



**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St./ 11, rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services 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, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux 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, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Weather Protective Clothing	
Solicitation No. - N° de l'invitation W6399-16HA79/A	Date 2016-01-05
Client Reference No. - N° de référence du client W6399-16HA79	
GETS Reference No. - N° de référence de SEAG PW-\$\$PR-761-68756	
File No. - N° de dossier pr761.W6399-16HA79	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-02-09	Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Beaumier, Julie	Buyer Id - Id de l'acheteur pr761
Telephone No. - N° de téléphone (613) 404-9874 ()	FAX No. - N° de FAX (819) 956-3814
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Clothing and Textiles Division / Division des vêtements et des textiles
11 Laurier St./ 11, rue Laurier
6A2, Place du Portage
Gatineau, Québec K1A 0S5

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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PART 1 - GENERAL INFORMATION

1.1 Security Requirement

There is no security requirement associated with this bid solicitation.

1.2 Statement of Work

The Request for Proposal is for the provision of a Commercial-Off-The-Shelf or Military-Off-The-Shelf Multi-Layer Weather Protective Clothing system to support training and operations where standard Canadian Forces clothing is unsuitable. The Weather Protective Clothing system consists of seven (7) layers, with each layer consisting of a jacket (top) and pant (bottom). The layers include two (2) next-to-skin base layers, two (2) insulated mid-layers, and three (3) outer layers. The layers are to be designed to be worn in various configurations based on the weather and activity, in order to provide protection from environments ranging from wet cold and dry cold to warm and humid. The procurement process is divided in two steps:

Step I (Trial Contract): each Bidder deemed compliant will be awarded a contract for the supply of a quantity of ten (10) of each of the clothing layers. These clothing layers will be used for a Proof of Concept Trial.

The requirement for the Trial Contracts is detailed in Part 6A – Trial Contract Clauses.

Step II (Main Contract): Following the Proof of Concept Trial result, one contract will be awarded for the Multi-Layer Weather Protective Clothing system. The Requisition on contract (ROC) will be for one (1) year with the option to extend for four (4) additional one (1) year period. The Bidder must supply and deliver the Multi-Layer Weather Protective Clothing system as specified in Individual Requisition on Contract.

The requirement for the Main Contract is detailed under Annex A of the resulting Main Contract clauses.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

The requirement is subject to the Agreement on Internal Trade (AIT)

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2015/07/03) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 180 days

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than seven (7) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.5 Specifications and Standards

2.5.1 Canadian General Standards Board (CGSB) - Standards

A copy of the CGSB Standards referred to in the bid solicitation is available and may be purchased from:

Canadian General Standards Board
Place du Portage III, 6B1
11 Laurier Street
Gatineau, Québec
Telephone: (819) 956-0425 or 1-800-665-CGSB (Canada only)
Fax: (819) 956-5740
E-mail: ncr.cgsb-ongc@pwgsc-tpsgc.gc.ca
CGSB Website: <http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html>

2.6 Transportation Costs Information

The Bidder is requested to provide the following information concerning transportation costs for the delivery of the units to destination:

- (a) shipping weight by unit; _____
- (b) number of items by unit; _____
- (c) cubic measurement by unit; _____
- (d) number of units per shipment: _____
- (e) name of shipping point; _____
- (f) recommended method of shipment and carrier _____
- (g) Unit cost per Destination WB941: \$ _____ W248A: \$ _____

(h) Total cost \$ _____

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (3 hard copies)
Section II: Financial Bid (1 hard copie)
Section III: Certifications (1 hard copie)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation;

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and

2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

3) Green Initiatives (for PWGSC information only)

Bidders are requested to provide details of their policies and practices in relation to the following initiatives:

- environmentally responsible manufacturing;
- environmentally responsible waste disposal;
- waste reduction;
- packaging;
- re-use strategies;
- recycling.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work (reference Part 4, Evaluation Procedures, 4.1.1 Technical Evaluation).

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

3.1.1 Exchange Rate Fluctuation

C3011T 2013/11/06 Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.

3.1.2 Origin of Work

For each line item, bidders must identify the name(s) of the country or countries where the apparel goods are cut (or knit to shape) and sewn, regardless of whether the work is to be performed by the Bidder or one of its subcontractor(s).

The following information must be provided for each location where any of the goods are cut (or knit to shape) or sewn:

Line Item number _____

Country: _____

(Bidders must add additional lines if there is more than one manufacturer or one country per line item.)

Bidders must immediately inform Canada in writing of any and all changes affecting the information provided under this clause during the entire bid validity period.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Phase I

Mandatory Criteria Screening

As part of the technical evaluation, to confirm a Bidder's capability of meeting the technical requirements, the items listed in Annex D must be provided with the bid at time and place of bid closing. The brochures submitted by the Bidder will remain the property of Canada.

The bid will be evaluated in accordance with the Compliance Matrix in Annex D. The evaluation will be conducted on the supplied information only. All mandatory criteria must be met or the bid will be deemed non-compliant. Failure to provide sufficient details in the bid submission to evaluate the bid against the mandatory criteria will also deem the bid non-compliant. Even if a bid fails to meet as few as one mandatory criterion that bid will be non compliant and will be given no further consideration. Only compliant Bidders will proceed to Phase II.

4.1.1.2 Phase II

Following the award of the Trial Contracts, the Contractor must supply ten (10) of each of the clothing layers in accordance with the Performance and Technical Specifications at Annex C within 30 calendar days from the contract award date. Failure to supply the ten (10) of each clothing layer within the specified time frame will result in the termination of the Trial Contract for default. If the Trial Contract is terminated for default, the bidder's bid will be declared non-responsive. The evaluation process will be conducted in parts as follows:

Part I: Verification and Evaluation Trials

Each of the layering system supplied by the Bidders will be subjected to the DND conducted verifications and trials as follows:

Note: Where the same clothing system is submitted by two or more compliant Bidders, only the lowest cost clothing system bid will be evaluated.

- (a) **Compliance Verification:** Prior to the Proof of Concept trial, each of the garments supplied by each Bidders will be assessed by DND against the mandatory requirements at Annex C. If the garments are found to be non-compliant with any one of the mandatory technical requirements, the reasons will be recorded and the bid will be deemed non-compliant and given no further consideration.
- (b) **Proof of Concept Trial** – Compliant Weather Protective Clothing systems will then undergo a multi-part “Proof of Concept” trial to test the fit, comfort and functionality of the garments and the operator’s ability to effectively conduct tasks while wearing the garments. The weather specific trials will be conducted in environmental chambers under controlled conditions that stimulate the operating environments for which the clothing is to be used. Following the trial, each operator will complete a human factor assessment designed to quantify the useability of the uniform in a combat environment. The measured scores and human factor assessment will be used to determine the Technical Merit (performance) score. A minimum Technical Merit score must be achieved in the Field Trial assessment to be deemed compliant. The Proof of Concept trial plan is detailed in Annex E.

Part II: Determination of Technical Merit Score

The objective of assigning a Technical Merit Score is to evaluate the “value added” over and above meeting the mandatory technical requirements. The “value added” through performance measurement is not considered mandatory, but is deemed to have additional value to the overall comfort/usability of the item. The trial participants will conduct various tests that include both quantitative (measured) and qualitative (user perception) requirements. Quantitative outputs are a measure of the effect of the Weather Protective Clothing system on the participant’s range of motion. In addition, the participants will complete questionnaires that rate the comfort and useability of the Weather Protective Clothing system in various categories as detailed in Table 1. The total Performance Score is the sum of the average score for all participants for the Weather Protective Clothing system across all categories of performance measurement.

Table 1: Performance Score

Test	Category	Weighted Score
1	Activity 1 - Initial Fit and Range of Motion	
1A	Initial Fit	_____ out of 35
1B	Range of Motion	_____ out of 60
1C	Washed Fit	_____ out of 35
1D	Range of Motion	_____ out of 60
2	Activity 2 - Wet Conditions	
2A & B	Wet Conditions	_____ out of 100
3	Activity 3 - Dry Conditions	
3	Dry Conditions	_____ out of 100
4	Activity 4 - Operational Task Effectiveness	
4A	Operational Tasks	_____ out of 100
4B	Observation Post Task	
4C	Swimming	_____ out of 100
Total Weighted Score		_____ out of 590

For each test listed in Table 1, the final score will be determined by taking all of the results from that test for all Participants, and then calculating the average (arithmetic mean). The average of all participants for that test will be the final score for that test item. A minimum of 470 points out of

590 (80%) must be achieved in the Performance Score or the bid will be deemed non-compliant and given no further consideration.

Technical Merit Score

The Technical Merit Score (out of 100) is the Performance Score of the Weather Protective Clothing system being evaluated divided by the Highest Performance Score achieved, then multiplying this ratio by 100 in order to get a score out of 100, as follows:

$$\text{Technical merit Score} = 100 \times (\text{Performance Score} / \text{Highest performance Score})$$

The system receiving the highest Performance Score will get a Technical Merit Score of 100, and the remaining systems will have a Technical Merit Score that is a fraction of 100 based upon the total Performance Score for that system in comparison to the highest Performance Score.

4.1.2 Financial Evaluation

4.1.2.1 Mandatory Financial Criteria

- a. The Bidder must submit firm unit prices in Canadian dollars, applicable taxes are excluded, DDP (within 250 kilometers of the National Capital Region) Incoterms 2000, transportation costs included, all applicable Customs Duties and Excise taxes included.
- b. The Bidder must submit firm unit pricing for all items including extensions. The Bidder is requested to quote firm unit pricing at no more than two decimal points.

4.1.2.2 Financial Evaluation Methodology

For the purpose of establishing an offer price for evaluation purposes only, each of the firm unit prices will be multiplied by the estimated quantity per year as per the Table below.. The resultant total for all firm unit prices will be added together to establish the Total Offer Price.

The formula is for evaluation purpose only and the offer evaluation quantities and estimate usage must not be interpreted as a guarantee of actual usage. :

Estimated Quantities – Multi-Layer Weather Protective Clothing

Item	Description	Colour (Outer)	Year 1	Extension			
				Year 2	Year 3	Year 4	Year 5
1	Waterproof, Breathable Jacket	MULTICAM®	1100	330	220	220	220
		Black	150	30	30	30	30
2	Waterproof, Breathable Pant – High Rise	MULTICAM®	1100	330	220	220	220
		Black	150	30	30	30	30
3	Waterproof, Breathable, Lightweight Jacket	MULTICAM®	2100	400	400	400	400
		Black	150	30	30	30	30
		Earth Tone	250	25	25	25	25
4	Waterproof, Breathable, Lightweight Pant	MULTICAM®	2100	400	400	400	400
		Black	150	30	30	30	30
		Earth Tone	250	25	25	25	25
5	Synthetic Loft, Windproof Jacket	MULTICAM®	2100	400	400	400	400
		Earth Tone	250	25	25	25	25
6	Synthetic Loft, Windproof Pant	MULTICAM®	2100	400	400	400	400
		Earth Tone	250	25	25	25	25

7	Lightweight Mid-Layer Light-Insulated Jacket	Earth Tone	1350	355	245	245	245
8	Lightweight Mid-Layer Light-Insulated Pant	Earth Tone	1350	355	245	245	245
9	Soft-Shell Jacket	MULTICAM®	1100	330	220	220	220
10	Soft-Shell Pant	MULTICAM®	1100	330	220	220	220
11	Next to Skin Moisture Wicking Shirt	Earth Tone	1350	465	465	465	465
12	Next to Skin Moisture Wicking Pant	Earth Tone	1350	465	465	465	465
13	Cold Weather Moisture Wicking Shirt	Earth Tone	1350	465	465	465	465
14	Cold Weather Moisture Wicking Pant	Earth Tone	1350	465	465	465	465

Price Score

The proposal price is the sum of all costs associated with the procurement of the Weather Protective Clothing for all years. The lowest price of the compliant proposals becomes the standard by which the remainder of the proposal's are evaluated. Each proposal is evaluated by taking the lowest proposal price and dividing it by the price of the proposal being evaluated, then multiplying this ratio by 100 in order to get a score out of 100, as follows:

$$\text{Price Score} = 100 \times (\text{Lowest Proposal Price} / \text{Current Proposal Price})$$

The lowest price of the compliant proposals will have a Price Score of 100, and the remainder of the compliant proposals will have price score that is a fraction of 100 based upon the total proposal price from that system in comparison to the lowest proposal price.

4.1.2.3 SACC MANUAL CLAUSE

A9033T 2012/07/16 Financial Capability

4.2 Basis of Selection

A bid must comply with all requirements of the bid solicitation and meet all mandatory technical and financial evaluation criteria to be declared responsive.

4.2.1 Basis of Selection – Trial Contracts

All responsive bids of Phase I will be recommended for the award of a Trial Contract.

4.2.2 Basis of Selection – Main Contract

1. To be declared responsive for Phase II, a bid must obtain the required minimum of 470 points out of 590 in the Performance Measurement.

2. The responsive bid with the highest combined rating of technical merit and price will be recommended for the award of the Main Contract. The ratio will be 60% for the technical merit and 40% for the price.

3. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

4. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted.

4.3 Contract Financial Security

1. If this bid is accepted, the Bidder may be required to provide contract financial security, after the bid closing date and within 10 calendar days from receipt of a written request from the Contracting Authority.

- (a) a security deposit as defined in clause "Security Deposit Definition" in the amount of up to ten percent (10%) of the contract price.
2. Security deposits in the form of government guaranteed bonds with coupons attached will be accepted only if all coupons that are unmatured, at the time the security deposit is provided, are attached to the bonds. The Contractor must provide written instructions concerning the action to be taken with respect to coupons that will mature while the bonds are pledged as security, when such coupons are in excess of the security deposit requirement.
3. If Canada does not receive the required financial security within the specified period, Canada may, as its discretion, accept another offer, issue a new bid solicitation, award a contract or reject all the bids.

4.4 Security Deposit Definition

1. "security deposit" means
- (a) a bill of exchange that is payable to the Receiver General for Canada, and certified by an approved financial institution or drawn by an approved financial institution on itself; or
 - (b) a Government guaranteed bond; or
 - (c) an irrevocable standby letter of credit, or
 - (d) such other security as may be considered appropriate by the Contracting Authority and approved by Treasury Board;
2. "approved financial institution" means
- (a) any corporation or institution that is a member of the Canadian Payments Association;
 - (b) a corporation that accepts deposits that are insured by the Canada Deposit Insurance Corporation or the "Régie de l'assurance-dépôts du Québec" to the maximum permitted by law;
 - (c) a credit union as defined in paragraph 137(6) the *Income Tax Act*;
 - (d) a corporation that accepts deposits from the public, if repayment of the deposits is guaranteed by Canadian province or territory; or
 - (e) the Canada Post Corporation.
3. "government guaranteed bond" means a bond of the Government of Canada or a bond unconditionally guaranteed as to principal and interest by the Government of Canada that is:
- (a) payable to bearer;
 - (b) accompanied by a duly executed instrument of transfer of the bond to the Receiver General for Canada in accordance with the *Domestic Bonds of Canada Regulations*;
 - (c) registered in the name of the Receiver General for Canada.
4. "irrevocable standby letter of credit"
- (a) means any arrangement, however named or described, whereby a financial institution (the "Issuer"), acting at the request and on the instructions of a customer (the "Applicant"), or on its behalf,
 - (i) will make a payment to or to the order of Canada, as the beneficiary;
 - (ii) will accept and pay bills of exchange drawn by Canada;
 - (iii) authorizes another financial institution to effect such payment, or accept and pay such bills of exchange; or
 - (iv) authorizes another financial institution to negotiate, against written demand(s) for payment, provided that the conditions of the letter of credit are complied with.
 - (b) must state the face amount which may be drawn against it;
 - (c) must state its expiry date;
 - (d) must provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by the authorized departmental representative identified in the letter of credit by his/her office;

- (e) must provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face amount of the letter of credit;
- (f) must provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision, ICC Publication No. 600. Pursuant to the ICC UCP, a credit is irrevocable even if there is no indication to that effect; and
- (g) must be issued (Issuer) or confirmed (Confirmer), in either official language, by a financial institution that is a member of the Canadian Payments Association and is on the letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Declaration of Convicted Offences

As applicable, pursuant to subsection Declaration of Convicted Offences of section 01 of the Standard Instructions, the Bidder must provide with its bid, a completed Declaration Form (<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – List of Names

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca) website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.esdc.gc.ca)" list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.esdc.gc.ca)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.A Trial Contract

6.A.1 Security Requirements

6.A.1.1 There is no security requirement applicable to this Contract.

6.A.2 Requirement

The Contractor must provide ten (10) of each layers defined at 6.A.2.1 as proposed in the Contractor's bid dated _____ and made in accordance with the Performance and Technical Specifications at Annex C to the following address:

Department of National Defence
8355 Franktown Road RR1
Richmond, ON K0A 2Z0
Attn: (to be advised at contract)

6.A.2.1 Layers:

- (a) Item 1 – Waterproof, Breathable Jacket:
 - i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;

- (b) Item 2 – Waterproof, Breathable Pant – High Rise
 - i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;

- (c) Item 3 – Waterproof, Breathable, Lightweight Jacket:

-
- i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (d) Item 4 - Waterproof, Breathable, Lightweight Pant:
- i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (e) Item 5 – Synthetic Loft, Windproof Jacket:
- i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (f) Item 6 – Synthetic Loft, Windproof Pant:
- i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (g) Item 7 – Lightweight Mid-Layer Light-Insulated Jacket:
- i. Colour: Earth Tone;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (h) Item 8 – Lightweight Mid-Layer Light-Insulated Pant:
- i. Colour: Earth Tone;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (i) Item 9 – Soft-Shell Jacket:
- i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (j) Item 10 – Soft-Shell Pant:
- i. Colour: MULTICAM®;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (k) Item 11 – Next to Skin Moisture Wicking Shirt:
- i. Colour: Earth Tone;
 - ii. Quantity five (5) in size Medium;
 - iii. Quantity three (3) in size Large; and
 - iv. Quantity two (2) in size Extra-Large;
- (l) Item 12 – Next to Skin Moisture Wicking Pant:

- i. Colour: Earth Tone;
- ii. Quantity five (5) in size Medium;
- iii. Quantity three (3) in size Large; and
- iv. Quantity two (2) in size Extra-Large;

(m) Item 13 – Cold Weather Moisture Wicking Shirt:

- i. Colour: Earth Tone;
- ii. Quantity five (5) in size Medium;
- iii. Quantity three (3) in size Large; and
- iv. Quantity two (2) in size Extra-Large;

(n) Item 14 – Cold Weather Moisture Wicking Pant:

- i. Colour: Earth Tone;
- ii. Quantity five (5) in size Medium;
- iii. Quantity three (3) in size Large; and
- iv. Quantity two (2) in size Extra-Large.

6.A.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

6.A.3.1 General Conditions

2030 (2015/09/03), General Conditions - Goods (Higher Complexity), apply to and form part of the Contract.

6.A.4 Term of Contract

6.A.4.1 Delivery Required (Mandatory) - Firm Quantity

The delivery of the Trial Quantity must be completed 30 calendar days from the effective date of the Contract.

Failure to submit the Trial Quantity within the specified time frame will result in the Trial Contract being terminated for default and the bidder's bid submission declared non-responsive.

6.A.4.1.2 Preparation for Delivery

The Contractor must prepare all items for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification D-LM-008-036/SF-000, DND Minimum Requirements for Manufacturer's Standard Pack.

The Contractor must package all items as specified in Annex A at 3.2 and 3.3.

6.A.4.1.3 Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:

(a) Delivered Duty Paid (DDP) (Richmond, Ontario) Incoterms 2000 for shipments from commercial contractor.

6.A.4.1.4 SACC Manual Clauses

D5545C 2010/08/16 ISO 9001:2008 - Quality Management Systems - Requirements (QAC C)

6.A.5 Authorities

6.A.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Julie Beaumier
Public Works and Government Services Canada
Acquisitions Branch
Commercial and Consumer Products Directorate (CCPD)
Clothing & Textiles Division
Place du Portage, Phase III, 6A2
11 Laurier Street
Gatineau, Quebec K1A 0S5
Telephone : 613-404-9874 Facsimile: 819-956-5454
E-mail address: Julie.Beaumier@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.A.5.2 Technical Authority

The Technical Authority for this Contract is:

Mailing/Shipping Address

Department of National Defence
101 Colonel By Drive
Ottawa, Ontario
K1A 0K2
Attn: (to be advised at contract)

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.A.5.3 Procurement Authority

The Procurement Authority for the Contract is:

Mailing/Shipping Address

Department of National Defence
101 Colonel By Drive
Ottawa, Ontario
K1A 0K2
Attn: DLP _____ (to be advised at contract)

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

6.A.5.4 Contractor's Representative

The person responsible for :

General enquiries

Name: _____
Telephone No.: _____
Facsimile No.: _____
E-mail address: _____

Delivery follow-up

Name: _____
Telephone No.: _____
Facsimile No.: _____
E-mail address: _____

6.A.6 Payment

6.A.6.1 Basis of Payment – Firm Unit Prices

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex B Year 1 for ten (10) of each layers for a cost of \$ (amount to be inserted at contract award). Customs duties are included 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.

6.A.6.2 SACC Manual Clauses

H1000C 2008/05/12 Single Payment

6.A.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the following address for certification and payment

National Defence Headquarters
MGen George R. Pearkes Building
101 Colonel By Drive
Ottawa, ON K1A 0K2
Attn: DLP _____
Email: _____ (to be inserted at contract award)
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
 - (c) One (1) copy must be forwarded to the consignee.

6.A.8 Certifications

6.A.8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

6.A.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

6.A.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

6.A.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- a) the Articles of Agreement;
- b) the general conditions 2030 (2015/09/03), General Conditions - Goods (Higher Complexity);
- c) Annex B, Basis of Payment;
- d) Annex C; Performance and Technical specifications
- e) the Contractor's bid dated _____.

6.A.11 Defence Contract

SACC *Manual* clause [A9006C](#) (2012/07/16) Defence Contract

6.A.12 Materials: Contractor Total Supply

The Contractor will be responsible for obtaining all materials required in the manufacture of the item(s) Specified. The delivery stated for the item(s) allows the necessary time to obtain such materials.

6.A.13 Plant Closing

The Contractor's plant closing for Christmas and Summer holidays are as follows. During this time there will be no shipments.

Summer Holiday FROM _____ TO _____

6.A.14 Plant Location

Items will be manufactured at: _____

6.A.15 Subcontractor(s)

The following subcontractor(s) will be utilized in the performance of the contract.

Name of Company: _____

Location: _____

Value of subcontract: \$ _____
Nature of subcontracting work performed: _____

Subcontractors, other than those listed above, may not be utilized without the written permission of Canada.

6.A.16 Origin of Work - Disclosure of Information

1. For each line item, the Contractor must specify the name(s) of all countries where the apparel goods are cut (or knit to shape) or sewn, regardless of whether the work is to be performed by the Contractor or one of its subcontractor(s).
2. The Contractor agrees that Canada may publicly disclose the information provided with respect to the countries of origin.
3. The Contractor must immediately inform Canada in writing of any and all changes affecting the information provided under this clause during the entire contract period.

6.A.17 Overshipment

Overshipment will not be accepted unless prior approval is obtained from the Contracting Authority.

6.A.18 Specifications and Standards

6.A.18.1 Canadian General Standards Board (CGSB) - Standards

A copy of the CGSB Standards referred to in the Contract is available and may be purchased from:

Canadian General Standards Board
Place du Portage III, 6B1
11 Laurier Street
Gatineau, Québec
Telephone: (819) 956-0425 or 1-800-665-CGSB (Canada only)
Fax: (819) 956-5740
E-mail: ncr.cgsb-ongc@pwgsc-tpsgc.gc.ca
CGSB Website: <http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html>

6.B Main Contract

6.B.1 Security Requirements

6.B.1.1 There is no security requirement applicable to this Contract.

6.B.2 Statement of Work

The Contractor must provide the items detailed at Annex A.

6.B.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

6.B.3.1 General Conditions

2030 (2015/09/03), General Conditions - Goods (Higher Complexity), apply to and form part of the Contract.

6.B.4 Requisition on Contract (ROC)

-
- (a) **Purpose of ROC:** Goods to be provided under the Contract on as an-and-when-requested basis will be ordered by Canada using a Requisition on Contract ("ROC").
- (b) **Process for Issuing a ROC:**
- i. Authorized ROCs against this Contract will be made using a duly completed form identified in Annex F by methods such electronic mail; and
 - ii. A ROC will be prepared by the Procurement Authority and sent to the Contractor;
- (c) **Authority to Issue a ROC:** Any ROC with a value less than or equal to **\$400,000.00** (including Applicable Taxes) may be issued by the Procurement Authority. Any ROC with a value greater than this amount must be issued directly by the Contracting Authority. By providing written notice to the Contractor, the Contracting Authority may suspend the Procurement Authority's authority to issue ROCs at any time;
- (d) **Contents of a ROC:** The ROC must contain the following information, if applicable:
- i. a ROC number;
 - ii. the details of any financial coding to be used;
 - iii. quantity and description of goods being ordered;
 - iv. the delivery date(s);
 - v. the specific delivery location; and
 - vi. the firm unit price payable to the Contractor;
- (e) **Charges for Goods under a ROC:** The Contractor must not charge Canada anything more than the price set out in the ROC unless Canada has issued a ROC amendment authorizing the increased expenditure. 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 being incorporated into the Work; and
- (f) **Delivery response time for a ROC:** Delivery ordered through a ROC is required within _____ calendar days from receipt of an approved ROC.

6.B.5 Term of Contract

6.B.5.1 Period of the Contract

The period for issuing an Individuals Requisition on contract against the contract is for a period of one year from the date of contract award.

6.B.5.2 Extension of the Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract by up to four (4) additional one (1) year periods under the same conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

Canada may exercise this option at any time by sending a written notice to the Contractor at least 15 calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

6.B.5.3 Preparation for Delivery

The Contractor must prepare all items for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification D-LM-008-036/SF-000, DND Minimum Requirements for Manufacturer's Standard Pack.

The Contractor must package all items as specified in Annex A at 3.2 and 3.3.

6.B.5.4 Bulk Shipments

For bulk shipments, all cartons must be shipped on 40" x 48" pallets shrink-wrapped or equivalent with overall height not to exceed 42".

6.B.5.5 Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered:

(a) Delivered Duty Paid (DDP) (Within 250 km of the National Capital Region) (*Exact location to be confirmed on Requisition on contract*) Incoterms 2000 for shipments from commercial contractor.

6.B.5.6 SACC Manual Clauses

D5545C 2010/08/16 ISO 9001:2008 - Quality Management Systems - Requirements (QAC C)

6.B.6 Authorities

6.B.6.1 Contracting Authority

The Contracting Authority for the Contract is:

Julie Beaumier
Public Works and Government Services Canada
Acquisitions Branch
Commercial and Consumer Products Directorate (CCPD)
Clothing & Textiles Division
Place du Portage, Phase III, 6A2
11 Laurier Street
Gatineau, Quebec K1A 0S5
Telephone : 613-404-9874 Facsimile: 819-956-5454
E-mail address: Julie.Beaumier@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.B.6.2 Technical Authority

The Technical Authority for this Contract is:

Mailing/Shipping Address

Department of National Defence
101 Colonel By Drive
Ottawa, Ontario
K1A 0K2
Attn: _____(to be advised at contract)

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.B.6.3 Procurement Authority

The Procurement Authority for the Contract is:

Mailing/Shipping Address

Solicitation No. - N° de l'invitation
W6399-16-HA79/A
Client Ref. No. - N° de réf. du client
W6399-16-HA79

Amd. No. - N° de la modif.
File No. - N° du dossier
pr761.W6399-16-HA79

Buyer ID - Id de l'acheteur
pr761
CCC No./N° CCC - FMS No./N° VME

Department of National Defence
101 Colonel By Drive
Ottawa, Ontario
K1A 0K2
Attn: DLP _____(to be advised at contract)

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

6.B.6.4 Contractor's Representative

The person responsible for :

General enquiries

Name: _____
Telephone No.: _____
Facsimile No.: _____
E-mail address: _____

Delivery follow-up

Name: _____
Telephone No.: _____
Facsimile No.: _____
E-mail address: _____

6.B.7 Payment

6.B.7.1 Basis of Payment – Firm Unit Prices

In consideration of the Contractor satisfactorily completing all of its obligations under the Requisition on Contract, the Contractor will be paid firm unit prices, as specified in Annex B for a cost of \$ (amount to be inserted at contract award). Customs duties are included 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.

6.B.7.2 SACC Manual Clauses

H1001C 2008/05/12 Multiple Payments

6.B.7.3 Limitation of Expenditure – Cumulative Total of all Requisition on Contracts

1. Canada's total liability to the Contractor under the Contract for all authorized Requisition on Contracts (ROCs), inclusive of any revisions, must not exceed the sum of (to be filled in at contract award) Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada will be authorized or paid to the Contractor unless an increase has been approved, in writing, by the Contracting Authority.
3. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - (a) when it is 75 percent committed; or

(b) four (4) months before the contract expiry date, whichever comes first;

4. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority, a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.
5. Canada will have no obligation to the Contractor under this clause if Canada terminates the Contract in whole or in part for default.

6.B.7.4 Minimum Limitation of Expenditure

1. "Maximum Contract Value" means the amount specified in the "Limitation of Expenditure" clause set out in the Contract; and "Minimum Contract Value" means \$ (to be filled in at contract award).
2. Canada's obligation under the Contract is to request goods in the amount of the Minimum Contract Value or, at Canada's option, to pay the Contractor at the end of the Contract in accordance with paragraph 3. In consideration of such obligation, the Contractor agrees to stand in readiness throughout the Contract period to supply the goods described in the Contract. Canada's maximum liability for goods supplied under the Contract must not exceed the Maximum Contract Value, unless an increase is authorized in writing by the Contracting Authority.
3. In the event that Canada does not request goods in the amount of the Minimum Contract Value during the period of the Contract, Canada must pay the Contractor the difference between the Minimum Contract Value and the total cost of the goods requested.
4. Canada will have no obligation to the Contractor under this clause if Canada terminates the Contract in whole or in part for default.

6.B.8 Periodic Usage Report – Contract with Requisition on Contract (ROC)

The Contractor must compile and maintain records on its provision of work to the federal government under authorized Requisition on Contracts issued under the Contract.

The Contractor must provide this data in accordance with the reporting requirements detailed below (see Annex G). If some data is not available, the reason must be indicated. If work is not provided during a given period, the Contractor must still provide a "NIL" report.

The data must be submitted on a quarterly basis to the Contracting Authority and Procurement Authority.

The data must be submitted to the Contracting Authority no later than ten (10) calendar days after the end of the reporting period.

6.B.8.1 Reporting Requirement – Details

A detailed and current record of all authorized work must be kept for each contract with a Requisition on Contract process. This record must contain:

For each authorized ROC:

- (i) the authorized ROC number or ROC revision number(s);
- (ii) a title or a brief description of each authorized ROC;
- (iii) the total estimated cost specified in the authorized ROC of each work, GST or HST extra;
- (iv) the start and completion date for each authorized ROC; and
- (v) the active status of each authorized ROC, as applicable.

For all authorized ROC:

- (i) the amount (GST or HST extra) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized ROCs; and
- (ii) the total amount, GST or HST extra, expended to date against all authorized ROCs.

6.B.9 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - (a) The original and one (1) copy must be forwarded to the following address for certification and payment

National Defence Headquarters
MGen George R. Pearkes Building
101 Colonel By Drive
Ottawa, ON K1A 0K2
Attn: DLP _____
Email: _____ (to be inserted at contract award)
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.
 - (c) One (1) copy must be forwarded to the consignee.

6.B.10 Certifications

6.B.10.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

6.B.10.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

6.B.11 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

6.B.12 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- a) the Articles of Agreement;
- b) the general conditions 2030 (2015/09/03), General Conditions - Goods (Higher Complexity);
- c) Annex A, Statement of Work;
- d) Annex B, Basis of Payment;
- e) Annex C, Performance and Technical Specifications;
- f) Annex F, Requisition on Contract;
- g) Annex G, Periodic usage Report;
- h) the Contractor's bid dated _____ .

6.B.13 Defence Contract

SACC Manual clause [A9006C](#) (2012/07/16) Defence Contract

6.B.14 SACC Manual Clauses

C2800C 2013/01/28 Priority Rating
C2801C 2014/11/27 Priority Rating - Canadian-based Contractors

6.B.15 Materials: Contractor Total Supply

The Contractor will be responsible for obtaining all materials required in the manufacture of the item(s) Specified. The delivery stated for the item(s) allows the necessary time to obtain such materials.

6.B.16 Procedures for Design Change/Deviations

The Contractor must follow these procedures for any proposed design change/deviation to contract specifications.

The Contractor must complete Part 1 of the Design Change/Deviation form DND 672 and forward one (1) copie to the Technical Authority and one (1) copy to the Contracting Authority.

The Contractor will be authorized to proceed upon receipt of the design change/deviation form signed by the Contracting Authority. A contract amendment will be issued to incorporate the design change/deviation in the Contract.

6.B.17 Plant Closing

The Contractor's plant closing for Christmas and Summer holidays are as follows. During this time there will be no shipments.

FY 16/17			
Summer Holiday	FROM	_____	TO _____
Christmas Holiday	FROM	_____	TO _____
FY 17/18 (Extension)			
Summer Holiday	FROM	_____	TO _____
Christmas Holiday	FROM	_____	TO _____

FY 18/19 (Extension)
Summer Holiday FROM _____ TO _____
Christmas Holiday FROM _____ TO _____

FY 19/20 (Extension)
Summer Holiday FROM _____ TO _____
Christmas Holiday FROM _____ TO _____

FY 20/21 (Extension)
Summer Holiday FROM _____ TO _____
Christmas Holiday FROM _____ TO _____

6.B.18 Plant Location

Items will be manufactured at: _____

6.B.19 Subcontractor(s)

The following subcontractor(s) will be utilized in the performance of the contract.

Name of Company: _____

Location: _____

Value of subcontract: \$ _____

Nature of subcontracting work performed: _____

Subcontractors, other than those listed above, may not be utilized without the written permission of Canada.

6.B.20 Origin of Work - Disclosure of Information

1. For each line item, the Contractor must specify the name(s) of all countries where the apparel goods are cut (or knit to shape) or sewn, regardless of whether the work is to be performed by the Contractor or one of its subcontractor(s).

2. The Contractor agrees that Canada may publicly disclose the information provided with respect to the countries of origin.

3. The Contractor must immediately inform Canada in writing of any and all changes affecting the information provided under this clause during the entire contract period.

6.B.21 Overshipment

Overshipment will not be accepted unless prior approval is obtained from the Contracting Authority.

6.B.22 Post Contract Award Meeting

The Design Authority or his delegated representatives at National Defence headquarters and the applicable DND Quality Assurance Representative (DNDQAR) must be afforded access to the Contractor's plant and all other premises where pertinent processes are being performed, on the same basis as afforded the representative of National Defence Headquarters, DGQA.

A post contract award meeting may be convened within twenty (20) calendar days after award of contract. Participants may include representatives of the Contractor, DND Design Authority, DNDQAR, DND project Authority, Contracting Authority and the DND Administrative Authority. Other meetings may be convened as required.

The Contractor is responsible for the recording and distribution of the minutes for all contract related meeting. The minutes must be sent to the Contracting Authority for acceptance prior to the distribution to

all participants or as otherwise directed in the contract within ten (10) calendar days of the subject meeting. The minutes must be used only as a record or proceedings.

6.B.23 Specifications and Standards

6.B.23.1 Canadian General Standards Board (CGSB) - Standards

A copy of the CGSB Standards referred to in the Contract is available and may be purchased from:

Canadian General Standards Board
Place du Portage III, 6B1
11 Laurier Street
Gatineau, Québec
Telephone: (819) 956-0425 or 1-800-665-CGSB (Canada only)
Fax: (819) 956-5740
E-mail: ncr.cgsb-ongc@pwgsc-tpsgc.gc.ca
CGSB Website: <http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html>

6.B.24 Financial Security

1. Canada may convert the security deposit to the use of Canada if any circumstance exists which would entitle Canada to terminate the Contract for default, but any such conversion will not constitute termination of the Contract.
2. Where Canada so converts the security deposit:
 - (a) the proceeds will be used by Canada to complete the Work according to the conditions of the Contract, to the nearest extent that it is feasible to do so and any balance left will be returned to the Contractor on completion of the warranty period; and
 - (b) if Canada enters into a Contract to have the Work completed, the Contractor will:
 - (i) be considered to have irrevocably abandoned the Work; and
 - (ii) remain liable for the excess cost of completing the Work if the amount of the security deposit is not sufficient for such purpose. "Excess cost" means any amount over and above the amount of the Contract Price remaining unpaid together with the amount of the security deposit.
3. If Canada does not convert the security deposit to the use of Canada before completion of the contract period, Canada will return the security deposit to the Contractor within a reasonable time after such date.
4. If Canada converts the security deposit for reasons other than bankruptcy, the financial security must be reestablished to the level of the amount stated above so that this amount is continued and available until completion of the contract period.

**STATEMENT OF WORK (MAIN CONTRACT)
FOR
WEATHER PROTECTIVE CLOTHING**

1.0 SCOPE

1.1. Purpose

The purpose of this statement of work is to define the scope and requirements for a Requisition on Contract (ROC) for Weather Protective Clothing for the Department of National Defence (DND).

1.2. Background

DND has a requirement for military off-the-shelf advanced technology multi-layer weather protective clothing to support training and operations where standard Canadian Forces clothing is unsuitable. The multi-layer system includes next-to-skin, mid-layer and outer layer garments that are designed to work together in various configurations to suit the climatic conditions in a military combat or law enforcement environment.

1.3. Applicable Documents

The following documents form part of this statement of work to the extent specified and are supportive of the statement of work when referenced; all other document references are to be considered supplemental information only. In the event of a conflict between the documents referenced herein and the contents of the statement of work, then the contents of the statement of work takes precedence.

- Canadian General Standards Board (CGSB) CAN/CGSB-43.22-2001 Corrugated Fibreboard Products

2.0 DELIVERABLES

2.1. Specific Deliverables

The Contractor must deliver the following for a period of five (5) years:

- (a) Garments in accordance with the Performance and Technical Specifications at Annex C in accordance with Individual Requisition on Contract against the ROC. Each Individual Requisition on Contract will specify quantities required by size and colour; and
- (b) Technical Data in accordance with Section 2.2.

2.2. Technical Data

The Contractor must provide to the DND Technical Authority, in English, the following information for each garment in PDF or Word format:

- (a) Item Name;
- (b) NCage, if applicable;
- (c) NATO Stock Number (NSN) and/or Manufacturer Part Number (MPN);
- (d) Weight; and
- (e) Shelf Life (if applicable);

3.0 REQUIREMENTS

3.1. Quality Assurance Program

The Contractor must be responsible for the performance of all inspections and tests necessary to demonstrate that the material and services submitted to DND for acceptance conform to the requirements of the ROC. The Contractor may utilize its own inspection and test equipment, or that of any other facility acceptable to the Quality Assurance Authority. The Government's Quality Assurance Authority reserves the right to perform any verification of the activities deemed necessary to confirm that the material and services conform to ROC requirements.

3.2. Packaging – Individual

Each garment/equipment must be neatly folded in accordance with good commercial practice and packaged individually. The package must consist of a polyethylene (or other transparent film) bag or envelope, made of material not less than one (1) mil thickness. The bags must be taped or stapled to effect closure and must be legibly marked (labeled) as follows (only required if the garment/equipment identification markings are not clearly visible through the bag):

- (a) NATO Stock Number (NSN) and/or Manufacturer Part Number;
- (b) Item Name; and
- (c) Size.

3.3. Packaging – Quantity

A quantity of individual garment/equipment packages, of the same size, must be packed into a corrugated fiberboard box as follows:

- (a) Box construction and closure conforms to Canadian General Standards Board (CGSB) specification CAN/CGSB-43.22-2001;
- (b) Overall inside dimensions (length, width and depth added) must not exceed 1.5 meters (59 inches) and the box size and content quantity must be uniform for the duration of the ROC;
- (c) Maximum weight of the box and contents must not exceed 18 kg (40 pounds)
- (d) Stenciling or labelling on one end of each box, in legible figures as large as practicable in relation to the space available, the following information:
 - i. NATO Stock Number (NSN) or Manufacturer Part Number;
 - ii. Item Name/Nomenclature (in bilingual format);
 - iii. Quantity (per box);
 - iv. Gross Weight (nearest kg); and
 - v. ROC Serial Number - As specified on ROC.

**PERFORMANCE AND TECHNICAL SPECIFICATIONS
FOR THE
WEATHER PROTECTIVE CLOTHING**

1.0 SCOPE

1.1 Scope

This specification defines the performance and technical requirements for the Weather Protective Clothing.

2.0 GENERAL

2.1 Applicable Documents

The following documents form part of this specification to the extent specified herein, and are supportive of the specification when referenced; all other document references are to be considered supplemental information only. In the event of a conflict between the documents referenced herein and the contents of this specification, then the contents of this specification takes precedence.

- FED-STD-595C (January 2008) - Colors Used in Government Procurement (www.everyspec.com)
- DCIEM Report 98-CR-15 Anthropometric Survey of the Land Forces (pubs.rddc-drdc.gc.ca)

2.2 Definitions

5th Percentile Female	Defined as 154.6 cm (5 ft) tall with a waist circumference of 70.6 cm (27.8 in) in accordance with DCIEM Report 98-CR-15
95th Percentile Male	Defined as 186.2 cm (6 ft 1 in) tall with a waist circumference of 110.5 cm (43.5 in) in accordance with DCIEM Report 98-CR-15
Articulated Elbows/Knees	Angles built into a jacket or pant around the elbow or knee joints, allowing for an unencumbered range of motion.
Color Coordinated	A color coordinated scheme is one in which all parts or elements are related, blended or matched to a particular color theme that is consistent with maintaining a subdued yet eye pleasing result.
CORELOFT™ (60/100)	A 100% polyester light-weight (60 or 100 g/m ²) breathable and thermally efficient fibre insulation with excellent loft retention made with highly crimped multi-denier siliconized polyester yarn.
Earth Tone	By definition, earth tone is considered a color scheme that draws from a color palette of browns, tans, grays, greens, oranges, whites and some reds. The colors in an earth tone scheme are muted and flat in an emulation of the natural colors found in soils, moss, trees and rocks. For the purpose of this specification, the earth tone color (where specified) must be based on the predominantly brown, tan and gray color series (lusterless) within FED STD-595C, where those colors do not include any elements of orange, red and white.
GORE-TEX® WBFX175607CZ	A 140 g/m ² three layer material consisting of a 40 denier nylon ripstop face fabric with a water repellent finish, paired with a GORE-TEX® membrane and a moisture –wicking polyester tricot knit backer.
GORE-TEX® WNSX000607	A 171 g/m ² three layer material consisting of a 70 denier nylon ripstop face fabric with a water repellent finish, paired with a GORE-TEX® membrane and a moisture –wicking polyester tricot knit backer.

GORE-TEX® WBLR175120	A 108 g/m ² three layer material consisting of a 30 denier nylon ripstop face fabric with a water repellent finish, paired with a GORE-TEX® membrane and a moisture –wicking polyester tricot knit backer.
GORE-TEX® PRO JSD000600GRN	A 112 g/m ² three layer material consisting of a 40 denier high tenacity nylon plain weave face fabric with a water repellent finish, paired with a GORE-TEX® membrane and a high tenacity nylon ripstop woven backer.
Gusseted Underarms/Seat	Additional piece of fabric inserted into the seam to add breadth or reduce stress on tight-fitting clothing and shape the clothing to fit the body of the wearer.
Hook and Loop Fastener	A fastening consisting of two strips of nylon fabric, one having hooked tangs and the other a coarse thread surface that form a strong bond when pressed together, trademarked under the name VELCRO®.
LUMINARA™	A 100% nylon light-weight (44 g/m ²) 20 denier stretch ripstop fabric with an air permeable poly-urethane coating and a durable weather repellent face finish.
Molded Slide Fastener Garage	A piece of fabric, molded to encompass the slide fastener slide, is attached to the garment at the end of the slide fastener and covers the slide fastener slide when in the closed position to prevent the ingress of water, dirt, etc.
MULTICAM®	A proprietary design camouflage pattern patented by Crye Precision Inc.
Multi-Directional Slide Fastener	A slide fastener with two slides to allow the fastener to be opened in opposing directions at the same time.
No-lift Gusseted Underarms	Additional piece of fabric inserted into the seam to add breadth or reduce stress, shape the clothing to fit the body of the wearer and prevent pulling/stretching of the fabric when lifting the arms above the head.
POLARTEC® POWER STRETCH® with HARDFACE® technology	An 88% polyester 12% spandex (230 g/m ²) four-way stretch knit fabric that is highly breathable and moisture wicking, and outer face treated for long lasting abrasion resistance.
Slide Fastener	A fastener for locking together two toothed edges by means of a slide, commonly referred to as a zipper.
Taped Seam	Waterproof material placed between overlapping seams, which are then stitched or welded.
THERMATEK™	A light-weight (92 g/m ²) 100% polyester durable weather repellent saturated hollow-core continuous filament fibre insulation bonded to a durable weather repellent treated 100% nylon high tenacity face fabric.
TWEAVE® DURASTRETCH®	An 91% nylon 9% spandex (184 g/m ²) breathable wind resistant plain weave stretch-woven fabric with a durable weather repellent finish.
WATERTIGHT™	Rated to the W.L. Gore Extreme Wet Weather test standard.
Welded Seam	Stitch-free seam construction with a waterproof barrier using sonic welding, reinforced with mesh and backed by flexible tape

2.3 Acronyms

CWMW	Cold Weather Moisture Wicking
HR	High Rise
LMLI	Lightweight Mid-Layer Light-Insulated
LR	Low Rise

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NSMW	Next to Skin Moisture Wicking
SLW	Synthetic Loft, Windproof
SS	Soft-Shell
WB	Waterproof Breathable
WBL	Waterproof, Breathable, Lightweight

3.0 REQUIREMENTS

3.1 Garments

The performance and technical requirements for the garments are detailed in the following sections. The Weather Protective Clothing system includes the following fourteen (14) garments:

- (a) Waterproof Outer Layers to include:
 - i. Waterproof Breathable (WB) Jacket;
 - ii. Waterproof Breathable High-Rise Bib Pant (WB Pant - HR);
 - iii. Waterproof Breathable Lightweight (WBL) Jacket; and
 - iv. Waterproof Breathable Lightweight Low-Rise Pant (WBL Pant - LR);
- (b) Insulated Layers (Synthetic Loft) to include:
 - i. Synthetic Loft Windproof (SLW) Jacket;
 - ii. Synthetic Loft Windproof (SLW) Pant;
 - iii. Lightweight Mid-Layer Light-Insulated (LMLI) Jacket; and
 - iv. Lightweight Mid-Layer Light-Insulated (LMLI) Pant;
- (c) Lightweight outer layer to include:
 - i. Soft-Shell (SS) Jacket; and
 - ii. Soft-Shell (SS) Pant;
- (d) Base Layers to include:
 - i. Next to Skin Moisture Wicking (NSMW) Shirt;
 - ii. Next to Skin Moisture Wicking (NSMW) Pant;
 - iii. Cold Weather Moisture Wicking (CWMW) Shirt; and
 - iv. Cold Weather Moisture Wicking (CWMW) Pant.

3.2 Similarity of Design/Manufacture

The garments must:

- (a) Be designed specifically for Military or Law Enforcement use that provides warmth and moisture management through the use of light-weight synthetic materials;
- (b) Be a purpose built layering system that is designed to be worn in user-configured layers such that pockets/slide fasteners line up from layer to layer and outer layers are sized to fit over middle and inner layers without bulkiness or restricting movements;
- (c) Have each matched layer (jacket and pant) designed and manufactured of identical materials and colors; and
- (d) Have all layers designed and manufactured by a single manufacturer utilizing similar materials and colors to maintain a uniform look when mixing/matching the various layers.

3.3 Material

All material must be sourced and supplied by the Contractor.

3.4 Sizing

The intent is to have available the entire OEM catalogue of sizes that are available for each individual garment. Size dimensions are a general guide and the actual dimensions may vary between manufacturers; however, the products delivered should be available to accommodate the range of sizes from the 5th percentile female to the 95th percentile male as defined in DCIEM Report 98-CR-15 as follows:

- (a) Chest: 81.9 cm - 116.5 cm (32.2 in - 45.9 in);
- (b) Waist: 70.6cm - 110.5 cm (27.8 in - 43.5 in);
- (c) Hip: 91.2 cm - 112.3 cm (35.9 in - 44.2 in);
- (d) Sleeve: 66.0 cm - 84.4 cm (26.0 in - 33.2 in); and
- (e) Inseam: 77.8 cm - 99.2 cm (30.6 in - 39.0 in).

Smaller and larger sizes are also to be included in accordance with the availability for each garment type from the OEM.

3.5 Dimensions

All dimensions quoted within this specification are nominal and must be treated as approximate dimensions ($\pm 5\%$). Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions. The dimensions quoted within this specification are in relation to a size medium to large garment and are for the purpose of describing the approximate scale of the features.

3.6 Layered Finishing

Where double-layer material is specified throughout the document, substitution of the inner layer material, or in other locations where the substitution of another material would provide efficiencies in price, serviceability or comfort of the garments, is permissible as long as the substituted material is not readily visible when the garment is worn.

3.7 Durability

The Weather Protective Clothing must provide durability as follows:

- (a) Washing does not result in fading or significant shrinkage of the material (minimum five (5) washes);
- (b) Seams remain intact and buttons do not become detached under operational wearing conditions; and
- (c) Material does not fray or tear under operational usage.

3.8 Waterproof Outer Layers

The Waterproof Outer Layers consist of four (4) items, based on the details within this specification, as follows:

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- (a) Waterproof Breathable (WB) Jacket;
- (b) Waterproof Breathable High-Rise Bib Pant (WB Pant - HR);
- (c) Waterproof Breathable Lightweight (WBL) Jacket; and
- (d) Waterproof Breathable Lightweight Low-Rise Pant (WBL Pant - LR).

3.8.1 WB Jacket

The requirements for the WB Jacket are detailed in the following sections.

3.8.1.1 General Features

The WB Jacket must:

- (a) Be fabricated from a light-weight three-layer waterproof, breathable and windproof material with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface with:
 - a. GORE-TEX® WBFX175607CZ or equivalent;
 - b. Earth tone or black slide fasteners;
 - c. MULTICAM® printed or earth tone hook and loop fastener patches; and
 - d. Color coordinated stitching;
 - ii. Black matte outer surface with;
 - a. GORE-TEX® WNSX000607 or equivalent;
 - b. Black slide fasteners;
 - c. Black or earth tone hook and loop fastener patches; and
 - d. Color coordinated stitching;
 - iii. Earth tone matte outer surface with;
 - a. GORE-TEX® WNSX000607 or equivalent;
 - b. Earth tone slide fasteners;
 - c. Earth tone hook and loop fastener patches; and
 - d. Color coordinated stitching;
- (b) Be designed with a generous fit such that it can be worn over body armour and/or a mid-layer insulating garment;
- (c) Have sealed seams throughout that are a combination of taped and/or welded fabrication;
- (d) Permit single-hand operation of fasteners and pocket flaps;
- (e) Have no raised seams that would apply acute pressure to the shoulders, waist or back when the user is wearing generic body armour and/or a tactical load bearing vest;
- (f) Have articulated elbows and gusseted underarms;
- (g) NOT have any snaps or buttons;
- (h) Weigh less than 600 grams (1.32 lbs) for a size large; and
- (i) Have an attached label that includes:
 - i. Date of manufacture;

- ii. Size;
- iii. User Name (blank space); and
- iv. Washing instructions.

3.8.1.2 Design Features

The WB Jacket is to be designed in accordance with the following requirements:

- (a) General – The WB Jacket must consist of a waist-length front opening shell with full-length arms;
- (b) Collar – The WB Jacket collar must:
 - i. Be a high flat collar that extends 7-10 cm (3-4 in) above the shoulders; and
 - ii. Incorporate a hood as follows:
 - a. Made from a light-weight waterproof, breathable and windproof material (GORE-TEX® or equivalent);
 - b. Non-removable;
 - c. Be large enough to fit over the 50th percentile male human head (circumference 57.5 cm (22.6 in)) wearing the DND standard issue combat helmet (CG 634) in size medium (http://matshelmetsse/Manuals/ca-cg634/ca-634_1.html);
 - d. Incorporate a laminated brim;
 - e. Be adjustable such that, when worn over the CG 634 helmet, there will be an unobstructed 150° forward (left to right) field of view;
 - f. Have a reliable, pull cord adjustment mechanism(s) that prevents the hood from loosening and changing its shape once the desired configuration has been set by the user. A hook and loop fastener adjustment mechanism is unacceptable; and
 - g. Neatly roll away into its own sleeve in the collar of the jacket that has a multi-directional slide fastener closure;
- (c) Front Full-Length Fastener - The WB Jacket must have a full length waterproof front slide fastener that extends from the bottom hem to the top of the collar with a full length internal flap to prevent chaffing from the slide fastener;
- (d) Pockets - The WB Jacket must have pockets as follows:
 - i. Chest Pockets - Watertight pockets on each chest (left and right) as follows:
 - a. Minimum 20 cm (8 in) wide by 25 cm (10 in) high; and
 - b. Incorporate a vertical waterproof slide fastener as follows:
 - 1. Located on the outer side of each pocket;
 - 2. Open downwards (shoulder to hip);
 - 3. Include a molded slide fastener garage at the top;
 - 4. Include a button hole or other means to route cables to the inside of the jacket on the inner upper side; and
 - 5. Flapless and waterproof (WATERTIGHT™ or equivalent);
 - ii. Sleeve Pockets - Watertight pockets on the upper exterior portion of each sleeve (between the elbow and the shoulder) as follows:
 - a. Minimum 22 cm (9 in) wide by 22 cm (9 in) high;
 - b. Incorporate a vertical slide fastener as follows:
 - 1. Located on the inward forward side of the pocket; and
 - 2. Open downwards (shoulder to elbow motion);
 - c. Have a hook and loop fastener female patch on the center exterior of each pocket as follows:

1. Sewn to the pocket in a manner that does not affect the watertight integrity of the pocket;
 2. 10 cm (4 in) wide by 10 cm (4 in) high; and
 3. Include 6 mm (0.25 in) diameter plastic or cord d-rings located at the top and bottom center of the pocket patches;
- iii. Interior Pockets – Pockets on the interior of each chest (left and right) as follows:
- a. Constructed of a synthetic stretch material (non-mesh type) that is laminated to the interior of the 3-layer shell material;
 - b. Minimum 10 cm (4 in) wide by 15 cm (6 in) high; and
 - c. Incorporates a slide fastener that is located on the inner side of each pocket;
- (e) Arm Pit Vents - The WB Jacket must have arm pit vents (left and right) with a multi-directional waterproof slide fastener closure that are flapless and waterproof (WATERTIGHT™ or equivalent);
- (f) Low Profile Cuff Adjusters - The WB Jacket sleeve cuff adjusters must:
- i. Have low profile laminated die-cut hook and loop fastener male tab that connects to a female hook and loop fastener patch that extends nominally half the circumference of the sleeve opening; and
 - ii. Closes inward to outward;
- (g) Adjustable Bottom Hem - The WB Jacket must have a laminated bottom hem that is adjustable by means of an integral elastic draw cord.

3.8.2 WB Pant - HR

The requirements for the WB Pant - HR are detailed in the following sections.

3.8.2.1 General Features

The WB Pant - HR must:

- (a) Be fabricated from a light-weight three-layer waterproof, breathable and windproof material with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface with:
 - a. GORE-TEX® WBFX175607CZ or equivalent;
 - b. Earth tone or black slide fasteners; and
 - c. Color coordinated stitching;
 - ii. Black matte outer surface with;
 - a. GORE-TEX® WNSX000607 or equivalent;
 - b. Black slide fasteners; and
 - c. Color coordinated stitching;
 - iii. Earth tone matte outer surface with;
 - a. GORE-TEX® WNSX000607 or equivalent;
 - b. Earth tone slide fasteners; and
 - c. Color coordinated stitching;
- (b) Have sealed seams throughout that are a combination of taped and/or welded fabrication;
- (c) Permit single-hand operation of fasteners and pocket flaps;
- (d) Have articulated knees and seat, and a gusseted crotch;

- (e) NOT have any snaps or buttons in areas prone to catching while crawling including the knees and thighs, or in areas where they could prove to be uncomfortable when wearing a climbing harness including the waist and groin area;
- (f) Weigh less than 625 grams (1.4 lbs) for a size large; and
- (g) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.8.2.2 Design

The WB Pant - HR is to be designed in accordance with the following requirements:

- (a) General - The WB Pant - HR must consist of a full-length pant with a full-circumference bib as follows:
 - i. Extends up to the lower chest area in front;
 - ii. Have a higher cut back panel of a soft-shell material; and
 - iii. Have integral adjustable elasticized suspenders that utilize adjustments/buckles of a low profile design to prevent discomfort or catching while crawling;
- (b) Waist - The WB Pant - HR waist must:
 - i. Have an elasticized waist band that extends from the left hip around the back to the right hip;
 - ii. Have an integral adjustable web belt closure in the front with a non-metallic buckle of a low profile design to prevent discomfort or catching while crawling with a thread-through adjustment on one (1) side; and
 - iii. Have front fly slide fasteners as follows:
 - a. A multi-directional closure (top and bottom slide fastener pulls) that goes from the top of the front bib to the center of the crotch area;
 - b. Includes one (1) snap at the top to secure the fly in the closed position;
 - c. The top opens completely when the slide fastener pulls are in the down position and the snap is open; and
 - d. Incorporates an external wind flap;
- (c) Thigh Pockets - The WB Pant - HR must have bellowed watertight pockets on the exterior front of each thigh (left and right) as follows:
 - i. Nominally 25 cm (10 in) wide by 17 cm (7 in) high; and
 - ii. Accessible from the top via a horizontal slide fastener that opens inwards (hip to crotch motion);
- (d) External Side Slide Fasteners - The WB Pant-HR must have three-quarter length side slide fasteners (left and right outer leg) as follows:
 - i. A multi-directional slide fastener closure (top and bottom slide fastener pulls) that starts at the thigh area and go to the bottom of the leg;
 - ii. Includes one (1) snap at the bottom of each slide to secure the cuff in the closed position;
 - iii. The bottom opens completely when the slide fastener pulls are in the up position and the snap is open;
 - iv. Include a molded garage at the top of each slide fastener; and

- v. Flapless and waterproof (WATERTIGHT™ or equivalent);
- (e) Knees - The WB Pant-HR must have a generous fit at the knees to permit ease of movement when wearing knee pads under the garment;
- (f) Instep Reinforcement - The WB Pant-HR must have a reinforcement material of a low-profile design on the instep sides of the lower pant legs to prevent damage by boots, crampons or other sharp objects that is made of a Kevlar aramide fiber material that is heat, tear and abrasion resistant (KEPROTEC™ or equivalent); and
- (g) Adjustable Bottom Pant Cuff - The WB Pant-HR must have a bottom pant cuff that is adjustable by means of an integral elastic draw cord and includes two (2) grommet eyelets (front and outer side) to attach to the boots (gaiter-style).

3.8.3 WBL Jacket

The requirements for the WBL Jacket are detailed in the following sections.

3.8.3.1 General Features

The WBL Jacket must:

- (a) Be fabricated from a light-weight three-layer waterproof, breathable and windproof material with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface with:
 - a. GORE-TEX® WBLR175120 or equivalent;
 - b. Earth tone or black slide fasteners;
 - c. MULTICAM® printed hook and loop fastener patches; and
 - d. Color coordinated stitching;
 - ii. Black matte outer surface with;
 - a. GORE-TEX® PRO JSD000600GRN or equivalent;
 - b. Black slide fasteners; and
 - c. Color coordinated stitching;
 - iii. Earth tone matte outer surface with;
 - a. GORE-TEX® PRO JSD000600GRN or equivalent;
 - b. Earth tone slide fasteners; and
 - c. Color coordinated stitching;
- (b) Be sized to be worn over a mid-layer and/or next to skin insulating garment;
- (c) Have sealed seams throughout that are a combination of taped and/or welded fabrication;
- (d) Permit single-hand operation of fasteners and pocket flaps;
- (e) Have articulated elbows and gusseted underarms;
- (f) NOT have any snaps or buttons;
- (g) Weigh less than 500 grams (1.1 lb) for a size large; and
- (h) Have an attached label that includes:
 - i. Date of manufacture;

- ii. Size;
- iii. User Name (blank space); and
- iv. Washing instructions.

3.8.3.2 Design Features

The WBL Jacket is to be designed in accordance with the following requirements:

- (a) General – The WBL Jacket must consist of a full-length front opening shell with full-length arms;
- (b) Collar – The WBL Jacket collar must incorporate a hood as follows:
 - i. Non-removable;
 - ii. Be large enough to fit over the 50th percentile male human head (circumference 57.5 cm (22.6 in)) wearing the DND standard issue combat helmet (CG 634) in size medium (http://matshelmetsse/Manuals/ca-cg634/ca-634_1.html);
 - iii. Incorporate a laminated brim;
 - iv. Be adjustable such that, when worn over the CG 634 helmet, there will be an unobstructed 150° forward (left to right) field of view;
 - v. Include a reliable, pull cord adjustment mechanism(s) that prevents the hood from loosening and changing its shape once the desired configuration has been set by the user. A hook and loop fastener adjustment mechanism is unacceptable; and
 - vi. Hood rolls up when not in use and is held in place by an elasticized "keeper" band at the center of the collar;
- (c) Front Full-Length Fastener - The WBL Jacket must have a full length front slide fastener as follows:
 - i. No external wind flap;
 - ii. Includes a full length internal flap to prevent chaffing from the slide fastener;
 - iii. Extends from the bottom hem to the top of the collar; and
 - iv. Waterproof (WATERTIGHT™ or equivalent);
- (d) Pockets - The WBL Jacket must have pockets as follows:
 - i. Chest Pockets - Watertight pockets on each chest (left and right) as follows:
 - a. Minimum 20 cm (8 in) wide by 25 cm (10 in) high; and
 - b. Incorporate a vertical slide fastener as follows:
 - 1. Located on the outer side of each pocket;
 - 2. Open downwards (shoulder to hip);
 - 3. Include a molded slide fastener garage at the top;
 - 4. Include a button hole or other means to route cables to the inside of the jacket on the inner upper side; and
 - 5. Flapless and waterproof (WATERTIGHT™ or equivalent);
 - ii. Interior Pocket – Pocket on the interior of the left chest as follows:
 - a. Constructed of a synthetic stretch material (non-mesh type) that is laminated to the interior of the 3-layer shell material;
 - b. Minimum 10 cm (4 in) wide by 15 cm (6 in) high; and;
 - c. Incorporate a slide fastener that is located on the top or inner side of each pocket;
- (e) Shoulder Patches (MULTICAM® Version Only) - Hook and loop fastener female patches on the upper exterior portion of each sleeve (between the elbow and the shoulder) as follows:
 - i. Sewn to the sleeve in a manner that does not affect the watertight integrity of the sleeve;
 - ii. 10 cm (4 in) wide by 10 cm (4 in) high; and

- iii. Include 6 mm (0.25 in) diameter plastic or cord d-rings located at the top and bottom center of the pocket patches;
- (f) Arm Pit Vents - The WBL Jacket must have arm pit vents (left and right) with a multi-directional slide fastener closure that are flapless and waterproof (WATERTIGHT™ or equivalent);
- (g) Low Profile Cuff Adjusters - The WB Jacket sleeve cuff adjusters must:
 - i. Include low profile laminated die-cut hook and loop fastener male tab that connects to a female hook and loop fastener patch that extends nominally half the circumference of the sleeve opening; and
 - ii. Closes inward to outward;
- (h) Adjustable Bottom Hem - The WBL Jacket must have a laminated bottom hem as follows:
 - i. Adjustable by means of an integral elastic draw cord;
 - ii. Drop back; and
 - iii. Incorporate a hanger loop (HEMLOCK™ or equivalent) to prevent the hem from rising when wearing a climbing harness.

3.8.4 WBL Pant-LR

The requirements for the WBL Pant - LR are detailed in the following sections.

3.8.4.1 General Features

The WBL Pant - LR must:

- (a) Be fabricated from a light-weight three-layer waterproof, breathable and windproof material with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface with:
 - a. GORE-TEX® WBLR175120 or equivalent;
 - b. Earth tone or black slide fasteners; and
 - c. Color coordinated stitching;
 - ii. Black matte outer surface with;
 - a. GORE-TEX® PRO JSD000600GRN or equivalent;
 - b. Black slide fasteners; and
 - c. Color coordinated stitching;
 - iii. Earth tone matte outer surface with;
 - a. GORE-TEX® PRO JSD000600GRN or equivalent;
 - b. Earth tone slide fasteners; and
 - c. Color coordinated stitching;
- (b) Have sealed seams throughout that are a combination of taped and/or welded fabrication;
- (c) Permit single-hand operation of fasteners and pocket flaps;
- (d) Have articulated knees;
- (e) NOT have any snaps or buttons in areas prone to catching while crawling including the knees and thighs;
- (f) Weigh less than 400 grams (0.88 lbs) for a size large; and

- (g) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.8.4.2 Design

The WBL Pant - LR is to be designed in accordance with the following requirements:

- (a) General - The WBL Pant - LR must consist of a full-length pant;
- (b) Waist - The WBL Pant - LR waist must:
 - i. Have an elasticized waist band that extends from the left hip around the back to the right hip;
 - ii. Have an integral adjustable web belt closure in the front with a non-metallic buckle of a low profile design to prevent discomfort or catching while crawling with a thread-through adjustment on one (1) side;
 - iii. Have front fly slide fasteners as follows:
 - a. A slide fastener that goes from the top of the pant to the lower center of the crotch area and opens downward;
 - b. Includes one (1) snap at the top to secure the fly in the closed position;
 - c. The top opens completely when the slide fastener pull is in the down position and the snap is open; and
 - d. Incorporates an external wind flap;
- (c) External Side Slide Fasteners - The WBL Pant - LR must have three-quarter length side slide fasteners (left and right outer leg) as follows:
 - i. A multi-directional slide fastener closure (top and bottom slide fastener pulls) that starts at the waist area and goes to the bottom of the leg;
 - ii. Includes one (1) snap at the bottom of each slide to secure the cuff in the closed position;
 - iii. The bottom opens completely when the slide fastener pulls are in the up position and the snap is open;
 - iv. Include a molded garage at the top of each slide fastener; and
 - v. Flapless and waterproof (WATERTIGHT™ or equivalent);
- (d) Reinforcements - The WBL Pant - LR must have a reinforced material (heavier weight GORETEX®) on the instep sides and cuffs for increased wear resistance; and
- (e) Adjustable Bottom Pant Cuff - The WBL Pant - LR must:
 - i. Have a bottom pant cuff that is adjustable by means of an integral elastic draw cord; and
 - ii. Include two (2) grommet eyelets (inner and outer sides) and integral lace hooks to attach to the boots (gaiter-style).

3.9 Insulated Layers (Synthetic Loft) Ensemble

The Insulated Layers (Synthetic Loft) consist of four (4) items, based on the details within this specification, as follows:

- (a) Synthetic Loft Windproof (SLW) Jacket;
- (b) Synthetic Loft Windproof (SLW) Pant;

- (c) Lightweight Mid-Layer Light-Insulated (LMLI) Jacket; and
- (d) Lightweight Mid-Layer Light-Insulated (LMLI) Pant.

3.9.1 SLW Jacket

The requirements for the SLW Jacket are detailed in the following sections.

3.9.1.1 General Features

The SLW Jacket must:

- (a) Be fabricated from a light-weight two-layer windproof , water-resistant material with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface with:
 - a. GORE-TEX WBLR175120 or equivalent;
 - b. Earth tone or black slide fasteners; and
 - c. Color coordinated stitching;
 - ii. Earth tone matte outer surface with;
 - a. GORE-TEX WBLR175120 or equivalent;
 - b. Earth tone slide fasteners; and
 - c. Color coordinated stitching;
- (b) Be fully insulated with a synthetic textile (THERMATEK™ or equivalent) that is
 - i. Hydrophobic;
 - ii. Quick drying and retains warmth when exposed to cold/wet conditions;
 - iii. Returns to full loft after repeated compressions; and
 - iv. Solid-fill design (hollow-fill or quilted designs are **not** acceptable);
- (c) Be designed with a generous fit such that it can be worn over a base-layer garment;
- (d) Permit single-hand operation of fasteners and pocket flaps;
- (e) NOT have any snaps or buttons;
- (f) Weigh less than 525 grams (1.16 lbs) for a size large; and
- (g) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.9.1.2 Design Features

The SLW Jacket is to be designed in accordance with the following requirements:

- (a) General – The SLW Jacket must consist of a full-length front opening insulated shell with full-length arms;
- (b) Collar – The SLW Jacket must have a high flat collar and no hood (removable or otherwise);

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- (c) Front Full-Length Fastener - The SLW Jacket must have a full length flapless front slide fastener that extends from the bottom hem to the top of the collar with a full length internal flap to prevent chaffing from the slide fastener;
- (d) Hand Pockets - The SLW Jacket must have pockets on the exterior front of each hip (left and right) as follows:
 - i. Minimum 18 cm (7 in) wide by 23 cm (9 in) high;
 - ii. Incorporate a vertical slide fastener as follows:
 - a. Located on the outer side of each pocket; and
 - b. Open downwards (shoulder to hip);
- (e) Cuffs - The SLW Jacket must have non-adjustable stretch-knit cuffs.

3.9.2 SLW Pant

The requirements for the SLW Pant are detailed in the following sections.

3.9.2.1 General Features

The SLW Pant must:

- (a) Be fabricated from a light-weight two-layer windproof, water-resistant material with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface with:
 - a. GORE-TEX WBLR175120 or equivalent;
 - b. Earth tone or black slide fasteners; and
 - c. Color coordinated stitching;
 - ii. Earth tone matte outer surface with:
 - a. GORE-TEX WBLR175120 or equivalent;
 - b. Earth tone slide fasteners; and
 - c. Color coordinated stitching;
- (b) Be fully insulated with a synthetic textile (THERMATEK™ or equivalent) that is:
 - i. Hydrophobic;
 - ii. Quick drying and retains warmth when exposed to cold/wet conditions;
 - iii. Returns to full loft after repeated compressions; and
 - iv. Solid-fill design (hollow-fill or quilted designs are **not** acceptable);
- (c) Permit single-hand operation of fasteners and pocket flaps;
- (d) NOT have any snaps or buttons;
- (e) Weigh less than 650 grams (1.4 lbs) for a size large; and
- (f) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.9.2.2 Design

The SLW Pant is to be designed in accordance with the following requirements:

- (a) General - The SLW Pant must consist of a full-length pant;
- (b) Waist - The SLW Pant waist must:
 - i. Have an elasticized waist band that extends around the circumference of the waist (front and rear) between the web belt closures; and
 - ii. Have integral adjustable web belt closures on the left and right hips above the side leg slide fasteners as follows:
 - a. Connected to the elasticized waist band on either hip; and
 - b. Have a non-metallic buckle of a low profile design to prevent discomfort or catching while crawling with a thread-through adjustment on one (1) side;
- (c) External Side Leg Slide Fasteners - The SLW Pant must have full-length side slide fasteners (left and right outer leg) as follows:
 - i. Multi-directional flapless slide fastener closure (top and bottom slide fastener pulls) that starts at the waist and go to the bottom of the leg;
 - ii. Incorporates a full length internal flap to prevent chaffing from the slide fastener; and
 - iii. The top and bottom open completely when the slide fastener pulls are in the up position;
- (d) Adjustable Bottom Pant Cuff - The SLW Pant must have a bottom pant cuff that is adjustable by means of an integral elastic draw cord.

3.9.3 LMLI Jacket

The requirements for the LMLI Jacket are detailed in the following sections.

3.9.3.1 General Features

The LMLI Jacket must:

- (a) Have an outer layer (front and rear) fabricated from a light-weight, breathable, wind resistant material (LUMINARA™ or equivalent) with a uniform color scheme and a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. Earth tone outer surface and slide fasteners; and
 - ii. Color coordinated stitching;
- (b) Have breathable synthetic stretch side panels (POLARTEC® POWER STRETCH® with HARDFACE® technology or equivalent);
- (c) Be insulated on the torso (front and rear) and the arms with a synthetic textile (CORELOFT™ 60 or equivalent) that:
 - i. Returns to full loft after repeated compressions; and
 - ii. Solid-fill design (hollow-fill or quilted designs are **not** acceptable);
- (d) Be designed with a generous fit such that it can be worn over a base-layer garment;
- (e) Permit single-hand operation of fasteners and pocket flaps;
- (f) NOT have any snaps or buttons;
- (g) Have articulated elbows and gusseted underarms;
- (h) Weigh less than 450 grams (1 lb) for a size large; and

- (i) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.9.3.2 Design Features

The LMLI Jacket is to be designed in accordance with the following requirements:

- (a) General – The LMLI Jacket must consist of a full-length front opening insulated shell with full-length arms;
- (b) Collar – The LMLI Jacket must have a high flat collar with a soft brushed material inner lining and no hood (removable or otherwise);
- (c) Front Full-Length Fastener - The LMLI Jacket must have a full length flapless front slide fastener that extends from the bottom hem to the top of the collar with a full length internal flap to prevent chaffing from the slide fastener;
- (d) Pockets - The LMLI Jacket must have pockets as follows:
 - i. Chest Pockets – Internal pocket on the left chest as follows:
 - a. Minimum 15 cm (6 in) wide by 22 cm (8.5 in) high; and
 - b. Incorporate a flapless vertical slide fastener as follows:
 - 1. Located on the inner side of the pocket; and
 - 2. Opens downwards (shoulder to hip);
 - ii. Hand Pockets – Pockets on the exterior front of each hip (left and right) as follows:
 - a. Minimum 15 cm (6 in) wide by 38 cm (15 in) high;
 - b. Include a button hole or other means to route cables to the inside of the jacket on the inner upper side; and
 - c. Incorporate a vertical slide fastener as follows:
 - 1. Located on the outer side of each pocket; and
 - 2. Open downwards (shoulder to hip);
- (e) Cuffs - The LMLI Jacket must have non-adjustable stretch-knit cuffs; and
- (f) Bottom Hem - The LMLI Jacket must have a laminated bottom hem that is adjustable by means of an integral elastic draw cord.

3.9.4 LMLI Pant

The requirements for the LMLI Pant are detailed in the following sections.

3.9.4.1 General Features

The LMLI Pant must:

- (a) Have an outer layer fabricated from a light-weight, breathable, wind resistant material (LUMINARA™ or equivalent) with a uniform color scheme and a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. Earth tone outer surface and slide fasteners; and
 - ii. Color coordinated stitching;

- (b) Be fully insulated with a synthetic textile (CORELOFT™ 60 or equivalent) that:
 - i. Returns to full loft after repeated compressions; and
 - ii. Solid-fill design (hollow-fill or quilted designs are **not** acceptable);
- (c) Permit single-hand operation of fasteners;
- (d) Have articulated knees and seat;
- (e) NOT have any snaps or buttons other than as specified in this document;
- (f) Weigh less than 450 grams (1 lb) for a size large; and
- (g) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.9.4.2 Design

The LMLI Pant is to be designed in accordance with the following requirements:

- (a) General - The LMLI Pant must consist of a full-length pant;
- (b) Waist - The LMLI Pant waist must:
 - i. Be elasticized; and
 - ii. Incorporates a slide fastener that goes from the top of the pant to the lower center of the crotch area with a top snap closure;;
- (c) External Side Slide Fasteners - The LMLI Pant must have full length separating side slide fasteners (left and right outer leg) as follows:
 - i. A slide fastener that starts at the top of the waist and goes to the bottom of the leg;
 - ii. Incorporates a full-length internal wind flap; and
 - iii. The side opens completely when the slide fastener pull is in the up position;
- (d) Cuffs – The LMLI Pant cuffs must:
 - i. Incorporate an internal snap at the bottom of the side slide fasteners; and
 - ii. Be adjustable by means of an integral elastic draw cord.

3.10 Lightweight Outer Layer

The Lightweight Outer Layer consists of two (2) items, based on the details within this specification, as follows:

- (a) Soft-Shell (SS) Jacket; and
- (b) Soft-Shell (SS) Pant.

3.10.1 SS Jacket

The requirements for the SS Jacket are detailed in the following sections.

3.10.1.1 General Features

The SS Jacket must:

- (a) Be fabricated from a moisture-resistant, breathable and wind-resistant soft-shell material (TWEAVE® DURASTRETCH® or equivalent) with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface; and
 - ii. Earth tone slide fasteners;
 - iii. MULTICAM® printed hook and loop fastener patches; and
 - iv. Color coordinated stitching;
- (b) Be designed with a generous fit such that it can be worn over a base layer;
- (c) Permit single-hand operation of fasteners and pocket flaps;
- (d) Have articulated elbows and shoulders;
- (e) NOT have any snaps or buttons;
- (f) Weigh less than 600 grams (1.32 lbs) for a size large; and
- (g) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.10.1.2 Design Features

The SS Jacket is to be designed in accordance with the following requirements:

- (a) General – The SS Jacket must consist of a full-length front opening shell with full-length arms;
- (b) Collar – The SS Jacket must have a high flat collar as follows:
 - i. Extends 7.5 cm (3 in) above the shoulders;
 - ii. Soft brushed material inner lining;
 - iii. No hood (removable or otherwise); and
 - iv. Includes a hook and loop fastener female patch on the center rear of the collar as follows:
 - a. Sewn to the collar; and
 - b. 4 cm (1.5 in) wide by 2 cm (0.75 in) high;
- (c) Front Full-Length Fastener - The SS Jacket must have a full length front slide fastener that extends from the bottom hem to the top of the collar with a full length internal flap to prevent chaffing from the slide fastener;
- (d) Pockets - The SS Jacket must have pockets as follows:
 - i.
 - ii. Sleeve Pockets - Pocket on the upper exterior portion of each sleeve (between the elbow and the shoulder) as follows:
 - a. Minimum 19 cm (7.5 in) wide by 22 cm (9 in) high;
 - b. Incorporate a vertical slide fastener as follows:
 - 1. Located on the inward side of the pocket; and
 - 2. Open downward (shoulder to elbow motion);

- c. Include a hook and loop fastener female patch on the center exterior of each pocket as follows:
 - 1. Sewn to the exterior of each pocket; and
 - 2. 10 cm (4 in) wide by 10 cm (4 in) high;
- iii. Chest Pockets – Pockets on the exterior front of each chest (left and right) as follows:
 - a. Minimum 20 cm (8 in) wide by 38 cm (15 in) high;; and
 - b. Incorporate a flapless vertical slide fastener as follows:
 - 1. Located on the outer side of each pocket;
 - 2. Open downwards (shoulder to hip); and
 - 3. Include a slide fastener garage at the top;
- (e) Arm Pit Vents - The SS Jacket must have arm pit vents (left and right) with a multi-directional slide fastener closure that are flapless;
- (f) Low Profile Cuff Adjusters - The SS Jacket sleeve cuff adjusters must:
 - i. Have low profile laminated die-cut hook and loop fastener male tab that connects to a female hook and loop fastener patch that extends nominally half the circumference of the sleeve opening; and
 - ii. Closes inward to outward;
- (g) Adjustable Bottom Hem - The SS Jacket must have a bottom hem that is adjustable from within the chest pockets by means of integral elastic draw cords.

3.10.2 SS Pant

The requirements for the SS Pant are detailed in the following sections.

3.10.2.1 General Features

The SS Pant must:

- (a) Be fabricated from a moisture-resistant waterproof, breathable and wind-resistant soft-shell material (TWEAVE® DURASTRETCH® or equivalent) with a uniform color scheme with a non-reflective matte finish and no patches of contrasting fabric colors as follows:
 - i. MULTICAM® printed outer surface;
 - ii. Earth tone slide fasteners; and
 - iii. Color coordinated stitching;
- (b) Have articulated knees and seat, and a gusseted crotch;
- (c) NOT have any snaps or buttons other than as specified in this document;
- (d) Weigh less than 700 grams (1.54 lbs) for a size large; and
- (e) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.10.2.2 Design

The SS Pant is to be designed in accordance with the following requirements:

- (a) General - The SS Pant must consist of a full-length pant;
- (b) Waist - The SS Pant waist must:
 - i. Have an integral waistband as follows:
 - a. Double layer construction; and
 - b. Incorporates minimum six (6) belt loops that are 7 cm (2.5 in) wide;
 - ii. Have a front fly as follows:
 - a. Incorporates a slide fastener that goes from the top of the pant to the lower center of the crotch area; and
 - b. Includes a top snap closure;
 - c. The top opens completely when the slide fastener pull is in the down position and the snap is open; and
 - d. Incorporates an external wind flap and a full length internal flap to prevent chaffing from the slide fastener;
- (c) Pockets – The SS Pant must have pockets as follows:
 - i. Waist Front Pockets - A three (3) layer internal flat pocket beneath the waistband on each front hip as follows:
 - a. Inner pocket as follows:
 - 1. Minimum 22 cm (9 in) wide by 20 cm (8 in) high; and
 - 2. Accessible from the top by a slide fastener that opens outward (crotch to hip motion);
 - b. Outer pocket as follows:
 - 1. Minimum 25 cm (10 in) wide by 30 cm (12 in) high; and
 - 2. Accessible from an opening at the top of the pocket that angles from the waistband downwards towards the outer hip area;
 - c. Tool pocket as follows:
 - 1. 12 cm (5 in) high by 7.5 cm (3 in) wide;
 - 2. Located on either hip on the flap of the Outer pocket; and
 - 3. Accessible from an opening across the top of the pocket;
 - ii. Hip Rear Pocket - An internal flat pocket as follows:
 - a. Located beneath the waistband on each rear hip centered on each leg;
 - b. 17 cm (7 in) wide by 17 cm (7 in) high; and
 - c. Accessible from the top by a slide fastener as follows:
 - 1. 15 cm (6 in) in effective opening length; and
 - 2. Open inward (hip to crotch motion);
 - iii. Thigh Side Pocket - An external pleated cargo pocket as follows:
 - a. Located on each outer thigh centered between the waist and the knee;
 - b. Minimum 20 cm (8 in) wide by 22 cm (9 in) high; and
 - c. Accessible from the top by a flap that covers the top of the pocket and has a hook and loop fastener patch to keep the flap closed;
- (d) Cuffs – The SS Pant cuffs must have a bottom hem that is adjustable by means of an integral elastic draw cord.

3.11 Base Layers

The Base Layers consist of four (4) items, based on the details within this specification, as follows:

- (a) Next to Skin Moisture Wicking (NSMW) Shirt;
- (b) Next to Skin Moisture Wicking (NSMW) Pant;

- (c) Cold Weather Moisture Wicking (CWMW) Shirt; and
- (d) Cold Weather Moisture Wicking (CWMW) Pant.

3.11.1 NSMW Shirt

The requirements for the NSMW Shirt are detailed in the following sections.

3.11.1.1 General Features

The NSMW Shirt must:

- (a) Be an insulated base-layer of Merino wool in an earth tone color scheme with a non-reflective matte finish and no patches of contrasting fabric colors;
- (b) Have gusseted underarms;
- (c) NOT have any snaps or buttons;
- (d) Weigh less than 375 grams (0.83 lbs) for a size large; and
- (e) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.11.1.2 Design Features

The NSMW Shirt is to be designed in accordance with the following requirements:

- (a) General – The NSMW Shirt must consist of a full-length shirt with full-length arms;
- (b) Collar – The NSMW Shirt must have a high flat collar that extends 7 cm (3 in) above the shoulders and no hood (removable or otherwise);
- (c) Front Quarter-Length Fastener - The NSMW Shirt must have a quarter-length flapless front slide fastener that extends from the top of the collar down to the mid chest area; and
- (d) Cuffs and Waist - The NSMW Shirt cuffs and waist must be tapered, hemmed and **not** incorporate adjusters.

3.11.2 NSMW Pant

The requirements for the NSMW Pant are detailed in the following sections.

3.11.2.1 General Features

The NSMW Pant must:

- (a) Be an insulated base-layer of Merino wool in an earth tone color scheme with a non-reflective matte finish and no patches of contrasting fabric colors;
- (b) Have a gusseted crotch;

- (c) NOT have any snaps or buttons;
- (d) Weigh less than 300 grams (0.66 lbs) for a size large; and
- (e) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.11.2.2 Design

The NSMW Pant is to be designed in accordance with the following requirements:

- (a) General - The NSMW Pant must consist of a full-length pant; and
- (b) Cuffs and Waist – The NSMW Pant cuffs and waist must be tapered, hemmed and **not** incorporate adjusters.

3.11.3 CWMW Shirt

The requirements for the CWMW Shirt are detailed in the following sections.

3.11.3.1 General Features

The CWMW Shirt must:

- (a) Be a moisture-wicking, breathable insulated base-layer of a synthetic weave with a soft next-to-skin finish (POLARTEC ® POWER STRETCH® or equivalent) in an earth tone color scheme with a non-reflective matte finish and no patches of contrasting fabric colors;
- (b) Have gusseted underarms;
- (c) NOT have any snaps or buttons;
- (d) Weigh less than 350 grams (0.77 lbs) for a size large; and
- (e) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.11.3.2 Design Features

The CWMW Shirt is to be designed in accordance with the following requirements:

- (a) General – The CWMW Shirt must consist of a full-length shirt with full-length arms;
- (b) Collar – The CWMW Shirt must have a high flat collar that extends 5 cm (2 in) above the shoulders and no hood (removable or otherwise);
- (c) Front Quarter-Length Fastener - The CWMW Shirt must have a quarter-length flapless front slide fastener that extends from the top of the collar down to the mid chest area; and

- (d) Cuffs and Waist - The NSMW Shirt cuffs and waist must be tapered, hemmed and **not** incorporate adjusters.

3.11.4 CWMW Pant

The requirements for the CWMW Pant are detailed in the following sections.

3.11.4.1 General Features

The CWMW Pant must:

- (a) Be a moisture-wicking, breathable insulated base-layer of a synthetic weave with a soft next-to-skin finish (POLARTEC ® POWER STRETCH® or equivalent) in an earth tone color scheme with a non-reflective matte finish and no patches of contrasting fabric colors;
- (b) Have a gusseted crotch;
- (c) NOT have any snaps or buttons;
- (d) Weigh less than 300 grams (0.66 lbs) for a size large; and
- (e) Have an attached label that includes:
 - i. Date of manufacture;
 - ii. Size;
 - iii. User Name (blank space); and
 - iv. Washing instructions.

3.11.4.2 Design

The CWMW Pant is to be designed in accordance with the following requirements:

- (a) General - The CWMW Pant must consist of a full-length pant; and
- (b) Cuffs and Waist – The CWMW Pant cuffs and waist must be tapered, hemmed and **not** incorporate adjusters.

**BID EVALUATION PROCESS (PHASE I)
FOR THE
WEATHER PROTECTIVE CLOTHING**

1.0 EVALUATION

The Phase I evaluation will be based upon the Bidder's experience in developing, manufacturing and/or selling advanced technology multi-layer weather protective clothing and their written confirmation that they can provide a layering system that can meet all of the performance and technical specifications in Annex C. Failure to provide all of the information requested in the compliance matrix will deem the bid non-compliant. All compliant bids will be included in the next phase of the process (Proof of Concept trial). There is no consideration for the price at this point in the evaluation process.

COMPLIANCE MATRIX

Item #	Requirement	Proof of Compliance	Compliant (Y/N)
1	<p><u>Expertise and Proven Design</u> The Bidder must be an established winter garment vendor that has significant experience in layering systems for military or police organizations as follows:</p> <p>(a) Manufacturer Qualifications -. The Bidder must have been in the business of developing, manufacturing and/or selling multi-layer weather protective clothing systems for a minimum of five (5) years; and</p> <p>(b) Proven Design - The Weather Protective Clothing system being offered must be based upon a Commercial-Off-The-Shelf (COTS) or Military-Off-The -Shelf (MOTS) product and, for each item being offered, the Bidder must have an existing similar product and have sold a minimum of twenty five (25) each to an American, British, Canadian or Australian (ABCA) military force or a North American (Canadian or US) police agency in the last five (5) years.</p>	<p>The Bidder must provide:</p> <p>(1) Written confirmation that they have been in the business of developing, manufacturing and/or selling multi-layer weather protective clothing systems for a minimum of five (5) years.</p> <p>AND</p> <p>(2) Contract information including award dates, models and quantities delivered.</p> <p>If the Bidder is an authorized distributor, the requested experience and sales can reflect that of the Original Equipment Manufacturer.</p>	
2	Annex B - Performance and Technical Specifications.	The Bidder must provide written confirmation that the Weather Protective Clothing system being offered is capable of meeting every aspect of the Performance and Technical Specifications detailed in Annex B.	

Item #	Requirement	Proof of Compliance	Compliant (Y/N)
3	Brochures	The Bidder must provide: (1) Brochures and technical information that detail each of the Weather Protective Clothing layers being offered; AND (2) A sizing chart that details the complete range of sizes available for each garment.	

**DEPARTMENT OF NATIONAL DEFENCE (DND)
PROOF OF CONCEPT TRIALS
FOR THE
WEATHER PROTECTIVE CLOTHING**

1.0 GENERAL

1.1 Purpose

This document outlines the Proof of Concept trials to be conducted by DND for the Weather Protective Clothing system.

1.2 Contractor Participation

The information provided in this Annex is for information purposes only. The verifications and trials will be conducted by DND without any support required from the Contractors that supply the clothing to be evaluated. The Contractors will not be permitted to witness any portion of the tests and evaluations. The Contractors may be provided the results of the Proof of Concept trial for their specific clothing system only.

APPENDIX 1 PROOF OF CONCEPT TRIALS

A1.1 Scope

This Appendix details the Proof of Concept trials for the Weather Protective Clothing.

A1.2 Aim

The aim of the Proof of Concept trials is to evaluate the impact of the Weather Protective Clothing system on the operator mobility, survivability and lethality. The trials will consider both the operator's ability to effectively conduct tasks while wearing the system, and their perceived physical and thermal discomfort.

A1.3 Proof of Concept Trial Plan

The trials are task-based and are focused on the operator's ability to effectively conduct these tasks in a simulated operational environment. The tasks will be rated qualitatively through the use of a systematic user rating. A group of non-participants will record the results at each phase of the trial program and ensure that there are no unfair or biased components injected into the trial program. For each trial, participants will wear Canadian Forces (CF) issued equipment as required including combat dress, swimmer suit, boots, bump cap/field cap, ear and eye protection, helmet, climbing harness, shooting gloves and a weapon (C8 with sling).

A1.3.1 Participants

The participants will be selected based on their specialty skill sets, with the selection covering the size range of the Weather Protective Clothing systems in order to provide a representative sample of the end-user community. A minimum of ten (10) participants will complete the trials and each participant will conduct the trial with each of the Bidder's Weather Protective Clothing systems such that all systems are trialed by all participants. All participants will be familiar with the use and wearing of Weather Protective Clothing in the operational environments for which it is designed. Each participant must complete all tasks within the specific test for all Weather Protective Clothing systems under evaluation. Should a participant become incapacitated or unavailable to complete the test for all systems, the activity will be deemed incomplete for that participant and none of the results for that participant will be included in the overall assessment of that test.

A1.3.2 Trial Program

The Proof of Concept trial will be conducted by DND at various facilities within Canada over a period of a number of days depending on the number of Weather Protective Clothing Systems to be assessed. Each participant will be required to complete the trials wearing each Weather Protective Clothing in succession. Weather Protective Clothing Systems will be trialed in a random order of Bidders and no more than two (2) separate Bidders will be trialed by a participant on the same day. Rest periods will be included in the trial program to eliminate the bias of physical exhaustion from the assessment process.

A1.3.3 User Rating

Participants will provide task evaluations at the completion of various activities for both the baseline condition (no Weather Protective Clothing) and for each Weather Protective Clothing system. The trial data collected, including the participant evaluations, will be recorded on the Trial Questionnaire forms, which will be completed for each participant as follows:

- (a) Appendix 2 - Trial Questionnaire - Initial Fit And Range Of Motion;
- (b) Appendix 3 - Trial Questionnaire - Washed Fit And Range Of Motion;
- (c) Appendix 4 - Trial Questionnaire - Wet Conditions;

- (d) Appendix 5 - Trial Questionnaire - Dry Conditions; and
- (e) Appendix 6 - Trial Questionnaire - Operational Task Effectiveness

The participant evaluations will be captured by individual ratings of various criteria using a non-biased approach to collecting user perception. A 7-point scale will be used to provide a clear and understandable quantification of the participants' perceptions in a controlled manner. Some tests, as designated on the individual Trial Questionnaires, are assigned a higher weight. The scale is defined as follows:

7-Point Scale

Scale	Participant Perception	Definition	Score
1	Completely Unacceptable	The Weather Protective Clothing did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.	0
2	Reasonably Unacceptable	The Weather Protective Clothing met the minimal requirements for the task and had some limitations that may prevent the operator from completing the task.	1
3	Barely Unacceptable	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with some limitations on range of use.	2
4	Borderline	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with only minor limitations on range of use.	3
5	Barely Acceptable	The Weather Protective Clothing met some of the requirements for the task and performed well in the hands of the operator with only minor limitations.	4
6	Reasonably Acceptable	The Weather Protective Clothing met most of the requirements for the task and performed well in the hands of the operator with minimal limitations.	5
7	Completely Acceptable	The Weather Protective Clothing met or exceeded all requirements for the task and performed in every way expected by the operator.	6

A1.3.4 Activities and Procedures

The trial activities are based upon operational related tasks performed by operators. Each of the tests will be conducted in either an environmental chamber or outdoors depending on the prevailing weather conditions. The details of the trials and the data collection procedures are given in the following sections.

A1.3.4.1 Activity 1 – Fit and Range of Motion

The participant will complete the following tasks:

- (a) Prior to issue of garments, the following measurements will be recorded for each participant on the Initial Fit questionnaire at Appendix 2:
 - i. Chest circumference: The maximum horizontal circumference of the chest at the fullest part of the breast;
 - ii. Waist circumference: The horizontal circumference of the waist at the level of the centre of the naval;
 - iii. Shoulder width'
 - iv. Leg inseam'

- v. Hip circumference' and
 - vi. Back length: The surface distance between the cervicale landmark at the back of the neck and the posterior waist landmark at the naval;
- (b) Test 1A – Initial Fit Sizing: The participant will be fitted with the correct (unwashed) sizes of the Weather Protective Clothing system to be evaluated and then complete the Initial Fit section of the Initial Fit and Range of Motion questionnaire at Appendix 2 for each of the layers individually. The assessment takes into account the following:
- i. Fit Sizing – Rating the fit including the adjustability of the system to the individual user and the size/fit of multiple layers;
 - i. Accessibility - Rating the accessibility to the pockets; and
 - ii. Comfort/Initial Mobility – Rating the overall physical comfort and initial mobility (range of motion, flexibility, etc.);
- (c) Test 1B - Range of Motion (ROM): A series of ROM measurements will be taken to quantify the effect of the Weather Protective Clothing system on the operators' flexibility and reach. For each assessment, the participant will perform the test and an observer will record the results in the Range of Motion section of the Initial Fit and Range of Motion questionnaire at Appendix 2. The Range of Motion tests will be completed in the baseline conditions (Combat dress or Swimmer Suit only) and with increasing layers of the Weather Protective Clothing System as follows:
- i. Combat Dress + LMLI + WBL;
 - ii. NSMW + CWMW + SS;
 - iii. NSMW + Combat Dress + SLW + WB;
 - iv. NSMW + SS + WBL;
 - v. NSMW + SS + SLW; and
 - vi. Swimmer Suit + NSMW + CWMW;
- (d) The ROM tests are as follows:
- i. Apley's Scratch Test - The Apley's Scratch Test is conducted as follows:
 - a. With a 24" long rod in one hand, the participant reaches behind the back over one shoulder (as if to scratch the back) and the other arm is extended around the other side below the shoulder in order to grasp the other end of the rod;
 - b. The participant, using the rod as a guide, then brings the hands as close together as possible without using the rod for leverage, and the distance between the hands is recorded.
 - c. Repeat the test over the other shoulder and record the results.
 - ii. Trunk Forward Flexion - The Trunk Forward Flexion test is conducted as follows:
 - a. The participant stands with legs together and arms held straight down the front of their legs with palms facing in toward the legs;
 - b. The observer will measure from the tip of the middle finger to the ground; and
 - c. The participant will bend forward and attempt to reach the ground. Legs will remain straight and arms will be perpendicular to the ground. Observer will measure from middle finger to the ground and record difference between standing and forward flexion;
 - iii. Active Straight Leg Raise - The Active Straight Leg Raise test is conducted as follows:
 - a. The participant lies in the supine position with both legs extended;
 - b. The ankle of the foot will be marked as "0";
 - c. The participant will raise one leg straight up in the air while keeping the other leg extended and hip touching the ground throughout;
 - d. The observer will mark a perpendicular line from the raised ankle to the ground and mark that spot on the ground;

- e. The observer will record the distance from the marked spot to the ankle of the lowered leg; and
 - f. Repeat the test for the other leg and record the results;
 - iv. Stand and Reach (Vertical) - The Stand and Reach (Vertical) test is conducted as follows:
 - a. The participant stands directly under a vertical reach with feet planted on the ground;
 - b. The participant will reach above their head with one arm and strike the tabs on the vertical reach;
 - c. The observer will record the results; and
 - d. Repeat the test for the other side and record the results;
 - v. Stand and Reach (Horizontal) - The Stand and Reach (Horizontal) test is conducted as follows:
 - a. The participant stands directly facing a wall with feet planted on the ground behind marked tape and midline of body facing "0" on the wall;
 - b. The participant will reach across the body to the opposite side and touch the wall. This spot will be marked by the observer;
 - c. The distance from "0" to the mark will be recorded; and
 - d. Repeat the test over the other arm and record the results;
- (e) The Weather Protective Clothing Systems from each Bidder will be washed five (5) times each;
- (f) Test 1C - Washed Fit: The participant will be fitted with the same washed sizes of the Weather Protective Clothing system as in Test 1A, and then complete the Washed Fit section of the Washed Fit and Range of Motion questionnaire at Appendix 3 for each of the layers individually; and
- (g) Test 1D - Range of Motion (ROM): The participant will complete the Range of Motion tests wearing the following layers of the Weather Protective Clothing System and record the results in the Range of Motion section of the Washed Fit and Range of Motion questionnaire at Appendix 3:
- i. Combat Dress + LMLI + WBL;
 - ii. NSMW + CWMW + SS;
 - iii. NSMW + Combat Dress + SLW + WB;
 - iv. NSMW + SS + WBL;
 - v. NSMW + SS + SLW; and
 - vi. Swimmer Suit + NSMW + CWMW;

A1.3.4.2 Activity 2 - Wet Weather Conditions

The participant will complete the following tasks:

- (a) Test 2A - Wet Warm - The participant will complete a series of static and dynamic tasks in an Environmental Chamber as follows:
 - i. The Environmental Chamber will be maintained at +26°C with periods of rain for the duration of the test;
 - ii. The participant will commence the test wearing Combat Dress and the WBL layer. However, the remaining layers of the Weather Protective Clothing system will be available to the participant at their discretion after the test commences. Layers added/removed during the test will be recorded;
 - iii. The participant will complete the following tasks:
 - a. 30-60 minutes - Remain stationary (seated, standing or lying down) to condition to the climate;

- b. 30-60 minutes - Active work to include setting up a tent, stationary jog, push-ups, sit-ups, etc.; and
 - c. 30-60 minutes - Remain stationary (seated, standing or lying down) to assess thermal properties, breathability, etc.;
- (b) Test 2B - Wet Cold - The participant will complete a series of static and dynamic tasks in an Environmental Chamber as follows:
- i. The Environmental Chamber will be maintained at +1°C with periods of rain for the duration of the test;
 - ii. The participant will commence the test wearing NSMW, SS and WB layers. However, the remaining layers of the Weather Protective Clothing system will be available to the participant at their discretion after the test commences. Layers added/removed during the test will be recorded;
 - iii. The participant will complete the following tasks:
 - a. 30-60 minutes - Remain stationary (seated, standing or lying down) to condition to the climate;
 - b. 30-60 minutes - Active work to include setting up a tent, stationary jog, push-ups, sit-ups, etc.; and
 - c. 30-60 minutes - Remain stationary (seated, standing or lying down) to assess thermal properties, breathability, etc.;
- (c) The participant will then complete the Wet Conditions questionnaire at Appendix 4.

A1.3.4.3 Activity 3 - Dry Weather Conditions

The participant will complete the following tasks:

- (a) The Environmental Chamber will be maintained at -15°C with a relative humidity of 50% for the duration of the test;
- (b) The participant will commence the test wearing NSMW, SS and SLW layers. However, the remaining layers of the Weather Protective Clothing system will be available to the participant at their discretion after the test commences. Layers added/removed during the test will be recorded;
- (c) The participant will complete the following tasks:
 - i. 30-60 minutes - Remain stationary (seated, standing or lying down) to condition to the climate;
 - ii. 30-60 minutes - Active work to include setting up a tent, stationary jog, push-ups, sit-ups, etc.; and
 - iii. 30-60 minutes - Remain stationary (seated, standing or lying down) to assess thermal properties, breathability, etc.;
- (d) The participant will then complete the Dry Conditions questionnaire at Appendix 5.

A1.3.4.4 Activity 4 – Operational Task Effectiveness

The participants will wear the appropriate layers of the Weather Protective Clothing system dependent on prevailing weather conditions, and operational equipment specific to the task (body armour, helmet, ballistic eyewear, gloves, weapons, etc.). The trials are based upon the actual training and qualification tests used in advanced combat training and, as such, only generic descriptions of the tests are provided. Depending on the weather conditions, not all of the tasks will be performed; however, the same tasks will be performed for each of the competing Weather Protective Clothing system. The details of the trials and the data collection procedures are as follows:

- (a) Test 4A - Operational Tasks - The participant will complete a series of operational tasks to quantify the effect of the Weather Protective Clothing system on the participant's operability. For each assessment, the participant will perform the test and record the results in the Operational Tasks section of the Operational Task Effectiveness Trial questionnaire at Appendix 6. The tests are as follows:
 - i. Caving Ladder Climb - The participant will begin at the bottom of the ladder with both feet on the ground, and then scale the ladder as swiftly as they are able to the top of the rappelling tower;
 - ii. Rappel - The participant will begin at the top of the rappelling tower with both feet on the platform, and then rappel to the bottom of the tower in a safe manner in accordance with standard procedures; and
 - iii. Stair Climb - The participant will begin at the bottom of the stairs with both feet on the platform in front of the stairs, and then scale the stairs as swiftly as they are able until both feet are on the balcony above the stairs;
- (b) Test 4B - Observation Post Task - The participant will complete the following tasks:
 - i. Pack all unworn layers of the Weather Protective Clothing system into a backpack and add additional weight as necessary such that the backpack weighs 22.7 kg (50 lbs);
 - ii. Navigate on foot 300-500 m (328 - 547 yds) to an Observation Post;
 - iii. Remain stationary (seated, standing or lying down) at the Observation Post for one (1) hour, adding/removing layers of the Weather Protective Clothing system at their discretion. Layers added/removed during the test will be recorded; and
 - iv. Adjust the layers worn and navigate 300-500 m (328 - 547 yds) on foot to the finish point
- (c) Test 4C - Swimming - The participant will complete the following tasks:
 - i. The participant will wear the NSMW and CWMW layers under the Swimmer Suit;
 - ii. The participant will wear necessary swimming equipment for a cold weather swim including flotation, fins, mask, etc.; and
 - iii. The participant will swim 400-500 m (437-547 yds) or a minimum of twenty (20) minutes;
- (d) Water/Moisture Retention - Upon completion of the above tasks, the size large outer layers (WB, WBL, LMLI, SLW and SS layers) will be weighed. The garments will then be completely submerged in water for five (5) minutes, and then hung to dry in an indoor area (nominal 20°C) for a period of one (1) hour. The garments will then be weighed and compared to the pre-submerged weight to assess the ability of the garments to repel/expel water/moisture; and
- (e) The participant will then complete the Operational Task Effectiveness questionnaire at Appendix 6.

APPENDIX 2 TRIAL QUESTIONNAIRE - INITIAL FIT AND RANGE OF MOTION

Participant Number:	
Date:	
Weather Protective System:	

Participant Measurements	
Chest Circumference	_____ cm
Waist Circumference	_____ cm
Shoulder Width	_____ cm
Leg inseam	_____ cm
Hip Circumference	_____ cm
Back Length	_____ cm

Garments Issued (Size)	
WB Jacket	
WB Pant - HR	
WBL Jacket	
WBL Pant - LR	
SLW Jacket	
SLW Pant	
LMLI Jacket	
LMLI Pant	
SS Jacket	
SS Pant	
NSMW Shirt	
NSMW Pant	
CWMW Shirt	
CWMW Pant	

Scale	Participant Perception	Definition	Score
1	Completely Unacceptable	The Weather Protective Clothing did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.	0
2	Reasonably Unacceptable	The Weather Protective Clothing met the minimal requirements for the task and had some limitations that may prevent the operator from completing the task.	1
3	Barely Unacceptable	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with some limitations on range of use.	2
4	Borderline	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with only minor limitations on range of use.	3
5	Barely Acceptable	The Weather Protective Clothing met some of the requirements for the task and performed well in the hands of the operator with only minor limitations.	4
6	Reasonably Acceptable	The Weather Protective Clothing met most of the requirements for the task and performed well in the hands of the operator with minimal	5

		limitations.	
7	Completely Acceptable	The Weather Protective Clothing met or exceeded all requirements for the task and performed in every way expected by the operator.	6

TEST 1A - INITIAL FIT

NSMW – Next to Skin Moisture Wicking							
Rate the acceptability of the NSMW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	⊗				☺		
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 72						

CWMW – Cold Weather Moisture Wicking							
Rate the acceptability of the CWMW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	⊗				☺		
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 72						

LMLI – Lightweight Mid-Layer Light-Insulating							
Rate the acceptability of the LMLI for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	⊗				☺		
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						

Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 90						

SLW – Synthetic Loft, Windproof							
Rate the acceptability of the SLW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
							
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neck opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shirt arm length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shirt Body Length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arm opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pants closure at waist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pants length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leg opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closing/opening side leg zipper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Comfort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to pockets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initial mobility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	_____ out of 90						

SS – Soft Shell							
Rate the acceptability of the SS for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
							
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neck opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shirt arm length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shirt Body Length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Arm opening	<input type="checkbox"/>						
Adjustment of cuff tabs at wrist	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Adjustment of leg cuff (tightening/loosening)	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Accessibility to underarm zippers	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 102						

WBL – Waterproof, Breathable, Lightweight							
Rate the acceptability of the WBLW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Neck length	<input type="checkbox"/>						
Hood adjustment	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Adjustment of cuff tabs at wrist	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Accessibility to underarm zippers	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 114						

WB – Waterproof, Breathable							
Rate the acceptability of the WB for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Neck length	<input type="checkbox"/>						

Hood adjustment	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Adjustment of cuff tabs at wrist	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Suspender adjustment	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Accessibility to underarm zippers	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 120						

TEST 1B - RANGE OF MOTION

B - Combat Dress	
Test	Measurement
Apley's Scratch Test	
Left Arm Over Shoulder	B1 = _____ cm
Right Arm Over Shoulder	B2 = _____ cm
Trunk Forward Flexion	
Forward Flexion	B3 = _____ cm
Active Straight Leg Raise	
Left Leg	B4 = _____ cm
Right Leg	B5 = _____ cm
Stand and Reach (Vertical)	
Left Arm	B6 = _____ cm
Right Arm	B7 = _____ cm
Stand and Reach (Horizontal)	
Left Arm	B8 = _____ cm
Right Arm	B9 = _____ cm

C - Swimmer Suit	
Test	Measurement
Apley's Scratch Test	
Left Arm Over Shoulder	C1 = _____ cm
Right Arm Over Shoulder	C2 = _____ cm
Trunk Forward Flexion	
Forward Flexion	C3 = _____ cm
Active Straight Leg Raise	
Left Leg	C4 = _____ cm
Right Leg	C5 = _____ cm
Stand and Reach (Vertical)	

Left Arm	C6 = _____ cm
Right Arm	C7 = _____ cm
Stand and Reach (Horizontal)	
Left Arm	C8 = _____ cm
Right Arm	C9 = _____ cm

A1 - Combat Dress + LMLI + WBL		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	_____ cm	_____ /B1 x 5 = _____
Right Arm Over Shoulder	_____ cm	_____ /B2 x 5 = _____
Trunk Forward Flexion		
Forward Flexion	_____ cm	_____ /B3 x 5 = _____
Active Straight Leg Raise		
Left Leg	_____ cm	_____ /B4 x 5 = _____
Right Leg	_____ cm	_____ /B5 x 5 = _____
Stand and Reach (Vertical)		
Left Arm	_____ cm	_____ /B6 x 5 = _____
Right Arm	_____ cm	_____ /B7 x 5 = _____
Stand and Reach (Horizontal)		
Left Arm	_____ cm	_____ /B8 x 5 = _____
Right Arm	_____ cm	_____ /B9 x 5 = _____
SUM		A1 = _____ out of 45

A2 - NSMW + CWMW + SS		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	_____ cm	_____ /B1 x 5 = _____
Right Arm Over Shoulder	_____ cm	_____ /B2 x 5 = _____
Trunk Forward Flexion		
Forward Flexion	_____ cm	_____ /B3 x 5 = _____
Active Straight Leg Raise		
Left Leg	_____ cm	_____ /B4 x 5 = _____
Right Leg	_____ cm	_____ /B5 x 5 = _____
Stand and Reach (Vertical)		
Left Arm	_____ cm	_____ /B6 x 5 = _____
Right Arm	_____ cm	_____ /B7 x 5 = _____
Stand and Reach (Horizontal)		
Left Arm	_____ cm	_____ /B8 x 5 = _____
Right Arm	_____ cm	_____ /B9 x 5 = _____
SUM		A2 = _____ out of 45

A3 - NSMW + Combat Dress + SLW + WB		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	_____ cm	_____ /B1 x 5 = _____
Right Arm Over Shoulder	_____ cm	_____ /B2 x 5 = _____
Trunk Forward Flexion		

Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =
Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A3 = out of 45

A4 - NSMW + SS + WBL		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/B1 x 5 =
Right Arm Over Shoulder	cm	/B2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =
Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A4 = out of 45

A5 - NSMW + SS + SLW		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/B1 x 5 =
Right Arm Over Shoulder	cm	/B2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =
Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A5 = out of 45

A6 - Swimmer Suit + NSMW + CWMW		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/C1 x 5 =
Right Arm Over Shoulder	cm	/C2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/C3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/C4 x 5 =
Right Leg	cm	/C5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/C6 x 5 =
Right Arm	cm	/C7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/C8 x 5 =
Right Arm	cm	/C9 x 5 =
SUM		A6 = out of 45

SUMMARY

Test 1A - Initial Fit		
Layer	Score	Weighted Score
NSMW	out of 72	(Score /72) x 5 =
CWMW	out of 72	(Score /72) x 5 =
LMLI	out of 90	(Score /90) x 5 =
SLW	out of 90	(Score /90) x 5 =
SS	out of 102	(Score /102) x 5 =
WBL	out of 114	(Score /114) x 5 =
WB	out of 120	(Score /120) x 5 =
Total (Weighted Score)		out of 35
Test 1B - Range of Motion		
Layers	Score	Weighted Score
<u>Combat Dress + LMLI + WBL</u>	A1 =	(A1/45) x 10 =
<u>NSMW + CWMW + SS</u>	A2 =	(A2/45) x 10 =
<u>NSMW + Combat Dress + SLW + WB</u>	A3 =	(A3/45) x 10 =
<u>NSMW + SS + WBL</u>	A4 =	(A4/45) x 10 =
<u>NSMW + SS + SLW</u>	A5 =	(A5/45) x 10 =
<u>Swimmer Suit + NSMW + CWMW</u>	A6 =	(A6/45) x 10 =
Total (Weighted Score)		out of 60

Comments:

APPENDIX 3 TRIAL QUESTIONNAIRE - WASHED FIT AND RANGE OF MOTION

Participant Number:	
Date:	
Weather Protective System:	

Scale	Participant Perception	Definition	Score
1	Completely Unacceptable	The Weather Protective Clothing did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.	0
2	Reasonably Unacceptable	The Weather Protective Clothing met the minimal requirements for the task and had some limitations that may prevent the operator from completing the task.	1
3	Barely Unacceptable	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with some limitations on range of use.	2
4	Borderline	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with only minor limitations on range of use.	3
5	Barely Acceptable	The Weather Protective Clothing met some of the requirements for the task and performed well in the hands of the operator with only minor limitations.	4
6	Reasonably Acceptable	The Weather Protective Clothing met most of the requirements for the task and performed well in the hands of the operator with minimal limitations.	5
7	Completely Acceptable	The Weather Protective Clothing met or exceeded all requirements for the task and performed in every way expected by the operator.	6

TEST 1C - WASHED FIT

NSMW – Next to Skin Moisture Wicking							
Rate the acceptability of the NSMW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	☹			☺			☺
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 72						

CWMW – Cold Weather Moisture Wicking							
Rate the acceptability of the CWMW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	☹			☺			☺
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 72						

LMLI – Lightweight Mid-Layer Light-Insulating							
Rate the acceptability of the LMLI for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	☹			☺			☺
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 90						

SLW – Synthetic Loft, Windproof							
Rate the acceptability of the SLW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	☹			☺			☺
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						

Neck opening	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 90						

SS – Soft Shell							
Rate the acceptability of the SS for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
							
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neck opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shirt arm length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shirt Body Length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arm opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustment of cuff tabs at wrist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pants closure at waist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pants length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leg opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustment of leg cuff (tightening/loosening)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Comfort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to pockets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to underarm zippers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initial mobility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	_____ out of 102						

WBL – Waterproof, Breathable, Lightweight							
Rate the acceptability of the WBLW for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
							
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appearance of stitching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neck opening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neck length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hood adjustment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Adjustment of cuff tabs at wrist	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Accessibility to underarm zippers	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 114						

WB – Waterproof, Breathable							
Rate the acceptability of the WB for the following criteria. Consider issues such as ease of putting on and taking off as well as proper fit (i.e., leg length is appropriate and so on).	User Assessment						
	☹			☺			☺
	0	1	2	3	4	5	6
Ability to don/doff	<input type="checkbox"/>						
Appearance of material	<input type="checkbox"/>						
Appearance of stitching	<input type="checkbox"/>						
Neck opening	<input type="checkbox"/>						
Neck length	<input type="checkbox"/>						
Hood adjustment	<input type="checkbox"/>						
Shirt arm length	<input type="checkbox"/>						
Shirt Body Length	<input type="checkbox"/>						
Arm opening	<input type="checkbox"/>						
Adjustment of cuff tabs at wrist	<input type="checkbox"/>						
Pants closure at waist	<input type="checkbox"/>						
Pants length	<input type="checkbox"/>						
Leg opening	<input type="checkbox"/>						
Closing/opening side leg zipper	<input type="checkbox"/>						
Suspender adjustment	<input type="checkbox"/>						
Physical Comfort	<input type="checkbox"/>						
Accessibility to pockets	<input type="checkbox"/>						
Accessibility to underarm zippers	<input type="checkbox"/>						
Initial mobility	<input type="checkbox"/>						
Overall fit	<input type="checkbox"/>						
Score	_____ out of 120						

TEST 1D - RANGE OF MOTION

B - Combat Dress	
Test	Measurement
Apley's Scratch Test	
Left Arm Over Shoulder	B1 = _____ cm

Right Arm Over Shoulder	B2 = _____ cm
Trunk Forward Flexion	
Forward Flexion	B3 = _____ cm
Active Straight Leg Raise	
Left Leg	B4 = _____ cm
Right Leg	B5 = _____ cm
Stand and Reach (Vertical)	
Left Arm	B6 = _____ cm
Right Arm	B7 = _____ cm
Stand and Reach (Horizontal)	
Left Arm	B8 = _____ cm
Right Arm	B9 = _____ cm

C - Swimmer Suit	
Test	Measurement
Apley's Scratch Test	
Left Arm Over Shoulder	C1 = _____ cm
Right Arm Over Shoulder	C2 = _____ cm
Trunk Forward Flexion	
Forward Flexion	C3 = _____ cm
Active Straight Leg Raise	
Left Leg	C4 = _____ cm
Right Leg	C5 = _____ cm
Stand and Reach (Vertical)	
Left Arm	C6 = _____ cm
Right Arm	C7 = _____ cm
Stand and Reach (Horizontal)	
Left Arm	C8 = _____ cm
Right Arm	C9 = _____ cm

A1 - Combat Dress + LMLI + WBL		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	_____ cm	/B1 x 5 = _____
Right Arm Over Shoulder	_____ cm	/B2 x 5 = _____
Trunk Forward Flexion		
Forward Flexion	_____ cm	/B3 x 5 = _____
Active Straight Leg Raise		
Left Leg	_____ cm	/B4 x 5 = _____
Right Leg	_____ cm	/B5 x 5 = _____
Stand and Reach (Vertical)		
Left Arm	_____ cm	/B6 x 5 = _____
Right Arm	_____ cm	/B7 x 5 = _____
Stand and Reach (Horizontal)		
Left Arm	_____ cm	/B8 x 5 = _____
Right Arm	_____ cm	/B9 x 5 = _____
SUM		A1 = _____ out of 45

A2 - NSMW + CWMW + SS		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/B1 x 5 =
Right Arm Over Shoulder	cm	/B2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =
Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A2 = out of 45

A3 - NSMW + Combat Dress + SLW + WB		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/B1 x 5 =
Right Arm Over Shoulder	cm	/B2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =
Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A3 = out of 45

A4 - NSMW + SS + WBL		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/B1 x 5 =
Right Arm Over Shoulder	cm	/B2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =

Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A4 = out of 45

A5 - NSMW + SS + SLW		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/B1 x 5 =
Right Arm Over Shoulder	cm	/B2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/B3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/B4 x 5 =
Right Leg	cm	/B5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/B6 x 5 =
Right Arm	cm	/B7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/B8 x 5 =
Right Arm	cm	/B9 x 5 =
SUM		A5 = out of 45

A6 - Swimmer Suit + NSMW + CWMW		
Test	Measurement	Score
Apley's Scratch Test		
Left Arm Over Shoulder	cm	/C1 x 5 =
Right Arm Over Shoulder	cm	/C2 x 5 =
Trunk Forward Flexion		
Forward Flexion	cm	/C3 x 5 =
Active Straight Leg Raise		
Left Leg	cm	/C4 x 5 =
Right Leg	cm	/C5 x 5 =
Stand and Reach (Vertical)		
Left Arm	cm	/C6 x 5 =
Right Arm	cm	/C7 x 5 =
Stand and Reach (Horizontal)		
Left Arm	cm	/C8 x 5 =
Right Arm	cm	/C9 x 5 =
SUM		A6 = out of 45

SUMMARY

Test 1C - Washed Fit		
Layer	Score	Weighted Score
NSMW	out of 72	(Score /72) x 5 =
CWMW	out of 72	(Score /72) x 5 =
LMLI	out of 90	(Score /90) x 5 =

SLW	_____ out of 90	(Score _____ /90) x 5 = _____
SS	_____ out of 102	(Score _____ /102) x 5 = _____
WBL	_____ out of 114	(Score _____ /114) x 5 = _____
WB	_____ out of 120	(Score _____ /120) x 5 = _____
Total (Weighted Score)		_____ out of 35
Test 1D - Range of Motion		
Layers	Score	Weighted Score
<u>Combat Dress + LMLI + WBL</u>	A1 = _____	(A1/45) x 10 = _____
<u>NSMW + CWMW + SS</u>	A2 = _____	(A2/45) x 10 = _____
<u>NSMW + Combat Dress + SLW + WB</u>	A3 = _____	(A3/45) x 10 = _____
<u>NSMW + SS + WBL</u>	A4 = _____	(A4/45) x 10 = _____
<u>NSMW + SS + SLW</u>	A5 = _____	(A5/45) x 10 = _____
<u>Swimmer Suit + NSMW + CWMW</u>	A6 = _____	(A6/45) x 10 = _____
Total (Weighted Score)		_____ out of 60

Comments:

APPENDIX 4 TRIAL QUESTIONNAIRE - WET CONDITIONS

Participant Number:	
Date:	
Wet Weather System:	

Note garments worn at start of the test	
Combat Dress	
NSMW (Next to Skin Moisture Wicking)	
CWMW (Cold Weather Moisture Wicking)	
LMLI (Lightweight Mid-Layer Light Insulated)	
SLW (Synthetic Loft, Windproof)	
SS (Soft Shell)	
WB (Waterproof Breathable)	
WBL (Waterproof Breathable, Lightweight)	

Note garments added or removed during the test		
Garment	Added	Removed
Combat Dress		
NSMW (Next to Skin Moisture Wicking)		
CWMW (Cold Weather Moisture Wicking)		
LMLI (Lightweight Mid-Layer Light Insulated)		
SLW (Synthetic Loft, Windproof)		
SS (Soft Shell)		
WB (Waterproof Breathable)		
WBL (Waterproof Breathable, Lightweight)		

Scale	Participant Perception	Definition	Score
1	Completely Unacceptable	The Weather Protective Clothing did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.	0
2	Reasonably Unacceptable	The Weather Protective Clothing met the minimal requirements for the task and had some limitations that may prevent the operator from completing the task.	1
3	Barely Unacceptable	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with some limitations on range of use.	2
4	Borderline	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with only minor limitations on range of use.	3
5	Barely Acceptable	The Weather Protective Clothing met some of the requirements for the task and performed well in the hands of the operator with only minor limitations.	4
6	Reasonably Acceptable	The Weather Protective Clothing met most of the requirements for the task and performed well in the hands of the operator with minimal limitations.	5
7	Completely Acceptable	The Weather Protective Clothing met or exceeded all requirements for the task and performed in every way expected by the operator.	6

Tests 2A & 2B - Wet Conditions							
Rate the acceptability for each criteria.	User Assessment						
	⊖ 0	1	2	☹ 3	4	5	☺ 6
Ability to don/doff rain gear over issued boots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort during activities (too hot, too cold)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort after activities (dynamic to static)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air flow inside rain jacket with underarm zippers open	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Breathability of raingear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to block wind	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustment of fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to keep underlying garments (and yourself) dry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waterproof ability of seams and closures (i.e. zippers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise of raingear while performing tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to move during tasks (non-restrictive)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field of View with rain jacket hood up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall design features of rain gear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Physical Comfort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall usability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall performance of rain pants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall performance of rain jacket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	_____ out of 102						
Rate the compatibility of the raingear.	User Assessment						
	⊖ 0	1	2	☹ 3	4	5	☺ 6
Compatibility of the raingear worn with layers noted above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compatibility of raingear when worn with PPE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compatibility of rain jacket and helmet (hood up and over helmet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compatibility of raingear with other equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to vents/zippers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	_____ out of 30						
Total Score	_____ out of 132						
Weighted Score	(Total Score _____/132) x 100 = _____ out of 100						

Comments:

APPENDIX 5 TRIAL QUESTIONNAIRE - DRY CONDITIONS

Participant Number:	
Date:	
Weather Protective System:	

Note garments worn at start of the test	
Combat Dress	
NSMW (Next to Skin Moisture Wicking)	
CWMW (Cold Weather Moisture Wicking)	
LMLI (Lightweight Mid-Layer Light Insulated)	
SLW (Synthetic Loft, Windproof)	
SS (Soft Shell)	
WB (Waterproof Breathable)	
WBL (Waterproof Breathable, Lightweight)	

Note garments added or removed during the test		
Garment	Added	Removed
Combat Dress		
NSMW (Next to Skin Moisture Wicking)		
CWMW (Cold Weather Moisture Wicking)		
LMLI (Lightweight Mid-Layer Light Insulated)		
SLW (Synthetic Loft, Windproof)		
SS (Soft Shell)		
WB (Waterproof Breathable)		
WBL (Waterproof Breathable, Lightweight)		

Scale	Participant Perception	Definition	Score
1	Completely Unacceptable	The Weather Protective Clothing did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.	0
2	Reasonably Unacceptable	The Weather Protective Clothing met the minimal requirements for the task and had some limitations that may prevent the operator from completing the task.	1
3	Barely Unacceptable	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with some limitations on range of use.	2
4	Borderline	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with only minor limitations on range of use.	3
5	Barely Acceptable	The Weather Protective Clothing met some of the requirements for the task and performed well in the hands of the operator with only minor limitations.	4
6	Reasonably Acceptable	The Weather Protective Clothing met most of the requirements for the task and performed well in the hands of the operator with minimal limitations.	5
7	Completely Acceptable	The Weather Protective Clothing met or exceeded all requirements for the task and performed in every way expected by the operator.	6

Activity 3 - Dry Conditions							
Rate the acceptability for each criteria.	User Assessment						
	☹ 0	1	2	☺ 3	4	5	☺ 6
Ability to don/doff outer layers over issued boots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of adding or removing layers as necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort during activities (too hot, too cold)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort after activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air flow inside rain jacket with underarm zippers open	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Breathability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moisture wicking ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustment of fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to adjust garment with issued gloves on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise of garments while performing tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to move during tasks (non-restrictive)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall design features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall physical comfort (chaffing, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall usability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall performance of system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	out of 90						
Rate the compatibility of the raingear.	User Assessment						
	☹ 0	1	2	☺ 3	4	5	☺ 6
Compatibility of garments when worn with PPE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compatibility with other equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility to vents/zippers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	out of 18						
Total Score	out of 108						
Weighted Score	(Total Score ____/108) x 100 = ____ out of 100						

Comments:

**APPENDIX 6 TRIAL QUESTIONNAIRE - OPERATIONAL TASK
 EFFECTIVENESS**

Participant Number:	
Date:	
Weather Protective System:	

Note garments worn at start of the test	
Combat Dress	
NSMW (Next to Skin Moisture Wicking)	
CWMW (Cold Weather Moisture Wicking)	
LMLI (Lightweight Mid-Layer Light Insulated)	
SLW (Synthetic Loft, Windproof)	
SS (Soft Shell)	
WB (Waterproof Breathable)	
WBL (Waterproof Breathable, Lightweight)	

Note garments added or removed during the test		
Garment	Added	Removed
Combat Dress		
NSMW (Next to Skin Moisture Wicking)		
CWMW (Cold Weather Moisture Wicking)		
LMLI (Lightweight Mid-Layer Light Insulated)		
SLW (Synthetic Loft, Windproof)		
SS (Soft Shell)		
WB (Waterproof Breathable)		
WBL (Waterproof Breathable, Lightweight)		

Scale	Participant Perception	Definition	Score
1	Completely Unacceptable	The Weather Protective Clothing did not meet any requirements for the task and had severe limitations that would prevent the operator from completing the task.	0
2	Reasonably Unacceptable	The Weather Protective Clothing met the minimal requirements for the task and had some limitations that may prevent the operator from completing the task.	1
3	Barely Unacceptable	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with some limitations on range of use.	2
4	Borderline	The Weather Protective Clothing met some of the requirements for the task and performed in a manner that would permit the operator to complete the task with only minor limitations on range of use.	3
5	Barely Acceptable	The Weather Protective Clothing met some of the requirements for the task and performed well in the hands of the operator with only minor limitations.	4
6	Reasonably Acceptable	The Weather Protective Clothing met most of the requirements for the task and performed well in the hands of the operator with minimal limitations.	5
7	Completely	The Weather Protective Clothing met or exceeded all requirements for	6

	Acceptable	the task and performed in every way expected by the operator.	
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Test 4A - Operational Task Effectiveness & Test 4B - Observation Post Task							
Rate the acceptability for each criteria.	User Assessment						
	☹	☺				☺	
	0	1	2	3	4	5	6
Overhead reaching and grasping (ladder rungs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility through pant legs while climbing/descending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise of garment while climbing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snagging while ingress/egress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort during observing (sweating, too cold)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort during navigation (sweating, too cold)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical comfort during navigation (chaffing, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustment of openings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compressibility of garments (x 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repel/expel ability of garments (x 3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	_____ out of 75						
Weighted Score	(Total Score _____/75) x 100 = _____ out of 100						

Note garments worn at start of the test	
Swimmer Suit	
NSMW (Next to Skin Moisture Wicking)	
CWMW (Cold Weather Moisture Wicking)	

Test 4C - Swimming							
Rate the acceptability for each criteria.	User Assessment						
	☹	☺				☺	
	0	1	2	3	4	5	6
Ease of donning/doffing swimmers suit over layers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thermal comfort during swimming (sweating, too cold)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical comfort during swimming (chaffing, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility during tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjustment of openings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall bulk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Score	_____ out of 36						
Weighted Score	(Total Score _____/36) x 100 = _____ out of 100						

Comments:

ANNEX "F" - REQUISITION ON CONTRACT
 (Note: Will be applicable during the contract period)

REQUISITION ON CONTRACT (ROC) SAMPLE	
1. CONDITIONS	
ALL INVOICES, SHIPPING BILLS, AND PACKING SLIPS MUST SHOW THE FOLLOWING AGREEMENT REFERENCE NUMBERS:	
CONTRACT NUMBER :	ROC NUMBER :
TO: Contractor: Address:	DELIVERY DATE: BALANCE LEFT ON CONTRACT PRIOR TO THIS ROC (Applicable Taxes included): VALUE OF THIS REQUISITION ON CONTRACT (ROC) (Applicable Taxes included): BALANCE REMAINING ON THE CONTRACT (Applicable Taxes included):

2. REQUIREMENT

2.1 FOR THE SUPPLY OF EQUIPMENT, : The Contractor shall be paid firm unit prices in Canadian dollars, DDP Delivered Duty Paid (destination) Incoterms 2000, Applicable Taxes are extra. Freight charges to destination and all applicable Custom duties and Excise taxes must be included.

Item #	Item Description	Quantity	Firm Unit Price (as per Contract)	Total
				\$
				\$
				\$
				\$
Total cost of items				\$
Rush Shipping cost				\$
Applicable Taxes				\$
Total cost including Applicable Taxes				\$

DELIVERY DESTINATION(S) Delivery Duty Paid (destination) Incoterms 2000:

The Contractor shall not charge Canada for any costs exceeding this total price.

3. APPROVALS		
Project/Technical Authority:	Administrative Authority (Procurement):	Contracting Authority at PWGSC (For any ROC over \$400,000):
Name:	Name:	Name:
Signature:	Signature:	Signature:
Date:	Date:	Date:

ANNEX G

PERIODIC USAGE REPORT

Instructions for submission of Requisition on Contracts usage data. The Contractor must e-mail the information identified below in an electronic spreadsheet in the format below, to the Contracting Authority identified herein.

The report must include as a minimum the following:

- The contract number for which the data is submitted;
- The period for which the data has been accumulated (start date to end date);
- The start date and end date for the contract;
- Item description;
- Quantity ordered, Unit price;
- Value of individual ROCs; and
- The total spend per reporting period.

Contract	(Insert Contract #)	Start Date of Contract (DD/MM/YYYY)	End Date of Contract (DD/MM/YYYY)
Total Value to Date (\$)	Total Value for Reporting Period (\$)	Start Reporting Period (DD/MM/YYYY)	End Reporting Period (DD/MM/YYYY)
ROC Number	Item Description	Firm Unit Price, Quantity Ordered	Date of Delivery / Value of Order (not including GST/HST, if applicable)

Department	Total <u>Number</u> of all ROCs during <u>reporting period</u>	Total <u>Number</u> of all ROCs <u>to date</u> .	Total <u>Dollar Value</u> (\$) <u> of all ROCs</u> during <u>reporting</u> <u>period</u> .	Total <u>Dollar</u> <u>Value (\$\$)</u> <u>of all</u> <u>ROCs to date</u>

**ANNEX "H" to PART 5 - BID SOLICITATION
FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION**

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\)-Labour's](#) website.

Date: _____(YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Bidder certifies having no work force in Canada.
- A2. The Bidder certifies being a public sector employer.
- A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.

OR

- A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity](#) (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Bidder is not a Joint Venture.

OR

- B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)