

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 0A1 / Noyau 0A1
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 HIGH AND LOW FLOW CALIBRATORS		
Solicitation No. - N° de l'invitation W3931-130113/A	Date 2012-12-14	
Client Reference No. - N° de référence du client W3931-130113		
GETS Reference No. - N° de référence de SEAG PW-\$\$HN-313-61780		
File No. - N° de dossier hn313.W3931-130113	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-01-28		Time Zone Fuseau horaire Eastern Standard Time EST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Kelly, Ruth		Buyer Id - Id de l'acheteur hn313
Telephone No. - N° de téléphone (819) 956-3588 ()	FAX No. - N° de FAX () -	
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE BLDG BB104A 105 MONTGOMERY RD ATTN: RECEIPTS SUPERVISOR PETAWAWA Ontario K8H2X3 Canada		

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

Electrical & Electronics Products Division
11 Laurier St./11, rue Laurier
6B1, Place du Portage, Phase III
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

Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	HIGH FLOW CALIBRATORS AS PER ANNEX "A" ATTACHED.	W1910	I - 1	27	Each	\$	XXXXXXXXXXXX	See Herein	
2	LOW FLOW CALIBRATORS AS PER ANNEX "B" ATTACHED.	W1910	I - 1	27	Each	\$	XXXXXXXXXXXX	See Herein	
3	OPTION YEAR 1 - HIGH FLOW CALIBRATOR. ===== Valid From: _____ to _____ (To Be Filled at Contract Award).	W1910	I - 1	27	Each	\$	XXXXXXXXXXXX	See Herein	
4	OPTION YEAR 1 - LOW FLOW CALIBRATOR. ===== Valid From: _____ to _____ (To Be Filled at Contract Award).	W1910	I - 1	27	Each	\$	XXXXXXXXXXXX	See Herein	
5	OPTION YEAR 2 - HIGH FLOW CALIBRATOR. ===== Valid From: _____ to _____ (To Be Filled at Contract Award).	W1910	I - 1	27	Each	\$	XXXXXXXXXXXX	See Herein	

Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
6	OPTION YEAR 2 - LOW FLOW CALIBRATOR. ===== Valid From: _____ to _____ (To Be Filled at Contract Award).	W1910	I - 1	27	Each	\$	XXXXXXXXXXXXXX	See Herein	
7	OPTION YEAR 3 - HIGH FLOW CALIBRATOR. ===== Valid From: _____ to _____ (To Be Filled at Contract Award).	W1910	I - 1	27	Each	\$	XXXXXXXXXXXXXX	See Herein	
8	OPTION YEAR 3 - LOW FLOW CALIBRATOR. ===== Valid From: _____ to _____ (To Be Filled at Contract Award).	W1910	I - 1	27	Each	\$	XXXXXXXXXXXXXX	See Herein	

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PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Statement of Requirement

The contractor will be required to provide the goods in accordance with the technical requirements stated herein at Annexes "A" and "B".

2.1 Delivery Requirement

Delivery is requested to be completed by _____ .

2.2 Delivery Offered

While delivery is requested as indicated above, the best delivery that could be offered is_____.

2.3 Contractor Representatives

Name and telephone number of the person responsible for :

General enquiries

Name:

Telephone:

Facsimile:

E-mail:

Delivery follow-up

Name:

Telephone:

Facsimile:

E-mail:

3. Debriefings

After contract award, 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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

PART 2 - BIDDER INSTRUCTIONS

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 (2012-11-19) 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: sixty (60) days
Insert: ninety (90) calendar days

1.1 SACC Manual Clauses

SACC Reference	Section	Date
A9033T	Financial Capability	2012-07-16
B1000T	Condition of Material	2007-11-30
B4024T	No Substitute Products	2006-08-15

1.5 Technical Documentation

TECHNICAL/DESCRIPTIVE LITERATURE MUST BE SUBMITTED AS PART OF THE BID PACKAGE PRIOR TO THE BID CLOSING DATE. FAILURE TO COMPLY WILL RENDER YOUR BID NON-RESPONSIVE.

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.

3. Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) 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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

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.

PART 3 - BID PREPARATION INSTRUCTIONS

1. Bid Preparation Instructions

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

Section I: Technical Bid (2 hard copies)

Section II: Financial Bid (1 hard copies)

Section III: Certifications (1 hard copies)

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>). 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.

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.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Goods and Services Tax (GST) or Harmonized Sales Tax (HST) must be shown separately, if applicable.

1.1. Exchange Rate Fluctuation

The requirement does not provide for exchange rate fluctuation protection. Any request for exchange rate fluctuation protection will not be considered and will render the bid non-responsive.

Solicitation No. - N° de l'invitation

W3931-130113/A

Amd. No. - N° de la modif.

File No. - N° du dossier

hn313W3931-130113

Buyer ID - Id de l'acheteur

hn313

CCC No./N° CCC - FMS No/ N° VME

W3931-130113

1.2 Pricing Basis

The bidder must quote firm unit prices **including options** in Canadian dollars, DDP Delivered Duty Paid (destination), the Goods and Services Tax (GST) and/or the Harmonized Sales Tax (HST) extra, as applicable. Freight charges to destination and all applicable Custom duties and Excise taxes must be included, as applicable.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

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.

Evaluation Criteria

All bids must be completed in full and provide all of the information requested in the bid solicitation to enable full and complete evaluation.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

The following **Mandatory** factors will be taken into consideration in the evaluation of each bid:

Mandatory Certifications Required Precedent to Contract Award as specified in Part 5;
Technical compliance of Annexes "A" and "B".
Acceptance of terms and conditions as mentioned in the bid solicitation;
Completion of the proposal;

1.2 Financial Evaluation

The following **Mandatory** factors will be taken into consideration in the evaluation of each bid:

Compliance with Pricing Basis;

The Bid price will be determined by the Sum of the items (including options) total price (unit price x qty.);

1.3 Conditions/Certifications Precedent to Contract

Federal Contractors Program as specified in Part 5;

2. Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price on an aggregate basis including options will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and related documentation to be awarded a contract. Canada will declare a bid non-responsive if the required certifications and related documentation are not completed and submitted as requested.

Compliance with the certifications bidders provide to Canada is subject to verification by Canada during the bid evaluation period (before award of a contract) and after award of a contract. The Contracting Authority will have the right to ask for additional information to verify bidders' compliance with the certifications before award of a contract. The bid will be declared non-responsive if any certification made by the Bidder is untrue, whether made knowingly or unknowingly. Failure to comply with the certifications, to provide the related documentation or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

1. Mandatory Certifications Required Precedent to Contract Award

1.1 Code of Conduct and Certifications - Related documentation

- 1.1.1** By submitting a bid, the Bidder certifies, for himself and his affiliates, to be in compliance with the Code of Conduct and Certifications clause of the Standard instructions. The related documentation hereinafter mentioned will help Canada in confirming that the certifications are true. By submitting a bid, the Bidder certifies that it is aware, and that its affiliates are aware, that Canada may request additional information, certifications, consent forms and other evidentiary elements proving identity or eligibility. Canada may also verify the information provided by the Bidder, including the information relating to the acts or convictions specified herein, through independent research, use of any government resources or by contacting third parties. Canada will declare non-responsive any bid in respect of which the information requested is missing or inaccurate, or in respect of which the information contained in the certifications is found to be untrue, in any respect, by Canada. The Bidder and any of the Bidder's affiliates, will also be required to remain free and clear of any acts or convictions specified herein during the period of any contract arising from this bid solicitation.

Bidders who are incorporated, including those bidding as a joint venture, must provide with their bid or promptly thereafter a complete list of names of all individuals who are currently directors of the Bidder. Bidders bidding as sole proprietorship, including those bidding as a joint venture, must provide the name of the owner with their bid or promptly thereafter. Bidders bidding as societies, firms, partnerships or associations of persons do not need to provide lists of names. If the required names have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

Canada may, at any time, request that a Bidder provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification Form - PWGSC-TPSGC 229) (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>) for any or all individuals aforementioned within the time specified. Failure to provide such Consent Forms within the time period provided will result in the bid being declared non-responsive.

2. Additional Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

2.1 Federal Contractors Program - Certification

Federal Contractors Program - over \$25,000 and below \$200,000

Suppliers who are subject to the Federal Contractors Program (FCP) and have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive federal government contracts over the threshold for solicitation of bids as set out in the Government Contracts Regulations. Suppliers may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

The Bidder, or, if the Bidder is a joint venture the member of the joint venture, certifies its status with the FCP, as follows:

The Bidder or the member of the joint venture

- (a) ☐ is not subject to the FCP, having a workforce of less than 100 full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada;
- (b) ☐ is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c. 44;
- (c) ☐ is subject to the requirements of the FCP, having a workforce of 100 or more full-time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, having not bid on requirements of \$200,000 or more;
- (d) ☐ has not been declared an ineligible contractor by HRSDC, and has a valid certificate number as follows: _____.

Further information on the FCP is available on the HRSDC Web site.

Signature

Date

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Statement of Requirement

The contractor will be required to provide the goods in accordance with the technical requirements stated herein at Annexes "A" and "B".

2.1 SACC Manual Clauses

SACC Reference	Section	Date
B1501C	Electrical Equipment	2006-06-16
B7500C	Excess Goods	2006-06-16

2.2 Optional Goods

The Contractor grants to Canada the irrevocable option to acquire the goods described at Annexes "A" and "B" of the Contract under the same conditions and at the prices stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, in whole or in part, through a contract amendment.

The Contracting Authority may exercise the option once a year for the full quantity of twenty-seven (27) of each High and Low Flow calibrators over three (3) years by sending a written notice to the Contractor.

Nothing contained in this Contract shall require the Minister to exercise the option(s) and the exercise of the option(s) is at the sole discretion of the Minister.

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>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2012-11-19), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

3.2 SACC Manual Clauses

SACC Reference	Section	Date
C2800C	Priority Rating	2011-05-16
C2801C	Priority Rating - Canadian Contractors	2011-05-16

4. Term of Contract

4.1 Duration of Contract

The contract duration is 3 years from contract award date to_____

4.2 Delivery Date

All the deliverables must be received within _____ weeks after receipt of order.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Ruth Kelly
Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Logistics, Electrical, Fuel and Transportation Directorate
"HN" Division
7B3, Place du Portage, Phase III
11 Laurier Street
Gatineau, QC, K1A 0S5

Telephone: (819) 956-3588
Facsimile: (819) 953-4944
E-mail address: ruth.kelly@pwgsc-tpsgc.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.

5.2 Contractor's Representative

Name and telephone number of the person responsible for:

General Enquiries

Name: will be inserted at contract
 Telephone: will be inserted at contract
 Facsimile: will be inserted at contract
 E-mail: will be inserted at contract

Delivery Follow-up

Name: will be inserted at contract
 Telephone: will be inserted at contract
 Facsimile: will be inserted at contract
 E-mail: will be inserted at contract

6. Payment

6.1 Basis of Payment

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 the contract. Customs duties are included, and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

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.

6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

6.3 SACC Manual Clauses

SACC Reference	Section	Date
G1005C	Insurance	2008-05-12
H1001C	Multiple Payments	2008-05-12

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 address shown on page 1 of the Contract for certification and payment.

 National Defence Headquarters
 MGen George R. Pearkes Building
 101 Colonel By Drive
 Ottawa, ON, K1A 0K2
 Attention: Scott Serafin / DIL Proc 5,
 Health Services Procurement - Room 107-05
 - (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

 Department of Public Works and Government Services
 "HN" Division
 7B3 Place du Portage, Phase III
 11 Laurier Street
 Gatineau, QC
 K1A 0S5
 Attention: Ruth Kelly

8. Certifications

- 8.1 Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation 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.

9. Applicable Laws

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

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) 2010 A (2012-11-19) General Conditions - Goods (Medium Complexity);
- (c) Annexes "A" and "B, Statement of Requirement;
- (d) the Contractor's bid dated _____ (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award: " , as clarified on _____ " or " , as amended on _____ " and insert date(s) of clarification(s) or amendment(s)*)

11. Defence Contract

SACC Manual clause A9006C (2012-07-16) Defence Contract

12. SACC Manual Clauses (Delivery)

SACC Reference	Section	Date
D3010C	Dangerous Goods/Hazardous Products	2012-07-16
D9002C	Incomplete Assemblies	2007-11-30

12.1 Shipping Instructions - Delivery at Destination

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

- (a) Delivered Duty Paid (DDP) (CFB Petawawa) Incoterms 2000 for shipments from a commercial contractor.

Annex "A"**STATEMENT OF REQUIREMENT
HIGH FLOW DRY CALIBRATOR**

National Defence Force Health Protection requires a portable, soapless electronic Primary Standard Calibrator to be used in military field operations in all environments. The function of the High Flow calibrator is: to allow fast, accurate calibration of personal air samplers and other volumetric industrial hygiene instruments.

The High flow calibrator is to be field friendly, lightweight and of rugged design and construction. It is to be easily maintained and allow for efficient transport. The calibrator accessories should be designed and constructed of materials to allow for thorough cleaning. The calibrator must be a true "Primary Calibrator" designed for the Occupational Health and safety industry. Laboratory accuracy must be certified by NIST through the NVLAP and backed by ISO 17025 accreditation, ANSI Z-540, and NIST handbook 150.

The High flow calibrator must be able to be integrated with personal air sampling pumps and other volumetric instruments currently used by DND FHP such as the SKC legacy pump. The calibrator is to be supplied with the following accessories, battery, 1 meter RS-232 cable, multi-plug charger (100-240V), leak test caps (2), operating software (windows compatible), hardened carry case and RS-232 port or USB to RS232 adapter.

MANDATORY CRITERIA

		Met	Not Met
M1	The high flow calibrator must provide a flow range between 300 to 30,000 ccm		
M2	The weight of the high flow calibrator with battery in operational mode must be less than 1 kg.		
M3	The accuracy of the high flow calibrator must be + or- 1.0% and standardized to + or – 1.2%.		
M4	The calibrator must be provided for selectable measurement units by the user for: Volumetric flow- mL/min, L/min, cc/min, cf/min		
M5 A	User selectable measurement units for Volumetric flow must be illustrated in mL/min, L/min, cc/min, cf/min		
M5 B	User selectable measurements units for Standardized Flow must be illustrated in sL/min, sL/min, scc/min, scf/min		
M6	User selectable measurement units on pressure must be in mmHg, PSI, kPa		
M7	User selectable ambient temperature must be in deg C, deg F		
M8	Reading styles must include single (manual), continuous or burst, with averaging user-selectable from 1-100 measurements		
M9	The calibrator must be equipped with suction and pressure flow modes, with pressure or suction fittings equipped with a ¼ " ID Hose Barb		
M10	The calibrator display must be backlit, graphical LCD (or equivalent)		
M11	Battery operational time must be a minimum of 2 hours with backlight on		
M12	Hard Protector/carry case with custom foam (or similar padding), fits 1 calibrator with accessories		

Annex "B"**STATEMENT OF REQUIREMENT
LOW FLOW DRY CALIBRATOR**

National Defence Force Health Protection requires a portable, soapless electronic Primary Standard Calibrator to be used in military field operations in all environments. The function of the low Flow calibrator is: to allow fast, accurate calibration of personal air samplers and other volumetric industrial hygiene instruments.

The low flow calibrator is to be field friendly, lightweight and of rugged design and construction. It is to be easily maintained and allow for efficient transport. The calibrator accessories should be designed and constructed of materials to allow for thorough cleaning. The calibrator must be a true "Primary Calibrator" designed for the Occupational Health and safety industry. Laboratory accuracy must be certified by NIST through the NVLAP and backed by ISO 17025 accreditation, ANSI Z-540, and NIST handbook 150.

The low flow calibrator must be able to be integrated with personal air sampling pumps and other volumetric instruments currently used by DND FHP such as the SKC legacy pump. The calibrator is to be supplied with the following accessories, battery, 1 meter RS-232 cable, multi-plug charger (100-240V), leak test caps (2), operating software (windows compatible), hardened carry case and RS-232 port or USB to RS232 adapter.

MANDATORY CRITERIA			
		Met	Not Met
M1	The low flow calibrator must provide a flow range between 5 to 500 ccm		
M2	The weight of the low flow calibrator with battery in operational mode must be less than 1 kg.		
M3	The accuracy of the low flow calibrator must be + or- 1.0% and standardized to + or – 1.2%.		
M4	The calibrator must be provided for selectable measurement units by the user for: Volumetric flow- mL/min, L/min, cc/min, cf/min		
M5 A	User selectable measurement units for Volumetric flow must be illustrated in mL/min, L/min, cc/min, cf/min		
M5 B	User selectable measurements units for Standardized Flow must be illustrated in sL/min, sL/min, scc/min, scf/min		
M6	User selectable measurement units on pressure must be in mmHg, PSI, kPa		
M7	User selectable ambient temperature must be in deg C, deg F		
M8	Reading styles must include single (manual), continuous or burst, with averaging user-selectable from 1-100 measurements		
M9	The calibrator must be equipped with suction and pressure flow modes, with pressure or suction fittings equipped with a ¼ " ID Hose Barb		
M10	The calibrator display must be backlit, graphical LCD (or equivalent)		
M11	Battery operational time must be a minimum of 2 hours with backlight on		
M12	Hard Protector/carry case with custom foam (or similar padding), fits 1 calibrator with accessories		