National Defence | Défense nationale

National Defence Headquarters
Ottawa, Ontario
K1A 0K2

Quartier général de la Défense nationale
Ottawa (Ontario)
K1A 0K2

REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION

AMENDMENT NO. 004
N° DE LA MODIFICATION 004

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À :

Email: John.Caldwell@forces.gc.ca
Courriel: John.Caldwell@forces.gc.ca

Proposal To: National Defence Canada

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein, or attached hereto, the goods and services listed herein and on any attached sheets at the price(s) set out therefore.

Proposition à : Défense nationale Canada

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens et services énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments – Commentaires

Title – Titre	**Solicitation No. – N° de l'invitation**
.338 Lapua Magnum Armour Piercing Incendiary Sniper Cartridge	W8476-206308/A
Date of Amendment – Date de modification	
05 February 2021	
Address Enquiries to: – Adresser toutes questions à :	
John Caldwell (by Email to john.caldwell@forces.gc.ca)	
Telephone No. – N° de telephone	**FAX No. – N° de fax**
By Email	By Email
Destination	
See Annex B to Part 6 – Basis of Payment Voir les détails en annexe B de la partie 6 – Base de paiement	

Instructions: Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

Instructions : Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.

Solicitation Closes –
L'invitation prend fin

At: – à : 14h00
Time Zone: Eastern Time (ET)
Fuseau horaire : Heure de l'Est (HE)

On: – le :23 February 2021
23 février 2021

Delivery Required – Livraison exigée
See herein:
Voir ici:

Vendor Name and Address – Raison sociale et adresse du fournisseur

Name and title of person authorized to sign on behalf of vendor (type or print) – Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d'imprimerie)

Name – Nom _____ **Title – Titre** _____

Signature _____ **Date** _____

Request for Proposal – Department of National Defence (DND) Requirement – .338 Lapua Magnum Armour Piercing Incendiary Sniper Ammunition

The subject Request for Proposal, (RFP), is amended as detailed below. This amendment to the RFP includes the following:

- Publication of questions submitted by bidders and answers to the submitted questions; and,
- Modifications to the Request for Proposal.

1.0 Questions and Answers

Question 5: In RFP Amendment 001, it states that the C21 rifle has not yet been selected. To provide certificates of conformance that the ammunition will be compliant with an unknown weapon is unreasonable. Can the references to the C21 in the solicitation documents be changed to an "off the shelf multi-calibre rifle".

Answer 5: References to the "C21" within the Compliance Matrix (Annex A to Attachment 1 of Part 3 of the bid solicitation) as well as within the Performance Specification (Annex A-2 to Part 6 of the bid solicitation) have been modified. As the changes impact the effect of the requested certifications (Annex B to Attachment 1 of Part 3 of the bid solicitation), evaluation criteria within the Compliance Matrix have been updated in respect of Test Report data to be provided.

As the System Acceptance Test document (Appendix 1 to Annex A-2 of Part 6) describes testing that will be undertaken by Canada to ensure compatibility between the proposed ammunition and the to be selected C21 rifle, references to the "C21" have not changed.

Question 6: In the definition for "Test Reports" that is provided in Attachment 1 to Part 3, there is a requirement that the test reports for tests conducted by the manufacturer, to be signed off by an independent government supplied Quality Assurance officer. Can you please advise if test reports for tests conducted by the manufacturer will be accepted if they were conducted in accordance with a NATO standard and the manufacturer can provide a letter of attestation that the ammunition proposed has been previously supplied to NATO Defence Force?

Answer 6: The definition for "Test Reports", as a required proof of compliance under the Compliance Matrix has been updated.

2.0 Modifications to the Request for Proposal

2.1 **REFERENCE:** Solicitation Closing Time and Date, Page 1 of the RFP

DELETE: "At: – à : 14h00
Time Zone: Eastern Time (ET)
Fuseau horaire : Heure de l'Est (HE)
On: – le : 09 February 2021
09 février 2021 "

INSERT: "At: – à : 14h00
Time Zone: Eastern Time (ET)
Fuseau horaire : Heure de l'Est (HE)

On: – le : 23 February 2021
23 février 2021 "

2.2 REFERENCE: Part 3 of the Bid Solicitation – Bid Preparation Instructions, Attachment 1 to Part 3 – Instructions to Bidders and Technical Evaluation, Page 11 of the RFP

DELETE: The following text, in its entirety:

"3.1.3 Proof of Compliance Column

3.1.3.1 Column 4 of the Compliance Matrix instructs bidders on the type of data that must be provided with the bid in order to demonstrate compliance against a specific requirement. More specifically, required data includes:

a. Test Reports – For the Mandatory Criteria which specify that the required Proof of Compliance is a "Test Report", all required tests must have been conducted by accredited independent laboratories, university laboratories, or government laboratories, all experienced with testing the commodity being delivered, and all within the jurisdiction of NATO member states. Test reports conducted by the manufacturer will also be accepted if they are signed off by an independent government supplied Quality Assurance (QA) officer."

INSERT: The following text, as a replacement for the above deletion:

"3.1.3 Proof of Compliance Column

3.1.3.1 Column 4 of the Compliance Matrix instructs bidders on the type of data that must be provided with the bid in order to demonstrate compliance against a specific requirement. More specifically, required data includes:

a. Test Reports – For the Mandatory Criteria which specify that the required Proof of Compliance is a "Test Report", all required tests must have been conducted by accredited independent laboratories, university laboratories, or government laboratories, all experienced with testing the commodity being delivered, and all within the jurisdiction of NATO member states. Test Reports for tests conducted by the manufacturer, will also be accepted if they are:

- signed off by an independent government supplied Quality Assurance (QA) officer;
- signed off by a QA officer of the manufacturer; or,
- certified by an engineer specialized in ammunition design or ammunition testing.

Evidence of the sign-off or certification must be provided with the Test Report."

2.3 REFERENCE: Part 3 of the Bid Solicitation – Bid Preparation Instructions, Annex A to Attachment 1 – Compliance Matrix, Page 12 of the RFP

DELETE: Annex A to Attachment 1– Compliance Matrix, in its entirety:

INSERT: Annex A to Attachment 1– Compliance Matrix, as attached.

2.4 **REFERENCE:** Part 3 of the Bid Solicitation – Bid Preparation Instructions, Annex B to Attachment 1– Bidder Certification to the Statement of Work and Performance Specifications, Page 18 of the RFP

DELETE: Annex B to Attachment 1– Bidder Certification to the Statement of Work and Performance Specifications, in its entirety:

INSERT: Annex B to Attachment 1– Bidder Certification to the Statement of Work and Performance Specifications, as attached.

2.5 **REFERENCE:** Part 5 of the Bid Solicitation – Certifications and Additional Information, Page 25 of the RFP

DELETE: The following text, in its entirety:

"5.1.2 Additional Certifications required with the Bid

Bidders must submit with their bid, the certification detailed in Annex B of Attachment 1 to Part 3 - Bidder Certification to the Statement of Work and Performance Specifications. Under this certification, the Bidder certifies that its proposed goods and services are in full compliance with:

- Annex A-1 – Statement of Work, and all appendices attached thereto; and,
- Annex A-2 – Performance Specifications, and all appendices attached thereto."

INSERT: The following text, as a replacement for the above deletion:

"5.1.2 Additional Certifications required with the Bid

Bidders must submit with their bid, the certification detailed in Annex B of Attachment 1 to Part 3 - Bidder Certification to the Statement of Work and Performance Specifications. Under this certification, the Bidder certifies that its proposed goods and services are in full compliance with:

- Annex A-1 – Statement of Work, and all appendices attached thereto; and,
- Annex A-2 – Performance Specifications, including Appendices 2 and 3 to Annex A-2 – (Sequential and Non-Sequential Test Requirements), but excluding Appendix 1 to Annex A-2 – (System Acceptance Test)"

2.6 **REFERENCE:** Part 6 of the Bid Solicitation – Resulting Contract Clauses, Clause 6.6.1 – Basis of Payment, Page 28 of the RFP

DELETE: Clause 6.6.1 – Basis of Payment, in its entirety;

INSERT: Clause 6.6.1 – Basis of Payment, as follows:

" 6.6.1 Basis of Payment

1. In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm lot price, as specified in Annex "B" – Basis of Payment, Table B.1 as follows:
   - Currency – Canadian Dollars;
   - Canadian Customs duties, if applicable, are included;
   - Canadian Excise Taxes, if applicable, are included;
   - INCO Terms 2010 DDP to Destinations; and,
   - Applicable Taxes are extra.

2. For options exercised, and in consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the applicable firm unit prices, as specified in Annex "B" – Basis of Payment, Table B.2 as follows:
   - Currency – Canadian Dollars;
   - Canadian Customs duties, if applicable, are included;
   - Canadian Excise Taxes, if applicable, are included;
   - INCO Terms 2010 DDP to Destinations; and,
   - Applicable Taxes are extra.

   Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work."

2.7 **REFERENCE:** Part 6 of the Bid Solicitation – Resulting Contract Clauses, Annex A-2 – Performance Specifications
DELETE: Part 6 of the Bid Solicitation – Resulting Contract Clauses, Annex A-2 – Performance Specifications, in its entirety;
INSERT: Part 6 of the Bid Solicitation – Resulting Contract Clauses, Annex A-2 – Performance Specifications, as attached.

2.8 **REFERENCE:** Part 6 of the Bid Solicitation – Resulting Contract Clauses, Appendix 1 to Annex A-2 - System Acceptance Test Requirements
DELETE: Part 6 of the Bid Solicitation – Resulting Contract Clauses, Appendix 1 to Annex A-2 - System Acceptance Test Requirements, in its entirety;
INSERT: Part 6 of the Bid Solicitation – Resulting Contract Clauses, Appendix 1 to Annex A-2 - System Acceptance Test Requirements, as attached.

ALL OTHER TERMS, CONDITIONS AND REQUIREMENTS OF THIS REQUEST FOR PROPOSAL REMAIN UNCHANGED

ANNEX A TO ATTACHMENT 1

COMPLIANCE MATRIX

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
1	Annex A-2 to Part 6 Para 5.1.1	.338 Lapua Magnum. The proposed Sniper Cartridge must be IAW the .338 Lapua Magnum cartridge as defined by Commission internationale permanente pour l'épreuve des armes à feu portatives (CIP)/ Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) standards in terms of dimensions, pressure and headspace. The CIP table of dimensions and pressures for the .338 Lapua Magnum cartridge can be found at the following links: https://bobp.cip-bobp.org/uploads/tdcc/tab-i/338-lapua-mag-en.pdf; and https://bobp.cip-bobp.org/uploads/annexe/annexeiii-en-cr1.pdf.	Test Report: Lot Acceptance Test Reports showing Maximum Average Pressure. and Documentary Compliance: Dimensioned Engineering Drawing of Cartridge indicating cartridge dimensions L1, L2, L3, L6 (cartridge overall length), R1, and G1 (projectile diameter) IAW CIP Table of Dimensions for Cartridges and Chambers for the .338 Lapua Magnum cartridge.			
2	Annex A-2 to Part 6 Para 5.1.2	Compatibility with Weapons. The proposed Sniper Cartridge must function properly and safely when used with weapons chambered for .338 Lapua Magnum.	Test Report: Test Report demonstrating proper and safe functioning in a weapon chambered for .338 Lapua Magnum. This could be factory function and casualty testing with a .338 Lapua Magnum weapon or other weapon system qualification report(s).			
3	Annex A-2 to Part 6 Para 5.2.1	Projectile Sub-Component. The Sniper Cartridge must incorporate an armour piercing, incendiary, match projectile that complies with the treaties and conventions to which Canada is a signatory to and other obligations under International Humanitarian Law (IHL) and customary international law.	Documentary Compliance The Bidder must supply documentation demonstrating that the projectile consists of an armour piercing incendiary projectile.			
4	Annex A-2 to Part 6 Para 5.2.2	Primer Sub-Component. The Sniper Cartridge must use a percussion primer that is safe for military use.	Documentary Compliance The Bidder must supply documentation demonstrating that the cartridge uses a primer that is safe for military use.			

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
5	Annex A-2 to Part 6 Para 5.2.3	Propellant. The Sniper Cartridge must use a propellant that is safe for military use.	Documentary Compliance The Bidder must supply documentation demonstrating that the cartridge uses a propellant that is safe for military use.			
6	Annex A-2 to Part 6 Para 5.3.1	Compatibility. The Sniper Cartridge must be compatible with all operational and non-operational aspects of a bolt action weapon chambered in .338 Lapua magnum.	Test Report Test report demonstrating compatibility with a bolt action weapon chambered in .338 Lapua Magnum. The test report must demonstrate compliance with the following: • Clearly identify the test weapon including make, model number and manufacturer; • The test weapon must be gauged, inspected and confirmed serviceable; • A sample of 10 Sniper Cartridges will be removed from their packaging and inspected; • The 10 Sniper Cartridges must then be loaded into the test weapon magazine and then the magazine inserted into the test weapon. The cartridges must then be cycled through the weapon without firing (fully chambering and ejecting each cartridge); • Inspect all cartridges for damage and witness marks (example: pre-engraving). • During loading and extraction (without firing) The Sniper Cartridges must not: pre-engrave into the rifling, experience a change in its overall length or be damaged in any way during loading and extraction that would affect safety or performance.			

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
			• Load 10 Sniper Cartridges into the magazine and fire them from the test weapon. • During firing, the Sniper Cartridges must not experience any stoppages or operate in an unsafe manner. • The casings for all fired cartridges must be inspected for signs of critical defects and incidents. Inspected casings must not show signs of splitting, rupturing, blown primer, primer punch out, loose primer, excessive primer extrusion, or any other signs of excessive pressure.			
7	Annex A-2 to Part 6 Para 5.4.1	Not Used.	Not Used.			
8	Annex A-2 to Part 6 Para 5.5.1	Precision. The proposed Sniper Cartridge must achieve a mean Extreme Spread of 1.5 MOA or less when fired against a target at 300m at +21°C IAW the Precision Test Procedure (paragraph 5.5.2 of the performance specification – Annex A-2).	Test Report: The Test Report must demonstrate the required precision and provide calculations showing that a mean Extreme Spread of 1.5 MOA or less has been achieved.			
9	Annex A-2 to Part 6 Para 5.6.1	Velocity Variation. The muzzle velocity standard deviation of the projectile must be less than 6 m/s for 20 cartridges conditioned at 21°C.	Test Report: Lot Acceptance Test Report(s) demonstrating velocity standard deviation.			
10	Annex A-2 to Part 6 Para 5.7.1	Terminal Effects. The proposed Sniper Cartridge projectile, when striking at a 0 degree angle of obliquity (normal to the line of fire), must completely penetrate a 10mm thick steel plate with a Brinell Hardness of 400, 100% of the time when fired from a .338 Lapua Magnum	Test Report: The provided Test Report must demonstrate that the proposed Sniper Cartridge meets the terminal effects requirement.			

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
		precision test barrel that is no longer than 686mm at a range of 500m.				
11	Annex A-2 to Part 6 Para 5.7.2	Behind Armour Effects. Following penetration of the steel target at paragraph 5.7.1, the proposed Sniper Cartridge projectile, or fragments of the projectile, must penetrate a 1.25mm mild steel plate at 10cm opposite the armour strike surface.	Test Report: The provided Test Report must demonstrate that the proposed Sniper Cartridge meets the Behind Armour Effects requirement.			
12	Annex A-2 to Part 6 Para 5.7.3	Incendiary Effects. The proposed Sniper Cartridge projectile must produce incendiary effects.	Test Report: Test Report demonstrating that the incendiary effects of the projectile are capable of igniting vaporized fuel.			
13	Annex A-2 to Part 6 Para 5.8.1	Operational Environment. The Sniper Cartridge will be used for CAF sniper operations and training exercises. Therefore it will be exposed to, and must operate in a wide variety of extremely demanding environments and operational situations ranging from urban areas, through dense vegetation to open savannah and desert. It will be transported by sniper units deployed on foot, in wheeled or tracked vehicles on roads and cross country, in naval craft, helicopters and by parachute. It must remain operable in almost all weather conditions and in climatic zones ranging from hot, dry desert to high arctic conditions.	Compliance Statement The Bidder must provide the certification detailed in Annex "B" of this Attachment.			
14	Annex A-2 to Part 6 Para 5.8.2	Storage and Handling - Extreme High Storage Conditions. The Sniper Cartridge must meet its performance requirements and function safely following no less than 72 hours of storage at the defined Extreme High Storage Conditions	Compliance Statement The Bidder must provide the certification detailed in Annex "B" of this Attachment.			
15	Annex A-2 to Part 6 Para 5.8.3	Storage and Handling - Extreme Low Storage Conditions. The Sniper Cartridge must meet its performance requirements and function safely following no less than 72	Compliance Statement The Bidder must provide the certification detailed in Annex "B" of this Attachment.			

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
		hours of storage at the defined Extreme Low Storage Conditions.				
16	Annex A-2 to Part 6 Para 5.8.4	Operational – Standard Ambient Conditions. The proposed Sniper Cartridge must meet its performance requirements and function safely when operated in a bolt action weapon chambered in .338 Lapua Magnum at Standard Ambient Conditions.	Test Report: Lot Acceptance Test Report(s) demonstrating safe functioning from a .338 test barrel at +21 Degrees Celsius.			
17	Annex A-2 to Part 6 Para 5.8.5	Operational – Extreme High Operational Conditions. The proposed Sniper Cartridge must meet its performance requirements and function safely when operated in a bolt action weapon chambered in .338 Lapua Magnum at Extreme High Operational Conditions.	Test Report: Lot Acceptance Test Report(s) demonstrating safe functioning from a .338 test barrel at +52 Degrees Celsius.			
18	Annex A-2 to Part 6 Para 5.8.6	Operational – Extreme Low Operational Conditions. The proposed Sniper Cartridge must meet its performance requirements and function safely when operated in a bolt action weapon chambered in .338 Lapua Magnum at Extreme Low Operational Conditions.	Test Report: Lot Acceptance Test Report(s) demonstrating safe functioning from a .338 test barrel at -54 Degrees Celsius.			
19	Annex A-2 to Part 6 Para 5.8.8	Waterproof. Untreated Sniper Cartridges must be waterproof in accordance to the test procedure and sentencing criteria of the MCMOPI: AC/225(DSS)D(2013)0014(PFP), Section 27	Test Report: Lot Acceptance Test Report(s) demonstrating waterproofness.			
20	Annex A-2 to Part 6 Para 5.9.1	Shelf Life - Packaged. The proposed Sniper Cartridge must have a packaged shelf life of at least 10 years when stored at the Standard Ambient Conditions.	Documentary Compliance: The Bidder must supply an analysis supported by technical documentation demonstrating a shelf life of at least 10 years.			
21	Annex A-2 to Part 6 Para 5.10.5	Hazard Classification Code (HCC). The packaged Sniper Cartridge must have an HCC of 1.4.	Documentary Compliance: The Bidder must supply documentation that supports the HCC classification. This may include a determination of the HCC from a national authority such as Natural Resources Canada.			

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
22	Attachment 1 to Part 3 Para 3.2.1	The Bidder must provide, with their bid submission, the ammunition manufacturer's Lot Acceptance Test Specification that is used to assess the quality of serial production lots.	Manufacturer Documentation: The original manufacturer's LAT Specification for the sniper cartridges proposed in the bid.			
23	Attachment 1 to Part 3 Para 3.3.1	The Bidder must provide, with their bid submission, ammunition manufacturer's LAT reports from 2 separate serial production lots.	Manufacturer Documentation: The original manufacturer's LAT reports from 2 separate serial production lots, for the sniper cartridges proposed in the bid.			
24	Attachment 1 to Part 3 Para 3.4.1 Para 3.4.2	The Bidder must provide, with their bid submission, a Technical Data Sheet. The Technical Data Sheet must contain the following data: a) Cartridge Photograph and/or line drawing; b) Part or Model Number; c) Cartridge NATO Stock Number (If available); d) Cartridge description, theory of operation and terminal effects; e) Projectile weight, composition and configuration; f) Hazard Classification Code and United Nations Number; g) Inner packaging description; and, h) Outer packaging (ammunition canister) description.	Manufacturer Documentation: The original manufacturer's Technical Data Sheet for the sniper cartridges proposed in the bid, and which contains the information detailed at Attachment 1 to Part 3, Para 3.4.2 must be submitted with the bid. The Technical Data Sheet must contain the following data: a) Cartridge Photograph and/or line drawing; b) Part or Model Number; c) Cartridge NATO Stock Number (If available); d) Cartridge description, theory of operation and terminal effects; e) Projectile weight, composition and configuration; f) Hazard Classification Code and United Nations Number; g) Inner packaging description; and, h) Outer packaging (ammunition canister) description.			

1 Mandatory Criteria	2 Bid Solicitation Reference	3 Mandatory Requirement	4 Required Proof of Compliance	5 Bidder's Self-Assessment	6 Evidence Location in Bid Package	7 Bidder's Statement and Comments
25	Attachment 1 to Part 3 Para 3.5.1	The Bidder must be: a. the original manufacturer for the sniper cartridge that is proposed in the bid; or, b. an entity which has a currently valid corporate agreement with the original manufacturer for the sniper cartridge that is proposed in the bid. The corporate agreement must have been entered into prior to the date of this bid solicitation, and demonstrate that the Bidder is an authorized representative of the original manufacturer for the sniper cartridge that is proposed in the bid.	The Bidder must provide documentation demonstrating that it is the original manufacturer of the sniper cartridge that is proposed in the bid, or that it has a currently valid corporate agreement (as defined in the reference under Column 2) with the original manufacturer for the sniper cartridge that is proposed in the bid.			

ANNEX B TO ATTACHMENT 1

BIDDER CERTIFICATION TO THE STATEMENT OF WORK AND PERFORMANCE SPECIFICATIONS

The Bidder must submit a compliance certification in the following format, as part of its proposal.

"The Bidder hereby certifies that the proposed goods and services will fully and unconditionally meet or exceed all requirements detailed in:

- The Statement of Work, included at Annex "A-1" of this bid solicitation, and the appendices attached thereto; and,
- The Performance Specifications, included at Annex "A-2" of this bid solicitation, , including Appendices 2 and 3 to Annex A-2 – (Sequential and Non-Sequential Test Requirements), but excluding Appendix 1 to Annex A-2 – (System Acceptance Test)"

_____ _____

Authorized representative of the Bidder Date"

The following documents are to be inserted into this Bid Solictation Amendment at this point in the document:

- Part 6 of the Bid Solicitation – Resulting Contract Clauses, Annex A-2 – Performance Specifications
- Part 6 of the Bid Solicitation – Resulting Contract Clauses, Appendix 1 to Annex A-2, System Acceptance Test Requirements

ANNEX A-2

.338 LAPUA MAGNUM ARMOUR PIERCING INCENDIARY SNIPER CARTRIDGE

PERFORMANCE SPECIFICATION

Reference Number: W8476-206308

Date: 03 Feb 2021

Prepared by:

DSSPM 9
Technical Authority/Life Cycle Materiel Manager
National Defence Headquarters
Major General George R. Pearkes Building
Ottawa, Ontario
K1A 0K2

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.

Contents

1 Introduction

1.1 Scope

1.1.1 This performance specification states the requirements for the .338 Lapua Magnum Armour Piercing Incendiary sniper cartridge (Sniper Cartridge).

1.1.2 This document and its various appendices form the basis for all verification activities to be performed on the Sniper Cartridge.

1.2 Background

1.2.1 The ammunition detailed in this Performance Specification will be used with the C21 Multi-Caliber Sniper Weapon (MCSW) chambered in the NATO 7.62mm x 51 and .338 Lapua Magnum calibers. Unless otherwise stated, testing and validations for S3 and System Acceptance Testing (SAT) will be conducted using this weapon platform.

2 Acronyms

ASSB	Ammunition Safety and Suitability for Service Board
AOP	Allied Ordnance Publication
CAF	Canadian Armed Forces
CIP	Commission internationale permanente pour l'épreuve des armes à feu portatives
DND	Department of National Defence
HCC	Hazard Classification Code
IAW	In Accordance With
IHL	International Humanitarian Law
MCMOPI	Multi-Caliber Manual of Proof and Inspection
MCSW	Multi-Caliber Sniper Weapon
MOA	Minute of Angle
NATO	North Atlantic Treaty Organization
RH	Relative Humidity
S3	Safety and Suitability for Service
SAAMI	Sporting Arms and Ammunition Manufacturers' Institute
SAT	System Acceptance Test
STANAG	Standardization Agreement

3 Terminology

3.1 “Article 36 Legal Review” refers to a review conducted by the Directorate of International and Operational Law to ensure that Canadian Armed Forces (CAF) weapon systems comply with those limits imposed by international laws and conventions to which Canada is a signatory.

3.2 “Ammunition Safety and Suitability for Service Board (ASSB) Phase 1 Decision Document” is used to assess whether the S3 test program proposed for a new munition is appropriate and complete with respect to the declared service life cycle.

3.3 “C21” means the CAF selected multi-caliber sniper weapon platform in the NATO 7.62mm x 51 and .338 Lapua Magnum and calibers.

3.4 “Defects and Incidents” means those defects and incidents that fall within Categories 1 through 4 in accordance with (IAW) the MCMOPI, AC/225(DSS)D(2013)0014(PFP), Section 11.

3.5 “Extreme High Operational Conditions” is defined as:

a. Temperature: +52°C;

b. Relative Humidity (RH): Between 3% and 8%; and

c. Atmospheric Pressure: 96 +/-10KPa.

3.6 “Extreme High Storage Conditions” is defined as:

a. Temperature: +71°C;

b. RH: 3% to 8%; and

c. Atmospheric Pressure: 96 +/-10KPa.

3.7 “Extreme Low Operational Conditions” is defined as:

a. Temperature: -54°C;

b. RH: Tending towards saturation; and

c. Atmospheric Pressure: 96 +/-10KPa.

3.8 “Extreme Low Storage Conditions” is defined as:

a. Temperature: -51°C;

b. RH: Tending towards saturation; and

c. Atmospheric Pressure: 96 +/-10KPa.

3.9 “Extreme Spread” is defined as the distance between the two farthest impact points within a single grouping of shots. This is measured from the center of impact of each shot.

3.10 “Lot” means a quantity of ammunition which is manufactured or assembled by one producer under uniform conditions and which is expected to function in a uniform manner. An ammunition Lot is designated and identified by assignment of an ammunition lot number. Materiel comprising an ammunition Lot must be homogeneous.

3.11 “Minute of Angle (MOA)” is as an angular measurement defined as 1/60th of a degree. 1 MOA spreads 2.9cm at a range of 100m.

3.12 “Standard Ambient Conditions” is defined as:

a. Temperature: 21°C +/- 5°C;

b. RH: 50% +/- 15%; and

c. Atmospheric Pressure: 96 +/-10KPa.

3.13 “Temperature Tolerance” for all temperatures is ±2°C unless otherwise stated.

4 Applicable Documents

4.1 Applicability

4.1.1 Unless otherwise stated, the most recent version of the documents listed below, at the time of Contract award, form part of this Performance Specification, to the extent specified herein, when specifically referenced in the text. All other document references are to be considered supplemental information only. Unless otherwise specified, the issue, amendment and version of documents effective for this Contract will be those in effect at Contract award. The Contractor must bring to the attention of Canada, through the Contract Authority, all inconsistencies between the Performance Specification and the documents attached in the Annexes and referenced in this document. In the event of conflict between the content of this Performance Specification and the referenced documents, the following order of precedence applies:

a. Applicable Canadian laws and regulations;

b. The Contract;

c. Content of the Statement of Work (Annex A-1) and appendices; and

d. This performance specification and appendices.

4.2 Commercially Available Documents

4.2.1 AOP-2(C), The Identification of Ammunition [https://www.nato.int/];

4.2.2 MIL-DTL-3060G (AR), Detail Specification, Boxes, Small Arms Ammunition – M19A1, M2A1 and M2A2 [https://global.ihs.com/];

4.2.3 Multi-Caliber Manual of Proof and Inspection (MCMOPI): AC/225(DSS)D(2013)0014(PFP) [https://www.nato.int/].

4.3 Government Supplied Documents

4.3.1 D-09-002-003/SG-000 Specification for Palletization of Ammunition; and

4.3.2 D-09-002-004/SG-000 Standard, Identification of Ammunition and Ammunition Packaging.

5. Requirements

5.1 Calibre

5.1.1 .338 Lapua Magnum. The Sniper Cartridge must be IAW the .338 Lapua Magnum cartridge as defined by Commission internationale permanente pour l'épreuve des armes à feu portatives (CIP)/ Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) standards in terms of dimensions, pressure and headspace. The CIP table of dimensions and pressures for the .338 Lapua Magnum cartridge can be found at https://bobp.cip-bobp.org/uploads/tdcc/tab-i/338-lapua-mag-en.pdf; and

https://bobp.cip-bobp.org/uploads/annexe/annexeiii-en-cr1.pdf.

5.1.2 Compatibility with Weapons. The Sniper Cartridge must function properly and safely when used with weapons chambered for .338 Lapua Magnum.

5.2 Cartridge Design

5.2.1 Projectile Sub-Component. The Sniper Cartridge must incorporate an armour piercing, incendiary, match projectile that complies with the treaties and conventions to which Canada is a signatory to and other obligations under International Humanitarian Law (IHL) and customary international law.

5.2.2 Primer Sub-Component. The Sniper Cartridge must use a percussion primer that is safe for military use.

5.2.3 Propellant. The Sniper Cartridge must use a propellant that is safe for military use.

5.3 Compatibility

5.3.1 Compatibility. The Sniper Cartridge must be compatible with all operational and non-operational aspects of a bolt action weapon chambered in .338 Lapua Magnum.

5.4 Not Used

5.4.1 Not Used.

5.5 Precision

5.5.1 Precision. The Sniper Cartridge must achieve a mean Extreme Spread of 1.5 MOA or less when fired against a target at 300m at +21°C IAW the Precision Test Procedure (paragraph 5.5.2).

5.5.2 Precision Test Procedure. The precision test must be conducted as follows:

a. Three x .338 Lapua Magnum precision test barrels must be used;

b. The test ammunition must be stored at +21 ± 3°C, for not less than 6 hours and must be fired at that temperature;

c. Each precision test barrel must fire at 5 targets located at 300m (15 targets total);

d. group of 5 rounds must be fired into each separate target (75 cartridges total); and

e. The Extreme Spread of each target (15 targets total) must be calculated independently and then averaged with the other targets to obtain the mean Extreme Spread.

5.6 Velocity

5.6.1 Velocity Variation. The muzzle velocity standard deviation of the projectile must be less than 6m/s for 20 cartridges conditioned at 21°C.

5.7 Terminal Effects

5.7.1 Terminal Effects. The Sniper Cartridge projectile, when striking at a 0 degree angle of obliquity (normal to the line of fire), must completely penetrate a 10mm thick steel plate with a Brinell Hardness of 400, 100% of the time when fired from a .338 Lapua Magnum precision test barrel that is no longer than 686mm at a range of 500m.

5.7.2 Behind Armour Effects. Following penetration of the steel target at paragraph 5.7.1, the Sniper Cartridge projectile, or fragments of the projectile, must penetrate a 1.25mm mild steel plate at 10cm opposite the armour strike surface.

5.7.3 Incendiary Effects. The Sniper Cartridge projectile must produce incendiary effects capable of igniting vaporized fuel.

5.8 Environmental Requirements

5.8.1 Operational Environment. The Sniper Cartridge will be used for CAF sniper operations and training exercises. Therefore it will be exposed to, and must operate in a wide variety of extremely demanding environments and operational situations ranging from urban areas, through dense vegetation to open savannah and desert. It will be transported by sniper units deployed on foot, in wheeled or tracked vehicles on roads and cross country, in naval craft, helicopters and by parachute. It must remain operable in almost all weather conditions and in climatic zones ranging from hot, dry desert to high arctic conditions.

5.8.2 Storage and Handling - Extreme High Storage Conditions. The Sniper Cartridge must meet its performance requirements and function safely following no less than 72 hours of storage at the defined Extreme High Storage Conditions.

5.8.3 Storage and Handling - Extreme Low Storage Conditions. The Sniper Cartridge must meet its performance requirements and function safely following no less than 72 hours of storage at the defined Extreme Low Storage Conditions.

5.8.4 Operational – Standard Ambient Conditions. The Sniper Cartridge must meet its performance requirements and function safely when operated in a bolt action weapon chambered in .338 Lapua Magnum at Standard Ambient Conditions.

5.8.5 Operational – Extreme High Operational Conditions. The Sniper Cartridge must meet its performance requirements and function safely when operated in a bolt action weapon chambered in .338 Lapua Magnum at Extreme High Operational Conditions.

5.8.6 Operational – Extreme Low Operational Conditions. The Sniper Cartridge must meet its performance requirements and function safely when operated in a bolt action weapon chambered in .338 Lapua Magnum at Extreme Low Operational Conditions.

5.8.7 Operational Temperature Conditioning. For requirements 5.8.4, 5.8.5 and 5.8.6 of this document, the Sniper Cartridges under test must be exposed to the specified conditions for 72 hours prior to testing.

5.8.8 Waterproof. Untreated Sniper Cartridges must be waterproof in accordance to

the test procedure and sentencing criteria of the MCMOPI: AC/225(DSS)D(2013)0014(PFP), Section 27.

5.9 Maintainability and Reliability

5.9.1 Shelf Life - Packaged. The Sniper Cartridge must have a packaged shelf life of at least 10 years when stored at the Standard Ambient Conditions.

5.10 Safety and Suitability for Service (S3)

5.10.1 Ammunition Safety and Suitability for Service Board (ASSB). The authority for certifying ammunition rests with the Department of National Defence (DND)'s ASSB. While DND retains the responsibility to satisfy the ASSB, the Contractor is responsible for the Sniper Cartridge to successfully meet the requirements of the ASSB Phase 1 Decision Document which includes sequential and non-sequential tests, environmental requirements and legal assessments.

5.10.2 Safety and Suitability for Service - Sequential Test Program. The Sniper Cartridge must meet all of the specified sentencing criteria and remain safe and suitable for service following exposure to the environmental sequential test program detailed in Appendix 2 of this Annex.

5.10.3 Safety and Suitable for Service - Non-Sequential Test Program. The Sniper Cartridge must meet all of the specified sentencing criteria and requirements of the non-sequential test program detailed in Appendix 3 of this Annex.

5.10.4 International Humanitarian Law (IHL) Provisions. The Sniper Cartridge must comply with all conventions, treaties and other obligations under IHL to which Canada is a signatory to and successfully pass an Article 36 Review by CAF Judge Advocate General / Directorate of International and Operational Law.

5.10.5 Hazard Classification Code (HCC). The packaged Sniper Cartridge must have an HCC of 1.4.

5.10.6 Environmental, Health and Safety. All identified environmental and occupational health risks identified against the Sniper Cartridge must be reduced to the satisfaction of Defence Force Health Protection and Director Land Equipment Program Staff.

5.11 Packaging and Palletized Unit Loads

5.11.1 Packaging Configuration. The Sniper Cartridges must be packaged and shipped in steel M2A1 ammunition boxes (MIL-DTL-3060G (AR)).

5.11.2 Inner Packaging Configuration. The inner packaging must consist of separate or individual "satellite" packages that hold 10 Sniper Cartridges each (2 rows of 5 cartridges).

5.11.3 Inner Packaging Quantity. The inner packaging must be configured so that at least a quantity of 200 Sniper Cartridges can be shipped in a single M2A1 box.

5.11.4 Protection Against Handling and Transportation. The Sniper Cartridges must remain safe and suitable for use and meet the specified performance

requirements following exposure to the sequential test program detailed in Appendix 2 of this Annex.

5.11.5 Palletized Unit Load. The Sniper Cartridges must be packaged and palletized on standard pallets IAW D-09-002-003/SG-000, Specification for Palletization of Ammunition.

5.12 Marking and Identification

5.12.1 Marking and Colour of Ammunition and Packaging. The Sniper Cartridge and its inner and outer packaging must be marked for identification IAW D-09-002-004/SG-000, Standard, Identification of Ammunition and Ammunition packaging and AOP-2(C), The Identification of Ammunition, where applicable.

5.12.2 M2A1 Ammunition Box Markings. The M2A1 ammunition box must be marked IAW the marking instructions contained in Annex C

5.12.3 Descriptive Nomenclature. The outer and inner packaging must clearly identify the contents with the following descriptive nomenclature: “Cartridge, .338 Lap Mag Armour Piercing Incendiary Match”.

5.12.4 Bullet Nature Symbol. The outer and inner packaging must be marked with the “Armour Piercing Incendiary” symbol IAW Annex B, Page 1 of AOP-2(C).

5.12.5 Marking of Cartridge Casing. The following must be stamped into the base of the Sniper Cartridge casing:

a. The manufacturer’s initials or identification letters;

b. Last two digits of the year of manufacture of the complete round or, if within one year of delivery, the last two digits of the year of manufacture of the casing.

APPENDIX 1 to ANNEX A-2

.338 LAPUA MAGNUM ARMOUR PIERCING INCENDIARY SNIPER CARTRIDGE

SYSTEM ACCEPTANCE TEST REQUIREMENTS

Reference Number: W8476-206308

Date: 03 Feb 2021

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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.

CONTENTS

1 Scope

1.1 Objective

1.1.1 The objective of this appendix is to describe the System Acceptance Testing (SAT) that will be conducted by Canada to:

a. Verify that the 0.338 Lapua Magnum Armour Piercing Incendiary Sniper Cartridge (Sniper Cartridge) is compatible with the C21 multi-calibre sniper weapon in Extreme High & Low Operational and Standard Ambient Conditions; and

b. To characterize the precision of the Sniper Cartridge when used with the C21.

1.2 Acronyms and Definitions

IAW	In Accordance With
MCMOPI	Multi-Caliber Manual of Proof and Inspection
MOA	Minute of Angle
NATO	North Atlantic Treaty Organization
OACL	Overall Cartridge Length
RH	Relative Humidity
SAT	System Acceptance Test
SOW	Statement of Work

1.3 Definitions

1.3.1 “C21” means the CAF selected multi-calibre sniper weapon platform in the 0.338” Lapua Magnum and NATO 7.62mm x 51 calibers.

1.3.2 “Defects and Incidents” means those defects and incidents that fall within Categories 1 through 4 IAW the MCMOPI, AC/225(DSS)D(2013)0014(PFP), Section 11.

1.3.3 “Extreme High Operational Conditions” is defined as:

a. Temperature: +49°C;

b. Relative Humidity (RH): Between 3% and 8%; and

c. Atmospheric Pressure: 96 +/-10KPa.

1.3.4 “Extreme Low Operational Conditions” is defined as:

a. Temperature: -46°C;

b. RH: Tending towards saturation; and

c. Atmospheric Pressure: 96 +/-10KPa.

1.3.5 “Extreme Spread” is defined as the distance between the two farthest impact points within a single grouping of shots.

1.3.6 “Minute of Angle (MOA)” is as an angular measurement defined as 1/60th of a degree. 1 MOA spreads 2.9 cm at a range of 100 m.

1.3.7 “Sniper Cartridge” means the .338” Lapua Magnum Armour Piercing Incendiary Sniper Cartridge.

1.3.8 “Standard Ambient Conditions” is defined as:

a. Temperature: 21°C +/- 5°C;

b. RH: 50% +/- 15%; and

c. Atmospheric Pressure: 96 +/-10KPa.

2 Applicable Documents

2.1 Applicability

2.1.1 Unless otherwise stated, the most recent version of the documents listed below, at the time of Contract award, form part of this Statement of Work (SOW) when specifically referenced in the text of the SOW. All other document references are to be considered supplemental information only. Unless otherwise specified, the issue, amendment and version of documents effective for this Contract will be those in effect at Contract award. The Contractor must bring to the attention of the Technical Authority through the Contract Authority all perceived inconsistencies between the SOW and the documents attached in the Annexes and referenced in this SOW. In the event of conflict between the content of this SOW and the referenced documents, the following order of precedence applies:

a. Applicable Canadian laws and regulations;

b. The Contract;

c. Content of the SOW and appendices; and

d. The Performance Specification and appendices.

2.2 Commercially Available Documents

a. Multi-Calibre Manual of Proof and Inspection (MCMOPI) AC/225(DSS)D(2013)0014(PFP).

3 SAT Requirements

3.1 Summary of Tests

3.1.1 The following requirements will be verified during SAT:

SAT No.	SAT Title	Related Reference	Requirement to be Verified
1	C21 Compatibility	Annex A-2 Para 5.3.1	Confirm that the Sniper Cartridge is compatible with all operational and non-operational aspects of the C21.
2	C21 Function Casualty	Annex A-2 Para 5.1.2 and 5.3.1	Confirm that the Sniper Cartridge operates safely and reliably in the C21 at extreme temperatures without experiencing Defects and Incidents that exceed the C21 Function Casualty Requirement as defined in Test 2 of the SAT Requirements below
3	C21 Precision	Test Requirement below para 3.4.	The Sniper Cartridge will be tested for precision using the C21.

3.2 Test 1 C21 Compatibility

3.2.1 Aim

3.2.1.1 To confirm that the Sniper Cartridge is compatible with all operational and non-operational aspects of the C21.

3.2.2 Procedure

a. 2 x C21 weapons (Test Weapon 1 and Test Weapon 2) will be inspected, gauged and fired using 5 rounds of CAF in-service .338" Lapua Magnum cartridges to confirm serviceability;

b. A sample of 40 Sniper Cartridges will be removed from their packaging, visually inspected and the Overall Cartridge Lengths (OACL) measured and recorded;

c. 10 Sniper Cartridges will be loaded into a C21 magazine, inserted into Test Weapon 1 and cycled through the weapon without firing (fully chambering and ejecting each cartridge). Repeat for the Test Weapon 2;

d. Inspect all cartridges for damage, witness marks (example: pre-engraving) and OACL; and

e. Operational compatibility with the C21 will be assessed during the function casualty testing (Test 2).

3.2.3 Sentencing Criteria

3.2.3.1 The Sniper Cartridge must be compatible with all operational and non-operational functions of the C21.

3.2.3.2 When used with the C21, the Sniper Cartridge must:

a. Not cause weapon stoppages beyond that allowable by table 2;

b. Not cause damage to the test weapon;

c. Not be damage while operating in the C21 as a result of its mechanical interface;

d. Not operate in an unsafe manner; and

e. Be mechanically fit and form for use in the C21 (example, loadable in the magazine).

3.3 Test 2 C21 Function Casualty

3.3.1 Aim

3.3.1.1 To confirm that the Sniper Cartridge will operate safely and reliably in the C21.

3.3.2 Procedure

a. 2 x C21 weapons (Test Weapon 1 and Test Weapon 2) will be inspected, gauged and fired using 5 rounds of CAF in-service .338 Lapua Magnum B408 to confirm serviceability;

b. A sample of 500 Sniper Cartridges will be fired from the 2 Test Weapons IAW the firing regime and temperatures detailed in table 1;

c. All ammunition used during the test will be conditioned to the required temperature for no less than 24 hours prior to the test;

d. Ammunition will be preloaded into magazines and removed from the conditioning chamber as it is being fired to avoid conditioning the ammunition to the laboratory ambient conditions;

e. Prior to being loaded into magazines, every Sniper Cartridge must be visually inspected for defects. If a visual defect is found, the defective cartridge will be replaced and the defect photographed and reported;

f. A witness screen will be placed at 5m from the muzzle to witness bullet impacts. Witness screens will be inspected and replaced IAW Table 1;

g. For every cartridge fired:

   i. All problems associated with feeding, firing, and extraction will be noted;

   ii. The witness screen and fired casings will be inspected and carefully examined for defects IAW MCMOPI, AC/225(DSS)D(2013)0014(PFP), Section 11.

h. If it cannot be established that the weapon and equipment is at fault, then the defects must be judged and noted against the ammunition;

i. Based on the sentencing criteria in section 3.3.3, a second sample of 500 Sniper Cartridges may be fired using the same procedure as above;

j. The test weapons will be periodically inspected and maintained IAW provided operator and maintenance manuals.

Table 1 Firing Regime for Sniper Cartridge Function and Casualty test with C21			
Test Weapon	**Firing Series**	**Temp**	**Qty**
Test Weapon 1	1	+21°C	20
Test Weapon 1	2	+21°C	20
Test Weapon 1	3	+21°C	20
Test Weapon 1	4	+21°C	20
Test Weapon 1	5	+21°C	20
Inspect/Change Witness Screens and Inspect Fired Cases, Cool Weapon			
Test Weapon 2	6	+21°C	20
Test Weapon 2	7	+21°C	20
Test Weapon 2	8	+21°C	20
Test Weapon 2	9	+21°C	20
Test Weapon 2	10	+21°C	20
Inspect/Change Witness Screens and Inspect Fired Cases, Cool Weapon			
Test Weapon 1	11	+49°C	20
Test Weapon 1	12	+49°C	20
Test Weapon 1	13	+49°C	20
Test Weapon 1	14	+49°C	15
Inspect/Change Witness Screens and Inspect Fired Cases, Cool Weapon			
Test Weapon 2	15	+49°C	20
Test Weapon 2	16	+49°C	20
Test Weapon 2	17	+49°C	20
Test Weapon 2	18	+49°C	15
Inspect/Change Witness Screens and Inspect Fired Cases, Cool Weapon			
Test Weapon 1	19	-46°C	20
Test Weapon 1	20	-46°C	20
Test Weapon 1	21	-46°C	20
Test Weapon 1	22	-46°C	15
Inspect/Change Witness Screens and Inspect Fired Cases, Cool Weapon			
Test Weapon 2	23	-46°C	20
Test Weapon 2	24	-46°C	20
Test Weapon 2	25	-46°C	20
Test Weapon 2	26	-46°C	15
Inspect/Change Witness Screens and Inspect Fired Cases, Cool Weapon			
Total Cartridges			500

3.3.3 Sentencing Criteria

3.3.3.1 The total number of accumulated Function and Casualty defects, as defined by MCMOPI AC/225(DSS)D(2013)0014(PFP), Section 11, must not exceed those indicated in Table 2 when fired from the C21 test weapons.

Table 2
Sentencing Table for Sniper Cartridge Function and Casualty test with C20

Definitions of the Defect Categories are listed in Section 11 of the MCMOPI	Sample	Sample Size	Cumulative Sample Size	Accept	Reject
Category 1 Defects (Critical)	1st 2nd	500 Not Permitted	500 Not Permitted	0 -	1 -
Category 2 Defects	1st 2nd	500 500	500 1000	0 3	3 4
Category 3 Defects	1st 2nd	500 500	500 1000	2 6	5 7
Category 4 Defects	1st 2nd	500 500	500 1000	7 18	11 19

3.3.3.2 A re-test with an equivalent quantity of cartridges (quantity 500) is to be conducted with the same weapons if the “Accept” figure in the first sample is exceeded but the “Reject” figure has not been reached.

3.3.3.3 If the number of defects permitted by table 2 is exceeded, the test will be sentenced a failure.

3.3.3.4 If one or more critical defects occur (Category 1), the test will be sentenced a failure.

3.4 Test 3 C21 Precision

3.4.1 Aim

3.4.1.1 The Sniper Cartridge precision will be assessed when fired from the C21.

3.4.2 Procedure

Conduct a precision shoot using the following procedure:

a. 2 x C21 weapons (Test Weapon 1 and Test Weapon 2) must be inspected, gauged and confirmed serviceable;

b. Weapons are to be zeroed and fired from a hand held prone position using 5-25x scopes.

c. A sample of 50 Sniper Cartridges must be removed from their packaging, visually inspected and the Overall Cartridge Lengths (OACL) measured and recorded;

d. The test ammunition must be stored at +21 ± 3°C, for not less than 6 hours and must be fired at that temperature;

e. Each rifle must fire at 5 targets located at 300m (10 targets total);

f. 1 group of 5 rounds must be fired into each separate target (5 groups of 5 for each rifle); and

g. The Extreme Spread of each target must be calculated independently and then averaged with the other targets to obtain the mean Extreme Spread.

3.4.3 Sentencing Criteria

3.4.3.1 There is no sentencing criteria for the Sniper Cartridge when fired from C21.