGY ACCES AND TRANSFER (CTAT) MANUAL
D-01-100-204/SF-000	2000-10-31	SPECIFICATION - PREPARATION OF PREVENTIVE MAINTENANCE INSTRUCTIONS
D-01-100-205/SF-000	2000-10-31	SPECIFICATION - PREPARATION OF CORRECTIVE MAINTENANCE INSTRUCTION
D-01-100-207/SF-002	1996-07-12	SPECIFICATION - PREPARATION OF INTERIM ILLUSTRATED PARTS MANUALS FOR LAND EQUIPMENTS
D-01-100-214/SF-000	2002-05-01	SPECIFICATION FOR PREPARATION OF PROVISIONING DOCUMENTATION FOR CANADIAN FORCES EQUIPMENT
D-01-400-001/SG-000	2018-01-31	STANDARD - ENGINEERING DRAWING PRACTICES FOR CLASS 1 DRAWINGS AND TECHNICAL DATA LIST
D-01-400-002/SF-000	2018-02-23	SPECIFICATION LEVELS OF ENGINEERING DRAWINGS
D-02-002-001/SG-001	2003-04-01	STANDARD – IDENTIFICATION MARKING OF CANADIAN MILITARY PROPERTY
D-LM-008-001/SF-001	1983-02-03	METHODS OF PACKAGING
D-LM-008-002/SF-001	1991-08-01	SPECIFICATION FOR MARKING FOR STORAGE AND SHIPMENT
D-LM-008-011/SF-001	1988-11-10	PREPARATION AND USE OF PACKAGING REQUIREMENTS CODES

COMMERCIALY AVAILABLE

<u>REFERENCE NUMBER</u>	<u>PROMULGATION DATE</u>	<u>REFERENCE TITLE</u>
ASTM D2487-11	2011	AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), "STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)
CWA 14747-2	2008-12	HUMANITARIAN MINE ACTION – TEST AND EVALUATION – PART 2: SOIL CHARACTERIZATION

DCIEM REPORT 98-CR-15	1997	FOR METAL DETECTOR AND GROUND PENETRATING RADAR PERFORMANCE
NEMA IEC 60529		ANTHROPOMETRIC SURVEY OF THE LAND FORCES – FINAL REPORT
R.S.C. 1985, C. H-3	1985	DEGREES OF PROTECTION PROVIDED BY ENCLOSURES - IP CODE
SOR/99-7	1998	HAZARDOUS PRODUCTS ACT
STANAG 4694	2011	OZONE-DEPLETING SUBSTANCES REGULATIONS, 1998
		NATO ACCESSORY RAIL

2.2 Order of Precedence

- 2.2.1 In the event of conflict between the content in this SOW and the referenced documents, the content of this SOW will take precedence.

3.0 PROJECT MANAGEMENT

3.1 Project Management Program

- 3.1.1 The Contractor must designate a Project Manager with the responsibilities to coordinate, execute, and manage the Contractor's project management activities for the Contract. The Contractor's Project Manager must have the total responsibility for all works required under the Contract.
- 3.1.2 The Contractor's Project Manager must be the primary point of contact between the Contractor, the DND Technical Authority (TA), and the PSPC Contracting Authority for all issues related to the Contract.

3.2 Contract Status Report

- 3.2.1 The Contractor must provide a Contract Status Report (CSR) in accordance with (IAW) the Contract Data Requirement List (CDRL) HRS-TOOL-PM-001 at Appendix A15.3 (page 71) to ANNEX A and its associated Data Item Delivery (DID) HRS-TOOL-PM-001 at Appendix A16.3 (page 89) to ANNEX A.

3.3 Project Meetings

- 3.3.1 Meeting Organization and Coordination
 - 3.3.1.1 The Contractor's Project Manager must be present at the Kick-off Meeting, and at other meetings when requested by Canada. If the Project Manager does not have final approval authority for decision making and changes, then the person that has that final approval authority must also be present.
- 3.3.2 Kick-off Meeting
 - 3.3.2.1 The Contractor must hold and chair a Kick-off Meeting (at the Contractor's facility) no later than 21 calendar days after contract award to review and secure a common understanding of the requirements expressed in the following:
 - 3.3.2.1.1 The Contract;
 - 3.3.2.1.2 The SOW;
 - 3.3.2.1.3 General overview of the project, risks, schedule and communication channels to follow, and
 - 3.3.2.1.4 Other contractual and programmatic issues associated with the project as agreed between the TA, CA and the Contractor.
 - 3.3.2.2 During the Kick-off Meeting, the Contractor must provide a Top Level Assembly Drawing (TLAD) IAW CDRL HRS-TOOL-ILS-201 at Appendix A15.6 (page 74) and its associated DID HRS-TOOL-ILS-201 at Appendix A16.6 (page 94) to this ANNEX A.
 - 3.3.2.3 Refer to Meeting Documentation requirements found at ANNEX A para. 3.3.5.
- 3.3.3 Integrated Logistics Support (ILS) Meeting

- 3.3.3.1 The Contractor must hold and chair an ILS Meeting following the closure of the Kick-Off Meeting (see 3.3.2), in order to:
 - 3.3.3.1.1 Review and secure a common understanding of the requirements expressed in the ILS CDRLs and DIDs, DND Canadian Forces Technical Orders (CFTO)s and specifications; and,
 - 3.3.3.1.2 Discuss possible sparing strategies and concepts, Lowest Replaceable Units (LRUs), and lines of maintenance.
- 3.3.3.2 Refer to Meeting Documentation requirements found at ANNEX A para. 3.3.5.
- 3.3.4 Other meetings
 - 3.3.4.1 The Contractor and the TA may schedule informal reviews, such as teleconferences, video conferences, briefings and technical interchange meetings, as required to help achieve the requirements of the Contract.
- 3.3.5 Meeting Documentation
 - 3.3.5.1 The Contractor must prepare and deliver a meeting agenda for all formal meetings and conferences, and prepare and deliver the meeting minutes afterwards.
 - 3.3.5.1.1 The Contractor must provide the Meeting Agenda(s) IAW CDRL HRS-TOOL-PM-002 at Appendix A15.4 (page 72) to ANNEX A and its associated DID HRS-TOOL-PM-002 at Appendix A16.4 (page 91) to ANNEX A.
 - 3.3.5.1.2 The Contractor must record, prepare, and provide the Meeting Minutes of each meeting IAW CDRL HRS-TOOL-PM-003 at Appendix A15.5 (page 73) to ANNEX A and its associated DID HRS-TOOL-PM-003 at Appendix A16.5 (page 93) to ANNEX A.
 - 3.3.5.2 No change in the interpretation of the SOW, Performance Specification, cost, and schedule, as defined in the Contract, may be authorized by the minutes of a meeting. Such action will require formal contract amendment by the CA.

4.0 INTEGRATED LOGISTICS SUPPORT (ILS)

4.1 Maintenance Concept

- 4.1.1 The HRS-TOOL will be maintainable by CAF operators and technicians in a field environment as prescribed for each item of equipment:
- 4.1.1.1 **Operator Maintenance** – consisting of maintenance that will not require Special Tools and Test Equipment (STTE) to complete, as well as equipment cleaning. Task duration generally less than one (1) hour.
 - 4.1.1.2 **Technician Maintenance** – consisting of preventive and minor corrective maintenance tasks by repair or replacement of parts, and could require STTE to complete this maintenance. Task duration generally less than four (4) hours.
- 4.1.2 The more in-depth maintenance tasks, consisting of corrective maintenance tasks, reconditioning of assemblies and component rebuilds, will be done through the Support Contract.

4.2 Instruments, Decals, Data Plates and Warnings

- 4.2.1 The Contractor must deliver all instruments, decals and data plates marked in metric units.
- 4.2.2 Where international symbols are not possible, the Contractor must provide bilingual markings in English and Canadian French, as per paragraph 4.3.5.
- 4.2.3 The Contractor must provide Warning and precautionary data plates in both official languages of Canada (English and Canadian French) in order to protect personnel and equipment, as per paragraph 4.3.5.

4.3 Technical Publication Package

- 4.3.1 The Contractor must prepare and deliver the following Technical Publications:
- 4.3.1.1 Operator Manual
 - 4.3.1.1.1 The Contractor must provide an Operator Manual IAW CDRL HRS-TOOL-ILS-202 at Appendix A15.7 (page 75) and its associated DID HRS-TOOL-ILS-202 at Appendix A16.7 (page 95) to this ANNEX A, for each of the following components:
 - 4.3.1.1.1.1 Ground Penetrating Radar & Metal Detector System (GPR/MD System)
 - 4.3.1.1.1.2 Complex Terrain Metal Detector System (CTMD System)
 - 4.3.1.1.1.3 Non-Linear Junction Detector System (NLJD System)
 - 4.3.1.1.1.4 Handheld Viewing Aid System (HVA System)
 - 4.3.1.1.1.5 Hydraulic Door Opener System
 - 4.3.1.2 Operator Quick Reference Card

- 4.3.1.2.1 The Contractor must provide an Operator Quick Reference Card IAW CDRL HRS-TOOL-ILS-203 at Appendix A15.8 (page 76) and its associated DID HRS-TOOL-ILS-203 at Appendix A16.8 (page 97) to ANNEX A, for each of the following components:
 - 4.3.1.2.1.1 Ground Penetrating Radar & Metal Detector System (GPR/MD System)
 - 4.3.1.2.1.2 Complex Terrain Metal Detector System (CTMD System)
 - 4.3.1.2.1.3 Non-Linear Junction Detector System (NLJD System)
 - 4.3.1.2.1.4 Handheld Viewing Aid System (HVA System)
 - 4.3.1.2.1.5 Hydraulic Door Opener System
- 4.3.1.3 Maintenance and Parts Handbook
 - 4.3.1.3.1 The Contractor must provide a Maintenance and Parts Handbook IAW CDRL HRS-TOOL-ILS-204 at Appendix A15.9 (page 77) and its associated DID HRS-TOOL-ILS-204 at Appendix A16.9 (page 99) to ANNEX A, for each of the following components:
 - 4.3.1.3.1.1 Ground Penetrating Radar & Metal Detector System (GPR/MD System)
 - 4.3.1.3.1.2 Complex Terrain Metal Detector System (CTMD System)
 - 4.3.1.3.1.3 Non-Linear Junction Detector System (NLJD System)
 - 4.3.1.3.1.4 Handheld Viewing Aid System (HVA System)
- 4.3.1.4 Operator Training Package
 - 4.3.1.4.1 The Contractor must provide an Operator Training Package IAW CDRL HRS-TOOL-ILS-205 at Appendix A15.10 (page 78) and its associated DID HRS-TOOL-ILS-205 at Appendix A16.10 (page 101) to ANNEX A.
- 4.3.1.5 Technician Training Package
 - 4.3.1.5.1 The Contractor must provide a Technician Training Package IAW CDRL HRS-TOOL-ILS-206 at Appendix A15.11 (page 79) and its associated DID HRS-TOOL-ILS-206 at Appendix A16.11 (page 103) to ANNEX A.
- 4.3.2 Front Matter
 - 4.3.2.1 The Contractor must include the following in each Technical Publication (except in the Operator Quick Reference Card):
 - 4.3.2.1.1 A cover page (a template of which will be provided by the Integrated Logistics Support Manager (ILSM)) showing the date the publication was issued and the model/system designation;
 - 4.3.2.1.2 A List of Effective Pages;

- 4.3.2.1.3 A Revision Control Table;
- 4.3.2.1.4 A detailed Table of Contents and List of Figures & Tables; and
- 4.3.2.1.5 An Acronyms and Abbreviations table
- 4.3.3 Supplementary Information
 - 4.3.3.1 The Contractor must provide supplementary information, in the portions of text that require it, with one or more of the following notices, in the order listed:
 - 4.3.3.1.1 **Danger.** The danger advisory will be used to draw attention to an extreme, violent and continuous hazard to life;
 - 4.3.3.1.2 **Warning.** The warning advisory will be used to emphasize an operating or maintenance procedure, practice, condition, statement, which if not strictly observed, could result in injury to or death of personnel;
 - 4.3.3.1.3 **Caution.** The caution advisory will be used to emphasize an operating or maintenance procedure, practice, condition, statement, which if not strictly observed, could result in maintenance, damage to or destruction of equipment, loss of mission effectiveness or long-term health hazards to personnel;
 - 4.3.3.1.4 **Note.** The note will be used to point out a procedure, event or practice that it is desirable to highlight; and,
 - 4.3.3.1.5 **Example.** The example will be used when required to clarify the preceding text.
 - 4.3.4 Copyright - Foreground and Background Information
 - 4.3.4.1 The Contractor must incorporate the copyright symbol and one of the following notices into the Technical Publications, for all Foreground and Background information that is subject to copyright regardless of the form or medium upon which it is recorded:
 - 4.3.4.1.1 Intellectual Property (IP) in Foreground that belongs to the Contractor: “© (insert year) (insert IP owner). This deliverable was delivered under Contract no. XXXX and contains Foreground Intellectual Property (IP). Her Majesty the Queen in Right of Canada has a royalty-free and perpetual license to the IP and is permitted to use, reproduce, modify, and translate, including authorizing contractors to reproduce, modify, and translate, in whole or in part the deliverable for all government purposes including competitive tendering. Refer to the contract terms for additional details as required.”
 - 4.3.4.1.2 Intellectual Property (IP) in Background Information: “© (insert year) (insert IP owner). This deliverable was delivered under Contract no. XXXX and contains Background Intellectual Property (IP). Her Majesty the Queen in Right of Canada has a royalty-free and perpetual license to the Background IP for the purpose of exercising its rights in the Contract deliverables and Foreground Information. The license includes the rights to use, reproduce, modify, and translate this deliverable, and further

includes the right to authorize others to use, reproduce, modify, and translate, in whole or in part the deliverable for all government purposes including competitive tendering. Refer to the contract terms for additional details as required.”

4.3.5 Official Language Requirements

- 4.3.5.1 The Contractor must deliver all Technical Publications in English and Canadian French.
- 4.3.5.2 The Contractor must have all Technical Publications translated by certified translators, such as members of an authorized provincial association of translators, to ensure the quality of translated text.
- 4.3.5.3 The Contractor must ensure all translations are consistent with approved DND terminology. Approved terminology sources, in order of priority, are as follows:
 - 4.3.5.3.1 Canadian Oxford Dictionary Second Edition (for English);
 - 4.3.5.3.2 Le Petit Robert Edition 2017 (for French); and
 - 4.3.5.3.3 Termium, PSPC Translation Bureau Linguistic Data Bank (<http://www.termiumplus.gc.ca/>);
- 4.3.5.4 The Contractor must review and accept responsibility for the validity of all (both their own and all sub-Contractors) information found in the Technical Publications.

4.4 Provisioning Documentation

- 4.4.1 The Provisioning Documentation (PD) lists and describes in detail the parts that make up the HRS-TOOL as well as all specialized and specific items required to support the use and maintenance of the HRS-TOOL. The PD allows the HRS-TOOL’s Integrated Logistics Support Manager (ILSM) to plan and implement a sparing and support strategy.
- 4.4.2 Included in the PD are all the procurable parts — either from the Contractor or a third-party — of the HRS-TOOL to the Lowest Replaceable Unit (LRU). Also considered procurable parts are the consumables required to operate and maintain the HRS-TOOL (chemicals, specific lubricants, etc.) and specialized equipment (special tools, training aids, transport containers, etc.) specific to the HRS-TOOL.
- 4.4.3 The Contractor must prepare and deliver the following Provisioning Documentation:
 - 4.4.3.1 Provisioning Parts Breakdown
 - 4.4.3.1.1 The Contractor must provide a Provisioning Parts Breakdown (PPB) IAW CDRL HRS-TOOL-ILS-207 at Appendix A15.12 (page 80) and its associated DID HRS-TOOL-ILS-207 at Appendix A16.12 (page 105) to this ANNEX A.
 - 4.4.3.2 Supplementary Provisioning Technical Documentation

4.4.3.2.1 The Contractor must provide Supplementary Provisioning Technical Documentation (SPTD) IAW CDRL HRS-TOOL-ILS-208 at Appendix A15.13 (page 81) and its associated DID HRS-TOOL-ILS-208 at Appendix A16.13 (page 108) to this ANNEX A.

4.4.3.3 Special Tools and Test Equipment List

4.4.3.3.1 The Contractor must provide a Special Tools and Test Equipment (STTE) List IAW CDRL HRS-TOOL-ILS-209 at Appendix A15.14 (page 82) and its associated DID HRS-TOOL-ILS-209 at Appendix A16.14 (page 110) to this ANNEX A.

4.5 Initial Provisioning Conference

4.5.1 The Contractor must hold and chair an Initial Provisioning Conference (IPC). The IPC will occur after the Contractor has delivered Provisioning Documentation suitable for a successful IPC as determined by the DND ILS Manager.

4.5.2 The purpose of an IPC is to allow DND to verify that the Provisioning Documentation reflects the current and complete configuration of the equipment being procured by comparing it against the Maintenance and Parts Handbook and Supplementary Provisioning Technical Documentation. It is also used to select the range of spares required to support the system during an initial period of service of two (2) years. For this purpose, the Contractor must provide:

4.5.2.1 A suitable conference facility;

4.5.2.2 Engineering and product support assistance;

4.5.2.3 The equipment for physical examination;

4.5.2.4 Engineering, reliability and maintainability data; and

4.5.2.5 Modification data, if applicable.

4.5.3 Refer to Meeting Documentation requirements found at ANNEX A para. 3.3.5.

4.6 Identification Plates

4.6.1 The Contractor must provide Identification Plates – Design Template & Populated Designs IAW CDRL HRS-TOOL-ILS-210 at Appendix A15.15 (page 83) and its associated DID HRS-TOOL-ILS-210 at Appendix A16.15 (page 112) to this ANNEX A.

4.6.2 The Contractor must attach Identification Plates to the following components for ease of tracking within the Canadian Forces Supply System:

4.6.2.1 Prime Equipment

4.6.2.2 Spares

4.6.2.3 STTE

4.6.2.4 Training Equipment

- 4.6.2.5 Transportation, Shipping, Storage Containers that are not single-use
- 4.6.2.6 Support Equipment (excluding common tools), and
- 4.6.2.7 Automatic Test Equipment

4.7 **Controlled & Non-Controlled Goods List**

- 4.7.1 Contractor must provide the Controlled & Non-Controlled Goods List with the Demilitarization Code (DMC) IAW HRS-TOOL-ILS-211 at Appendix A15.16 (page 84) and its associated DID HRS-TOOL-ILS-211 at Appendix A16.16 (page 114) to this ANNEX A.

4.8 **Identification Labels for Storage and Shipment and Packaging Codes**

- 4.8.1 The Contractor must supply all parts and equipment, packaged and packed as per D-LM-008-001/SF-001 following:
 - 4.8.1.1 Level B Limited Military Package; and
 - 4.8.1.2 Level B Limited Military Pack;
- 4.8.2 The Contractor must label all packaging, produced under 4.8.1 above, as per D-LM-008-002/SF-001, using D-LM-008-011/SF-001 to prepare the required packaging and preservation codes.
- 4.8.3 The Contractor must provide Identification Labels for Storage and Shipment and Packaging Codes IAW CDRL HRS-TOOL-ILS-212 at Appendix A15.17 (page 85) to Annex A, and its associated DID HRS-TOOL-ILS-212 at Appendix A16.17 (page 116) to this ANNEX A.

4.9 **List of Items to be Supported (for Support SOW)**

- 4.9.1 The Contractor must provide a List of Items to be Supported IAW CDRL HRS-TOOL-ILS-213 at Appendix A15.18 (page 86) to Annex A, and its associated DID HRS-TOOL-ILS-213 at Appendix A16.18 (page 118) to this ANNEX A.

4.10 **Training Sessions**

- 4.10.1 The Contractor must provide Training Sessions after delivery of the first HRS-TOOL.
 - 4.10.1.1 Scheduling of Training Sessions will be done after contract award, and jointly planned between the DND and the Contractor.
- 4.10.2 The Contractor must provide Training Sessions consisting of:
 - 4.10.2.1 Operator Training Session (train-the-trainer type) for one (1) to 20 students per course, with a course length of five (5) days.
 - 4.10.2.2 Operator Training Session (train-the-trainer type) for one (1) to 20 students per course, with a course length of three (3) days (shortened course length as training session won't include training on the CTMD System, NLJD System, and Hydraulic Door Opener System).

- 4.10.2.3 Technician Training Session (train-the-trainer type) for one (1) to five (5) students per course, with a course length of two (2) days.
- 4.10.3 The Contractor must provide Training Sessions in English. The instructor(s) must be bilingual in order to understand and answer questions from students in both official languages; English and Canadian French.
- 4.10.4 The Contractor must provide instructor(s) that are Subject Matter Experts on the HRS-TOOL equipment being provided.
- 4.10.5 The Contractor must use the approved and accepted **Operator and Technician Training Packages** for the Training Sessions, and course lessons must follow the content found within those training packages.
- 4.10.6 The Contractor must provide course material listed within the **Operator and Technician Training Package** CDRLs as being 'Issued to Students at Training Session(s)', and all course material and handouts must be provided in English and Canadian French.
- 4.10.7 The Contractor must use the HRS-TOOLS and additional training material identified in the **Operator and Technician Training Package Instructor Lesson Plan**, for the Training Session.
 - 4.10.7.1 The Contractor must provide the additional training material that is listed in the **Operator and Technician Training Package Instructor Lesson Plan** as 'supplied by the Contractor'.
 - 4.10.7.2 The Contractor must set-up the HRS-TOOLS and additional training material that is listed in the **Operator and Technician Training Package Instructor Lesson Plan** as 'supplied by the Contractor', for the Training Session.

4.11 Data Deliverable Format

- 4.11.1 Unless otherwise specified as a specific requirement, the Contractor must deliver all of the soft copies of data deliverables, in formats compatible with the office software currently in use by the DND as listed:
 - 4.11.1.1 Microsoft (MS) Windows 7 Enterprise Operating System (OS), Service Pack 1;
 - 4.11.1.2 MS Internet Explorer (IE) 9.0 with 256 Bit Encryption;
 - 4.11.1.3 MS Office Professional Plus 2013 (Word, Excel, Access, PowerPoint and Outlook);
 - 4.11.1.4 Adobe Acrobat X; and
 - 4.11.1.5 WinZip 8.1 SR-1

5.0 ENVIRONMENTAL HEALTH AND SAFETY

5.1 General

- 5.1.1 Environmental Health and Safety (EHS) consideration must be incorporated and documented into the decision making process for the Work performed under this Contract. EHS documentation must be maintained within the project file throughout the life of this Contract. The Contractor must provide for and allow DND inspection and monitoring of EHS documentation throughout the life of the contract.
- 5.1.2 Polychlorinated Biphenyls (PCBs), halocarbons (as identified within the SOR/99-7 - Ozone-Depleting Substances Regulations, 1998), and asbestos must not be incorporated into the design, operation and maintenance of the equipment, and products used in equipment support activities.
- 5.1.3 The Contractor must identify and report all sources of mercury contained and used within the design, operation and maintenance of the equipment, and products used in equipment support activities.
- 5.1.4 The Department is committed to the Federal programs to reduce and eliminate emissions from toxic substances. Contractors must identify and submit justifications for the use of all regulated products and those containing substances identified within the Accelerated Reduction/Elimination of Toxics (ARET, <http://www.ec.gc.ca/nopp/aret/en/list.cfm>), National Pollutant Release Inventory (NPRI, http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm) and List of Challenge Substances (http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/list_e.html), and also for products containing heavy metals (heavy metals are those identified within Schedule 1 of the Canadian Environmental Protection Act (CEPA)) to the technical authority for approval.
- 5.1.5 Canada Labour Code, Part II dictates that the least hazardous materials should be used at the workplace. Therefore, the Contractor is to strive to use the least hazardous product that meets the requisite performance requirements.
- 5.1.6 The Contractor must incorporate EHS warnings and instructions in direct relation of the EHS risks presented in the contents into documentation.

5.2 Environmental Management System

- 5.2.1 The Contractor must have a management system in place to control environmental, health and safety impacts resulting from their activities, products and services.
- 5.2.2 The Contractor must have a formalized set of procedures and control measures in place to achieve conformance with the requirements of this Work, while ensuring environmental, health and safety protection and pollution prevention.
- 5.2.3 The Contractor must also make reasonable effort to monitor that all subcontractors are in compliance with applicable environmental laws and regulations.

5.3 EHS Packaging Labels and SDS

- 5.3.1 The Contractor must label and ship goods falling within the Hazardous Products Act, R.S.C. 1985, C. H-3 and regulation(s) there under, in accordance with the said Act and regulation(s).

- 5.3.1.1 The Contractor must ship goods accompanied by the required Safety Data Sheet(s) (SDS), completed in both English and Canadian French.
- 5.3.1.2 The Contractor must clearly identify the contents of the hazardous material with labels, and the SDS must explain what those hazards are.

6.0 TECHNICAL REQUIREMENTS

6.1 Overview

6.1.1 The Contractor must comply with all specified requirements for each component of the HRS-TOOL, stated in:

- 6.1.1.1 A1.0 APPENDIX: GPR/MD SYSTEM TECHNICAL SPECIFICATION
- 6.1.1.2 A2.0 APPENDIX: CTMD SYSTEM TECHNICAL SPECIFICATION
- 6.1.1.3 A3.0 APPENDIX: NLJD SYSTEM TECHNICAL SPECIFICATION
- 6.1.1.4 A4.0 APPENDIX: HVA SYSTEM TECHNICAL SPECIFICATION
- 6.1.1.5 A5.0 APPENDIX: BREACHING BOLT CUTTER TECHNICAL SPECIFICATION
- 6.1.1.6 A6.0 APPENDIX: ASSAULT LADDER TECHNICAL SPECIFICATION
- 6.1.1.7 A7.0 APPENDIX: WIRE CAVING LADDER TECHNICAL SPECIFICATION
- 6.1.1.8 A8.0 APPENDIX: GRAPPLING HOOK TECHNICAL SPECIFICATION
- 6.1.1.9 A9.0 APPENDIX: FRONTAL HEADLAMP TECHNICAL SPECIFICATION
- 6.1.1.10 A10.0 APPENDIX: HIGH POWER HANDHELD FLASHLIGHT TECHNICAL SPECIFICATION
- 6.1.1.11 A11.0 APPENDIX: TRIP WIRE ILLUMINATOR TECHNICAL SPECIFICATION
- 6.1.1.12 A12.0 APPENDIX: PORTABLE FLOODLIGHT TECHNICAL SPECIFICATION
- 6.1.1.13 A13.0 APPENDIX: HYDRAULIC DOOR OPENER SYSTEM TECHNICAL SPECIFICATION
- 6.1.1.14 A14.0 APPENDIX: LOAD CARRIAGE SYSTEM TECHNICAL SPECIFICATION

A1.0 APPENDIX: GPR/MD SYSTEM TECHNICAL SPECIFICATION

A1.1 System Requirements

A1.1.1 General

- A1.1.1.1 The Ground Penetrating Radar & Metal Detector System (GPR/MD System) must be based on proven, fielded equipment, which is in-service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian (ABCA) military partner or police agency of those countries.
- A1.1.1.2 The GPR/MD System must consist of the following components, and is further described in detail under the System Component Requirements section:
 - A1.1.1.2.1 One (1) Dual Sensor Detector;
 - A1.1.1.2.2 One (1) Headset;
 - A1.1.1.2.3 Battery Set(s) for eight (8) hours of operation;
 - A1.1.1.2.4 One (1) Battery Charging System (if required);
 - A1.1.1.2.5 One (1) GPR Test Target (if required);
 - A1.1.1.2.6 One (1) Soft Carry Case, and
 - A1.1.1.2.7 One (1) Hard Transport Container for the above components.
- A1.1.1.3 The GPR/MD System must include (stored within the Hard Transport Container) all tools required to setup and maintain the GPR/MD System in accordance with the **Operator Maintenance** Concept ANNEX A paragraph 4.1.1.1 (page 13).
- A1.1.1.4 The GPR/MD System must include (stored within the Hard Transport Container without needing to be folded or otherwise distorted from flat) the Technical Publication(s) listed within the CDRL(s) as being 'Issued with each GPR/MD System'.

A1.1.2 Transportability

- A1.1.2.1 The GPR/MD System, when stored within the Hard Transport Container, must be transportable with no more than 10 minutes preparation time.
- A1.1.2.2 The GPR/MD System must be transportable by fixed and rotary wing aircraft, cargo ships, rail, and commercial and military wheeled vehicles on highways and cross-country.

A1.1.3 Electromagnetic Interference

- A1.1.3.1 The Dual Sensor Detector must not exhibit any malfunction, degradation of performance, or deviation from specified indications, beyond the tolerances indicated in the individual equipment or subsystem specification, when subjected to a vertically polarized, radiated electric field of 4 V/m from 30 MHz to 1 GHz, following the testing procedure described by MIL-STD-461F RS103.

A1.1.3.1.1 The Dual Sensor Detector will be oriented according to manufacturer standard operating procedure with radiated field originating from behind where the operator would normally be positioned to use the equipment.

A1.1.4 Operational Clothing Compatibility

A1.1.4.1 The GPR/MD System's operational performance must not be affected when an operator is wearing summer or winter environmental clothing or the Mission Oriented Protective Posture (MOPP) suit (State 1 - NSN 8415-20-002-5553).

A1.1.4.2 The Dual Sensor Detector, Headset and associated cables must not interfere with the operator's ability to function while wearing operational clothing.

A1.2 System Component Requirements

A1.2.1 Dual Sensor Detector

A1.2.1.1 Single Piece Construction

A1.2.1.1.1 The Dual Sensor Detector, when assembled and ready for operation, must form a single piece of solid construction, except for the Headset component.

A1.2.1.2 Startup, Self-Diagnostic, Soil Compensation & Calibration

A1.2.1.2.1 The Dual Sensor Detector must complete startup and be ready for operation (both the MD and GPR sensors) in no more than 60 seconds.

A1.2.1.2.2 The Dual Sensor Detector must conduct a self-diagnostic to determine if it is operating within its design parameters, and indicate any faults.

A1.2.1.2.3 The Dual Sensor Detector (MD) must perform soil compensation (calibrate) in no more than 45 seconds.

A1.2.1.2.4 The Dual Sensor Detector (GPR) must calibrate in no more than five (5) minutes.

A1.2.1.3 Drift

A1.2.1.3.1 The Dual Sensor Detector's received signal (both MD and GPR sensors) must not degrade more than 10% over 30 minutes of use.

A1.2.1.4 Low Power Warning

A1.2.1.4.1 The Dual Sensor Detector must warn the operator when the battery power is low and the Battery Set needs replacing.

A1.2.1.5 Detection Signal

A1.2.1.5.1 The Dual Sensor Detector detection signal external speaker volume must be adjustable by the user, including turned off completely, and have a clear, discriminatory tone when detection is made.

- A1.2.1.5.2 The Dual Sensor Detector detection signal must vary in relation with the strength of the detection.
- A1.2.1.5.3 The Dual Sensor Detector must mute the detection signal external speaker when the Headset is connected.
- A1.2.1.5.4 The Dual Sensor Detector detection signal must have a different and distinguishable signal between the MD and GPR sensors.
- A1.2.1.6 Visual Display
 - A1.2.1.6.1 The Dual Sensor Detector must display visual information so that it can be seen under daylight and low light viewing.
- A1.2.1.7 Mode of Operation
 - A1.2.1.7.1 The Dual Sensor Detector must have three (3) modes of operation:
 - A1.2.1.7.1.1 MD mode (detection using metal detector sensor only).
 - A1.2.1.7.1.2 GPR mode (detection using GPR sensor only), and
 - A1.2.1.7.1.3 Dual GPR/MD mode (detection using both sensors simultaneously).
- A1.2.2 **Headset**
 - A1.2.2.1 The Headset must connect to the Dual Sensor Detector, but still be removable when not needed.
 - A1.2.2.2 The Headset must operate with the in-service combat helmet NSN 8470-21-912-7719 and in-service ballistic eyewear NSN 8465-20-001-4355.
 - A1.2.2.3 The Headset must not block external sounds when worn.
- A1.2.3 **Battery Set(s)**
 - A1.2.3.1 Each Battery Set must provide no less than four (4) hours of operation at a temperature of 20°C (+/- 3 °C).
 - A1.2.3.2 If the Battery Set uses alkaline batteries, **no batteries** must be included with the GPR/MD System.
- A1.2.4 **Battery Charging System (if required)**
 - A1.2.4.1 If the Battery Set uses alkaline batteries, no Battery Charging System is required.
 - A1.2.4.2 If the Battery Set uses rechargeable batteries:
 - A1.2.4.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with North American plug type.

A1.2.4.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.

A1.2.4.2.3 The Battery Charging System's full re-charge time for one (1) Battery Set must not exceed eight (8) hours.

A1.2.4.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A1.2.5 GPR Test Target (if required for GPR calibration)

A1.2.5.1 The GPR Test Target must assist with calibration of the Dual Sensor Detector GPR.

A1.2.6 Soft Carry Case

A1.2.6.1 The Soft Carry Case must be provided to hold and protect the following components:

A1.2.6.1.1 Dual Sensor Detector

A1.2.6.1.2 Headset

A1.2.6.1.3 Battery Set(s) for eight (8) hours of operation

A1.2.6.1.4 Battery Charging System (if required), and

A1.2.6.1.5 GPR Test Target (if required).

A1.2.6.2 The Soft Carry Case must organize and separate the items from one another using pockets or separate compartments.

A1.2.7 Hard Transport Container

A1.2.7.1 The Hard Transport Container must have no less than an IP66 rating, or equivalent, IAW NEMA IEC 60529.

A1.3 Physical Requirements

A1.3.1 Size

A1.3.1.1 The Dual Sensor Detector must be adjustable to accommodate and be used by the entire range of 5th to 95th percentile male and female personnel of the Land Forces, as per DCIEM Report 98-CR-15:

A1.3.1.1.1 Suprasternale Height (page 63 of DCIEM Report 98-CR-15)

A1.3.1.1.1.1 Female 5% - 1248mm

A1.3.1.1.1.2 Male 5% - 1337mm

A1.3.1.1.1.3 Female 95% - 1421mm

- A1.3.1.1.1.4 Male 95% - 1525mm
- A1.3.1.1.2 Arm Length (page 57 of DCIEM Report 98-CR-15)
 - A1.3.1.1.2.1 Female 5% - 659mm
 - A1.3.1.1.2.2 Male 5% - 720mm
 - A1.3.1.1.2.3 Female 95% - 744mm
 - A1.3.1.1.2.4 Male 95% - 844mm
- A1.3.1.2 The Dual Sensor Detector must collapse down for storage and transport, without requiring any tools.
- A1.3.1.3 The Dual Sensor Detector must be supported using only one arm to allow for operation in the standing, kneeling, and prone position.
- A1.3.2 **Weight**
 - A1.3.2.1 The GPR/MD System must weigh no more than 16.0 kg.
 - A1.3.2.2 The GPR/MD System, without the Hard Transport Container, must weigh no more than 11.0 kg.
 - A1.3.2.3 The Dual Sensor Detector and Headset, including one (1) Battery Set to make it operational, must weigh no more than five (5.0) kg.
- A1.3.3 **Colour**
 - A1.3.3.1 The Dual Sensor Detector, Headset, Soft Carry Case, and Hard Transport Container must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:
 - A1.3.3.1.1 Flat/matte finish green;
 - A1.3.3.1.2 Flat/matte finish earth tone;
 - A1.3.3.1.3 Flat/matte finish grey, or
 - A1.3.3.1.4 Flat/matte finish black.
 - A1.3.3.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:
 - A1.3.3.2.1 34094 Green;
 - A1.3.3.2.2 30051 Brown;
 - A1.3.3.2.3 33446 Dessert Tan;
 - A1.3.3.2.4 34082 Green;

- A1.3.3.2.5 33105 Brown;
- A1.3.3.2.6 33303 Sand, or
- A1.3.3.2.7 Black.

A1.4 Performance Requirements

A1.4.1 MD Performance in Neutral Soils (IAW CWA 14747-2:2008, D/E/F)

- A1.4.1.1 The Dual Sensor Detector (using the MD sensor only) must detect minimum metal threats (Type 72A anti-personnel (AP) mine or surrogate) to a depth of no less than nine (9) cm from the top of the mine to the surface of the soil.
- A1.4.1.2 The Dual Sensor Detector (using the MD sensor only) must detect large metal containing anti-tank mines (TM-62, TM-36, TM-57, M-15 or surrogate) to a depth of no less than 20 cm from the top of the mine to the surface of the soil.
- A1.4.1.3 The Dual Sensor Detector (using the MD sensor only) must detect 105mm High Explosive shells in a horizontal orientation to a depth of no less than 20 cm from the top of the shell to the surface of the soil.

A1.4.2 MD Performance in Moderate Soils (IAW CWA 14747-2:2008, D/E/F)

- A1.4.2.1 The Dual Sensor Detector (using the MD sensor only) must detect minimum metal threats (Type 72A anti-personnel (AP) mine or surrogate) to a depth of no less than seven (7) cm from the top of the mine to the surface of the soil.

A1.4.3 GPR Detection Performance in Sand

- A1.4.3.1 The targets will be placed in sand (medium grain in accordance with ASTM D2487-11) with an approximate dielectric constant of 2.8 and moisture content of less than 3% by weight.
- A1.4.3.2 The Dual Sensor Detector (using the GPR sensor only) must detect an air-filled bottle (Nalgene ® 500ml, approx. 7.2 cm diameter x 16.6 cm length) to a depth of no less than 15cm in sand, measured from the top of the bottle while horizontal, to the surface of the sand.
- A1.4.3.3 The Dual Sensor Detector (using the GPR sensor only) must detect a wax-filled (paraffin wax with permittivity of 2.2) bottle (Nalgene ® 500ml, approx. 7.2 cm diameter x 16.6 cm length) to a depth of no less than five (5) cm in sand, measured from the top of the bottle while horizontal, to the surface of the sand.
- A1.4.3.4 The Dual Sensor Detector (using the GPR sensor only) must detect a wax (paraffin with a permittivity of 2.2) TM62 AT surrogate (32 cm diameter x 7 cm thickness) to a depth of no less than 30cm in sand, measured from the top of the AT surrogate to the surface of the sand.

A1.4.4 Ingress Protection, Cleaning and Submersion

- A1.4.4.1 The Dual Sensor Detector must have no less than an IP64 rating, or equivalent, IAW NEMA IEC 60529.

A1.4.4.2 The Dual Sensor Detector must have an exterior that can be cleaned with hot and cold low pressure water, steam and detergents, without wear, deterioration or damage.

A1.4.4.3 The Dual Sensor Detector sensor head (using the MD sensor only) must operate in, and not be damaged by, submersion in no less than 20cm of fresh water, measured from the top of the sensor head to the surface of the water.

A1.4.5 **Detector Interference**

A1.4.5.1 The Dual Sensor Detector operational performance must not be affected by the operation of a second Dual Sensor Detector when as close as five (5) meters.

A1.4.6 **Robustness**

A1.4.6.1 The Dual Sensor Detector must remain fully operational after a drop from a height of no less than 90cm onto a hard surface.

A1.4.6.1.1 Fully operational includes no loss in sensor detection performance, and the ability to collapse down for storage or be adjustable for different users.

A1.5 Environmental/Climatic Requirements

A1.5.1 **Climatic Conditions**

A1.5.1.1 The Dual Sensor Detector and Headset, including Battery Set to make it operational, must operate in temperatures from -19°C to $+44^{\circ}\text{C}$.

A1.5.1.2 The Dual Sensor Detector and Headset, including Battery Set to make it operational, must operate in relative humidity from 5% to 100%.

A2.0 APPENDIX: CTMD SYSTEM TECHNICAL SPECIFICATION

A2.1 System Requirements

A2.1.1 General

- A2.1.1.1 The Complex Terrain Metal Detector System (CTMD System) must be based on proven, fielded equipment, which is in-service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian (ABCA) military partner or police agency of those countries.
- A2.1.1.2 The CTMD System must consist of the following components, and is further described in detail under the System Component Requirements section:
 - A2.1.1.2.1 One (1) Metal Detector;
 - A2.1.1.2.2 One (1) Headset;
 - A2.1.1.2.3 One (1) Battery Set;
 - A2.1.1.2.4 One (1) Battery Charging System (if required);
 - A2.1.1.2.5 One (1) Soft Carry Case, and
 - A2.1.1.2.6 One (1) Hard Transport Container for the above components.
- A2.1.1.3 The CTMD System must include (stored within the Hard Transport Container) all tools required to setup and maintain the CTMD System in accordance with the Operator Maintenance Concept ANNEX A paragraph 4.1.1.1 (page 13).
- A2.1.1.4 The CTMD System must include (stored within the Hard Transport Container without needing to be folded or otherwise distorted from flat) the Technical Publication(s) listed within the CDRL(s) as being 'Issued with each CTMD System'.

A2.1.2 Transportability

- A2.1.2.1 The CTMD System, when stored within the Hard Transport Container, must be transportable with no more than 10 minutes preparation time.
- A2.1.2.2 The CTMD System must be transportable by fixed and rotary wing aircraft, cargo ships, rail, and commercial and military wheeled vehicles on highways and cross-country.

A2.1.3 Electromagnetic Interference

- A2.1.3.1 The Metal Detector must not exhibit any malfunction, degradation of performance, or deviation from specified indications, beyond the tolerances indicated in the individual equipment or subsystem specification, when subjected to a vertically polarized, radiated electric field of 4 V/m from 30 MHz to 1 GHz, following the testing procedure described by MIL-STD-461F RS103.

A2.1.3.1.1 The Metal Detector will be oriented according to manufacturer standard operating procedure with radiated field originating from behind where the operator would normally be positioned to use the equipment.

A2.1.4 Operational Clothing Compatibility

A2.1.4.1 The CTMD System operational performance must not be affected when an operator is wearing summer or winter environmental clothing or the Mission Oriented Protective Posture (MOPP) suit (State 1 - NSN 8415-20-002-5553).

A2.1.4.2 The Metal Detector, Headset and associated cables must not interfere with the operator's ability to function while wearing operational clothing and gloves.

A2.2 System Component Requirements

A2.2.1 Metal Detector

A2.2.1.1 Single Piece Construction

A2.2.1.1.1 The Metal Detector, when assembled and ready for operation, must form a single piece of solid construction, except for the Headset component.

A2.2.1.2 Fault Reporting

A2.2.1.2.1 The Metal Detector must conduct a self-diagnostic to determine if it is operating within its design parameters, and indicate any faults.

A2.2.1.3 Low Power Warning

A2.2.1.3.1 The Metal Detector must warn the operator when the battery power is low and the Battery Set needs replacing.

A2.2.1.4 Detection Signal

A2.2.1.4.1 The Metal Detector detection signal external audio must have a clear tone when detection is made.

A2.2.1.4.2 The Metal Detector detection signal must vary in relation with the strength of the detection.

A2.2.1.4.3 The Metal Detector must mute the detection signal external speaker when the Headset is connected.

A2.2.1.5 Visual Display

A2.2.1.5.1 The Metal Detector must display visual information so that it can be seen under daylight and low light viewing.

A2.2.2 Headset

A2.2.2.1 The Headset must connect to the Metal Detector, but still be removable when not needed.

A2.2.2.2 The Headset must operate with the in-service combat helmet NSN 8470-21-912-7719 and in-service ballistic eyewear NSN 8465-20-001-4355.

A2.2.2.3 The Headset must not block external sounds.

A2.2.3 Battery Set

A2.2.3.1 The Battery Set must provide no less than six (6) hours of operation at a temperature of 20°C (+/- 3 °C).

A2.2.3.2 If the Battery Set uses alkaline batteries, **no batteries** must be included with the CTMD System.

A2.2.4 Battery Charging System (if required);

A2.2.4.1 If Battery Set uses alkaline batteries, no Battery Charging System is required.

A2.2.4.2 If Battery Set uses rechargeable batteries:

A2.2.4.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with North American plug type.

A2.2.4.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.

A2.2.4.2.3 The Battery Charging System full re-charge time for one (1) Battery Set must not exceed eight (8) hours.

A2.2.4.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A2.2.5 Soft Carry Case

A2.2.5.1 The Soft Carry Case must be provided to hold and protect the following components:

A2.2.5.1.1 Metal Detector

A2.2.5.1.2 Headset

A2.2.5.1.3 Battery Set, and

A2.2.5.1.4 Battery Charging System (if required).

A2.2.5.2 The Soft Carry Case must organize and separate the items from one another using pockets or separate compartments.

A2.2.6 Hard Transport Container

A2.2.6.1 The Hard Transport Container must have no less than an IP66 rating, or equivalent, IAW NEMA IEC 60529.

A2.3 Physical Requirements

A2.3.1 Size

A2.3.1.1 The Metal Detector must be adjustable to accommodate and be used by the entire range of 5th to 95th percentile male and female personnel of the land forces, as per DCIEM Report 98-CR-15:

A2.3.1.1.1 Suprasternale Height (page 63 of DCIEM Report 98-CR-15)

A2.3.1.1.1.1 Female 5% - 1248mm

A2.3.1.1.1.2 Male 5% - 1337mm

A2.3.1.1.1.3 Female 95% - 1421mm

A2.3.1.1.1.4 Male 95% - 1525mm

A2.3.1.1.2 Arm Length (page 57 of DCIEM Report 98-CR-15)

A2.3.1.1.2.1 Female 5% - 659mm

A2.3.1.1.2.2 Male 5% - 720mm

A2.3.1.1.2.3 Female 95% - 744mm

A2.3.1.1.2.4 Male 95% - 844mm

A2.3.1.2 The Metal Detector must collapse for storage and transport, without requiring any tools.

A2.3.1.3 The Metal Detector must be supported using only one arm to allow for operation in the standing, kneeling, and prone position.

A2.3.2 Weight

A2.3.2.1 The Metal Detector and Headset, including Battery Set to make it operational, must weigh no more than two and a half (2.50) kg.

A2.3.3 Colour

A2.3.3.1 The Metal Detector, Headset, Soft Carry Case, and Hard Transport Container must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

A2.3.3.1.1 Flat/matte finish green;

A2.3.3.1.2 Flat/matte finish earth tone;

A2.3.3.1.3 Flat/matte finish grey, or

A2.3.3.1.4 Flat/matte finish black.

A2.3.3.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

A2.3.3.2.1 34094 Green;

A2.3.3.2.2 30051 Brown;

A2.3.3.2.3 33446 Dessert Tan;

A2.3.3.2.4 34082 Green;

A2.3.3.2.5 33105 Brown;

A2.3.3.2.6 33303 Sand, or

A2.3.3.2.7 Black.

A2.4 Performance Requirements

A2.4.1 Performance in Neutral Soils (IAW CWA 14747-2:2008, D/E/F)

A2.4.1.1 The Metal Detector must detect minimum metal threats (Type 72A anti-personnel (AP) mine or surrogate) to a depth of no less than seven (7) cm from the top of the mine to the surface of the soil.

A2.4.1.2 The Metal Detector must detect separately each of two adjacent minimum metal threats (Type 72A AP mine or surrogate) that are separated by no more than 30cm, and buried at a depth of no less than five (5) cm from the top of the mine to the surface of the soil.

A2.4.2 Performance Near Large Metal Objects

A2.4.2.1 The Metal Detector must have a zeroing function to detect a flush-buried minimum metal threat (Type 72A AP mine or surrogate) that is no more than 40cm from large metal objects such as railways, pipelines, storage tanks and utility rooms.

A2.4.3 Performance in Complex Terrain

A2.4.3.1 The Metal Detector must detect metal targets (Type 72A AP mine or surrogate) placed in holes and gaps with openings of no more than 10cm in diameter, and at depths of no less than 50cm.

A2.4.4 Ingress Protection, Cleaning and Submersion

A2.4.4.1 The Metal Detector must have no less than an IP65 rating, or equivalent, IAW NEMA IEC 60529.

A2.4.4.2 The Metal Detector must have an exterior that can be cleaned with hot and cold low pressure water, steam and detergents, without wear, deterioration or damage.

A2.4.4.3 The Metal Detector sensor head must operate in, and not be damaged by, submersion in no less than 20cm of fresh water, measured from the top of the sensor head to the water surface.

A2.4.4.3.1 Operation is defined as performing the requirement of para. A2.4.1.1, while the Detector sensor head is submerged as described.

A2.4.5 **Detector Interference**

A2.4.5.1 The Metal Detector operational performance must not be affected by the operation of a second Metal Detector when as close as five (5) meters.

A2.4.6 **Robustness**

A2.4.6.1 The Metal Detector must remain fully operational after a drop from a height of no less than 122cm, in any orientation, onto hard compacted gravel.

A2.4.6.1.1 Fully operational includes no loss in sensor detection performance, and the ability to collapse down for storage or be adjustable for different users.

A2.5 Environmental/Climatic Requirements

A2.5.1 **Climatic Conditions**

A2.5.1.1 The Metal Detector and Headset, including Battery Set to make it operational, must operate in temperatures from -19°C to $+44^{\circ}\text{C}$.

A2.5.1.2 The Metal Detector and Headset, including Battery Set to make it operational, operate in relative humidity from 5% to 100%.

A3.0 APPENDIX: NLJD SYSTEM TECHNICAL SPECIFICATION

A3.1 System Requirements

A3.1.1 General

A3.1.1.1 The Non-Linear Junction Detector System (NLJD System) must consist of the following components, and is further described in detail under the System Component Requirements section:

A3.1.1.1.1 One (1) NLJD;

A3.1.1.1.2 One (1) Headset;

A3.1.1.1.3 Battery Set(s) for eight (8) hours of operation;

A3.1.1.1.4 One (1) Battery Charging System (if required);

A3.1.1.1.5 One (1) NLJD Test Target

A3.1.1.1.6 One (1) Soft Carry Case, and

A3.1.1.1.7 One (1) Hard Transport Container for the above components.

A3.1.1.2 The NLJD System must include (stored within the Hard Transport Container) all tools required to setup and maintain the NLJD System in accordance with the Operator Maintenance Concept ANNEX A paragraph 4.1.1.1 (page 13).

A3.1.1.3 The NLJD System must include (stored within the Hard Transport Container without needing to be folded or otherwise distorted from flat) the Technical Publication(s) listed within the CDRL(s) as being 'Issued with each NLJD System'.

A3.1.2 Transportability

A3.1.2.1 The NLJD System, when stored within the Hard Transport Container, must be transportable with no more than 10 minutes preparation time.

A3.1.2.2 The NLJD System must be transportable by fixed and rotary wing aircraft, cargo ships, rail, and commercial and military wheeled vehicles on highways and cross-country.

A3.1.3 Electromagnetic Interference

A3.1.3.1 The NLJD must not exhibit any malfunction, degradation of performance, or deviation from specified indications, beyond the tolerances indicated in the individual equipment or subsystem specification, when subjected to a vertically polarized, radiated electric field of 4 V/m from 30 MHz to 1 GHz, following the testing procedure described by MIL-STD-461F RS103.

A3.1.3.1.1 The NLJD will be oriented according to manufacturer standard operating procedure with radiated field originating from behind where the operator would normally be positioned to use the equipment.

A3.1.4 **Operational Clothing Compatibility**

- A3.1.4.1 The NLJD System operational performance must not be affected when an operator is wearing summer or winter environmental clothing or the Mission Oriented Protective Posture (MOPP) suit (State 1 - NSN 8415-20-002-5553).

A3.2 **System Component Requirements**

A3.2.1 **NLJD**

A3.2.1.1 Single Piece Construction

- A3.2.1.1.1 The NLJD, when assembled and ready for operation, must form a single piece of solid construction, except for the Headset component.

A3.2.1.2 Setup and Startup

- A3.2.1.2.1 The NLJD unpacking, assembly, and startup (ready for operation) must complete in no more than five (5) minutes.

A3.2.1.3 Drift

- A3.2.1.3.1 The NLJD must not have variance in detection performance exceeding 10% over 30 minutes of use.

A3.2.1.4 Detection Signal

- A3.2.1.4.1 The NLJD detection signal external audio volume must be adjustable by the user, including turned off completely, and have a clear tone when detection is made.

- A3.2.1.4.2 The NLJD detection signal must vary in relation with the strength of the detection and the strength of the second and third harmonic detection.

- A3.2.1.4.3 The NLJD must mute the detection signal external speaker when the Headset is connected.

A3.2.1.5 Visual Display

- A3.2.1.5.1 The NLJD must indicate detection visually and must display that information so that it can be seen under daylight and low light viewing.

- A3.2.1.5.2 The NLJD must indicate both the second and third harmonic detection strength through the visual display.

A3.2.1.6 Output Power or Sensitivity Control Adjustment

- A3.2.1.6.1 The NLJD must provide control over the output power or detection sensitivity to assist with range control and target localization.

A3.2.2 **Headset**

- A3.2.2.1 The Headset must connect to the NLJD, but still be removable when not needed.

A3.2.2.2 The Headset must operate with the in-service combat helmet NSN 8470-21-912-7719 and in-service ballistic eyewear NSN 8465-20-001-4355.

A3.2.2.3 The Headset must not block external sounds.

A3.2.3 Battery Set(s)

A3.2.3.1 Each Battery Set must provide no less than one (1) hour of operation at a temperature of 20°C (+/- 3 °C), when operating on maximum detection mode (maximum transmit power and maximum sensitivity).

A3.2.3.2 If Battery Set uses alkaline batteries, **no batteries** must be included with the NLJD System.

A3.2.4 Battery Charging System (if required);

A3.2.4.1 If Battery Set uses alkaline batteries, no Battery Charging System is required.

A3.2.4.2 If Battery Set uses rechargeable batteries:

A3.2.4.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with North American plug type.

A3.2.4.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.

A3.2.4.2.3 The Battery Charging System full re-charge time for one (1) Battery Set must not exceed eight (8) hours.

A3.2.4.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A3.2.5 NLJD Test Target

A3.2.5.1 The NLJD Test Target must assist with ensuring proper operation of the NLJD.

A3.2.6 Soft Carry Case

A3.2.6.1 The Soft Carry Case must be provided to hold and protect the following components:

A3.2.6.1.1 NLJD

A3.2.6.1.2 Headset

A3.2.6.1.3 Battery Set(s) for eight (8) hours of operation

A3.2.6.1.4 Battery Charging System (if required), and

A3.2.6.1.5 NLJD Test Target.

A3.2.6.2 The Soft Carry Case must organize and separate the items from one another using pockets or separate compartments.

A3.2.7 Hard Transport Container

A3.2.7.1 The Hard Transport Container must have no less than an IP66 rating, or equivalent, IAW NEMA IEC 60529.

A3.3 Physical Requirements

A3.3.1 Size

A3.3.1.1 The NLJD must be adjustable to accommodate and be used by the entire range of 5th to 95th percentile male and female personnel of the land forces, as per DCIEM Report 98-CR-15:

A3.3.1.1.1 Suprasternale Height (page 63 of DCIEM Report 98-CR-15)

A3.3.1.1.1.1 Female 5% - 1248mm

A3.3.1.1.1.2 Male 5% - 1337mm

A3.3.1.1.1.3 Female 95% - 1421mm

A3.3.1.1.1.4 Male 95% - 1525mm

A3.3.1.1.2 Arm Length (page 57 of DCIEM Report 98-CR-15)

A3.3.1.1.2.1 Female 5% - 659mm

A3.3.1.1.2.2 Male 5% - 720mm

A3.3.1.1.2.3 Female 95% - 744mm

A3.3.1.1.2.4 Male 95% - 844mm

A3.3.1.2 The NLJD must be supported using only one arm to allow for operation in the standing, kneeling, and prone position.

A3.3.2 Weight

A3.3.2.1 The NLJD System, without the Hard Transport Container, must weigh no more than 12.0 kg.

A3.3.2.2 The NLJD and Headset, including Battery Set to make it operational, must weigh no more than five (5.0) kg.

A3.3.3 Colour

A3.3.3.1 The NLJD, Headset, Soft Carry Case and Hard Transport Container must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

A3.3.3.1.1 Flat/matte finish green;

A3.3.3.1.2 Flat/matte finish earth tone;

- A3.3.3.1.3 Flat/matte finish grey, or
- A3.3.3.1.4 Flat/matte finish black.
- A3.3.3.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:
 - A3.3.3.2.1 34094 Green;
 - A3.3.3.2.2 30051 Brown;
 - A3.3.3.2.3 33446 Dessert Tan;
 - A3.3.3.2.4 34082 Green;
 - A3.3.3.2.5 33105 Brown;
 - A3.3.3.2.6 33303 Sand, or
 - A3.3.3.2.7 Black.

A3.4 Performance Requirements

A3.4.1 Electronic Component Detection

- A3.4.1.1 The NLJD must detect and locate the following electronic components (powered or un-powered):
 - A3.4.1.1.1 Diode model 1N4148 with 25mm leads at a distance of no less than 800cm;
 - A3.4.1.1.2 Small integrated circuit consisting of a bipolar junction transistor model LM395 at a distance of no less than 300cm;
 - A3.4.1.1.3 Large integrated circuit consisting of a Programmable Interface Controllers (PIC) Microcontroller model PIC16F877 at a distance of no less than 300cm;
 - A3.4.1.1.4 Small printed circuit board consisting of a Dual-tone Multi-frequency (DTMF) decoder circuit model RB-DFR-541 at a distance of no less than 500cm;
 - A3.4.1.1.5 Large printed circuit board consisting of a Linux Wi-Fi single board controller model TS-WIFIBOX at a distance of no less than 250cm;
 - A3.4.1.1.6 Cellphone consisting of a Nokia model 2650 at a distance of no less than 50cm;
 - A3.4.1.1.7 Two-Way radio consisting of a Motorola model T5720 at a distance of no less than 400cm;
 - A3.4.1.1.8 Radio frequency switch consisting of a Liftmaster Rx model 850LM at a distance of no less than 350cm, and

A3.4.1.1.9 Passive infra-red (PIR) consisting of a Paradox PIR model 476 at a distance of no less than 250cm.

A3.4.2 Metallic Component Rejection

A3.4.2.1 The NLJD must not indicate detection of metallic components to the rear of the sensor, when no closer than 10cm, such as those that may be carried by the operator.

A3.4.3 Cleaning

A3.4.3.1 The NLJD must have an exterior that can be cleaned with a damp/dry rag, without wear, deterioration or damage.

A3.5 Environmental/Climatic Requirements

A3.5.1 Climatic Conditions

A3.5.1.1 The NLJD and Headset, including Battery Set to make it operational, must operate in temperatures from +5°C to +40°C.

A3.5.1.2 The NLJD and Headset, including Battery Set to make it operational, must operate in relative humidity from 5% to 80%.

A4.0 APPENDIX: HVA SYSTEM TECHNICAL SPECIFICATION

A4.1 System Requirements

A4.1.1 General

- A4.1.1.1 The Handheld Viewing Aid System (HVA System) must be based on proven, fielded equipment, which is in-service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian (ABCA) military partner or police agency of those countries.
- A4.1.1.2 The HVA System must consist of the following components, and is further described in detail under the System Component Requirements section:
 - A4.1.1.2.1 One (1) Camera Pole;
 - A4.1.1.2.2 One (1) Eye-Piece Video Display;
 - A4.1.1.2.3 One (1) Handheld Video Display;
 - A4.1.1.2.4 One (1) Thermal Camera;
 - A4.1.1.2.5 One (1) Colour Camera;
 - A4.1.1.2.6 One (1) Night Vision Camera;
 - A4.1.1.2.7 Battery Set(s) for five (5) hours of operation;
 - A4.1.1.2.8 One (1) Battery Charging System (if required), and
 - A4.1.1.2.9 One (1) Hard Transport Container for the above components.
- A4.1.1.3 The HVA System must include (stored within the Hard Transport Container) all tools required to setup and maintain the HVA System in accordance with the **Operator Maintenance** Concept ANNEX A paragraph 4.1.1.1 (page 13).
- A4.1.1.4 The HVA System must include (stored within the Hard Transport Container without needing to be folded or otherwise distorted from flat) the Technical Publication(s) listed within the CDRL(s) as being 'Issued with each HVA System'.

A4.1.2 Single Source of Power

- A4.1.2.1 The HVA System must operate from one source of power when using the Handheld Video Display, or the Eye-Piece Video Display, and any of the cameras.
 - A4.1.2.1.1 This will simplify battery replacement or charging by the operator.

A4.1.3 Transportability

- A4.1.3.1 The HVA System, when stored within the Hard Transport Container, must be transportable with no more than 10 minutes preparation time.

- A4.1.3.2 The HVA System must be transportable by fixed and rotary wing aircraft, cargo ships, rail, and commercial and military wheeled vehicles on highways and cross-country.

A4.2 System Component Requirements

A4.2.1 Camera Pole

- A4.2.1.1 The Camera Pole must be extendable to a length of no less than three (3) m.
- A4.2.1.2 The Camera Pole must articulate in the following way:
 - A4.2.1.2.1 In the middle of Camera Pole at an elbow joint.
 - A4.2.1.2.2 At the end of Camera Pole, where the camera attaches, with no less than two (2) degrees of freedom (not including rotating around the longitudinal axis), thereby enabling the camera to look back 180 degrees.
- A4.2.1.3 The Camera Pole must allow for the mounting of, and control of, the Thermal Camera, Colour Camera, and Night Vision Camera.

A4.2.2 Eye-Piece Video Display

- A4.2.2.1 Low Power Warning
 - A4.2.2.1.1 Eye-Piece Video Display must warn the operator when the battery power is low and the Battery Set needs replacing.
- A4.2.2.2 Mounting
 - A4.2.2.2.1 Eye-Piece Video Display must mount on the CAF in-service ballistic eyewear, NSN 8465-20-001-4355.

A4.2.3 Handheld Video Display

- A4.2.3.1 Low Power Warning
 - A4.2.3.1.1 The Handheld Video Display must warn the operator when the battery power is low and the Battery Set needs replacing.
- A4.2.3.2 Visual Display
 - A4.2.3.2.1 The Handheld Video Display must have a Video Display whose brightness is user adjustable for daylight and low light viewing.
 - A4.2.3.2.2 The Handheld Video Display must have a screen size no less than 7.62cm (approx. three (3) inches) in width and 7.62cm (approx. three (3) inches) in height.
- A4.2.3.3 Video Recording and Transfer
 - A4.2.3.3.1 The Handheld Video Display must record and store no less than six (6) hours of live video coming from the attached cameras.

A4.2.3.3.2 The Handheld Video Display must have a USB connection, or removable storage device (specifically a SD or Micro SD card), for transferring recorded video files.

A4.2.3.4 Harness

A4.2.3.4.1 The Handheld Video Display must include a detachable Harness, or MOLLE attachment accessories, for hands-free operation.

A4.2.4 Thermal Camera

A4.2.4.1 The Thermal Camera must have a resolution no less than 640x480 pixels, at no more than 17-micron pixel-pitch.

A4.2.4.2 The Thermal Camera must be passive, require no illuminators, and rely solely on the relative temperature of the object in the field of view.

A4.2.4.3 The Thermal Camera must have no less than a 30 degree field of view.

A4.2.4.4 The Thermal Camera must mount on the Camera Pole and connect to the Video Displays providing live video.

A4.2.5 Colour Camera

A4.2.5.1 The Colour Camera must have a resolution no less than 640x480 pixels.

A4.2.5.2 The Colour Camera must have a high intensity white-light LED array for additional illumination in dark environments.

A4.2.5.3 The Colour Camera must mount on the Camera Pole and connect to the Video Displays providing live video.

A4.2.6 Night Vision Camera

A4.2.6.1 The Night Vision Camera must have a resolution no less than 640x480 pixels.

A4.2.6.2 The Night Vision Camera must have no less than a 30 degree field of view.

A4.2.6.3 The Night Vision Camera must have a high intensity near-infrared LED array for no-light environments.

A4.2.6.4 The Night Vision Camera must mount on the Camera Pole and connect to the Video Displays providing live video.

A4.2.7 Battery Set(s)

A4.2.7.1 Battery Set must provide no less than five (5) hours of continuous operation at a temperature of 20°C (+/- 3 °C).

A4.2.7.2 If a different Battery Set is required to operate with the Eye-Piece Video Display versus the Handheld Video Display, then an additional Battery Set meeting no less than five (5) hours of continuous operation must be provided.

A4.2.7.3 If Battery Set uses alkaline batteries, **no batteries** must be included with the HVA System.

A4.2.8 Battery Charging System (if required);

A4.2.8.1 If Battery Set uses alkaline batteries, no Battery Charging System is required.

A4.2.8.2 If Battery Set uses rechargeable batteries:

A4.2.8.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with a North American plug type.

A4.2.8.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.

A4.2.8.2.3 The Battery Charging System full re-charge time for one (1) Battery Set must not exceed eight (8) hours.

A4.2.8.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A4.2.9 Hard Transport Container

A4.2.9.1 The Hard Transport Container must have no less than an IP66 rating, or equivalent, IAW NEMA IEC 60529.

A4.3 Physical Requirements

A4.3.1 Weight

A4.3.1.1 The Camera Pole must weigh no more than 2.5 kg.

A4.3.1.2 The Handheld Video Display, not including a Battery Set, must weigh no more than 1.5kg.

A4.3.1.3 The Thermal Camera must weigh no more than one (1) kg.

A4.3.1.4 The Colour Camera must weigh no more than one (1) kg.

A4.3.1.5 The Night Vision Camera must weigh no more than one (1) kg.

A4.3.2 Colour

A4.3.2.1 The HVA System components, not including the Battery Charging System (if required), must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

A4.3.2.1.1 Flat/matte finish green;

A4.3.2.1.2 Flat/matte finish earth tone;

A4.3.2.1.3 Flat/matte finish grey, or

A4.3.2.1.4 Flat/matte finish black.

A4.3.2.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

A4.3.2.2.1 34094 Green;

A4.3.2.2.2 30051 Brown;

A4.3.2.2.3 33446 Dessert Tan;

A4.3.2.2.4 34082 Green;

A4.3.2.2.5 33105 Brown;

A4.3.2.2.6 33303 Sand, or

A4.3.2.2.7 Black.

A4.4 Performance Requirements

A4.4.1 Ingress Protection

A4.4.1.1 The HVA System components, not including the Battery Set(s) and Battery Charging System (if required) and Hard Transport Container, must have no less than an IP65 rating, or equivalent, IAW NEMA IEC 60529.

A4.5 Environmental/Climatic Requirements

A4.5.1 Climatic Conditions

A4.5.1.1 The HVA System, not including the Battery Charging System (if required), must operate in temperatures from -19°C to $+39^{\circ}\text{C}$.

A4.5.1.2 The HVA System, not including the Battery Charging System (if required), must operate in relative humidity from 5% to 100%.

A5.0 APPENDIX: BREACHING BOLT CUTTER TECHNICAL SPECIFICATION

A5.1 Requirements

A5.1.1 Performance

- A5.1.1.1 The Breaching Bolt Cutter must cut hard steel, Rockwell Scale C of 50 or higher, of no less than 5/16 inch thickness.

A5.1.2 Size

- A5.1.2.1 The Breaching Bolt Cutter, with handles extended, must be no less than 25 inches in length to reduce the required cutting force.
- A5.1.2.2 The Breaching Bolt Cutter, when compacted for transport and storage, must be no more than 21 inches in length to fit within the Soldier's Tactical Field Pack (NSN: 8465-20-000-2774), stored on an angle.

A5.1.3 Weight

- A5.1.3.1 The Breaching Bolt Cutter must weigh no more than 4.60 kg (Approx.10 lbs).

A5.1.4 Colour

- A5.1.4.1 The Breaching Bolt Cutter must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

- A5.1.4.1.1 Flat/matte finish green;
- A5.1.4.1.2 Flat/matte finish earth tone;
- A5.1.4.1.3 Flat/matte finish grey, or
- A5.1.4.1.4 Flat/matte finish black.

- A5.1.4.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

- A5.1.4.2.1 34094 Green;
- A5.1.4.2.2 30051 Brown;
- A5.1.4.2.3 33446 Dessert Tan;
- A5.1.4.2.4 34082 Green;
- A5.1.4.2.5 33105 Brown;
- A5.1.4.2.6 33303 Sand, or
- A5.1.4.2.7 Black.

A5.1.5 **Climatic Conditions**

A5.1.5.1 The Breaching Bolt Cutter must operate in temperatures from -19°C to +49°C.

A5.1.5.2 The Breaching Bolt Cutter must operate in relative humidity from 5% to 100%.

A6.0 APPENDIX: ASSAULT LADDER TECHNICAL SPECIFICATION

A6.1 Requirements

A6.1.1 Performance

- A6.1.1.1 The Assault Ladder must be formed from connecting between three (3) and five (5) individual segments, allowing the ladder to be broken down for easier transport and storage.
- A6.1.1.2 The Assault Ladder must be no less than five (5) m in length when assembled.
- A6.1.1.3 The Assault Ladder must support a load of no less than 130 kg when placed near vertically along a wall.

A6.1.2 Weight

- A6.1.2.1 The Assault Ladder must weigh no more than 15.0 kg.
- A6.1.2.2 The Assault Ladder individual segments must weigh no more than 5.0 kg each.

A6.1.3 Colour

- A6.1.3.1 The Assault Ladder must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:
 - A6.1.3.1.1 Flat/matte finish green;
 - A6.1.3.1.2 Flat/matte finish earth tone;
 - A6.1.3.1.3 Flat/matte finish grey, or
 - A6.1.3.1.4 Flat/matte finish black.
- A6.1.3.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:
 - A6.1.3.2.1 34094 Green;
 - A6.1.3.2.2 30051 Brown;
 - A6.1.3.2.3 33446 Dessert Tan;
 - A6.1.3.2.4 34082 Green;
 - A6.1.3.2.5 33105 Brown;
 - A6.1.3.2.6 33303 Sand, or
 - A6.1.3.2.7 Black.

A6.1.4 Climatic Conditions

- A6.1.4.1 The Assault Ladder must operate in temperatures from -19°C to +49°C.
- A6.1.4.2 The Assault Ladder must operate in relative humidity from 5% to 100%.

A7.0 APPENDIX: WIRE CAVING LADDER TECHNICAL SPECIFICATION

A7.1 Requirements

A7.1.1 Performance

- A7.1.1.1 The Wire Caving Ladder must support a load of no less than 200kg.
- A7.1.1.2 The Wire Caving Ladder must include attaching hook hardware, also supporting a load of no less than 200kg, for mounting on and attaching to the following structures:
 - A7.1.1.2.1 Railings and the sides of ships;
 - A7.1.1.2.2 Wood-frame construction window sills;
 - A7.1.1.2.3 Concrete building windows sills, and
 - A7.1.1.2.4 House and commercial building flat-top roofs.
- A7.1.1.3 The Wire Caving Ladder must include an extendable pole (telescopic or folding) that can be manually extended to no less than five (5) m in length and is used to place the attaching hook hardware on the structure from below.
 - A7.1.1.3.1 Once the attaching hook hardware is placed, the extendable pole must detach from the Wire Caving Ladder attaching hook hardware.
- A7.1.1.4 The Wire Caving Ladder must be a wire rope or metal cable ladder providing sharp edge wear resistance and protection against corrosive substances.

A7.1.2 Size

- A7.1.2.1 The Wire Caving Ladder must be no less than five (5) m in length.
- A7.1.2.2 The Wire Caving Ladder, including attaching hook hardware and extendable pole, when compacted for transport and storage, must fit within the Soldier's Tactical Field Pack (NSN: 8465-20-000-2774).
 - A7.1.2.2.1 The Soldier's Tactical Field Pack (NSN: 8465-20-000-2774) has an available volume of height – 50 cm, width – 30 cm, and depth – 20 cm.

A7.1.3 Weight

- A7.1.3.1 The Wire Caving Ladder must weigh no more than two (2) kg.
- A7.1.3.2 The Wire Caving Ladder, attaching hook hardware, and extendable pole must weigh no more than five (5) kg.

A7.1.4 Colour

- A7.1.4.1 The Wire Caving Ladder must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

A7.1.4.1.1 Flat/matte finish green;

A7.1.4.1.2 Flat/matte finish earth tone;

A7.1.4.1.3 Flat/matte finish grey, or

A7.1.4.1.4 Flat/matte finish black.

A7.1.4.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

A7.1.4.2.1 34094 Green;

A7.1.4.2.2 30051 Brown;

A7.1.4.2.3 33446 Dessert Tan;

A7.1.4.2.4 34082 Green;

A7.1.4.2.5 33105 Brown;

A7.1.4.2.6 33303 Sand, or

A7.1.4.2.7 Black.

A7.1.5 Climatic Conditions

A7.1.5.1 The Wire Caving Ladder must operate in temperatures from -19°C to +49°C.

A7.1.5.2 The Wire Caving Ladder must operate in relative humidity from 5% to 100%.

A8.0 APPENDIX: GRAPPLING HOOK TECHNICAL SPECIFICATION

A8.1 Requirements

A8.1.1 Performance

- A8.1.1.1 The Grappling Hook must support a load of no less than 200 kg.
- A8.1.1.2 The Grappling Hook must have three (3) or four (4) prongs for easier attachment when dragging the hook. Prongs must have additional sharp or serrated attaching features for securing the hook to soft items.
- A8.1.1.3 The Grappling Hook must include a 100 m rope that can support a load of no less than 200kg.

A8.1.2 Size

- A8.1.2.1 The Grappling Hook must be no less than 15cm in length and no more than 30cm in length.
- A8.1.2.2 The Grappling Hook with rope, when compacted for transport and storage, must fit within the Soldier's Tactical Field Pack (NSN: 8465-20-000-2774).
 - A8.1.2.2.1 The Soldier's Tactical Field Pack (NSN: 8465-20-000-2774) has an available volume of height – 50 cm, width – 30 cm, and depth – 20 cm.

A8.1.3 Colour

- A8.1.3.1 The Grappling Hook and rope must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:
 - A8.1.3.1.1 Flat/matte finish green;
 - A8.1.3.1.2 Flat/matte finish earth tone;
 - A8.1.3.1.3 Flat/matte finish grey, or
 - A8.1.3.1.4 Flat/matte finish black.
- A8.1.3.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:
 - A8.1.3.2.1 34094 Green;
 - A8.1.3.2.2 30051 Brown;
 - A8.1.3.2.3 33446 Dessert Tan;
 - A8.1.3.2.4 34082 Green;
 - A8.1.3.2.5 33105 Brown;

A8.1.3.2.6 33303 Sand, or

A8.1.3.2.7 Black.

A8.1.4 **Climatic Conditions**

A8.1.4.1 The Grappling Hook must operate in temperatures from -19°C to +49°C.

A8.1.4.2 The Grappling Hook must operate in relative humidity from 5% to 100%.

A9.0 APPENDIX: FRONTAL HEADLAMP TECHNICAL SPECIFICATION

A9.1 Requirements

A9.1.1 Performance

- A9.1.1.1 The Frontal Headlamp must have two (2) light output settings:
 - A9.1.1.1.1 High output which must emit a luminous intensity of no less than 130 lumens.
 - A9.1.1.1.2 Low output which must emit light for no less than 15 hours at a temperature of 20°C (+/- 3 °C).
- A9.1.1.2 The Frontal Headlamp must operate using either AAA or AA alkaline batteries.
 - A9.1.1.2.1 **No batteries** must be included with the Frontal Headlamp.
- A9.1.1.3 The Frontal Headlamp must have tilt adjustment.
- A9.1.1.4 The Frontal Headlamp must be single-handed operation for ON/OFF, light intensity and light direction adjustment.
- A9.1.1.5 The Frontal Headlamp must emit both a white light for normal use, and a red light for discretion.
- A9.1.1.6 The Frontal Headlamp must have no less than an IP64 rating, or equivalent, IAW NEMA IEC 60529.

A9.1.2 Size

- A9.1.2.1 The Frontal Headlamp must mount or attach to the in-service CAF CG634 combat helmets:
 - A9.1.2.1.1 Small: NSN 8470-21-912-7604;
 - A9.1.2.1.2 Medium: NSN 8470-21-912-7605, and
 - A9.1.2.1.3 Large: NSN 8470-21-912-7606.

A9.1.3 Colour

- A9.1.3.1 The Frontal Headlamp must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:
 - A9.1.3.1.1 Flat/matte finish green;
 - A9.1.3.1.2 Flat/matte finish earth tone;
 - A9.1.3.1.3 Flat/matte finish grey, or
 - A9.1.3.1.4 Flat/matte finish black.

A9.1.3.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

A9.1.3.2.1 34094 Green;

A9.1.3.2.2 30051 Brown;

A9.1.3.2.3 33446 Dessert Tan;

A9.1.3.2.4 34082 Green;

A9.1.3.2.5 33105 Brown;

A9.1.3.2.6 33303 Sand, or

A9.1.3.2.7 Black.

A9.1.4 **Climatic Conditions**

A9.1.4.1 The Frontal Headlamp must operate in temperatures from -19°C to +39°C.

A9.1.4.2 The Frontal Headlamp must operate in relative humidity from 43% to 100%.

A10.0 APPENDIX: HIGH POWER HANDHELD FLASHLIGHT TECHNICAL SPECIFICATION

A10.1 Requirements

A10.1.1 Performance

- A10.1.1.1 The High Power Handheld Flashlight must have two light output settings:
 - A10.1.1.1.1 High output which must emit a luminous intensity of no less than 500 lumens for no less than one (1) hour at a temperature of 20°C (+/- 3 °C).
 - A10.1.1.1.2 Low output which must emit light for no less than three (3) hours at a temperature of 20°C (+/- 3 °C).
- A10.1.1.2 The High Power Handheld Flashlight must operate using alkaline, lithium, or rechargeable batteries.
 - A10.1.1.2.1 If rechargeable batteries – One (1) Battery Set must be provided, along with a Battery Charging System.
 - A10.1.1.2.2 If alkaline or lithium batteries – **No batteries** must be included with the High Power Handheld Flashlight.
- A10.1.1.3 The High Power Handheld Flashlight must have no less than an IP65 rating, or equivalent, IAW NEMA IEC 60529.

A10.1.2 Battery Charging System (if required);

- A10.1.2.1 If Battery Set uses alkaline or lithium batteries, no Battery Charging System is required.
- A10.1.2.2 If Battery Set uses rechargeable batteries:
 - A10.1.2.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with North American plug type.
 - A10.1.2.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.
 - A10.1.2.2.3 The Battery Charging System full re-charge time for the Battery Set must not exceed three (3) hours.
 - A10.1.2.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A10.1.3 Weight

- A10.1.3.1 The High Power Handheld Flashlight, along with batteries, must weigh no more than 300 grams.

A10.1.4 Colour

A10.1.4.1 The High Power Handheld Flashlight must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

A10.1.4.1.1 Flat/matte finish green;

A10.1.4.1.2 Flat/matte finish earth tone;

A10.1.4.1.3 Flat/matte finish grey, or

A10.1.4.1.4 Flat/matte finish black.

A10.1.4.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

A10.1.4.2.1 34094 Green;

A10.1.4.2.2 30051 Brown;

A10.1.4.2.3 33446 Dessert Tan;

A10.1.4.2.4 34082 Green;

A10.1.4.2.5 33105 Brown;

A10.1.4.2.6 33303 Sand, or

A10.1.4.2.7 Black.

A10.1.5 Climatic Conditions

A10.1.5.1 The High Power Handheld Flashlight must operate in temperatures from -19°C to +39°C.

A10.1.5.2 The High Power Handheld Flashlight must operate in relative humidity from 43% to 100%.

A11.0 APPENDIX: TRIP WIRE ILLUMINATOR TECHNICAL SPECIFICATION

A11.1 Requirements

A11.1.1 Performance

- A11.1.1.1 The Trip Wire Illuminator must use a green visible laser for ease of viewing in low-light and bright-light conditions.
- A11.1.1.2 The Trip Wire Illuminator must mount and attach to the in-service CAF C-7 rifle using the tactical rail meeting STANAG 4694.
- A11.1.1.3 The Trip Wire Illuminator must operate using disposable 3V lithium, or alkaline AA/AAA batteries.
 - A11.1.1.3.1 **No batteries** must be included with the Trip Wire Illuminator.
- A11.1.1.4 The Trip Wire Illuminator must project a laser beam fan of length no less than 4.5m with a fan width of no less than 60 degrees.

A11.1.2 Size

- A11.1.2.1 The Trip Wire Illuminator must be no more than 13cm (length) x 5cm (width) x 5cm (height) in size.

A11.1.3 Weight

- A11.1.3.1 The Trip Wire Illuminator, including battery and adapter for C-7 rifle mounting, must weigh no more than 300g.

A11.1.4 Colour

- A11.1.4.1 The Trip Wire Illuminator must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:
 - A11.1.4.1.1 Flat/matte finish green;
 - A11.1.4.1.2 Flat/matte finish earth tone;
 - A11.1.4.1.3 Flat/matte finish grey, or
 - A11.1.4.1.4 Flat/matte finish black.
- A11.1.4.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:
 - A11.1.4.2.1 34094 Green;
 - A11.1.4.2.2 30051 Brown;
 - A11.1.4.2.3 33446 Dessert Tan;

- A11.1.4.2.4 34082 Green;
- A11.1.4.2.5 33105 Brown;
- A11.1.4.2.6 33303 Sand, or
- A11.1.4.2.7 Black.

A11.1.5 **Climatic Conditions**

- A11.1.5.1 The Trip Wire Illuminator must operate in temperatures from 10°C to +39°C.
- A11.1.5.2 The Trip Wire Illuminator must operate in relative humidity from 43% to 100%.

A12.0 APPENDIX: PORTABLE FLOODLIGHT TECHNICAL SPECIFICATION

A12.1 Requirements

A12.1.1 Performance

- A12.1.1.1 The Portable Floodlight must have a luminosity of no less than 2600 lumens.
- A12.1.1.2 The Portable Floodlight must emit light for no less than 14 hours at a temperature of 20°C (+/- 3 °C), and at a luminosity of no less than 50% of the 2600 lumens (lower output setting).
- A12.1.1.3 The Portable Floodlight must use white light LEDs to emit light, providing increased bulb durability and long-life.
- A12.1.1.4 The Portable Floodlight must attach to an included stand that can support and raise the Portable Floodlight to a height of no less than one (1) m from the ground surface (measured from the ground to the base of the Portable Floodlight).
- A12.1.1.5 The Portable Floodlight must operate using rechargeable batteries.
- A12.1.1.6 The Portable Floodlight must have no less than an IP65 rating, or equivalent, IAW NEMA IEC 60529.

A12.1.2 Battery Charging System

- A12.1.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with North American plug type.
- A12.1.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.
- A12.1.2.3 The Battery Charging System full re-charge time for the battery set must not exceed eight (8) hours.
- A12.1.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A12.1.3 Weight

- A12.1.3.1 The Portable Floodlight must weigh no more than seven (7) kg.

A12.1.4 Colour

- A12.1.4.1 The Portable Floodlight must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:
 - A12.1.4.1.1 Flat/matte finish green;
 - A12.1.4.1.2 Flat/matte finish earth tone;
 - A12.1.4.1.3 Flat/matte finish grey, or
 - A12.1.4.1.4 Flat/matte finish black.

A12.1.4.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

A12.1.4.2.1 34094 Green;

A12.1.4.2.2 30051 Brown;

A12.1.4.2.3 33446 Dessert Tan;

A12.1.4.2.4 34082 Green;

A12.1.4.2.5 33105 Brown;

A12.1.4.2.6 33303 Sand, or

A12.1.4.2.7 Black.

A12.1.5 **Climatic Conditions**

A12.1.5.1 The Portable Floodlight must operate in temperatures from -19°C to +39°C.

A12.1.5.2 The Portable Floodlight must operate in relative humidity from 43% to 100%.

A13.0 APPENDIX: HYDRAULIC DOOR OPENER SYSTEM TECHNICAL SPECIFICATION

A13.1 Requirements

A13.1.1 Performance

- A13.1.1.1 The Hydraulic Door Opener System must open the following types of inward opening doors:
 - A13.1.1.1.1 Door material – metal, wood and PVC
 - A13.1.1.1.2 Door lock type – single and multi-lock
- A13.1.1.2 The Hydraulic Door Opener System must have a spreading force of no less than 50 kN.
- A13.1.1.3 The Hydraulic Door Opener System must have a pushing force of no less than 30 kN.
- A13.1.1.4 The Hydraulic Door Opener System must have remote cable control of cable length no less than 130 m.
- A13.1.1.5 If using a hydraulic power unit:
 - A13.1.1.5.1 The Hydraulic Door Opener System must have operator controls on the hydraulic power unit itself.
 - A13.1.1.5.2 The Hydraulic Door Opener System must operate using rechargeable batteries.
 - A13.1.1.5.2.1 One (1) Battery Set must be provided, along with a Battery Charging System.
 - A13.1.1.5.3 The Hydraulic Door Opener System must operate continuously on a full battery charge for no less than 20 minutes.
 - A13.1.1.5.4 The Hydraulic Door Opener System must include a pressure hose of no less than five (5) m for increased extension between the hydraulic power unit and opening tool itself.
- A13.1.1.6 If using air cylinder with pneumatic-hydraulic drive:
 - A13.1.1.6.1 The Hydraulic Door Opener System must include enough air cylinders to allow for eight (8) door opening operations.
 - A13.1.1.6.2 The Hydraulic Door Opener System must include a pressure hose of no less than five (5) m for increased extension between the air cylinder and opening tool itself.
- A13.1.1.7 The Hydraulic Door Opener System must include extension bracket(s) to operate with door widths of no less than 120 cm.

A13.1.1.8 The Hydraulic Door Opener System must operate in a horizontal direction.

A13.1.1.9 The Hydraulic Door Opener System must have no less than an IP65 rating, or equivalent, IAW NEMA IEC 60529.

A13.1.2 Battery Charging System (if required)

A13.1.2.1 The Battery Charging System must include a universal power input of 110VAC – 220VAC, 50Hz – 60Hz, with North American plug type.

A13.1.2.2 The Battery Charging System must provide visual indications of battery charging in order to indicate when charging is in progress and when it is complete.

A13.1.2.3 The Battery Charging System full re-charge time for one (1) Battery Set must not exceed four (4) hours.

A13.1.2.4 The Battery Charging System must be certified CE, UL or equivalent.

A13.1.3 Size

A13.1.3.1 If using a hydraulic power unit, the Hydraulic Door Opener System hydraulic power unit must be no more than 30cm (length) x 35cm (width) x 60cm (height) in size.

A13.1.3.2 If using air cylinder with pneumatic-hydraulic drive, the Hydraulic Door Opener System air cylinder with pneumatic-hydraulic drive unit must be no more than 30cm (length) x 35cm (width) x 60cm (height) in size.

A13.1.3.3 The Hydraulic Door Opener System **opening tool** must be no more than 80 cm (length) x 50cm (width) x 10cm (height) in size.

A13.1.4 Weight

A13.1.4.1 The Hydraulic Door Opener System must weigh no more than 40.0 kg.

A13.1.5 Colour

A13.1.5.1 The Hydraulic Door Opener System, not including the Battery Charging System (if required), must have the predominant exterior colour (so that it contributes to and does not compromise an operator's camouflage) of:

A13.1.5.1.1 Flat/matte finish green;

A13.1.5.1.2 Flat/matte finish earth tone;

A13.1.5.1.3 Flat/matte finish grey, or

A13.1.5.1.4 Flat/matte finish black.

A13.1.5.2 Items that need to be painted to meet this requirement must be painted using one of the following paint colours (IAW FED-STD-595C) and must have a flat/matte finish:

- A13.1.5.2.1 34094 Green;
- A13.1.5.2.2 30051 Brown;
- A13.1.5.2.3 33446 Dessert Tan;
- A13.1.5.2.4 34082 Green;
- A13.1.5.2.5 33105 Brown;
- A13.1.5.2.6 33303 Sand, or
- A13.1.5.2.7 Black.

A13.1.6 Climatic Conditions

- A13.1.6.1 The Hydraulic Door Opener System must operate in temperatures from -19°C to +39°C.
- A13.1.6.2 The Hydraulic Door Opener System must operate in relative humidity from 43% to 100%.

A13.1.7 Hard Transport Container

- A13.1.7.1 The Hydraulic Door Opener System must be stored and shipped within a single Hard Transport Container, with no less than an IP66 rating or equivalent, IAW NEMA IEC 60529.
- A13.1.7.2 The Hydraulic Door Opener System must include (stored within the Hard Transport Container) all tools required to setup and maintain the Hydraulic Door Opener System in accordance with the **Operator Maintenance** Concept ANNEX A paragraph 4.1.1.1 (page 13).
- A13.1.7.3 The Hydraulic Door Opener System must include (stored within the Hard Transport Container without needing to be folded or otherwise distorted from flat) the Technical Publication(s) listed within the CDRL(s) as being 'Issued with each Hydraulic Door Opener System'.

A14.0 APPENDIX: LOAD CARRIAGE SYSTEM TECHNICAL SPECIFICATION

A14.1 Requirements

A14.1.1 Material and Colour Requirements

A14.1.1.1 The Load Carriage System must be made using the following Government Supplied Material (GSM) for the predominant external material:

A14.1.1.1.1 CADPAT (Temperate Woodlands) – Textured High Tenacity Nylon – NSN 8305-20-002-4731 – quantity of material provided is 1150m.

A14.1.1.2 The Load Carriage System interior material, webbing, and straps must be Canadian Average Green in colour.

A14.1.1.3 The Load Carriage System fasteners and buckles must be:

A14.1.1.3.1 Non-metallic and crush resistant to a load of no less than 120kg.

A14.1.1.3.2 Black in colour, and have a flat/matte finish.

A14.1.1.4 The Load Carriage System Bolstered Ventilation and Stability (BVS) system must be black in colour.

A14.1.2 Load Carriage System Components

A14.1.2.1 The Load Carriage System must include the following components:

A14.1.2.1.1 **Expedition Overload BVS – CADPAT(TW) – MD-MD [NSN 8105-01-649-0611]**, which includes:

A14.1.2.1.1.1 QTY 1 - Expedition Overload Bag – CADPAT(TW)

A14.1.2.1.1.2 QTY 1 - NICE Frame – CADPAT(TW) – MD-MD

A14.1.2.1.1.3 QTY 1 - NICE Daypack Lid – CADPAT(TW)

A14.1.2.1.1.4 QTY 4 – Rip Zip Pocket MOLLE – CADPAT(TW)

A14.1.2.1.2 **NICE Load Cell – CADPAT(TW) – SM [NSN 8105-01-649-0615]**

A14.1.2.1.2.1 Details: Volume: 16L, Dimensions: 18cm x 33cm x 15cm

A14.1.2.1.3 **NICE Load Cell – CADPAT(TW) – LG [NSN 8105-01-649-0619]**

A14.1.2.1.3.1 Details: Volume: 23L, Dimensions: 30cm x 33cm x 15cm

A14.1.2.1.4 **NICE ROUS BVS – CADPAT(TW) – MD-MD [NSN 8105-01-649-0624]**, which includes:

A14.1.2.1.4.1 QTY 1 – NICE ROUS Bag – CADPAT(TW)

A14.1.2.1.4.2 QTY 1 – NICE Frame – CADPAT(TW) – MD-MD

A14.1.3 **Sizing and Fit**

A14.1.3.1 NICE Frame – CADPAT(TW) – MD-MD sizing (Waist belt-Frame Size) must be the following:

A14.1.3.1.1 Waist belt Size - Medium (MD) – 88.9cm to 96.52cm

A14.1.3.1.2 Frame (height) Size - Medium (MD) – 5'6" to 6'2"

A14.1.4 **Climatic Conditions**

A14.1.4.1 The Load Carriage System must operate in temperatures from -19°C to +49°C.

A14.1.4.2 The Load Carriage System must operate in relative humidity from 5% to 100%.

A15.0 APPENDIX: CONTRACT DATA REQUIREMENTS LIST

A15.1 CDRL Item List

CDRL #	Title	DID #
HRS-TOOL-PM-001	Contract Status Report	HRS-TOOL-PM-001
HRS-TOOL-PM-002	Meeting Agenda	HRS-TOOL-PM-002
HRS-TOOL-PM-003	Meeting Minutes	HRS-TOOL-PM-003
HRS-TOOL-ILS-201	Top Level Assembly Drawing	HRS-TOOL-ILS-201
HRS-TOOL-ILS-202	Operator Manual	HRS-TOOL-ILS-202
HRS-TOOL-ILS-203	Operator Quick Reference Card	HRS-TOOL-ILS-203
HRS-TOOL-ILS-204	Maintenance and Parts Handbook	HRS-TOOL-ILS-204
HRS-TOOL-ILS-205	Operator Training Package	HRS-TOOL-ILS-205
HRS-TOOL-ILS-206	Technician Training Package	HRS-TOOL-ILS-206
HRS-TOOL-ILS-207	Provisioning Parts Breakdown	HRS-TOOL-ILS-207
HRS-TOOL-ILS-208	Supplementary Provisioning Technical Documentation	HRS-TOOL-ILS-208
HRS-TOOL-ILS-209	Special Tools and Test Equipment	HRS-TOOL-ILS-209
HRS-TOOL-ILS-210	Identification Plates	HRS-TOOL-ILS-210
HRS-TOOL-ILS-211	Controlled & Non-Controlled Goods List	HRS-TOOL-ILS-211
HRS-TOOL-ILS-212	Identification Labels for Storage and Shipment and Packaging Codes	HRS-TOOL-ILS-212
HRS-TOOL-ILS-213	List of Items to be Supported	HRS-TOOL-ILS-213

A15.2 CDRL Table Definitions

The following section defines the various blocks of information found on the CDRL forms:

BLOCK 1 – SYSTEM / ITEM

Provides the name of the System or Item for which the CDRL applies.

BLOCK 2 – ITEM NUMBER

The Item Number is a sequential three-digit number to uniquely identify the individual data item (CDRL number). Note that the 001-099 series is reserved to Project Management (PM) CDRLs, the 101-199 series is reserved to Systems Engineering (SE) CDRLs and the 201-299 series is reserved to Integrated Logistics Support (ILS) CDRLs.

BLOCK 3 - TITLE OR DESCRIPTION OF DATA

The title of the data item being referred to in this CDRL.

BLOCK 4 - AUTHORITY (DATA ITEM NUMBER)

Indicates the Data Item Description (DID) number to which this CDRL refers.

BLOCK 5 - CONTRACT REFERENCE

The specific paragraph number of the Contract Demand, Statement of Work, Request for Proposal, Specification, or other applicable document to assist in identifying the work effort associated with the data item.

BLOCK 6 - FREQUENCY

This block indicates the frequency of the delivered data. The following frequency codes are used:

ANNLY	Annually
ASGEN	As generated
ASREQ	As required
BI-MO	Every 2 months
BI-WK	Every 2 weeks
DAILY	Daily
MNTHY	Monthly
ONE/R	One time with revisions
OTIME	One time
QRTLY	Quarterly
R/ASR	Revisions as required
SEMIA	Semi-annually
WKLY	Weekly

BLOCK 7 – REQUIRING OFFICE

Identifies the technical office of primary interest responsible for defining the data requirement, reviewing, acceptance and approval of the data item, and ensuring the adequacy of the delivered data.

BLOCK 8 – SUBMISSION SCHEDULE

DATE OF 1ST SUBMISSION - The initial submission date or associated constraint for the 1st submission of the data item is indicated in this block using typical abbreviations as listed above under Block 11.

DATE OF SUBSEQUENT SUBMISSION / EVENT - The date(s) of subsequent submission(s) or associated constraint(s) of the data item is indicated in this block.

BLOCK 9 - DISTRIBUTION AND ADDRESSEES

Indicates the addressees and the respective number of copies (hard copies and soft copies separately), for either the draft or first submissions (Sub-Block "Draft"), and for the final or subsequent submissions (Sub-Block "Final"), for which the data item is required.

A15.3 CDRL – Contract Status Report

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-PM-001	3. TITLE OR DESCRIPTION OF DATA Contract Status Report (CSR)		4. AUTHORITY (Data Item Number) DID HRS-TOOL-PM-001				
5. CONTRACT REFERENCE SOW: Para. 3.2.1 (pg. 11) DID: App. A16.3 (pg. 89)		6. FREQUENCY MNTY	7. REQUIRING OFFICE DND PMO				
8. SUBMISSION SCHEDULE <p>First Submission: The Contractor must provide a draft CSR for review no later than 28 calendar days after the Kick-off Meeting.</p> <p>Response Time: Comments on the draft CSR will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p> <p>Subsequent Submission(s): The Contractor must provide a revised CSR, addressing Canada's comments, for review and possible acceptance no later than 7 calendar days after the receipt of Canada's comments.</p> <p>Response Time: Comments or acceptance of the revised CSR will be provided by Canada no later than seven (7) calendar days after receipt of the <u>soft copy submission</u>.</p> <p>Monthly Submissions: After acceptance by Canada, the Contractor must provide a CSR on a monthly basis throughout the contract.</p>			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND TA	0	1	0	1
			PSPC CA	0	0	0	1
			DND PA	0	0	0	1
DND ILSM	0	1	0	1			

A15.4 CDRL – Meeting Agenda

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-PM-002		3. TITLE OR DESCRIPTION OF DATA Meeting Agenda		4. AUTHORITY (Data Item Number) DID HRS-TOOL-PM-002			
5. CONTRACT REFERENCE SOW: Para. 3.3.5.1.1 (pg. 12) DID: App. A16.4 (pg. 91)		6. FREQUENCY ASREQ		7. REQUIRING OFFICE DND PMO			
8. SUBMISSION SCHEDULE First Submission: The Contractor must provide a draft Meeting Agenda for review no later than seven (7) calendar days prior to each meeting. Response Time: Comments on the draft Meeting Agenda, and additions and deletions of discussion items, will be provided by Canada no later than five (5) calendar days after receipt of the <u>soft copy</u> submission. Subsequent Submission: The Contractor must provide a revised Meeting Agenda, addressing Canada's comments, in <u>soft copy</u> one (1) calendar day prior to each meeting, and in <u>hard copy</u> at the meeting.			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			PSPC CA	0	1	1	1
DND TA	0	1	1	1			
DND PA	0	1	1	1			

A15.5 CDRL – Meeting Minutes

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-PM-003	3. TITLE OR DESCRIPTION OF DATA Meeting Minutes		4. AUTHORITY (Data Item Number) DID HRS-TOOL-PM-003				
5. CONTRACT REFERENCE SOW: Para. 3.3.5.1.2 (pg. 12) DID: App. A16.5 (pg. 93)	6. FREQUENCY ASREQ		7. REQUIRING OFFICE DND PMO				
8. SUBMISSION SCHEDULE First Submission: The Contractor must provide draft Meeting Minutes for review no later than seven (7) calendar days following each meeting. Response Time: Comments on the draft Meeting Minutes will be provided by Canada no later than seven (7) calendar days after receipt of the <u>soft copy submission</u> . Subsequent Submission(s): The Contractor must provide revised Meeting Minutes, addressing Canada's comments, for review and possible acceptance no later than seven (7) calendar days after receipt of Canada's comments. Response Time: Comments or acceptance of the revised Meeting Minutes will be provided by Canada no later than seven (7) calendar days after receipt of the <u>soft copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			PSPC CA	0	1	0	1
			DND TA	0	1	0	1
DND PA	0	1	0	1			

A15.6 CDRL – Top Level Assembly Drawing

CONTRACT DATA REQUIREMENTS LIST								
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools								
2. ITEM NUMBER CDRL HRS-TOOL-ILS-201	3. TITLE OR DESCRIPTION OF DATA TLAD	4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-201						
5. CONTRACT REFERENCE SOW: Para. 3.3.2.2 (pg. 11) DID: App. A16.6 (pg. 94)	6. FREQUENCY ONE/R	7. REQUIRING OFFICE DND ILS Manager						
8. SUBMISSION SCHEDULE		9. DISTRIBUTION and ADDRESSEES						
<p>First Submission: The Contractor must provide a draft TLAD for review by Canada during the Kick-Off Meeting.</p> <p>Response Time: Comments on the draft TLAD will be provided by Canada no later than seven (7) calendar days after receipt of the <u>hard and soft copy submission</u>.</p> <p>Subsequent Submission(s): The Contractor must provide a revised TLAD, addressing Canada's comments, for review and possible acceptance no later than seven (7) calendar days after the receipt of Canada's comments.</p> <p>Response Time: Comments or acceptance of the revised TLAD will be provided by Canada no later than seven (7) calendar days after receipt of the <u>hard and soft copy submission</u>.</p>		A. ADDRESSEE	B. COPIES					
				DRAFT		FINAL		
				Hard Copy	Soft Copy	Hard Copy	Soft Copy	
				DND ILSM	1	1	1	1

A15.7 CDRL – Operator Manual

CONTRACT DATA REQUIREMENTS LIST								
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools								
2. ITEM NUMBER CDRL HRS-TOOL-ILS-202		3. TITLE OR DESCRIPTION OF DATA Operator Manual		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-202				
5. CONTRACT REFERENCE SOW: Para. 4.3.1.1.1 (pg. 13) DID: App. A16.7 (pg. 95)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager				
8. SUBMISSION SCHEDULE First Submission (English): The Contractor must provide a draft English Operator Manual for review by Canada no later than 56 calendar days after the Kick off Meeting date. Response Time: Comments on the draft English Operator Manual will be provided by Canada no later than 21 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (English): The Contractor must provide a revised English Operator Manual, addressing Canada's comments, for review and possible acceptance no later than 21 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised English Operator Manual will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . First Submission (Bilingual): The Contractor must provide a draft Bilingual Operator Manual for review by Canada no later than 42 calendar days after the acceptance of the English Operator Manual. Response Time: Comments on the draft Bilingual Operator Manual will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Bilingual): The Contractor must provide a revised Bilingual Operator Manual, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised Bilingual Operator Manual will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> .			9. DISTRIBUTION and ADDRESSEES					
			A. ADDRESSEE		B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM		1 per component	1 per component	1 per component	1 per component
			Issued with each GPR/MD System				1	
			Issued with each CTMD System				1	
			Issued with each NLJD System				1	
			Issued with each HVA System				1	
Issued with each Hydraulic Door Opener System				1				

A15.8 CDRL - Operator Quick Reference Card

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-203		3. TITLE OR DESCRIPTION OF DATA Operator Quick Reference Card		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-203			
5. CONTRACT REFERENCE SOW Para. 4.3.1.2.1 (pg. 14) DID: App. A16.8 (pg. 97)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
8. SUBMISSION SCHEDULE First Submission (English): The Contractor must provide a draft English Operator Quick Reference Card at the same time as the submission of the draft English Operator Manual. Response Time: Comments on the draft English Operator Quick Reference Card will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) English: The Contractor must provide a revised English Operator Quick Reference Card, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised English Operator Quick Reference Card will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . First Submission (Bilingual): The Contractor must provide a draft Bilingual Operator Quick Reference Card at the same time as the submission of the Bilingual Operator Manual. Response Time: Comments on the draft Bilingual Operator Quick Reference Card will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Bilingual): The Contractor must provide a revised Bilingual Operator Quick Reference Card, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised Bilingual Operator Quick Reference Card will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	component 1 per	component 1 per	component 1 per	component 1 per
			Issued with each GPR/MD System			1	
			Issued with each CTMD System			1	
			Issued with each NLJD System			1	
			Issued with each HVA System			1	
Issued with each Hydraulic Door Opener System			1				

A15.9 CDRL – Maintenance and Parts Handbook

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-204		3. TITLE OR DESCRIPTION OF DATA Maintenance and Parts Handbook		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-204			
5. CONTRACT REFERENCE SOW: Para. 4.3.1.3.1 (pg. 14) DID: App. A16.9 (pg. 99)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
8. SUBMISSION SCHEDULE First Submission (English): The Contractor must provide a draft English Maintenance and Parts Handbook for review by Canada no later than 70 calendar days after the Kick off Meeting date. Response Time: Comments on the draft English Maintenance and Parts Handbook will be provided by Canada no later than 21 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) English: The Contractor must provide a revised English Maintenance and Parts Handbook, addressing Canada's comments, for review and possible acceptance no later than 21 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised English Maintenance and Parts Handbook will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . First Submission (Bilingual): The Contractor must provide a draft Bilingual Maintenance and Parts Handbook for review by Canada no later than 42 calendar days after the acceptance of the English Maintenance and Parts Handbook. Response Time: Comments on the draft Bilingual Maintenance and Parts Handbook will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Bilingual): The Contractor must provide a revised Bilingual Maintenance and Parts Handbook, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of comments. Response Time: Comments or acceptance of the revised Bilingual Maintenance and Parts Handbook will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	component 1 per	component 1 per	component 1 per	component 1 per
			Issued with each GPR/MD System			1	
			Issued with each CTMD System			1	
			Issued with each NLJD System			1	
			Issued with each HVA System			1	

A15.10 CDRL – Operator Training Package

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-205		3. TITLE OR DESCRIPTION OF DATA Operator Training Package		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-205			
5. CONTRACT REFERENCE SOW: Para. 4.3.1.4.1 (pg. 14) DID: App. A16.10 (pg. 101)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
8. SUBMISSION SCHEDULE First Submission (English): The Contractor must provide a draft English Operator Training Package for review by Canada no later than 14 calendar days following the acceptance of the English version of the Operator Manual. Response Time: Comments on the draft English Operator Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (English): The Contractor must provide a revised English Operator Training Package, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised English Operator Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . First Submission (Bilingual): The Contractor must provide a draft Bilingual Operator Training Package for review by Canada no later than 14 calendar days after the acceptance of the Bilingual Operator Manual. Response Time: Comments on the draft Bilingual Operator Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Bilingual): The Contractor must provide a revised Bilingual Operator Training Package, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised Bilingual Operator Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESS	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	1	1	1	1
			Issued to Students at Training Session(s)			1 – Student Handout only	1 – CD of the Operator Training Package

A15.11 **CDRL – Technician Training Package**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-206		3. TITLE OR DESCRIPTION OF DATA Technician Training Package		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-206			
5. CONTRACT REFERENCE SOW: Para. 4.3.1.5.1 (pg. 14) DID: App. A16.11 (pg. 103)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
8. SUBMISSION SCHEDULE First Submission (English): The Contractor must provide a draft English Technician Training Package for review by Canada no later than 14 calendar days following the acceptance of the English version of the Maintenance and Parts Handbook. Response Time: Comments on the draft English Technician Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (English): The Contractor must provide a revised English Technician Training Package, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised English Technician Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . First Submission (Bilingual): The Contractor must provide a draft Bilingual Technician Training Package for review by Canada no later than 14 calendar days after the acceptance of the Bilingual Maintenance and Parts Handbook. Response Time: Comments on the draft Bilingual Technician Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Bilingual): The Contractor must provide a revised Bilingual Technician Training Package, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised Bilingual Technician Training Package will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESS	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	1	1	1	1
Issued to Students at the Training Session(s)			1 – Student Handout only	1 – CD of the Technician Training Package			

A15.12 **CDRL – Provisioning Parts Breakdown**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-207		3. TITLE OR DESCRIPTION OF DATA Provisioning Parts Breakdown		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-207			
5. CONTRACT REFERENCE SOW: Para. 4.4.3.1.1 (pg. 16) DID: App. A16.12 (pg. 105)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
8. SUBMISSION SCHEDULE First Submission: The Contractor must provide a draft Provisioning Parts Breakdown for review by Canada at the same time as the draft Maintenance and Parts Handbook submission. Response Time: Comments on the draft Provisioning Parts Breakdown will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u> . Subsequent Submission(s): The Contractor must provide a revised Provisioning Parts Breakdown, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days before the IPC. Response Time: Comments or acceptance of the revised Provisioning Parts Breakdown will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u> . Note: The Contractor must provide a subsequent submission of the Provisioning Parts Breakdown if additional revisions or additions are required after completion of the IPC.			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	1	1	1	1

A15.13 **CDRL – Supplementary Provisioning Technical Documentation**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-208		3. TITLE OR DESCRIPTION OF DATA Supplementary Provisioning Technical Documentation		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-208			
5. CONTRACT REFERENCE SOW: Para. 4.4.3.2.1 (pg. 17) DID: App. A16.13 (pg. 108)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
<p>8. SUBMISSION SCHEDULE</p> <p>First Submission: The Contractor must provide a draft Supplementary Provisioning Technical Documentation for review by Canada at the same time as the draft Provisioning Parts Breakdown submission.</p> <p>Response Time: Comments on the draft Supplementary Provisioning Technical Documentation will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p> <p>The Contractor must revise the draft Supplementary Provisioning Technical Documentation, addressing Canada's comments, and bring the revised Supplementary Provisioning Technical Documentation to the Initial Provisioning Conference.</p> <p>Subsequent Submission(s) The Contractor must provide a revised Supplementary Provisioning Technical Documentation, addressing Canada's comments and changes resulting from decisions taken during the Initial Provisioning Conference, for review and possible acceptance no later than 14 calendar days from the end date of the Initial Provisioning Conference.</p> <p>Response Time: Comments or acceptance of the revised Supplementary Provisioning Technical Documentation will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p>			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	0	1	1	1

A15.14 **CDRL – Special Tools and Test Equipment List**

CONTRACT DATA REQUIREMENTS LIST								
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools								
2. ITEM NUMBER CDRL HRS-TOOL-ILS-209	3. TITLE OR DESCRIPTION OF DATA Special Tools & Test Equipment List	4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-209						
5. CONTRACT REFERENCE SOW: Para. 4.4.3.3.1 (pg. 17) DID: App. A16.14 (pg. 110)	6. FREQUENCY ONE/R	7. REQUIRING OFFICE DND ILS Manager						
8. SUBMISSION SCHEDULE		9. DISTRIBUTION and ADDRESSEES						
<p>First Submission: The Contractor must provide a draft Special Tools and Test Equipment List for review by Canada no later than 21 calendar days after the kick-off meeting.</p> <p>Response Time: Comments on the draft Special Tools and Test Equipment List will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p> <p>Subsequent Submission(s): The Contractor must provide a revised Special Tools and Test Equipment List, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after receipt of Canada's comments.</p> <p>Response Time: Comments or acceptance of the revised Special Tools and Test Equipment List will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p>		A. ADDRESSEE	B. COPIES					
				DRAFT		FINAL		
				Hard Copy	Soft Copy	Hard Copy	Soft Copy	
				DND ILSM	0	1	1	1

A15.15 **CDRL – Identification Plates – Design Template & Populated Designs**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-210	3. TITLE OR DESCRIPTION OF DATA Identification Plates – Design Template & Populated Designs		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-210				
5. CONTRACT REFERENCE SOW: Para. 4.6.1 (pg. 17) DID: App. A16.15 (pg. 112)		6. FREQUENCY ONE/R	7. REQUIRING OFFICE DND ILS Manager				
8. SUBMISSION SCHEDULE First Submission (Design Template): The Contractor must provide a draft Identification Plates design template for review by Canada no later than 28 calendar days after the Kick off Meeting date. Response Time: Comments on the draft Identification Plates design template will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Design Template): The Contractor must provide a revised Identification Plates design template, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised Identification Plates design template will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . First Submission (Populated Designs): The Contractor must provide all draft populated Identification Plate designs for review by Canada no later than 28 calendar days after acceptance of the Identification Plates design template. Response Time: Comments on the draft populated Identification Plate designs will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> . Subsequent Submission(s) (Populated Designs): The Contractor must provide revised populated Identification Plate designs, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after the receipt of Canada's comments. Response Time: Comments or acceptance of the revised populated Identification Plate designs will be provided by Canada no later than 14 calendar days after receipt of the <u>hard copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	1	1	1	1

A15.16 **CDRL – Controlled & Non-Controlled Goods List**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-211	3. TITLE OR DESCRIPTION OF DATA Controlled & Non-Controlled Goods List (CNCGL)		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-211				
5. CONTRACT REFERENCE SOW: Para. 4.7.1 (pg. 18) DID: App. A16.16 (pg. 114)	6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager				
8. SUBMISSION SCHEDULE			9. DISTRIBUTION and ADDRESSEES				
<p>First Submission: The Contractor must provide a draft CNCGL for review by Canada at the same time as the draft Provisioning Parts Breakdown submission.</p> <p>Response Time: Comments on the draft CNCGL will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p> <p>Subsequent Submission(s) The Contractor must provide a revised CNCGL, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after receipt of Canada's comments.</p> <p>Response Time: Comments or acceptance of the revised CNCGL will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u>.</p>			A. ADDRESSEE	B. COPIES			
			DRAFT		FINAL		
			Hard Copy	Soft Copy	Hard Copy	Soft Copy	
			DND ILSM	0	1	1	1

A15.17 **CDRL – Identification Labels for Storage and Shipment and Packaging Codes**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-212	3. TITLE OR DESCRIPTION OF DATA Identification Labels for Storage and Shipment and Packaging Codes		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-212				
5. CONTRACT REFERENCE SOW: Para. 4.8.3 (pg. 18) DID: App. A16.17 (pg. 116)	6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager				
8. SUBMISSION SCHEDULE First Submission (Labels): The Contractor must provide draft Identification Labels for Storage and Shipment designs for review by Canada no later than 42 calendar days after the Kick-off Meeting. Response Time: Comments on the draft Identification Labels for Storage and Shipment designs will be provided by Canada no later than 28 calendar days after receipt of the <u>soft copy submission</u> . Subsequent Submission(s): The Contractor must provide revised Identification Labels for Storage and Shipment designs, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after receipt of Canada's comments. Response Time: Comments or acceptance of the revised Identification Labels for Storage and Shipment designs will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u> . First Submission (Codes): The Contractor must provide draft Packaging Codes forms for review by Canada no later than 35 calendar days after Canada provides the item's NATO Stock Number. Response Time: Comments on the draft Packaging Codes forms will be provided by Canada no later than 21 calendar days after receipt of the <u>soft copy submission</u> . Subsequent Submission(s): The Contractor must provide revised Packaging Codes forms, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after receipt of Canada's comments. Response Time: Comments or acceptance of the revised Packaging Codes forms will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u> . Note: The Contractor must provide subsequent submission of the Identification Labels for Storage and Shipment designs and Packaging Code forms if additional revisions or additions are required after a range of spares are chosen by Canada.			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	0	1	1	1

A15.18 **CDRL – List of Items to be Supported**

CONTRACT DATA REQUIREMENTS LIST							
1. SYSTEM / ITEM High Risk Search Equipment & Multi-Threat Detection Tools							
2. ITEM NUMBER CDRL HRS-TOOL-ILS-213		3. TITLE OR DESCRIPTION OF DATA List of Items to be Supported		4. AUTHORITY (Data Item Number) DID HRS-TOOL-ILS-213			
5. CONTRACT REFERENCE SOW: Para. 4.9.1 (pg. 18) DID: App. A16.18 (pg. 118)		6. FREQUENCY ONE/R		7. REQUIRING OFFICE DND ILS Manager			
8. SUBMISSION SCHEDULE First Submission: The Contractor must provide a draft List of Items to be Supported for review by Canada no later than 30 calendar days following the final acceptance of the Maintenance and Parts Handbook, PPB and SPTD. Response Time: Comments on the draft List of Items to be Supported will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u> . Subsequent Submission(s): The Contractor must provide a revised List of Items to be Supported, addressing Canada's comments, for review and possible acceptance no later than 14 calendar days after receipt of Canada's comments. Response Time: Comments or acceptance of the revised List of Items to be Supported will be provided by Canada no later than 14 calendar days after receipt of the <u>soft copy submission</u> .			9. DISTRIBUTION and ADDRESSEES				
			A. ADDRESSEE	B. COPIES			
				DRAFT		FINAL	
				Hard Copy	Soft Copy	Hard Copy	Soft Copy
			DND ILSM	0	1	0	1

A16.0 APPENDIX: DATA ITEM DESCRIPTION

A16.1 DID Item List

DID #	Title	CDRL #
HRS-TOOL-PM-001	Contract Status Report	HRS-TOOL-PM-001
HRS-TOOL-PM-002	Meeting Agenda	HRS-TOOL-PM-002
HRS-TOOL-PM-003	Meeting Minutes	HRS-TOOL-PM-003
HRS-TOOL-ILS-201	Top Level Assembly Drawing	HRS-TOOL-ILS-201
HRS-TOOL-ILS-202	Operator Manual	HRS-TOOL-ILS-202
HRS-TOOL-ILS-203	Operator Quick Reference Card	HRS-TOOL-ILS-203
HRS-TOOL-ILS-204	Maintenance and Parts Handbook	HRS-TOOL-ILS-204
HRS-TOOL-ILS-205	Operator Training Package	HRS-TOOL-ILS-205
HRS-TOOL-ILS-206	Technician Training Package	HRS-TOOL-ILS-206
HRS-TOOL-ILS-207	Provisioning Parts Breakdown	HRS-TOOL-ILS-207
HRS-TOOL-ILS-208	Supplementary Provisioning Technical Documentation	HRS-TOOL-ILS-208
HRS-TOOL-ILS-209	Special Tools and Test Equipment	HRS-TOOL-ILS-209
HRS-TOOL-ILS-210	Identification Plates	HRS-TOOL-ILS-210
HRS-TOOL-ILS-211	Controlled & Non-Controlled Goods List	HRS-TOOL-ILS-211
HRS-TOOL-ILS-212	Identification Labels for Storage and Shipment and Packaging Codes	HRS-TOOL-ILS-212
HRS-TOOL-ILS-213	List of Items to be Supported	HRS-TOOL-ILS-213

A16.2 DID Table Definitions

The following section defines the various blocks of information found on the Data Item Description (DID) forms:

BLOCK 1 – TITLE

The title of the data item for the DID.

BLOCK 2 - IDENTIFICATION NUMBER

The Data Item Description (DID) number, consisting of a sequential three-digit number and prefixed with an abbreviation code, to uniquely identify the DID. Note that the 001-099 series is reserved to Project Management (PM) DIDs, the 101-199 series is reserved to Systems Engineering (SE) DIDs and the 201-299 series is reserved to Integrated Logistics Support (ILS) DIDs. The abbreviation codes used for the prefix are:

“PM” for Project Management
“SE” for Systems Engineering
“ILS” for Integrated Logistics Support

BLOCK 3 - DESCRIPTION

Provides a general description of the data content requirements.

BLOCK 4 – RELATED DOCUMENT(S)

Provides a listing of the related documents and specifications associated with and required to produce this DID.

BLOCK 5 - CONTRACT REFERENCE

The specific paragraph numbers from the Contract Statement of Work and CDRL to assist in identifying the work effort associated with the data item.

BLOCK 6 - PREPARATION INSTRUCTIONS

Provides the preparation instructions for the content and format requirements for the DID.

A16.3 DID – Contract Status Report

DATA ITEM DESCRIPTION	
1. TITLE Contract Status Report (CSR)	2. IDENTIFICATION NUMBER DID HRS-TOOL-PM-001
3. DESCRIPTION The Contract Status Report (CSR) is the principal statement and explanation of the status of the contract at the end of each reporting period, and will summarise the Contractor's progress and activities in relation to the Project milestones, schedule, and contract data deliverables.	
4. RELATED DOCUMENTS	5. CONTRACT REFERENCE SOW: Para. 3.2.1 (pg. 11) CDRL: App. A15.3 (pg. 71)
6. PREPARATION INSTRUCTIONS	
<p>6.1. CONTENT</p> <p>6.1.1. Section A: Contract Status</p> <p>6.1.1.1. The CSR must identify the date at which the CSR is valid, and the time period since the status date of the previous CSR (the 'reporting period').</p> <p>6.1.1.2. The CSR must include the following information:</p> <p>6.1.1.2.1. A summary of work activities undertaken during the reporting period;</p> <p>6.1.1.2.2. A summary of work activities expected to be undertaken in the next reporting period and all significant forthcoming events.</p> <p>6.1.1.2.3. A narrative detailing progress against milestones, expected date of completion of near milestones, problem areas and work-around plans where required;</p> <p>6.1.1.2.4. A status report on contract data deliverable end items as called up in the CDRLs;</p> <p>6.1.1.2.5. A list of correspondence that requires a response from the DND/PSPC, but for which no response has been received; and</p> <p>6.1.1.2.6. A list of DND/PSPC correspondence to the Contractor for which a response is outstanding, and an estimate of the response date.</p> <p>6.1.1.3. Risk Register</p> <p>6.1.1.3.1. The CSR must include a Risk Register that reflects the current status of risk for the contract;</p> <p>6.1.1.3.2. The Risk Register information provided must include:</p> <p>6.1.1.3.2.1. Identification of each risk (sequence number, name and description);</p> <p>6.1.1.3.2.2. Its likelihood and potential severity;</p> <p>6.1.1.3.2.3. Who is assigned to manage the risk;</p> <p>6.1.1.3.2.4. The planned risk response should the event occur; and</p> <p>6.1.1.3.2.5. The risk mitigation (actions taken in advance to reduce probability/impact.</p> <p>6.1.1.3.3. Once individual identified risks have been resolved, they can be removed from the active Risk Register.</p> <p>6.1.2. Section B: Project Master Schedule</p> <p>6.1.2.1. The CSR must include a project schedule with progress up to the last day of the reporting period.</p> <p>6.1.2.2. The CSR Project Schedule must include the following information:</p>	

- 6.1.2.2.1. A summary level time scaled bar chart showing the WBS elements/codes and work activities along the vertical axis and the time scale in months along the horizontal axis;
- 6.1.2.2.2. A baseline schedule bar should be retained for each work activity, event and milestone along with the start/finish dates and total duration, for comparison to a current schedule;
- 6.1.2.2.3. A current schedule bar should be shown for each work activity, event and milestone along with the start/finish dates and total duration;
- 6.1.2.2.4. A separate schedule clearly identifying the critical path; and
- 6.1.2.2.5. Appropriate titles and legends to define all symbols used on the Project Master Schedule.

6.2. SOFT COPY FORMAT

- 6.2.1. The CSR must be submitted as a PDF file type.
- 6.2.2. The CSR PDF must be submitted via email (submission size not to exceed 7MB) as follows:
 - 6.2.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.
 - 6.2.2.2. Subject Field: HRS-TOOL-PM-001 – CSR – [Rev #] – [Date of Issue]

A16.4 DID – Meeting Agenda

DATA ITEM DESCRIPTION	
1. TITLE Meeting Agenda	2. IDENTIFICATION NUMBER DID HRS-TOOL-PM-002
3. DESCRIPTION The Meeting Agenda contains the venue information and identifies the discussion items to be covered at meetings.	
4. RELATED DOCUMENTS	5. CONTRACT REFERENCE SOW: Para. 3.3.5.1.1 (pg. 12) CDRL: App. A15.4 (pg. 72)
6. PREPARATION INSTRUCTIONS	
<p>6.1. CONTENT</p> <p>6.1.1. The Meeting Agenda must set forth the venue, identify all requirements and list the discussion items to be covered at the meeting.</p> <p>6.1.2. Venue. The Meeting Agenda must address the venue as follows:</p> <ul style="list-style-type: none"> 6.1.2.1. Meeting Identification Number; 6.1.2.2. Purpose; 6.1.2.3. Date, time and location; and 6.1.2.4. Attendees. <p>6.1.3. Discussion items. The Meeting Agenda must address the discussion items through the following sections:</p> <ul style="list-style-type: none"> 6.1.3.1. Opening Remarks; 6.1.3.2. Agenda Review; 6.1.3.3. Review of Previous Minutes; 6.1.3.4. Opened Discussion Items; 6.1.3.5. New Discussion Items; 6.1.3.6. Review of Action Items; 6.1.3.7. Next Venue; and 6.1.3.8. Closing Remarks. <p>6.2. HARD COPY FORMAT</p> <p>6.2.1. The Meeting Agenda must be printed on paper with these characteristics:</p> <ul style="list-style-type: none"> 6.2.1.1. Weight of no less than 90 gsm; 6.2.1.2. Brightness of no less than 96 ISO brightness; <p>6.3. SOFT COPY FORMAT</p> <p>6.3.1. The Meeting Agenda must be submitted as a MS Word file type.</p> <p>6.3.2. The Meeting Agenda MS Word document must be submitted via email (submission size not to exceed 7MB) as follows:</p> <ul style="list-style-type: none"> 6.3.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract. 	

6.3.2.2. Subject Field: HRS-TOOL-PM-002 – Meeting Agenda – [Rev #] – [Date of Issue]

A16.5 DID – Meeting Minutes

DATA ITEM DESCRIPTION	
1. TITLE Meeting Minutes	2. IDENTIFICATION NUMBER DID HRS-TOOL-PM-003
3. DESCRIPTION The Meeting Minutes contains the detailed records of proceedings, discussions, decisions and action items from meetings.	
4. RELATED DOCUMENTS	5. CONTRACT REFERENCE SOW: Para. 3.3.5.1.2 (pg. 12) CDRL: App. A15.5 (pg. 73)
6. PREPARATION INSTRUCTIONS	
<p>6.1. CONTENT</p> <p>6.1.1. The Meeting Minutes must contain the detailed records of proceedings, discussions, decisions and action items from the meeting and be presented through the following sections:</p> <p>6.1.1.1. General – consisting of meeting identification number, purpose, date, time and location;</p> <p>6.1.1.2. Attendees, consisting of the organization each person represents, and the identification of the Chairperson(s);</p> <p>6.1.1.3. Opening Remarks;</p> <p>6.1.1.4. Action Item Report - used to monitor issues, assign responsibility, direct action and track status, history, and progress, and must consist of:</p> <p>6.1.1.4.1. Item #; date initiated; required action; assigned actionee; target completion date; cross-reference to all related action items.</p> <p>6.1.1.4.2. Action Item Report must be updated with each meeting and must consist of:</p> <p>6.1.1.4.2.1. Action Item current status and the actual date completed;</p> <p>6.1.1.5. Next Venue;</p> <p>6.1.1.6. Closing Remarks;</p> <p>6.2. SOFT COPY FORMAT</p> <p>6.2.1. The Meeting Minutes must be submitted as a PDF file type.</p> <p>6.2.2. The Meeting Minutes PDF must be submitted via email (submission size not to exceed 7MB) as follows:</p> <p>6.2.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.</p> <p>6.2.2.2. Subject Field: HRS-TOOL-PM-003 – Meeting Minutes – [Rev #] – [Date of Issue]</p>	

A16.6 DID – Top Level Assembly Drawing

DATA ITEM DESCRIPTION	
1. TITLE TLAD	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-201
3. DESCRIPTION The TLAD describes the assembled relationship of all the parts of the system.	
4. RELATED DOCUMENTS D-01-400-001/SG-000 <i>Standard - Engineering Drawing Practices</i> D-01-400-002/SF-000 <i>Specification - Levels of Engineering Drawings</i>	5. CONTRACT REFERENCE SOW: Para. 3.3.2.2 (pg. 11) CDRL: App. A15.6 (pg. 74)
6. PREPARATION INSTRUCTIONS	
6.1. CONTENT	
6.1.1. The TLAD must contain all information necessary to identify all the components of the HRS-TOOL.	
6.2. GENERAL FORMAT	
6.2.1. The TLAD must be prepared IAW D-01-400-001/SG-000, Engineering Drawing Practices, para 7.4.	
6.3. HARD COPY FORMAT	
6.3.1. The TLAD must be printed on paper with these characteristics:	
6.3.1.1. Standard US Ledger size (432 mm x 279 mm)	
6.3.1.2. Weight of no less than 90 gsm;	
6.3.1.3. Brightness of no less than 96 ISO brightness;	
6.4. SOFT COPY FORMAT	
6.4.1. The TLAD must be submitted as a PDF file type, and match the printed format and layout.	
6.4.1.1. Viewing the PDF version: pages, regardless of size, containing text and illustrations in landscape, must be rotated for electronic viewing and reading in landscape.	
6.4.2. Soft Copy format submission size below 7MB – The TLAD PDF may be submitted via email as follows:	
6.4.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.	
6.4.2.2. Subject Field: HRS-TOOL-ILS-201 – TLAD – [Rev #] – [Date of Issue]	
6.4.3. Soft Copy format submission size at or above 7MB - The TLAD PDF must be submitted on CD or DVD media and be labelled as follows:	
6.4.3.1. High Risk Search Equipment & Multi-Threat Detection Tools	
6.4.3.2. TLAD;	
6.4.3.3. HRS-TOOL-ILS-201;	
6.4.3.4. The Revision number, and	
6.4.3.5. The date of issue.	

A16.7 DID – Operator Manual

DATA ITEM DESCRIPTION	
1. TITLE Operator Manual	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-202
3. DESCRIPTION The Operator Manual contains all the essential information required to describe the safe and correct operative procedures and operator maintenance associated with the equipment.	
4. RELATED DOCUMENTS C-01-100-100/AG-008 <i>Writer's Guide for Technical Documentation</i>	5. CONTRACT REFERENCE SOW: Para. 4.3.1.1.1 (pg. 13) CDRL: App. A15.7 (pg. 75)
6 PREPARATION INSTRUCTIONS 6.1 CONTENT <ul style="list-style-type: none"> 6.1.1 The Operator Manual must cover the following topics, and others judged pertinent by the Contractor: <ul style="list-style-type: none"> 6.1.1.1 General Description/Equipment Overview; 6.1.1.2 Pre-use testing/inspection; 6.1.1.3 Preparation and set up for use; 6.1.1.4 Use and operation; 6.1.1.5 Operator Maintenance and troubleshooting, IAW the Maintenance Concept para 4.1 (pg. 13); 6.1.1.6 Shut-down and post-shut-down actions and precautions; 6.1.1.7 Preparation for equipment transit by air, land, and sea; 6.1.1.8 Safety/Hazardous material issues; 6.1.2 The Operator Manual material covered in 6.1.1 above, must be amplified by colour illustrations, line drawings, and good quality colour pictures. 6.2 GENERAL FORMAT <ul style="list-style-type: none"> 6.2.1 The Operator Manual must be prepared in the Contractor's format while being in full conformance with the above-stated issue of C-01-100-100/AG-008. 6.2.2 The Operator Manual must include the National Defence Index of Documentation (NDID) number, provided to the Contractor by DND, which must be placed on the top right corner of all the pages of the manual. 6.3 HARD COPY FORMAT <ul style="list-style-type: none"> 6.3.1 The accepted Operator Manual hard copies must be: <ul style="list-style-type: none"> 6.3.1.1 Printed on paper with these characteristics: <ul style="list-style-type: none"> 6.3.1.1.1 Standard US Letter Size (270 mm x 216 mm) 6.3.1.1.2 Covers: 320-370 gsm polyester film (such as Pico Film), matt surface and white colour 6.3.1.1.3 Pages: 150-190 gsm polyester film (such as Pico Film), matt surface and white colour 6.3.1.2 Bound with white or black spiral PVC coil (such as PLASTIKOIL®) 	

6.4 SOFT COPY FORMAT

- 6.4.1 The Operator Manual must be provided as a PDF file with searchable text that matches the printed publication's format and layout. Links, bookmarks and thumbnails are to be included in the PDF file. All references made to a specific paragraph, figure, appendix must be appropriately linked.
- 6.4.2 Viewing the Operator Manual PDF: pages, regardless of size, containing text and illustrations in landscape, must be rotated for electronic viewing and reading in landscape.
- 6.4.3 **Soft Copy format submission size below 7MB** – The Operator Manual PDF and its native file may be submitted via email as follows:
 - 6.4.3.1 To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.
 - 6.4.3.2 Subject Field: HRS-TOOL-ILS-202 – Operator Manual – [Rev #] – [Date of Issue]
- 6.4.4 **Soft Copy format submission size at or above 7MB** - The Operator Manual PDF and its native file must be submitted on CD or DVD media and be labelled as follows:
 - 6.4.4.1 High Risk Search Equipment & Multi-Threat Detection Tools
 - 6.4.4.2 Operator Manual;
 - 6.4.4.3 HRS-TOOL-ILS-202;
 - 6.4.4.4 The Revision number, and
 - 6.4.4.5 The date of issue.

A16.8 DID – Operator Quick Reference Card

DATA ITEM DESCRIPTION	
1. TITLE Operator Quick Reference Card	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-203
3. DESCRIPTION Operator Quick Reference Card (OQRC) will allow the trained user to quickly unpack, assemble, and safely use the equipment.	
4. RELATED DOCUMENTS	5. CONTRACT REFERENCE SOW: Para. 4.3.1.2.1 (pg. 14) CDRL: App. A15.8 (pg. 76)
6. PREPARATION INSTRUCTIONS	
<p>6.1. CONTENT</p> <p>6.1.1. The OQRC must contain the necessary instructions to allow a trained user to quickly, safely and effectively operate the equipment.</p> <p>6.1.2. The OQRC must assume that the equipment's initial state is as off-loaded from its last transport vehicle (see Technical Specification(s)).</p> <p>6.1.3. The OQRC instructions must be based on pictograms illustrating the sequence of steps required while using only minimal text to assist in the understanding of the document. Desired look and feel would be similar to commercial airline safety pamphlets describing the use of oxygen masks, and emergency exits.</p> <p>6.1.4. The OQRC must not introduce new information and procedures not also described in the Operator Manual, as the Operator Manual is the master document on how to use the equipment.</p> <p>6.1.5. The OQRC cautionary advisory's heading must be determined based on the criteria set out in ANNEX A SOW para. 4.3.3.1.</p> <p>6.1.6. The OQRC cautionary advisory must read as follows: "This Operator Quick Reference Card is intended solely for experienced users who have been trained on this equipment, and have read and understood its Operator Manual (CFTO# to be supplied by DND). When in doubt, read the Operator Manual before operating this equipment."</p> <p>6.1.7. The OQRC cautionary advisory must also have, immediately following this text, a brief description of the consequences of misuse of the equipment, linked to the same criteria listed in 6.1.5 above.</p> <p>6.2. HARD COPY FORMAT</p> <p>6.2.1. The accepted OQRC hard copies must:</p> <p style="margin-left: 20px;">6.2.1.1. Be printed on paper with pages of 320-370 gsm polyester film (such as Pico Film), matt surface and white colour, and bound with white or black spiral PVC coil (such as PLASTIKOIL®);</p> <p style="margin-left: 20px;">6.2.1.2. Contain no more than four (4) sheets;</p> <p style="margin-left: 20px;">6.2.1.3. Be produced and printed exclusively in black and white.</p> <p>6.3. SOFT COPY FORMAT</p> <p>6.3.1. The OQRC must be provided as a PDF file with searchable text that matches the printed publication's format and layout. Links, bookmarks and thumbnails are to be included in the PDF file. All references made to a specific paragraph, figure, appendix must be appropriately linked.</p> <p>6.3.2. Viewing the OQRC PDF: pages, regardless of size, containing text and illustrations in landscape, must be rotated for electronic viewing and reading in landscape.</p> <p>6.3.3. Soft Copy format submission size below 7MB – The OQRC PDF and its native file may be submitted via email as follows:</p> <p style="margin-left: 20px;">6.3.3.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.</p> <p style="margin-left: 20px;">6.3.3.2. Subject Field: HRS-TOOL-ILS-203 – OQRC – [Rev #] – [Date of Issue]</p>	

6.3.4. **Soft Copy format submission size at or above 7MB** - The OQRC PDF and its native file must be submitted on CD or DVD media and be labelled as follows:

6.3.4.1. High Risk Search Equipment & Multi-Threat Detection Tools

6.3.4.2. OQRC;

6.3.4.3. HRS-TOOL-ILS-203;

6.3.4.4. The Revision number, and

6.3.4.5. The date of issue.

A16.9 DID – Maintenance and Parts Handbook

DATA ITEM DESCRIPTION	
<p>1. TITLE Maintenance and Parts Handbook</p>	<p>2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-204</p>
<p>3. DESCRIPTION The Maintenance and Parts Handbook will allow a trained technician to effectively maintain and identify parts of the system.</p>	
<p>4. RELATED DOCUMENTS D-01-100-205/SF-000 <i>Specification for Preparation of Corrective Maintenance Instruction;</i> D-01-100-204/SF-000 <i>Specification for Preparation of Preventive Maintenance Instructions;</i> C-01-100-100/AG-008 <i>Writer's Guide for Technical Documentation</i></p>	<p>5. CONTRACT REFERENCE SOW: Para. 4.3.1.3.1 (pg. 14) CDRL: App. A15.9 (pg. 77)</p>
<p>6 PREPARATION INSTRUCTIONS</p> <p style="margin-left: 20px;">6.1 CONTENT</p> <p style="margin-left: 40px;">6.1.1 Maintenance</p> <p style="margin-left: 60px;">6.1.1.1 The scope of the Maintenance portion of the Maintenance and Parts Handbook must cover the Technician Maintenance and repair tasks.</p> <p style="margin-left: 60px;">6.1.1.2 The maintenance topics must consist of:</p> <p style="margin-left: 80px;">6.1.1.2.1 General Description/Equipment Overview;</p> <p style="margin-left: 80px;">6.1.1.2.2 Pre-maintenance procedures to make the equipment safe;</p> <p style="margin-left: 80px;">6.1.1.2.3 Troubleshooting and testing;</p> <p style="margin-left: 80px;">6.1.1.2.4 Basic diagnosis and fault finding;</p> <p style="margin-left: 80px;">6.1.1.2.5 Adjustments, maintenance and repairs grouped IAW the Maintenance Concept para 4.1 (pg. 13), and presented IAW D-01-100-205/SF-000 and D-01-100-204/SF-000;</p> <p style="margin-left: 80px;">6.1.1.2.6 Safety/Hazardous material issues;</p> <p style="margin-left: 60px;">6.1.1.3 The maintenance material must be amplified by colour illustrations, line drawings, and good quality colour pictures as appropriate.</p> <p style="margin-left: 40px;">6.1.2 Parts Handbook:</p> <p style="margin-left: 60px;">6.1.2.1 The Maintenance and Parts Handbook must have an Illustrated Parts List (IPL) section. This IPL must contain all the necessary information to positively identify and relate, to each other, all the parts of the equipment that are procurable and those involved in all maintenance tasks outlined in 6.1.1.2 above. This information must consist of:</p> <p style="margin-left: 60px;">6.1.2.2 Drawings of the parts and assemblies: line drawings and exploded views in black and white only; and,</p> <p style="margin-left: 60px;">6.1.2.3 Corresponding table(s) containing:</p> <p style="margin-left: 80px;">6.1.2.3.1 Item Number (callout in the drawing(s));</p> <p style="margin-left: 80px;">6.1.2.3.2 Item Name;</p> <p style="margin-left: 80px;">6.1.2.3.3 Manufacturer's Part Number;</p> <p style="margin-left: 80px;">6.1.2.3.4 Manufacturer's NCAGE code;</p>	

- 6.1.2.3.5 Contractor's Part Number (CPN), if the Contractor is not the original Manufacturer;
- 6.1.2.3.6 NATO Stock Number (NSN), if known; and,
- 6.1.2.3.7 Quantity per Assembly (QPA).

6.2 GENERAL FORMAT

- 6.2.1 The Maintenance and Parts Handbook must be prepared in the Contractor's format and must be in full conformance with the above-stated issue of C-01-100-100/AG-008.

6.3 HARD COPY FORMAT

- 6.3.1 The accepted Maintenance and Parts Handbook hard copies must be:
 - 6.3.1.1 Printed on paper with these characteristics:
 - 6.3.1.1.1 Standard US Letter Size (216 mm x 270 mm)
 - 6.3.1.1.2 Covers: 320-370 gsm polyester film (such as Pico Film), matt surface and white colour
 - 6.3.1.1.3 Pages: 150-190 gsm polyester film (such as Pico Film), matt surface and white colour
 - 6.3.1.2 Bound with white or black spiral PVC coil (such as PLASTIKOIL®)

6.4 SOFT COPY FORMAT

- 6.4.1 The Maintenance and Parts Handbook must be provided as a PDF file with searchable text that matches the printed publication's format and layout.
 - 6.4.1.1 Links, bookmarks and thumbnails are to be included in the PDF file.
 - 6.4.1.2 All references made to a specific paragraph, figure, appendix must be appropriately linked.
 - 6.4.1.3 Viewing the PDF version: pages, regardless of size, containing text and illustrations in landscape, must be rotated for electronic viewing and reading in landscape.
- 6.4.2 **Soft Copy format submission size below 7MB** – The Maintenance and Parts Handbook PDF and its native file may be submitted via email as follows:
 - 6.4.2.1 To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.
 - 6.4.2.2 Subject Field: HRS-TOOL-ILS-204 – Maintenance and Parts Handbook – [Rev #] – [Date of Issue]
- 6.4.3 **Copy format submission size at or above 7MB** - The Maintenance and Parts Handbook PDF and its native file must be submitted on CD or DVD media and be labelled as follows:
 - 6.4.3.1 High Risk Search Equipment & Multi-Threat Detection Tools
 - 6.4.3.2 Maintenance and Parts Handbook;
 - 6.4.3.3 HRS-TOOL-ILS-204;
 - 6.4.3.4 The Revision number, and
 - 6.4.3.5 The date of issue.

A16.10 **DID – Operator Training Package**

DATA ITEM DESCRIPTION	
<p>1. TITLE</p> <p>Operator Training Package</p>	<p>2. IDENTIFICATION NUMBER</p> <p>DID HRS-TOOL-ILS-205</p>
<p>3. DESCRIPTION</p> <p>The Operator Training Package will be used as the reference material during the Training Sessions, and to facilitate future lesson plan preparation on the operation, Operator maintenance and storage of the equipment.</p>	
<p>4. RELATED DOCUMENTS</p> <p>C-01-100-100/AG-008 <i>Writer's Guide for Technical Documentation</i></p>	<p>5. CONTRACT REFERENCE</p> <p>SOW: Para. 4.3.1.4.1 (pg. 14) CDRL: App. A15.10 (pg. 78)</p>
<p>6. PREPARATION INSTRUCTIONS</p> <p>6.1. CONTENT</p> <p>6.1.1. The Operator Training Package course material must include, in the order judged most appropriate by the Contractor, the following subjects:</p> <ul style="list-style-type: none"> 6.1.1.1. General Description/Equipment Overview; 6.1.1.2. Pre-use testing/inspection; 6.1.1.3. Preparation and set up for use; 6.1.1.4. Use and operation; 6.1.1.5. Preparation for travel and handling; 6.1.1.6. Safety and Hazardous material issues; 6.1.1.7. Operator Troubleshooting and testing; 6.1.1.8. Basic diagnosis and fault finding; and, 6.1.1.9. Operator Maintenance IAW the Maintenance Concept para. 4.1 (pg. 13). <p>6.1.2. The Operator Training Package course material must be amplified by colour illustrations, line drawings, and good quality colour pictures.</p> <p>6.1.3. The Operator Training Package course material subjects must be approached from the perspective that the student experience with this equipment is low.</p> <p>6.1.4. The Operator Training Package course material must not present any information that cannot also be found in the Technical Publication Package documents; those documents remain the primary reference for the equipment.</p> <p>6.1.5. The Operator Training Package must include a Student Handout that includes the course material described above.</p> <p>6.1.6. The Operator Training Package must include an Instructor Lesson Plan that includes the course material described above, speaker's notes, and outlines the following:</p> <ul style="list-style-type: none"> 6.1.6.1. Classroom's physical and functional requirements; 6.1.6.2. Field area's physical and functional requirements; 6.1.6.3. Training Session schedule, divided by course material subjects; 6.1.6.4. Instructor/Student ratio for the course material subjects; 6.1.6.5. Training materiel to be supplied by the Contractor; 6.1.6.6. Training material to be supplied by Canada. 	

6.2. **GENERAL FORMAT**

- 6.2.1. The Operator Training Package can be prepared in the Contractor's format while using C-01-100-100/AG-008 as guidance.
- 6.2.2. No Contractor or sub-contractor logo, name, trademark, or other wording or device that may be interpreted as advertising must appear in the publication.
- 6.2.3. The Operator Training Package **Student Handout** must have no more than three (3) slides per page of the course material, and have additional space and lines for note taking.
- 6.2.4. The Operator Training Package **Instructor Lesson Plan** must have one (1) slide per page of the course material, with the speaker's notes below it.

6.3. **HARD COPY FORMAT**

- 6.3.1. The Operator Training Package must be furnished in three (3) ring binders and printed on paper with these characteristics:
 - 6.3.1.1. Weight of no less than 90 gsm;
 - 6.3.1.2. Brightness of no less than 96 ISO brightness;

6.4. **SOFT COPY FORMAT**

- 6.4.1. The Operator Training Package soft copy format must be MS PowerPoint.
- 6.4.2. **Soft Copy format submission size below 7MB** – The Operator Training Package may be submitted via email as follows:
 - 6.4.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.
 - 6.4.2.2. Subject Field: HRS-TOOL-ILS-205 – Operator Training Package – [Rev #] – [Date of Issue]
- 6.4.3. **Soft Copy format submission size at or above 7MB** - The Operator Training Package file must be submitted on CD or DVD media and be labelled as follows:
 - 6.4.3.1. High Risk Search Equipment & Multi-Threat Detection Tools
 - 6.4.3.2. Operator Training Package;
 - 6.4.3.3. HRS-TOOL-ILS-205;
 - 6.4.3.4. The Revision number, and
 - 6.4.3.5. The date of issue.

A16.11 **DID – Technician Training Package**

DATA ITEM DESCRIPTION	
<p>1. TITLE</p> <p>Technician Training Package</p>	<p>2. IDENTIFICATION NUMBER</p> <p>DID HRS-TOOL-ILS-206</p>
<p>3. DESCRIPTION</p> <p>The Technician Training Package will be used as the reference material during the Training Sessions, and to facilitate future lesson plan preparation on the operation, Technician maintenance and storage of the equipment.</p>	
<p>4. RELATED DOCUMENTS</p> <p>C-01-100-100/AG-008 <i>Writer's Guide for Technical Documentation</i></p>	<p>5. CONTRACT REFERENCE</p> <p>SOW: Para. 4.3.1.5.1 (pg. 14) CDRL: App. A15.11 (pg. 79)</p>
<p>6. PREPARATION INSTRUCTIONS</p> <p>6.1. CONTENT</p> <p>6.1.1. The Technician Training Package course material must include, in the order judged most appropriate by the Contractor, the following subjects:</p> <ul style="list-style-type: none"> 6.1.1.1. General Description/Equipment Overview; 6.1.1.2. Pre-use testing/inspection; 6.1.1.3. Preparation and set up for use; 6.1.1.4. Use and operation; 6.1.1.5. Safety and Hazardous material issues; 6.1.1.6. Troubleshooting and testing; 6.1.1.7. Advanced diagnosis and fault finding; 6.1.1.8. Corrective and preventive maintenance procedures that are particular to the equipment versus general mechanical procedures, IAW the Maintenance Concept para. 4.1 (pg. 13). <p>6.1.2. The Technician Training Package course material must be amplified by colour illustrations, line drawings, and good quality colour pictures.</p> <p>6.1.3. The Technician Training Package course material subjects must be approached from the perspective that the student experience on this equipment is moderate.</p> <p>6.1.4. The Technician Training Package must not present any information that cannot also be found in the Technical Publication Package documents; those documents remain the primary reference for the equipment.</p> <p>6.1.5. The Technician Training Package must include a Student Handout that includes the course material described above.</p> <p>6.1.6. The Technician Training Package must include an Instructor Lesson Plan that includes the course material described above, speaker's notes, and outlines the following:</p> <ul style="list-style-type: none"> 6.1.6.1. Classroom's physical and functional requirements; 6.1.6.2. Field area's physical and functional requirements; 6.1.6.3. Training Session schedule divided by course material subjects; 6.1.6.4. Instructor/Student ratio for the course material subjects; 6.1.6.5. Training materiel that will be supplied by the Contractor; 6.1.6.6. Training material that is expected to be supplied by Canada. 	

6.2. **GENERAL FORMAT**

- 6.2.1. The Technician Training Package can be prepared in the Contractor's format, using C-01-100-100/AG-008 as guidance.
- 6.2.2. No Contractor or sub-contractor logo, name, trademark, or other wording or device that may be interpreted as advertising must appear in the publication.
- 6.2.3. The Technician Training Package **Student Handout** must have no more than three (3) slides per page of the course material, and have additional space and lines for note taking.
- 6.2.4. The Technician Training Package **Instructor Lesson Plan** must have one (1) slide per page of the course material, with the speaker's notes below it.

6.3. **HARD COPY FORMAT**

- 6.3.1. The Technician Training Package must be furnished in a three (3) ring binder(s) and printed on paper with these characteristics:
 - 6.3.1.1. Weight of no less than 90 gsm;
 - 6.3.1.2. Brightness of no less than 96 ISO brightness;

6.4. **SOFT COPY FORMAT**

- 6.4.1. The Technician Training Package soft copy format must be MS PowerPoint.
- 6.4.2. **Soft Copy format submission size below 7MB** – The Technician Training Package may be submitted via email as follows:
 - 6.4.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.
 - 6.4.2.2. Subject Field: HRS-TOOL-ILS-206 – Technician Training Package – [Rev #] – [Date of Issue]
- 6.4.3. **Soft Copy format submission size at or above 7MB** - The Technician Training Package file must be submitted on CD or DVD media and be labelled as follows:
 - 6.4.3.1. High Risk Search Equipment & Multi-Threat Detection Tools
 - 6.4.3.2. Technician Training Package;
 - 6.4.3.3. HRS-TOOL-ILS-206;
 - 6.4.3.4. The Revision number, and
 - 6.4.3.5. The date of issue.

A16.12 DID – Provisioning Parts Breakdown

DATA ITEM DESCRIPTION															
<p>1. TITLE</p> <p>Provisioning Parts Breakdown</p>	<p>2. IDENTIFICATION NUMBER</p> <p>DID HRS-TOOL-ILS-207</p>														
<p>3. DESCRIPTION</p> <p>The Provisioning Parts Breakdown (PPB) is a top-down breakdown of the equipment in the configuration in which it is being procured. This breakdown is accomplished by listing all parts included in the end item in a lateral and descending family tree/generation breakdown. In this breakdown, all assemblies, subassemblies and parts are listed in relation to the next higher assembly. This relationship is shown by means of an indention code as illustrated in the top-down breakdown sequence. For example, an assembly with indention code B must be followed by a detailed breakdown of all the subsequent indention codes pertaining to that assembly before the next indention code B assembly (if any) is, in turn, broken down.</p>															
<p>4. RELATED DOCUMENTS</p> <p>D-01-100-214/SF-000 <i>Specification for Preparation of Provisioning Documentation for Canadian Forces Equipment</i></p>	<p>5. CONTRACT REFERENCE</p> <p>SOW: Para. 4.4.3.1.1 (pg. 16) CDRL: App. A15.12 (pg. 80)</p>														
<p>6 PREPARATION INSTRUCTIONS</p> <p>6.1 CONTENT</p> <p>6.1.1 The PPB must contain data as per Table 1 below, which supersedes Figures 1 and 5 in D-01-100-214/SF-000.</p> <p>6.1.2 The PPB attaching parts and fasteners, given a “Y” indention code, must immediately follow the part which they fasten.</p> <p>6.1.3 The PPB Data Field definitions can be found at section 3.9.4 of the D-01-100-214/SF-000 specification. The following override applies: <i>Expanded Description (SPTD)</i> must contain the line item’s applicable SPTD filename.</p> <p>6.1.4 For clarity:</p> <p>6.1.4.1 <i>Original Equipment Manufacturer’s Part Number</i> refers only to the Contractor which DND has contracted to supply the equipment; data from sub-contractors for items that they did not manufacture or do not control are not permitted. This field may be left blank if no data is available, or if it is the same as the MRN.</p> <p>6.1.4.2 <i>Quantity per Assembly (QPA)</i> refers to the number of times the item is used in the next higher assembly. For example, a C-level item’s QPA will show the number of times it is used in its related B-level assembly, without being multiplied by the number of B-level assemblies.</p> <p>6.1.4.3 <i>Quantity per Equipment (QPE)</i> refers to the total number of times the item is used in the whole prime equipment (A-level). If that quantity exceeds 99999, the figure will show 99999 in the field, with the true quantity (if known) shown in the <i>Expanded Description</i> field.</p> <p>6.1.4.4 <i>NATO Commercial and Government Entity (NCAGE) Codes</i> can be searched and requested through the NATO portal: https://eportal.nspa.nato.int/AC135Public/scage/CageList.aspx.</p>															
<p>Table 1</p> <table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">DATA FIELDS REQUIRED</th> <th style="text-align: center; padding: 5px;">Field Length</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Item Number</td> <td style="text-align: center; padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">Indention Code</td> <td style="text-align: center; padding: 5px;">1</td> </tr> <tr> <td style="padding: 5px;">Item Name</td> <td style="text-align: center; padding: 5px;">32</td> </tr> <tr> <td style="padding: 5px;">MRN</td> <td style="text-align: center; padding: 5px;">30</td> </tr> <tr> <td style="padding: 5px;">NCAGE</td> <td style="text-align: center; padding: 5px;">5</td> </tr> <tr> <td style="padding: 5px;">OEM’s Part Number</td> <td style="text-align: center; padding: 5px;">30</td> </tr> </tbody> </table>		DATA FIELDS REQUIRED	Field Length	Item Number	6	Indention Code	1	Item Name	32	MRN	30	NCAGE	5	OEM’s Part Number	30
DATA FIELDS REQUIRED	Field Length														
Item Number	6														
Indention Code	1														
Item Name	32														
MRN	30														
NCAGE	5														
OEM’s Part Number	30														

NATO Stock Number	16
Quantity Per Assembly (QPA)	4
Quantity Per Equipment (QPE)	5
Standard Unit Price	9
Unit Of Issue	2
Reparability Indicator (REP)	1
Government Supplied Material (GSM)	1
Procurement Lead Time (PLT)	3
Shelf Life	2
Usage Rate	5
Recommended Buy Quantity	8
SMR Code	5
Expanded Description	34
Expanded Description (SPTD)	74

6.1.5 The Source Maintenance and Recoverability (SMR) Codes are used to communicate maintenance and supply instructions to the various logistic support levels and user organizations for the logistic support of systems, equipment, and end items. The PPB SMR Codes must be chosen from the following list:

SMR Field Position	Code	Application/Explanation
First and Second Position Source Codes	PA	Item procured and stocked for anticipated or known usage. Items are normally considered for replenishment
	PC	Item procured and stocked, but is deteriorative in nature.
	PF	Support equipment which will not be stocked, but which will be centrally procured on demand.
	XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly
	XC	Installation drawing, diagram, instruction sheet, or field Service drawing, that is identified by the manufacturers' part number.
Third Position Maintenance Codes	C	Support item is removed, replaced, used by the operator/crew.
	O	Support item is removed, replaced, or used at the Technician Maintenance level.
	K	Repairable item. Item is removed, replaced, or used at contractor facility.
Fourth Position Repair Codes	C	The lowest maintenance activity capable of complete repair of the support item is the operator/crew.
	O	The lowest maintenance activity capable of complete repair of the support item is the Technician Maintenance level.
	K	Repairable support item. Complete repair capability exists at a designated contractor facility.
	Z	Non-repairable.
Fifth Position Recoverability Codes	C	Repairable item. When uneconomically repairable, condemn and disposed by the operator/crew.
	Z	Non-repairable item. When item becomes unserviceable, condemn and disposed of by authorized activity.
	O	Repairable item. When uneconomically repairable, condemn and dispose at organizational activity.
	K	Repairable item. Condemnation and disposal to be performed at contractor facility.

6.2 GENERAL FORMAT

6.2.1 The PPB must be prepared as an MS Excel spreadsheet, formatted IAW D-01-100-214/SF-000.

6.3 HARD COPY FORMAT

6.3.1 The PPB must be printed on paper with these characteristics:

6.3.1.1 Standard US Ledger size (432 mm x 279 mm)

6.3.1.2 Weight of no less than 90 gsm;

6.3.1.3 Brightness of no less than 96 ISO brightness;

6.4 SOFT COPY FORMAT

6.4.1 The PPB must be provided as an MS Excel Spreadsheet file.

6.4.2 **Soft Copy format submission size below 7MB** – The PPB may be submitted via email as follows:

6.4.2.1 To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.

6.4.2.2 Subject Field: HRS-TOOL-ILS-207 – PPB – [Rev #] – [Date of Issue]

6.4.3 **Soft Copy format submission size at or above 7MB** - The PPB file must be submitted on CD or DVD media and be labelled as follows:

6.4.3.1 High Risk Search Equipment & Multi-Threat Detection Tools

6.4.3.2 Provisioning Parts Breakdown;

6.4.3.3 HRS-TOOL-ILS-207;

6.4.3.4 The Revision number, and

6.4.3.5 The date of issue.

A16.13 **DID – Supplementary Provisioning Technical Documentation**

DATA ITEM DESCRIPTION	
1. TITLE Supplementary Provisioning Technical Documentation	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-208
3. DESCRIPTION The Supplementary Provisioning Technical Documentation (SPTD) fully identifies and describes part(s) that may be catalogued.	
4. RELATED DOCUMENTS D-01-100-214/SF-000 <i>Specification for Preparation of Provisioning Documentation for Canadian Forces Equipment</i> D-01-400-001/SG-000 <i>Standard - Engineering Drawing Practices</i>	5. CONTRACT REFERENCE SOW: Para. 4.4.3.2.1 (pg. 17) CDRL: App. A15.13 (pg. 81)
6. PREPARATION INSTRUCTIONS	
6.1. CONTENT	
6.1.1. The Supplementary Provisioning Technical Documentation (SPTD) must be provided for each item appearing on the Provisioning Documentation, as follows:	
6.1.1.1. The SPTD must include the technical data required for DND to classify and fully describe the item within the NATO codification system, allowing for item identification and cataloguing purposes.	
6.1.1.2. Key elements of good SPTD:	
6.1.1.2.1. Displays the true manufacturer company logo & address (or NCAGE), and MRN (see D-01-100-214/SF-000 for definitions.).	
6.1.1.2.2. Lists characteristic data about the item:	
6.1.1.2.2.1. Configuration;	
6.1.1.2.2.2. Physical characteristics, such as dimensions, tolerances, material, mandatory processes, surface finish, and protective coatings;	
6.1.1.2.2.3. Electrical Characteristics;	
6.1.1.2.2.4. Performance data;	
6.1.1.2.2.5. Special features which contribute to the uniqueness of the item, especially for common items modified to a particular standard of performance.	
6.1.1.2.3. Clearly shows the item in question.	
6.1.1.2.4. Shows where the item fits in the next higher assembly (where practical).	
6.2. GENERAL FORMAT	
6.2.1. The SPTD must be prepared as black and white line drawing(s) or with good quality photograph(s) within a Technical Datasheet.	
6.2.1.1. If prepared as a drawing, the SPTD must follow the drawing format of D-01-400-001/SG-000 section 7.4, with attached parts lists (for assemblies), so that DND can ensure that the Provisioning Documentation reflects the current and complete configuration of the equipment being produced.	
6.3. HARD COPY FORMAT	
6.3.1. The SPTD must be printed on Ledger (11X17) paper with these characteristics:	
6.3.1.1. Weight of no less than 90 gsm;	
6.3.1.2. Brightness of no less than 96 ISO brightness;	
6.4. SOFT COPY FORMAT	
6.4.1. The SPTD must be submitted in PDF file type, with filenames in the following format: (MRN)_(NCAGE)_(item name).pdf.	
6.4.2. Soft Copy format submission size below 7MB – The SPTD PDFs may be submitted via email as follows:	

6.4.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.

6.4.2.2. Subject Field: HRS-TOOL-ILS-208 – SPTD – [Rev #] – [Date of Issue]

6.4.3. **Soft Copy format submission size at or above 7MB** - The SPTD PDFs must be submitted on CD or DVD media and be labelled as follows:

6.4.3.1. High Risk Search Equipment & Multi-Threat Detection Tools

6.4.3.2. SPTD;

6.4.3.3. HRS-TOOL-ILS-208;

6.4.3.4. The Revision number, and

6.4.3.5. The date of issue.

A16.14 **DID – Special Tools and Test Equipment**

DATA ITEM DESCRIPTION	
<p>1. TITLE</p> <p>Special Tools and Test Equipment</p>	<p>2. IDENTIFICATION NUMBER</p> <p>DID HRS-TOOL-ILS-209</p>
<p>3. DESCRIPTION</p> <p>The Special Tools and Test Equipment (STTE) provides a list of all special tools and testing equipment, that are not in DND inventory, required to maintain and operate the equipment.</p>	
<p>4. RELATED DOCUMENTS</p>	<p>5. CONTRACT REFERENCE</p> <p>SOW: Para. 4.4.3.3.1 (pg. 17)</p> <p>CDRL: App. A15.14 (pg. 82)</p>
<p>6. PREPARATION INSTRUCTIONS</p> <p>6.1. CONTENT</p> <p>6.1.1. The STTE must include the following for each item listed:</p> <ul style="list-style-type: none"> 6.1.1.1. Item Name; 6.1.1.2. Reference (Manufacturer's Part) Number; 6.1.1.3. NCAGE; 6.1.1.4. NSN (if available); 6.1.1.5. Maintenance Level; 6.1.1.6. Recommended Buy Quantity; 6.1.1.7. Standard Unit Price; 6.1.1.8. Date of First Article Delivery; 6.1.1.9. Picture(s) or drawing(s) of item; and, 6.1.1.10. Description and Function of STTE <p>6.1.2. The above STTE item list may be divided into sub-sections such as:</p> <ul style="list-style-type: none"> 6.1.2.1. Operations Support Equipment; 6.1.2.2. Maintenance Support Equipment; 6.1.2.3. Calibration Equipment; 6.1.2.4. Test, Measurement and Diagnostic Equipment (TMDE); 6.1.2.5. Automatic Test Equipment (ATE) and its Test Program Set (TPS); and 6.1.2.6. Computer Resources Support Requirement. <p>6.2. GENERAL FORMAT</p> <p>6.2.1. The STTE must be prepared as an MS Excel spreadsheet</p> <p>6.3. HARD COPY FORMAT</p> <p>6.3.1. The STTE must be printed on paper with these characteristics:</p> <ul style="list-style-type: none"> 6.3.1.1. Weight of no less than 90 gsm; 6.3.1.2. Brightness of no less than 96 ISO brightness; 	

6.4. **SOFT COPY FORMAT**

6.4.1. The STTE must be provided as an MS Excel Spreadsheet file.

6.4.2. **Soft Copy format submission size below 7MB** – The STTE may be submitted via email as follows:

6.4.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.

6.4.2.2. Subject Field: HRS-TOOL-ILS-209 – STTE – [Rev #] – [Date of Issue]

6.4.3. **Soft Copy format submission size at or above 7MB** - The STTE file must be submitted on CD or DVD media and be labelled as follows:

6.4.3.1. High Risk Search Equipment & Multi-Threat Detection Tools

6.4.3.2. Special Tools and Test Equipment

6.4.3.3. HRS-TOOL-ILS-209;

6.4.3.4. The Revision number, and

6.4.3.5. The date of issue.

A16.15 **DID – Identification Plates – Design Template & Populated Designs**

DATA ITEM DESCRIPTION	
1. TITLE Identification Plates – Design Template & Populated Designs	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-210
3. DESCRIPTION The Identification Plates uniquely identify equipment and components and spares based on the procedures governing the identification marking of Canadian military property.	
4. RELATED DOCUMENTS D-02-002-001/SG-001 <i>Canadian Forces Standard Identification Marking of Canadian Military Property</i> D-01-400-002/SF-000 <i>Specification - Levels of Engineering Drawings</i>	5. CONTRACT REFERENCE SOW: Para. 4.6.1 (pg. 17) CDRL: App. A15.15 (pg. 83)
6. PREPARATION INSTRUCTIONS	
6.1. CONTENT AND GENERAL FORMAT	
6.1.1. In accordance with D-02-002-001/SG-001, the Identification Plates affixed to each item included in Annex A SOW para 4.6.2 must be of size, format, and construction appropriate for the item being identified, and contain the data required for those Identification Plate formats in both official languages.	
6.1.2. The Identification Plates Design Template & Populated Designs must be prepared as representative Level 2 drawings (see D-01-400-002/SF-000).	
6.1.2.1. The Level 2 drawings must include the mounting or installation method for each Identification Plate, with any fasteners described by size, and/or technical standard, and/or NSN, and quantity.	
6.2. HARD COPY FORMAT	
6.2.1. The Identification Plates Design Template & Populated Designs must be:	
6.2.1.1. Printed in 1:1 scale;	
6.2.1.2. Printed on Standard US Ledger size paper (432 mm x 279 mm), with a:	
6.2.1.2.1. Weight of no less than 90 gsm;	
6.2.1.2.2. Brightness of no less than 96 ISO brightness;	
6.3. SOFT COPY FORMAT	
6.3.1. The Identification Plates Design Template & Populated Designs must be provided as PDF files, filename labelled in the following way: [Item Name]_[MRN].pdf.	
6.3.2. The Identification Plates Design Template and Populated Designs PDFs containing text and illustrations in landscape, must be rotated for electronic viewing and reading in landscape.	
6.3.3. Soft Copy format submission size below 7MB – The Identification Plates Design Template & Populated Designs may be submitted via email as follows:	
6.3.3.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.	
6.3.3.2. Subject Field: HRS-TOOL-ILS-210 – Identification Plates – [Rev #] – [Date of Issue]	
6.3.4. Soft Copy format submission size at or above 7MB - The Identification Plates Design Template & Populated Designs file must be submitted on CD or DVD media and be labelled as follows:	
6.3.4.1. High Risk Search Equipment & Multi-Threat Detection Tools	
6.3.4.2. Identification Plates	
6.3.4.3. HRS-TOOL-ILS-210;	
6.3.4.4. The Revision number, and	

6.3.4.5. The date of issue.

A16.16 **DID – Controlled & Non-Controlled Goods List**

DATA ITEM DESCRIPTION	
1. TITLE Controlled & Non-Controlled Goods List (CNCGL)	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-211
3. DESCRIPTION <p><u>Controlled Goods Items</u> – The CNCGL identifies if the controlled goods end items, components and sub-components of the equipment are specifically designed and modified for military purpose, and provides the Demilitarization Instructions if required.</p> <p><u>Non-Controlled Goods Items</u> – The CNCGL still includes non-controlled goods end items, components and sub-components of the equipment, as they will still require a DMC assignment.</p>	
4. RELATED DOCUMENTS C-02-007-000/AG-001 <i>Controlled Technology Access and Transfer (CTAT) Manual</i>	5. CONTRACT REFERENCE SOW: Para. 4.7.1 (pg. 18) CDRL: App. A15.16 (pg. 84)
6. PREPARATION INSTRUCTIONS <p>6.1. CONTENT</p> <p>6.1.1. The CNCGL must identify end items accordingly, IAW C-02-007-000/AG-001:</p> <p style="margin-left: 20px;">6.1.1.1. For Canadian origin items, Canada’s Export Control List (ECL) articles that apply in accordance with the Defence Product Act (DPA);</p> <p style="margin-left: 20px;">6.1.1.2. For US origin dual use, the Export Control Classification Number (ECCN) of the Commerce Control List that applies;</p> <p style="margin-left: 20px;">6.1.1.3. For US origin controlled goods also known as defence articles, the United States Munitions List (USML) Category and paragraph that apply in accordance with the International Traffic in Arms Regulations (ITAR);</p> <p style="margin-left: 20px;">6.1.1.4. For all other countries other than Canada and the USA, the category and article of the Wassenaar Control List that applies, and</p> <p style="margin-left: 20px;">6.1.1.5. All items require a Demilitarization Code (DMC).</p> <p>6.2. GENERAL FORMAT</p> <p>6.2.1. The CNCGL must be in spreadsheet format with 6 columns:</p> <p style="margin-left: 20px;">6.2.1.1. Item name, as per the PPB;</p> <p style="margin-left: 20px;">6.2.1.2. Manufacturer’s Reference Part Number, as per the PPB;</p> <p style="margin-left: 20px;">6.2.1.3. Ref para for Canadian origin items (ECL), if required;</p> <p style="margin-left: 20px;">6.2.1.4. Ref para for US origin controlled goods (USML), if required;</p> <p style="margin-left: 20px;">6.2.1.5. DMC;</p> <p style="margin-left: 20px;">6.2.1.6. Formal Demilitarisation Instructions, if DMC is F;</p> <p style="margin-left: 20px;">6.2.1.7. Remarks.</p> <p>6.3. HARD COPY FORMAT</p> <p>6.3.1. The CNCGL must be printed on paper with these characteristics:</p> <p style="margin-left: 20px;">6.3.1.1. Weight of no less than 90 gsm;</p> <p style="margin-left: 20px;">6.3.1.2. Brightness of no less than 96 ISO brightness;</p>	

6.4. **SOFT COPY FORMAT**

- 6.4.1. The CNCGL must be provided as an MS Excel Spreadsheet file.
- 6.4.2. **Soft Copy format submission size below 7MB** – The CNCGL may be submitted via email as follows:
 - 6.4.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.
 - 6.4.2.2. Subject Field: HRS-TOOL-ILS-211 – CNCGL – [Rev #] – [Date of Issue]
- 6.4.3. **Soft Copy format submission size at or above 7MB** - The CNCGL file must be submitted on CD or DVD media and be labelled as follows:
 - 6.4.3.1. High Risk Search Equipment & Multi-Threat Detection Tools
 - 6.4.3.2. CNCGL
 - 6.4.3.3. HRS-TOOL-ILS-211;
 - 6.4.3.4. The Revision number, and
 - 6.4.3.5. The date of issue.

A16.17 **DID – Identification Labels for Storage and Shipment and Packaging Codes**

DATA ITEM DESCRIPTION	
<p>1. TITLE</p> <p>Identification Labels for Storage and Shipment and Packaging Codes</p>	<p>2. IDENTIFICATION NUMBER</p> <p>DID HRS-TOOL-ILS-212</p>
<p>3. DESCRIPTION</p> <p>The Identification Labels for Storage and Shipment and Packaging Codes (CF271 forms) ensures that the labelling used to identify packages for items procured by DND and shipped to and stored at a Canadian facility comply with CAF specifications. As well, this will allow DND to obtain a complete record of packaging codes for catalogued items of the equipment.</p>	
<p>4. RELATED DOCUMENTS</p> <p>D-LM-008-011/SF-001 <i>Preparation and Use of Packaging Requirements Codes</i> D-LM-008-002/SF-001 <i>Specification for Marking for Storage and Shipment</i> D-01-400-002/SF-000 <i>Specification - Levels of Engineering Drawings</i> CF271 Form <i>(MS Excel version provided by DND after contract award)</i></p>	<p>5. CONTRACT REFERENCE</p> <p>SOW: Para. 4.8.3 (pg. 18) CDRL: App. A15.17 (pg. 85)</p>
<p>6. PREPARATION INSTRUCTIONS</p> <p>6.1. CONTENT AND GENERAL FORMAT</p> <p>6.1.1. The Identification Labels for Storage and Shipment design, populated with the appropriate data, must be provided as Level 1 drawings (see D-01-400-002/SF-000) and include dimensions to show the measurements as defined by D-LM-008-002/SF-001 (example: text size, bar code dimensions).</p> <p>6.1.2. A separate Packaging Code (CF271 Form) must be provided electronically for each item that:</p> <p style="margin-left: 20px;">6.1.2.1. Requires special packaging, packing, or preservation considerations to meet the required protection level (see 4.8.1 of the SOW), as per D-LM-008-011/SF-001 (see Table 1 below).</p> <p style="margin-left: 20px;">6.1.2.2. Has a NATO Stock Number (NSN).</p> <p>6.1.3. The CF271 forms' file name must correspond to the item listed within, either by its part number or NSN (example: CF271 9422-01-552-8836.xls).</p> <p>6.2. HARD COPY FORMAT</p> <p>6.2.1. The Identification Labels for Storage and Shipment designs must be printed on paper with these characteristics:</p> <p style="margin-left: 20px;">6.2.1.1. Standard US Ledger size (432 mm x 279 mm)</p> <p style="margin-left: 20px;">6.2.1.2. Weight of no less than 90 gsm;</p> <p style="margin-left: 20px;">6.2.1.3. Brightness of no less than 96 ISO brightness;</p> <p>6.3. SOFT COPY FORMAT</p> <p>6.3.1. The Identification Labels for Storage and Shipment designs must be provided as PDF files.</p> <p>6.3.2. The Identification Labels for Storage and Shipment designs PDFs containing text and illustrations in landscape, must be rotated for electronic viewing and reading in landscape.</p> <p>6.3.3. The Packaging Codes (CF271 forms) must be provided as MS Excel Spreadsheet files.</p> <p>6.3.4. Soft Copy format submission size below 7MB – The Identification Labels for Storage and Shipment and Packaging Codes may be submitted via email as follows:</p> <p style="margin-left: 20px;">6.3.4.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.</p>	

A16.18 **DID – List of Items to be Supported**

DATA ITEM DESCRIPTION	
1. TITLE List of Items to be Supported	2. IDENTIFICATION NUMBER DID HRS-TOOL-ILS-213
3. DESCRIPTION The List of Items to be Supported (LIS) will provide the repairable/consumable item data, and technical data, which will be supported once the system is delivered. DND will use this information, along with the provisioning data, to populate the Support SOW Appendix A1.0 tables.	
4. RELATED DOCUMENTS	5. CONTRACT REFERENCE SOW: Para. 4.9.1 (pg. 18) CDRL: App. A15.18 (pg. 86)
6. PREPARATION INSTRUCTIONS	
<p>6.1. CONTENT</p> <p>6.1.1. The LIS must provide an overview and understanding to DND on how the HRS-TOOL and its associated equipment will be supported once the HRS-TOOL is delivered. Refer to the Support SOW for further information.</p> <p>6.1.2. The LIS must provide the following completed tables, stemming from the Concept of Operation & Support (in accordance with the Support SOW), and in accordance with the Maintenance Concept ANNEX A paragraph 4.1.1.1 (page 13):</p> <p style="padding-left: 40px;">6.1.2.1. Supported Repairable-Consumable Equipment and Spares Table - This includes the repairable equipment or components of the complete system, STTE, and consumable equipment.</p> <p style="padding-left: 40px;">6.1.2.2. Supported Technical Data Table - This includes the Technical Data and publications, and training material for which the Contractor will provide support.</p> <p>6.2. GENERAL FORMAT</p> <p>6.2.1. The LIS must be prepared as an MS Word document with tables.</p> <p>6.3. SOFT COPY FORMAT</p> <p>6.3.1. The LIS must be provided as an MS Word file.</p> <p>6.3.2. Soft Copy format submission size below 7MB – The LIS may be submitted via email as follows:</p> <p style="padding-left: 40px;">6.3.2.1. To Field: As per the related CDRL section 9.A. Addressee, as identified in the contract.</p> <p style="padding-left: 40px;">6.3.2.2. Subject Field: HRS-TOOL-ILS-213 – LIS – [Rev #] – [Date of Issue]</p> <p>6.3.3. Soft Copy format submission size at or above 7MB - The LIS file must be submitted on CD or DVD media and be labelled as follows:</p> <p style="padding-left: 40px;">6.3.3.1. High Risk Search Equipment & Multi-Threat Detection Tools</p> <p style="padding-left: 40px;">6.3.3.2. LIS</p> <p style="padding-left: 40px;">6.3.3.3. HRS-TOOL-ILS-213;</p> <p style="padding-left: 40px;">6.3.3.4. The Revision number, and</p> <p style="padding-left: 40px;">6.3.3.5. The date of issue.</p>	

Supported Repairable-Consumable Equipment and Spares Table

An explanation of each column is detailed below:

1. System Identifier MRN/OEM Part No – A unique identifier for the Item, as used in the applicable technical manuals or supply management system.
2. Item Nomenclature – The name of the Item that may include Item class/group categories and functional descriptors.
3. NATO Stock Number (NSN) – The 13-digit identifier used in NATO and allied cataloguing systems. The NSN will be included if the Item is to be ordered by DND.
4. Regular or Free-Flow R&O by Item
 - a. Repair Cost Estimate (RCE) – Identifies that the item will require a cost estimate before repairs or overhaul can begin.
 - i. This is used for regular R&O when equipment is more complex so the TA requires more visibility on what is being proposed, has not yet reached steady-state and is therefore harder to predict typical repair costs/requirements, and repairs occur at a low rate.
 - b. Maximum Repair Cost (MRC) – Identifies the maximum amount authorized that includes all labour and material costs, to be expended to repair an item. Repairs above the MRC must be approved by DND before any repair or overhaul work commences. Standard Selection Notice Observation Message procedures as detailed in A-LM-184-001/JS-001 must apply.
 - i. This is used for free-flow R&O when equipment repairs are well understood or are less complex, and are used for repairs that occur at a high rate.
5. Repair Turn-Around-Time (TAT) – Identifies the Repair TAT, if different from the general Repair TAT, as defined in Support SOW, indicating that this item is of greater importance to the operation of the HRS-TOOL and therefore requires a faster turn-around. Repair TAT is indicated in calendar days, if left blank, then general Repair TAT is followed.
6. Fleet Support Spares (FSS) quantity to hold – Describes the quantity of each item that the Contractor will hold and maintain, or left blank, if item does NOT have a required sparing level quantity or category isn't applicable.

FSS are used to support the fleet, both domestically or while on deployment, and can be used by Contractor FSRs during repair tasks, for faster TAT during R&O.

FSS are also used in 'repair by replacement' situations, where the repair can be done in the field or when parts are required so rarely that they would not be stocked in depot, and the cost is minimal compared to the transport cost of shipping equipment back for R&O Maintenance Support at the Contractor's site.
7. Operational Spares Kits – Base Operating Spares Kit (BOSK) – Describes the collection of operational deployment spares, and quantities of each item, held in reserve in pre-positioned storage. If left blank the item is not included in the operational spares kits or category isn't applicable.

BOSK(s) are held domestically in the National Capital Region (NCR), and in operation will be deployed to a base which supports the forward deployments.
8. Detailed Inspection & Maintenance – Indicates which items will require a detailed inspection and maintenance, performed by the Contractor, following the manufacturer's instructions for use and inspection.

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- a. 'Y – HRS-TOOL Equip. QTY' = yes, detailed inspection & maintenance required for the listed quantity of HRS-TOOL Equipment.
- b. 'Y – BOSK' = yes, detailed inspection & maintenance required for that BOSK item(s).
- c. 'N' or blank = no.

NOTE: INFORMATION IN THIS TABLE WILL BE FINALIZED AFTER DELIVERY AND ACCEPTANCE OF THE PROVISIONING DOCUMENTATION.

Item Identifier MRN/OEM Part No. (1)	Item Nomenclature (2)	NSN (if item can be ordered) (3)	Regular or Free-Flow RCE/MRC (4)	Repair TAT (cal. days) (5)	Fleet Support Spares (Qty. to hold) (6)	Operational Spares Kits (7)		Detailed Inspection & Maintenance (Y – HRS-TOOL Equip. QTY) (Y – BOSK) (8)
						BOSK Qty.		
	GPR/MD System		RCE		16	8		Y – Qty 18 in the NCR Y – BOSK
	CTMD System		RCE		12	6		Y – Qty 20 in the NCR Y – BOSK
	NLJD System		RCE		4	2		Y – Qty 5 in the NCR Y – BOSK
	HVA System		RCE		12	6		Y – Qty 13 in the NCR Y – BOSK
	Breaching Bolt Cutter		-		4	2		Y – BOSK
	Assault Ladder		RCE		4	2		Y – BOSK
	Wire Caving Ladder		RCE		4	2		Y – BOSK
	Grappling Hook		-		4	2		Y – BOSK
	Frontal Headlamp		-		48	24		Y – BOSK
	High Power Handheld Flashlight		-		4	2		Y – Qty 15 in the NCR Y – BOSK
	Trip Wire Illuminator		-		4	2		Y – Qty 13 in the NCR Y – BOSK
	Portable Floodlight		RCE		4	2		Y – Qty 13 in the NCR Y – BOSK
	Hydraulic Door Opener System		RCE		4	2		Y – Qty 5 in the NCR Y – BOSK
NICEEXPEDOVERL OADBVS CPATTWM DMD	Expedition Overload BVS – CADPAT(TW) – MD-MD	8105-01-649-0611	-		-	6 – Provided through GFE		N

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Item Identifier MRN/OEM Part No. (1)	Item Nomenclature (2)	NSN (if item can be ordered) (3)	Regular or Free-Flow RCE/MRC (4)	Repair TAT (cal. days) (5)	Fleet Support Spares (Qty. to hold) (6)	Operational Spares Kits (7)	Detailed Inspection & Maintenance (Y – HRS-TOOL Equip. QTY) (Y – BOSK) (8)
						BOSK Qty.	
NICELOADCELLCP ATTWSM	NICE Load Cell – CADPAT(TW) – SM	8105-01-649-0615	-		-	6 – Provided through GFE	N
NICELOADCELLCP ATTWLG	NICE Load Cell – CADPAT(TW) – LG	8105-01-649-0619	-		-	6 – Provided through GFE	N

Supported Technical Data Table

An explanation of each column is detailed below:

1. Publication Number - The unique identifier for the published Item of Technical Data.
2. Title - The title of the item of Technical Data.

NOTE: INFORMATION IN THIS TABLE WILL BE FINALIZED AFTER DELIVERY AND ACCEPTANCE OF THE TECHNICAL PUBLICATIONS.

Publication Identifier (1)	Title (2)
	GPR/MD SYSTEM – OPERATOR MANUAL
	GPR/MD SYSTEM – OPERATOR QUICK REFERENCE CARD
	GPR/MD SYSTEM – MAINTENANCE AND PARTS HANDBOOK
	CTMD SYSTEM – OPERATOR MANUAL
	CTMD SYSTEM – OPERATOR QUICK REFERENCE CARD
	CTMD SYSTEM – MAINTENANCE AND PARTS HANDBOOK
	NLJD SYSTEM – OPERATOR MANUAL
	NLJD SYSTEM – OPERATOR QUICK REFERENCE CARD
	NLJD SYSTEM – MAINTENANCE AND PARTS HANDBOOK
	HVA SYSTEM – OPERATOR MANUAL
	HVA SYSTEM – OPERATOR QUICK REFERENCE CARD
	HVA SYSTEM – MAINTENANCE AND PARTS HANDBOOK
	HYDRAULIC DOOR OPENER SYSTEM – OPERATOR MANUAL
	HYDRAULIC DOOR OPENER SYSTEM – OPERATOR QUICK REFERENCE CARD
	OPERATOR TRAINING PACKAGE
	TECHNICIAN TRAINING PACKAGE
	PROVISIONING PARTS BREAKDOWN
	SUPPLEMENTARY PROVISIONING TECHNICAL DOCUMENTATION
	SPECIAL TOOL & TESTING EQUIPMENT
	IDENTIFICATION PLATES
	CONTROLLED & NON-CONTROLLED GOODS LIST
	PACKAGING, LABELS AND CODES

Solicitation No. - N° de l'invitation
W8476-195904
Client Ref. No. - N de rf. du client
W8476-195904

Amd. No. - N de la modif.
File No. - N du dossier
030qf W8476-195904

Buyer ID - Id de l'acheteur
030qf
CCC No./N CCC - FMS No./N VME

ANNEX C

TECHNICAL PROPOSAL REQUIREMENT AND BID EVALUATION

HIGH RISK SEARCH EQUIPMENT & MULTI-THREAT DETECTION TOOLS

This documents consists of this page plus thirty (30) additional pages

TECHNICAL PROPOSAL REQUIREMENTS
AND BID EVALUATION
FOR THE
HIGH RISK SEARCH EQUIPMENT & MULTI-THREAT DETECTION
TOOLS



NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document must continue to apply.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

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1.0 GENERAL

1.1 Introduction

- 1.1.1 This document is split in two parts and defines the criteria that will be used to determine the winning bid for the procurement of the High Risk Search Equipment & Multi-Threat Detection Tools (HRS-TOOL).
 - 1.1.1.1 The first part, Technical Proposal Requirements, defines the information and samples required from the Bidders for their proposal to be evaluated.
 - 1.1.1.2 The second part, Technical Bid Evaluation, defines the evaluation process Canada will undertake, and describes the Evaluation Trial and items that will be evaluated.

2.0 TECHNICAL PROPOSAL REQUIREMENTS

2.1 Responding to Evaluation Criteria

- 2.1.1 Bidders must provide the information required for each listed requirement in accordance with the method identified in the "Compliance Documentation Required" column in the Evaluation of Key Mandatory Requirements table(s).
 - 2.1.1.1 The following compliance methods define the information required:
 - 2.1.1.1.1 **Compliance Statement (CS)** - Where "CS" is identified, the Bidder must describe in detail how the equipment offered fully complies with the requirement. Supporting documentation is requested but not essential.
 - 2.1.1.1.2 **Test Report (TR)** - Where "TR" is identified, the Bidder must provide a completed and detailed Test Report, including test procedures, data and results, for tests conducted on the equipment offered to confirm it fully complies with the requirement.
- 2.1.2 For each listed requirement, the Bidder must provide a response in the "Bidder's Response/References" column in the Evaluation of Key Mandatory Requirements table(s) to clearly explain how the requirement is met, either by including the specific reference to indicate where in their proposal the information is found or including the complete response directly in that column.

2.2 Evaluation Trial Bidder Samples and FSRs

- 2.2.1 Successful Bidders from Phase 1 advancing to the Phase 2 Evaluation Trial must deliver two (2) complete samples of each of the following items in the proposed HRS-TOOL (one of the samples is a backup in case of unexpected failure), all at no cost to Canada:
 - 2.2.1.1 Total of two (2) Ground Penetrating Radar & Metal Detector System (GPR/MD System)
 - 2.2.1.2 Total of two (2) Complex Terrain Metal Detector System (CTMD System)
 - 2.2.1.3 Total of two (2) Non-Linear Junction Detector System (NLJD System)

- 2.2.1.4 As part of the HRS-TOOL item samples, the Bidders must include technical manual(s) (in English), but these need not be exactly as specified in the SOW.
- 2.2.2 The Bidders must deliver the samples no later than 45 calendar days after being informed of the successful results of Phase 1 – Evaluation of Key Mandatory Requirements, to the following address:
- C/O: Brian VanderGaast**
DRDC Suffield Research Centre (DRDC SRC)
BLDG 560 Receiving, Ralston, AB
T0J 2N0, CANADA
Email: Brian.VanderGaast@drdc-rddc.gc.ca
Tel: 403-544-4000 Ext 5273 / Fax: 403-544-4704
- 2.2.2.1 The Bidders must supply samples that are pristine, although not necessarily new, and must not be pre-conditioned making it not representative of the items that would be provided as part of the contract.
- 2.2.2.2 Bidders that do not provide two (2) complete samples of each item, in the time allowed, will be deemed non-compliant and the sample(s) returned.
- 2.2.2.3 DND will return the two (2) complete samples of each item in the HRS-TOOL once used in the trial, and testing is complete. Testing planned will be non-destructive, therefore samples should be returned undamaged.
- 2.2.3 The Bidders must attend and provide no more than two (2) Field Service Representatives (FSR) for a two (2) day period of instruction and training at DRDC SRC.
- 2.2.4 The Bidder instruction and training will occur at the following address, on dates to be confirmed by the Public Service Procurement Canada (PSPC) Contracting Authority (CA):
- Point of Contact: Brian VanderGaast**
DRDC Suffield Research Centre (DRDC SRC)
Canadian Forces Base Suffield
Alberta, CANADA
Email: Brian.VanderGaast@drdc-rddc.gc.ca
Tel: 403-544-4000 Ext 5273 / Fax: 403-544-4704

3.0 TECHNICAL BID EVALUATION

3.1 Technical Evaluation of Compliance

3.1.1 Phase 1: Evaluation of Key Mandatory Requirements

3.1.1.1 The evaluation team will use the Bidder's submitted proposal to determine compliance against key mandatory requirements. See the Evaluation of Key Mandatory Requirements table(s) for more details.

3.1.2 Phase 2: Evaluation Trial

3.1.2.1 Testing and trials will be conducted using the complete samples supplied by Bidders having successfully moved onto Phase 2 Evaluation Trial.

3.1.2.2 Submitted samples will be utilized in accordance with the Original Equipment Manufacturers' recommended operating procedures and training provided by Bidders.

3.2 Evaluation Trial

3.2.1 The aim of the Evaluation Trial is to assess the performance of submitted samples against the requirements identified in the Evaluation Trial table(s).

3.2.2 Canada will conduct the Evaluation Trial within the DRDC Suffield area, or at some other appropriate venue in Canada, under the supervision of DND.

3.2.3 Trial Personnel will include:

3.2.3.1 DND HRS-TOOL Project Trials Officer(s).

3.2.3.2 DND/DRDC Subject Matter Experts.

3.2.3.3 Additional assistance to set up and monitor the trials will be provided by the DND HRS-TOOL TA as required.

3.2.4 Subject Matter Experts

3.2.4.1 Subjects will be drawn from experienced operators of similar equipment or members of the DND/DRDC scientific community.

3.2.5 Preparation & Training Period

3.2.5.1 Up to three (3) Subject Matter Experts will be provided.

3.2.5.2 The Bidders will each be allowed two (2) days, with up to eight (8) hours each day, for the breakout of equipment, preparation for use, and training of subjects for tests in the trial.

3.2.6 Evaluation Trial Testing

3.2.6.1 See the Evaluation Trial table(s) for more details.

3.2.7 Assessment

3.2.7.1 Canada will assess each bidder's system, and results of all tests will be compiled by Technical Staff which will consist of DND HRS-TOOL Project Trials Officer(s) and Subject Matter Experts.

3.2.7.2 Results of compliance and non-compliance will be provided through PSPC CA.

3.3 PHASE 1 – Evaluation of Key Mandatory Requirements – GPR/MD System

Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement TR - Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M1	ANNEX A – Para A1.1.1.1	The Ground Penetrating Radar & Metal Detector System (GPR/MD System) must be based on proven, fielded equipment, which is in-service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian (ABCA) military partner or police agency of those countries.	CS			
M2	ANNEX A – Para A1.2.1.1.1	The Dual Sensor Detector, when assembled and ready for operation, must form a single piece of solid construction, except for the Headset component.	CS			
M3	ANNEX A – Para A1.2.1.2.2	The Dual Sensor Detector must conduct a self-diagnostic to determine if it is operating within its design parameters, and indicate any faults	CS			
M4	ANNEX A – Para A1.2.1.6.1	The Dual Sensor Detector must display visual information so that it can be seen under daylight and low light viewing.	CS			
M5	ANNEX A – Para A1.2.1.7.1	The Dual Sensor Detector must have three (3) modes of operation: a. MD mode (detection using metal detector sensor only). b. GPR mode (detection using GPR sensor only), and c. Dual GPR/MD mode (detection using both sensors simultaneously).	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M6	ANNEX A – Para A1.3.1.1	<p>The Dual Sensor Detector must be adjustable to accommodate and be used by the entire range of 5th to 95th percentile male and female personnel of the Land Forces, as per DCIEM Report 98-CR-15:</p> <p>a. Suprasternale Height (page 63 of DCIEM Report 98-CR-15)</p> <ul style="list-style-type: none"> I. Female 5% - 1248mm II. Male 5% - 1337mm III. Female 95% - 1421mm IV. Male 95% - 1525mm <p>b. Arm Length (page 57 of DCIEM Report 98-CR-15)</p> <ul style="list-style-type: none"> I. Female 5% - 659mm II. Male 5% - 720mm III. Female 95% - 744mm IV. Male 95% - 844mm 	<p>CS - Compliance Statement</p> <p>TR - Test Report</p> <p>CS</p>			
M7	ANNEX A – Para A1.3.1.3	<p>The Dual Sensor Detector must be supported using only one arm to allow for operation in the standing, kneeling, and prone position.</p>	CS			
M8	ANNEX A – Para A1.4.4.1	<p>The Dual Sensor Detector must have no less than an IP64 rating, or equivalent, IAW NEMA IEC 60529.</p>	TR			
M9	ANNEX A – Para A1.4.6	<p>Robustness</p> <p>The Dual Sensor Detector must remain fully operational after a drop from a height of no less than 90cm onto a hard surface.</p> <p>(Fully operational includes no loss in sensor detection performance, and the ability to collapse down for storage or be adjustable for different users.)</p>	TR			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M10	ANNEX A – Para A1.5.1	<p>Climatic Conditions</p> <p>The Dual Sensor Detector and Headset, including Battery Set to make it operational, must operate in temperatures from –19°C to +44°C.</p> <p>The Dual Sensor Detector and Headset, including Battery Set to make it operational, must operate in relative humidity from 5% to 100%.</p>	<p>CS - Compliance Statement</p> <p>TR - Test Report</p> <p>CS</p>			

3.4 PHASE 1 – Evaluation of Key Mandatory Requirements – CTMD System

Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement TR - Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M11	ANNEX A – Para A2.1.1.1	The Complex Terrain Metal Detector System (CTMD System) must be based on proven, fielded equipment, which is in-service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian (ABCA) military partner or police agency of those countries.	CS			
M12	ANNEX A – Para A2.2.1.1.1	The Metal Detector, when assembled and ready for operation, must form a single piece of solid construction, except for the Headset component.	CS			
M13	ANNEX A – Para A2.2.1.2.1	The Metal Detector must conduct a self-diagnostic to determine if it is operating within its design parameters, and indicate any faults.	CS			
M14	ANNEX A – Para A2.2.1.5.1	The Metal Detector must display visual information so that it can be seen under daylight and low light viewing.	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M15	ANNEX A – Para A2.3.1.1	<p>The Metal Detector must be adjustable to accommodate and be used by the entire range of 5th to 95th percentile male and female personnel of the land forces, as per DCIEM Report 98-CR-15:</p> <p>a. Suprasternale Height (page 63 of DCIEM Report 98-CR-15)</p> <ul style="list-style-type: none"> I. Female 5% - 1248mm II. Male 5% - 1337mm III. Female 95% - 1421mm IV. Male 95% - 1525mm <p>b. Arm Length (page 57 of DCIEM Report 98-CR-15)</p> <ul style="list-style-type: none"> I. Female 5% - 659mm II. Male 5% - 720mm III. Female 95% - 744mm IV. Male 95% - 844mm 	<p>CS - Compliance Statement</p> <p>TR - Test Report</p> <p>CS</p>			
M16	ANNEX A – Para A2.3.1.3	<p>The Metal Detector must be supported using only one arm to allow for operation in the standing, kneeling, and prone position.</p>	CS			
M17	ANNEX A – Para A2.4.4.1	<p>The Metal Detector must have no less than an IP65 rating, or equivalent, IAW NEMA IEC 60529.</p>	TR			
M18	ANNEX A – Para A2.4.6	<p>Robustness</p> <p>The Metal Detector must remain fully operational after a drop from a height of no less than 122cm, in any orientation, onto hard compacted gravel.</p> <p>(Fully operational includes no loss in sensor detection performance, and the ability to collapse down for storage or be adjustable for different users.)</p>	TR			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M19	ANNEX A – Para A2.5.1	<p>Climatic Conditions</p> <p>The Metal Detector and Headset, including Battery Set to make it operational, must operate in temperatures from –19°C to +44°C.</p> <p>The Metal Detector and Headset, including Battery Set to make it operational, operate in relative humidity from 5% to 100%.</p>	<p>CS - Compliance Statement</p> <p>TR - Test Report</p> <p>CS</p>			

3.5 PHASE 1 – Evaluation of Key Mandatory Requirements – NLJD System

Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M20	ANNEX A – Para A3.2.1.1.1	The NLJD, when assembled and ready for operation, must form a single piece of solid construction, except for the Headset component.	CS			
M21	ANNEX A – Para A3.2.1.5	Visual Display The NLJD must indicate detection visually and must display that information so that it can be seen under daylight and low light viewing. The NLJD must indicate both the second and third harmonic detection strength through the visual display.	CS			
M22	ANNEX A – Para A3.2.1.6	Output Power or Sensitivity Control Adjustment The NLJD must provide control over the output power or detection sensitivity to assist with range control and target localization.	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M23	ANNEX A – Para A3.3.1.1	<p>The NLJD must be adjustable to accommodate and be used by the entire range of 5th to 95th percentile male and female personnel of the land forces, as per DCIEM Report 98-CR-15:</p> <p>a. Suprasternale Height (page 63 of DCIEM Report 98-CR-15)</p> <ul style="list-style-type: none"> I. Female 5% - 1248mm II. Male 5% - 1337mm III. Female 95% - 1421mm IV. Male 95% - 1525mm <p>b. Arm Length (page 57 of DCIEM Report 98-CR-15)</p> <ul style="list-style-type: none"> I. Female 5% - 659mm II. Male 5% - 720mm III. Female 95% - 744mm IV. Male 95% - 844mm 	CS			
M24	ANNEX A – Para A3.3.1.2	<p>The NLJD must be supported using only one arm to allow for operation in the standing, kneeling, and prone position.</p> <p>Metallic Component Rejection</p>	CS			
M25	ANNEX A – Para A3.4.2	<p>The NLJD must not indicate detection of metallic components to the rear of the sensor, when no closer than 10cm, such as those that may be carried by the operator.</p>	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M26	ANNEX A – Para A3.5.1	<p>Climatic Conditions</p> <p>The NLJD and Headset, including Battery Set to make it operational, must operate in temperatures from +5°C to +40°C.</p> <p>The NLJD and Headset, including Battery Set to make it operational, must operate in relative humidity from 5% to 80%.</p>	CS			

3.6 PHASE 1 – Evaluation of Key Mandatory Requirements – High Risk Search Equipment & Tools

Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M27	ANNEX A – Para A4.1.1.1	The Handheld Viewing Aid System (HVA System) must be based on proven, fielded equipment, which is in-service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian (ABCA) military partner or police agency of those countries.	CS			
M28	ANNEX A – Para A4.1.2.1	The HVA System must operate from one source of power when using the Handheld Video Display, or the Eye-Piece Video Display, and any of the cameras.	CS			
M29	ANNEX A – Para A4.2.2.1	Eye-Piece Video Display must mount on the CAF in-service ballistic eyewear, NSN 8465-20-001-4355.	CS			
M30	ANNEX A – Para A4.2.3.2.2	The Handheld Video Display must have a screen size no less than 7.62cm (approx. three (3) inches) in width and 7.62cm (approx. three (3) inches) in height.	CS			
M31	ANNEX A – Para A4.2.4.2	The Thermal Camera must be passive, require no illuminators, and rely solely on the relative temperature of the object in the field of view.	CS			
M32	ANNEX A – Para A4.2.5.1	The Colour Camera must have a resolution no less than 640x480 pixels.	CS			
M33	ANNEX A – Para A4.2.6.1	The Night Vision Camera must have a resolution no less than 640x480 pixels.	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M34	ANNEX A – Para A4.5.1	<p>Climatic Conditions</p> <p>The HVA System, not including the Battery Charging System (if required), must operate in temperatures from -19°C to +39°C.</p> <p>The HVA System, not including the Battery Charging System (if required), must operate in relative humidity from 5% to 100%.</p>	CS			
M35	ANNEX A – Para A5.1.1.1	The Breaching Bolt Cutter must cut hard steel, Rockwell Scale C of 50 or higher, of no less than 5/16 inch thickness.	CS			
M36	ANNEX A – Para A6.1.1.2 & A6.1.1.3	<p>The Assault Ladder must be no less than five (5) m in length when assembled.</p> <p>The Assault Ladder must support a load of no less than 130 kg when placed near vertically along a wall.</p>	CS			
M37	ANNEX A – Para A7.1.1.1 & A7.1.1.2	<p>The Wire Caving Ladder must support a load of no less than 200kg.</p> <p>The Wire Caving Ladder must include attaching hook hardware, also supporting a load of no less than 200kg, for mounting on and attaching to the following structures:</p> <ol style="list-style-type: none"> a. Railings and the sides of ships; b. Wood-frame construction window sills; c. Concrete building windows sills, and d. House and commercial building flat-top roofs. 	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M38	ANNEX A – Para A8.1.1.1 & A8.1.1.2	<p>The Grappling Hook must support a load of no less than 200 kg.</p> <p>The Grappling Hook must have three (3) or four (4) prongs for easier attachment when dragging the hook. Prongs must have additional sharp or serrated attaching features for securing the hook to soft items.</p>	CS			
M39	ANNEX A – Para A10.1.1.1	<p>The High Power Handheld Flashlight must have two light output settings:</p> <p>a. High output which must emit a luminous intensity of no less than 500 lumens for no less than one (1) hour at a temperature of 20°C (+/- 3 °C).</p> <p>b. Low output which must emit light for no less than three (3) hours at a temperature of 20°C (+/- 3 °C).</p>	CS			
M40	ANNEX A – Para A11.1.1.2 & A11.1.1.4	<p>The Trip Wire Illuminator must mount and attach to the in-service CAF C-7 rifle using the tactical rail meeting STANAG 4694.</p> <p>The Trip Wire Illuminator must project a laser beam fan of length no less than 4.5m with a fan width of no less than 60 degrees.</p>	CS			
M41	ANNEX A – Para A12.1.1.1 & A12.1.1.2	<p>The Portable Floodlight must have a luminosity of no less than 2600 lumens.</p> <p>The Portable Floodlight must emit light for no less than 14 hours at a temperature of 20°C (+/- 3 °C), and at a luminosity of no less than 50% of the 2600 lumens (lower output setting).</p>	CS			

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Serial	Requirement Reference(s)	Requirement Description	Compliance Documentation Required CS - Compliance Statement	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M42	ANNEX A – Para A13.1.1.1, A13.1.1.2, A13.1.1.3 & A13.1.1.4	<p>The Hydraulic Door Opener System must open the following types of inward opening doors:</p> <ul style="list-style-type: none"> a. Door material – metal, wood and PVC b. Door lock type – single and multi-lock <p>The Hydraulic Door Opener System must have a spreading force of no less than 50 kN.</p> <p>The Hydraulic Door Opener System must have a pushing force of no less than 30 kN.</p> <p>The Hydraulic Door Opener System must have remote cable control of cable length no less than 130 m.</p>	CS			

3.7 PHASE 2 – Evaluation Trial – GPR/MD System

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance for the Evaluation Team only	
				“C”	“NC”
T1	ANNEX A – Para A1.1.3	<p>Electromagnetic Interference</p> <p>The Dual Sensor Detector must not exhibit any malfunction, degradation of performance, or deviation from specified indications, beyond the tolerances indicated in the individual equipment or subsystem specification, when subjected to a vertically polarized, radiated electric field of 4 V/m from 30 MHz to 1 GHz, following the testing procedure described by MIL-STD-461F RS103.</p> <p>The Dual Sensor Detector will be oriented according to manufacturer standard operating procedure with radiated field originating from behind where the operator would normally be positioned to use the equipment.</p>	<p>Equipment Requirements: One (1) Dual Sensor Detector, with one (1) set of batteries, RS103 testing equipment, and a standard object for detection (air-filled Nalgene@ 500ml)</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. The Dual Sensor Detector will be shown to detect the following standard object: an air-filled bottle (Nalgene@ 500 mL, approx. 7.2 cm diameter x 16.6 cm length) at a depth of no less than 10 cm in sand (medium grain in accordance with ASTM D2487-11) with an approximate dielectric constant of 2.8 and moisture content of less than 3% by weight. 2. Evaluator will perform the testing procedure described in MIL-STD-461F RS103, subjecting the Dual Sensor Detector to a vertically polarized, radiated electric field of 4 V/m from 30MHz to 1GHz (electromagnetic field source modulated at 1 kHz and the frequency of the source stepped through the full range of 30MHz to 1GHz). 3. An electric field probe, 1m above the ground, will be used to measure the magnitude of the electric field of the RF wave at the position of the Dual Sensor Detector. 4. The Dual Sensor Detector will be oriented according to the manufacturer standard operating procedure, with the Operator (if present) facing away from the RF source. 		

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Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T2	ANNEX A – Para A1.4.1	<p>Metal Detection Performance in Neutral Soils (IAW CWA 14747-2:2008, D/E/F)</p> <p>The Dual Sensor Detector (using the MD sensor only) must detect minimum metal threats (Type 72A anti-personnel (AP) mine or surrogate) to a depth of no less than nine (9) cm from the top of the mine to the surface of the soil.</p> <p>The Dual Sensor Detector (using the MD sensor only) must detect large metal containing anti-tank (AT) mines (TM-62, TM-36, TM-57, M-15 or surrogate) to a depth of no less than 20 cm from the top of the mine to the surface of the soil.</p> <p>The Dual Sensor Detector (using the MD sensor only) must detect 105mm High Explosive shells in a horizontal orientation to a depth of no less than 20 cm from the top of the shell to the surface of the soil.</p>	<p>Compliance achieved if the Dual Sensor Detector functions normally, without any degradation in performance when detecting the standard object and exposed to the electric field of strength 4V/m or less, in the frequency range from 30MHz to 1GHz.</p> <p>Equipment Requirements: One (1) Dual Sensor Detector & Headset, with one (1) set of batteries, Bartington MS2 with MS2D coil, Type 72A AP mine, AT mine, 105mm shell, or surrogates.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. Evaluator will measure the magnetic susceptibility of the soil using the Bartington MS2 with the MS2D coil to verify it can be classified as Neutral Soil IAW CWA 14747-2:2008, D/E/F. 2. Evaluator will bury each of the three (3) target objects (Type 72A AP mine, AT mine, and 105mm shell, or three (3) surrogates) as described in the requirement, at the specified minimum depth and orientation. 3. Evaluator will perform Dual Sensor Detector start-up and calibration procedure according to the operator manual and training provided. 4. Evaluator will attempt to detect each target object and declare a successful detection or not. <p>Compliance achieved if all of the three (3) target objects are detected.</p>		

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T3	ANNEX A – Para A1.4.2	<p>Metal Detection Performance in Moderate Soils (IAW CWA 14747-2:2008, D/E/F)</p> <p>The Dual Sensor Detector (using the MD sensor only) must detect minimum metal threats (Type 72A anti-personnel (AP) mine or surrogate) to a depth of no less than seven (7) cm from the top of the mine to the surface of the soil.</p>	<p>Equipment Requirements: One (1) Dual Sensor Detector & Headset, with one (1) set of batteries, Bartington MS2 with MS2D coil, Type 72A AP mine or surrogate.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. Evaluator will measure the magnetic susceptibility of the soil using the Bartington MS2 with the MS2D coil to verify it can be classified as Moderate Soil IAW CWA 14747-2:2008, D/E/F. 2. Evaluator will bury the target object (Type 72A AP mine or surrogate) as described in the requirement, at the specified minimum depth. 3. Evaluator will perform Dual Sensor Detector start-up and calibration procedure according to the operator manual and training provided. 4. Evaluator will attempt to detect the target object and declare a successful detection or not. <p>Compliance achieved if the target object is detected.</p>		

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)
				“C”
				“NC”
T4	ANNEX A – Para A1.4.3	<p>GPR Detection Performance in Sand The targets will be placed in sand (medium grain in accordance with ASTM D2487-11) with an approximate dielectric constant of 2.8 and moisture content of less than 3% by weight.</p> <p>The Dual Sensor Detector (using the GPR sensor only) must detect an air-filled bottle (Nalgene @ 500ml, approx. 7.2 cm diameter x 16.6 cm length) to a depth of no less than 15cm in sand, measured from the top of the bottle while horizontal, to the surface of the sand.</p> <p>The Dual Sensor Detector (using the GPR sensor only) must detect a wax-filled (paraffin wax with permittivity of 2.2) bottle (Nalgene @ 500ml, approx. 7.2 cm diameter x 16.6 cm length) to a depth of no less than five (5) cm in sand, measured from the top of the bottle while horizontal, to the surface of the sand.</p> <p>The Dual Sensor Detector (using the GPR sensor only) must detect a wax (paraffin with a permittivity of 2.2) TM62 AT surrogate (32 cm diameter x 7 cm thickness) to a depth of no less than 30cm in sand, measured from the top of the AT surrogate to the surface of the sand.</p>	<p>Equipment Requirements: One (1) Dual Sensor Detector & Headset, with one (1) set of batteries, air-filled Nalgene@ 500ml, wax-filled Nalgene@ 500ml, and wax-filled TM62 AT surrogate.</p> <p>Concept of test:</p> <ol style="list-style-type: none"> 1. Evaluator will bury each of the three (3) target objects (air-filled Nalgene@ 500ml, wax-filled Nalgene@ 500ml, and wax-filled TM62 AT surrogate) as described in the requirement, at the specified minimum depth and orientation. 2. Evaluator will verify that sand is medium grain in accordance with ASTM D2487-11, with an approximate dielectric constant of 2.8 and moisture content of less than 3% by weight. Moisture content of the sand will also be verified. 3. Evaluator will perform Dual Sensor Detector start-up and calibration procedure according to the operator manual and training provided. 4. Evaluator will attempt to detect each target object and declare a successful detection or not. <p>Compliance achieved if all of the three (3) target objects are detected.</p>	

3.8 PHASE 2 – Evaluation Trial – CTMD System

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T5	ANNEX A – Para A2.1.3	<p>Electromagnetic Interference</p> <p>The Metal Detector must not exhibit any malfunction, degradation of performance, or deviation from specified indications, beyond the tolerances indicated in the individual equipment or subsystem specification, when subjected to a vertically polarized, radiated electric field of 4 V/m from 30 MHz to 1 GHz, following the testing procedure described by MIL-STD-461F RS103.</p> <p>The Metal Detector will be oriented according to manufacturer standard operating procedure with radiated field originating from behind where the operator would normally be positioned to use the equipment.</p>	<p>Equipment Requirements: One (1) Metal Detector, with one (1) set of batteries, RS103 testing equipment, and a standard object for detection (Type 72A AP mine or surrogate flush buried in neutral soil).</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> The Metal Detector will be shown to detect the following standard object: a Type 72A AP mine or surrogate flush buried in neutral soil. Evaluator will perform the testing procedure described in MIL-STD-461F RS103, subjecting the Metal Detector to a vertically polarized, radiated electric field of 4 V/m from 30MHz to 1GHz (electromagnetic field source modulated at 1 kHz and the frequency of the source stepped through the full range of 30MHz to 1GHz). An electric field probe, 1m above the ground, will be used to measure the magnitude of the electric field of the RF wave at the position of the Metal Detector. The Metal Detector will be oriented according to the manufacturer standard operating procedure, with the Operator (if present) facing away from the RF source. <p>Compliance achieved if the Metal Detector functions normally, without any degradation in performance when detecting the standard object and exposed to the electric field of strength 4V/m or less, in the frequency range from 30MHz to 1GHz.</p>		

ANNEX C
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Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T6	ANNEX A – Para A2.4.1	<p>Performance in Neutral Soils (IAW CWA 14747-2:2008, D/E/F)</p> <p>The Metal Detector must detect minimum metal threats (Type 72A anti-personnel (AP) mine or surrogate) to a depth of no less than seven (7) cm from the top of the mine to the surface of the soil.</p> <p>The Metal Detector must detect separately each of two adjacent minimum metal threats (Type 72A AP mine or surrogate) that are separated by no more than 30cm, and buried at a depth of no less than five (5) cm from the top of the mine to the surface of the soil.</p>	<p>Equipment Requirements: One (1) Metal Detector & Headset, with one set of batteries, Bartington MS2 with MS2D coil, three (3) Type 72A AP mines or surrogates.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. Evaluator will measure the magnetic susceptibility of the soil using the Bartington MS2 with the MS2D coil to verify it can be classified as Neutral Soil IAW CWA 14747-2:2008, D/E/F. 2. Evaluator will bury each of the three (3) target objects (three (3) Type 72A AP mines or surrogates) as described in the requirement, at the specified minimum depth and separation distance. 3. Evaluator will perform any power up tests specified by the manufacturer and set the Metal Detector to the default sensitivity setting according to the operator manual and training provided. 4. Evaluator will attempt to detect each target object and declare a successful detection or not. <p>Compliance achieved if all of the three (3) target objects are detected.</p>		

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T7	ANNEX A – Para A2.4.2	<p>Performance Near Large Metal Objects</p> <p>The Metal Detector must have a zeroing function to detect a flush-buried minimum metal threat (Type 72A AP mine or surrogate) that is no more than 40cm from large metal objects such as railways, pipelines, storage tanks and utility rooms.</p>	<p>Equipment Requirements: One (1) Metal Detector & Headset, with one (1) set of batteries, Bartington MS2 with MS2D coil, Type 72A AP mine or surrogate, 10cm diameter steel pipe.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. Evaluator will measure the magnetic susceptibility of the soil using the Bartington MS2 with the MS2D coil to verify it can be classified as Neutral Soil IAW CWA 14747-2:2008, D/E/F. 2. Evaluator will place the 10cm diameter pipe on one end of the search area. 3. Evaluator will bury the target object (Type 72A AP mine or surrogate) as described in the requirement, at the flush-buried depth and at the maximum distance of 40cm from the large metal object. 4. Evaluator will perform any power up tests specified by the manufacturer and set the Metal Detector to the default sensitivity setting according to the operator manual and training provided. 5. Evaluator will attempt to detect the target object and declare a successful detection or not. <p>Compliance achieved if the target objects is detected.</p>		

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Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T8	ANNEX A – Para A2.4.3	Performance in Complex Terrain The Metal Detector must detect metal targets (Type 72A AP mine or surrogate) placed in holes and gaps with openings of no more than 10cm in diameter, and at depths of no less than 50cm.	<p>Equipment Requirements: One (1) Metal Detector & Headset, with one (1) set of batteries, Bartington MS2 with MS2D coil, Type 72A AP mine or surrogate.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. Evaluator will measure the magnetic susceptibility of the soil using the Bartington MS2 with the MS2D coil to verify it can be classified as Neutral Soil IAW CWA 14747-2:2008, D/E/F. 2. Evaluator will place the Type 72A AP mine at the bottom of a hole dug to be 10cm in diameter and 50cm in depth. 3. Evaluator will perform any power up tests specified by the manufacturer and set the Metal Detector to the default sensitivity setting according to the operator manual and training provided. 4. Evaluator will attempt to detect the target object and declare a successful detection or not. <p>Compliance achieved if the target objects is detected.</p>		

3.9 PHASE 2 – Evaluation Trial – NLJD System

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T9	ANNEX A – Para A3.1.3	<p>Electromagnetic Interference</p> <p>The NLJD must not exhibit any malfunction, degradation of performance, or deviation from specified indications, beyond the tolerances indicated in the individual equipment or subsystem specification, when subjected to a vertically polarized, radiated electric field of 4 V/m from 30 MHz to 1 GHz, following the testing procedure described by MIL-STD-461F RS103.</p> <p>The NLJD will be oriented according to manufacturer standard operating procedure with radiated field originating from behind where the operator would normally be positioned to use the equipment.</p>	<p>Equipment Requirements: One (1) NLJD, with one (1) set of batteries, RS103 testing equipment, and a standard object for detection (diode model 1N4148 with 25mm leads).</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. The NLJD will be shown to detect the following standard object: diode model 1N4148 with 25mm leads. 2. Evaluator will perform the testing procedure described in MIL-STD-461F RS103, subjecting the NLJD to a vertically polarized, radiated electric field of 4 V/m from 30MHz to 1GHz (electromagnetic field source modulated at 1 kHz and the frequency of the source stepped through the full range of 30MHz to 1GHz). 3. An electric field probe, 1m above the ground, will be used to measure the magnitude of the electric field of the RF wave at the position of the NLJD. 4. The NLJD will be oriented according to the manufacturer standard operating procedure, with the operator (if present) facing away from the RF source. <p>Compliance achieved if the NLJD functions normally, without any degradation in performance when detecting the standard object, when exposed to the electric field of strength 4V/m or less, in the frequency range from 30MHz to 1GHz.</p>		

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
T10	ANNEX A – Para A3.4.1	<p>Electronic Component Detection</p> <p>The NLJD must detect and locate the following electronic components (powered or un-powered):</p> <ol style="list-style-type: none"> Diode model 1N4148 with 25mm leads at a distance of no less than 800cm; Small integrated circuit consisting of a bipolar junction transistor model LM395 at a distance of no less than 300cm; Large integrated circuit consisting of a Programmable Interface Controllers (PIC) Microcontroller model PIC16F877at a distance of no less than 300cm; Small printed circuit board consisting of a Dual-tone Multi-frequency (DTMF) decoder circuit model RB-DFR-541 at a distance of no less than 500cm; Large printed circuit board consisting of a Linux Wi-Fi single board controller model TS-WIFIBOX at a distance of no less than 250cm; Cellphone consisting of a Nokia model 2650 at a distance of no less than 50cm; Two-Way radio consisting of a Motorola model T5720 at a distance of no less than 400cm; Radio frequency switch consisting of a Liftmaster Rx model 850LM at a distance of no less than 350cm, and 	<p>Equipment Requirements: One (1) NLJD & Headset, with one set of batteries, nine (9) test targets as per requirement, semi-enclosed anechoic chamber whose walls and floor attenuate unwanted reflections and spurious signals from external sources. The chamber is open on one end and the ceiling. At the closed end of the chamber, an electromagnetic compatible turntable and stand is used to vary the orientation and height of the target object. An electromagnetic compatible tripod is used to secure the detector.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> Evaluator will place each of the nine (9) target objects, as per the requirement, on the turntable and stand, so that the target object is 1m above the top of the floor in the chamber. Evaluator will place the NLJD on the tripod and set it to maximum transmit power and sensitivity, and at the minimum distance stated for each of the nine (9) target objects. Evaluator will attempt to detect each of the nine (9) target objects and declare a successful detection or not for each. <p>Compliance achieved if all of the nine (9) target objects are detected at their minimum distances.</p>		

Serial	Requirement Reference(s)	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				“C”	“NC”
		<p>i. Passive infra-red (PIR) consisting of a Paradox PIR model 476 at a distance of no less than 250cm.</p>			
T11	ANNEX A – Para A3.4.2	<p>Metallic Component Rejection</p> <p>The NLJD must not indicate detection of metallic components to the rear of the sensor, when no closer than 10cm, such as those that may be carried by the operator.</p>	<p>Equipment Requirements: One (1) NLJD & Headset, with one (1) set of batteries, Nalgene @ 500ml filled with ½ inch stainless steel ball bearings test target, semi-enclosed anechoic chamber whose walls and floor attenuate unwanted reflections and spurious signals from external sources. The chamber is open on one end and the ceiling. At the closed end of the chamber, an electromagnetic compatible turntable and stand is used to vary the orientation and height of the target object. An electromagnetic compatible tripod is used to secure the detector.</p> <p>Concept of Test:</p> <ol style="list-style-type: none"> 1. Evaluator will place the NLJD on the turntable and stand, adjusting the height and orientation so that the detector is directed horizontal at a point 1 m above the floor of the chamber. 2. Evaluator will power on the NLJD and set the output power and sensitivity to maximum. 3. Evaluator will position the ball bearing filled test target 10cm directly behind the center of the NLJD sensor head, or as close as possible given the physical dimensions of the sensor. 4. Evaluator will declare a successful detection or not. <p>Compliance achieved if the target object is NOT detected.</p>		