

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 1T3
Bid Fax: (902) 496-5016

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 SODA BLAST EQUIPMENT	
Solicitation No. - N° de l'invitation W355B-141426/A	Date 2013-10-16
Client Reference No. - N° de référence du client W355B-14-1426	
GETS Reference No. - N° de référence de SEAG PW-\$HAL-503-9104	
File No. - N° de dossier HAL-3-71123 (503)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-11-26	Time Zone Fuseau horaire Atlantic Standard Time AST
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: Forward (HAL), LeeAnne	Buyer Id - Id de l'acheteur hal503
Telephone No. - N° de téléphone (902) 496-5070 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE FMF CAPE SCOTT, HMCS DOCKYARD BUILDING D200, DOOR 13 HALIFAX NOVA SCOTIA B3K 5X5 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
Acquisitions
1713 Bedford Row
Halifax, N.S./Halifax, (N.É.)
B3J 3C9

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. Security Requirement

There is no security requirement associated with this bid solicitation.

2. Requirement

Department of National Defense (DND), Fleet Maintenance Facility Cape Scott (FMFCS) have a requirement for the supply, start-up and training of a new Grit Blast System, including but not limited to the following: Abrasive Blast Room Enclosure (Booth), Dust Collector and Blast Media Reclamation System. This project will be in Department of National Defense (DND) Fleet Maintenance Facility (FMF) Cape Scott, HMC Dockyard, CFB Halifax, Building D-175. On-site visit and review of the design drawing package shall be provided by FMF Cape Scott, Industrial Engineering Division (IED) representative. All dimensions are in Metric and Imperial units of measure. The Contractor must provide the items detailed under the Requirement at Annex A.

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 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 2013-06-01 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) days

1.1 SACC Manual Clauses

B1000T	Condition of Material	2007-11-30
B3000T	Equivalent Products	2006-06-16
B4057T	Technical Publications - Manuals	2008-05-12

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.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

2.1 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least 10 days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

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 Nova Scotia.

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 Applicable Taxes must be shown separately.

1.1 Exchange Rate Fluctuation

C3011T Exchange Rate Fluctuation 2010-01-11

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.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

Proposals which do not meet all of the Mandatory Technical Requirements at the bid closing will be considered to be non-compliant and will be given no further consideration. The evaluation will only be based on the information provided with the bid. References to Internet sites or information that is not included will not be evaluated.

The Mandatory Technical Criteria are:

A) The Bidder must provide equipment literature to prove that the equipment complies with each and every one of the Mandatory Technical Specifications specified in Annex A, Requirement. Simply stating "yes" or "compliant" will not be sufficient for the purpose of this evaluation. Failure to meet the requirements of all of the Mandatory Technical Specifications will result in the bid being declared as non-compliant.

Proof can be provided in the form of equipment literature, brochure, engineering drawing, specification of the product or written narrative which clearly demonstrates how the proposed goods meet each and every one of the Mandatory Technical Specifications.

The Bidder must reference the page number and section of the submitted literature which proves their proposal complies with each and every one of the Mandatory Technical Specifications in Annex A.

1.2 Financial Evaluation

A0220T Evaluation of Price 2013-04-25

2. Basis of Selection

A0069T Basis of Selection 2007-05-25

A bid must comply with all requirements of the bid solicitation to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and documentation 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 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 with this request will also render the bid non-responsive or will constitute a default under the Contract.

1. Mandatory Certifications Required Precedent to Contract Award**1.1 Code of Conduct and Certifications - Related documentation**

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

1.2 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" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Human Resources and Skills Development Canada (HRSDC) - Labour's 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" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

The Contractor must provide the items detailed under the Requirement at Annex 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>) issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A 2013-04-25, General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Delivery Date

All the deliverables are requested on or before 4 - 6 weeks, ARO.

4.2 Shipping

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

Delivered Duty Paid (DDP) FMF Cape Scott, Maritime Forces Atlantic, Halifax, N.S. Incoterms 2000 for shipments from a commercial contractor.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Lee Anne Forward
Title: Supply Specialist, Public Works and Government Services Canada
Address: 1713 Bedford Row, Halifax, NS B3J 1T3
Telephone: (902)496-5070
Facsimile: (902)496-5016
E-mail address: leeanne.forward@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 Technical Authority

The Technical Authority for the Contract is: *(To be determined at Contract Award)*

The Technical Authority named above 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.

5.3 Contractor's Representative

Name: _____

Title: _____

Address: _____

Telephone: _____

Fax: _____

Email: _____

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 a firm price, as specified in Annex B, for a cost of \$ _____ (insert the amount 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.

6.2 Limitation of Price

C6000C Limitation of Price 2011-05-16

6.3 Single Payment

H1000C Single Payment 2008-05-12

6.4 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 two (2) copies 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.

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.

Each invoice must be supported by:

- a. a copy of time sheets to support the time claimed;
- b. a copy of the release document and any other documents as specified in the Contract;
- c. a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses;

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.

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.

8. Certifications

8.1 Compliance

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 Nova Scotia.

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 2010A General Conditions - Goods (Medium Complexity) (2013-04-25);
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) the Contractor's bid dated _____ (*insert date of bid*).

11. Defence Contract

A9006C Defence Contract 2012-07-16

12. SACC Manual Clauses

B1501C	Electrical Equipment	2006-06-16
B4058C	Publications - Specifications and Standards	2008-05-12
G1005C	Insurance	2008-05-12
D2000C	Marking	2007-11-30

ANNEX A

REQUIREMENT

Mandatory Specifications:

Please indicate where in your bid the following mandatory specifications can be found by filling in the corresponding page number to your bid document in spaces provided below.

REQUIREMENT

Department of National Defense (DND), Fleet Maintenance Facility Cape Scott (FMFCS) have a requirement for the supply, start-up and training of a new Grit Blast System, including but not limited to the following: Abrasive Blast Room Enclosure (Booth), Dust Collector and Blast Media Reclamation System. This project will be in Department of National Defense (DND) Fleet Maintenance Facility (FMF) Cape Scott, HMC Dockyard, CFB Halifax, Building D-175. On-site visit and review of the design drawing package shall be provided by FMF Cape Scott, Industrial Engineering Division (IED) representative. All dimensions are in Metric and Imperial units of measure.

Attached drawings are for reference only.

Mandatory Specifications

Canada reserves the right to verify that all of the mandatory specifications are met prior to the award of contract. This verification shall include technical information from a submitted Equipment Manufacturers brochure. Technical information that cannot be verified from the submitted brochure must have an accompanying letter signed by a Professional Engineer employed by the Equipment Manufacture verifying the technical information.

Specifications found not to be meet this requirement will result in a non-compliant bid, and if found after contract award may result in termination of contract.

State compliance Yes or No and provide page number and technical information.

1.0 Abrasive Blast Room Enclosure:

1.1 INTERIOR DIMENSIONS: 7315.2mm (24'-0") long by 4876.8mm (16'-0") wide by 3657.6mm (12'-0") high. Exterior dimensions are limited based on the existing building size. See drawings for space available for booth and ducting. **Page No:**_____

1.2 **CONSTRUCTION:** The structure shall be supplied in sections with simple bolt-together construction. The enclosure shall stand by it's own structural support with no connections to the surrounding facilities. **Page No:_____**

1.3 **VENTILATION VELOCITY:** Average 0.3 m/s(60 FPM) cross draft ventilation in the abrasive blast booth, as per ANSI/AIHA Z9.4 -latest edition. **Page No:_____**

1.4 **WALLS:** Minimum 10 gauge galvanized steel construction. The structure is to be fully sealed, dust tight, and all steel. Internally, the enclosure shall not have areas, other than the floor, where airborne media or dust may be captured. **Page No:_____**

1.5 **CEILING:** Ceiling panels are to be fabricated from a minimum of 10 gauge galvanized steel. **Page No:_____**

1.6 **WORKDOORS:** Provide two swinging doors at one end of the enclosure. Resilient rubber strips are to be provided to prevent leakage when doors are in the closed position. A safety interlock switch meeting OSHA requirements is required for the work doors, prohibiting nozzle operation if the doors are not fully closed. **Page No:_____**

1.7 **PERSONNEL DOOR:** One personnel access door is to be provided on the left side of the booth . (Standing in front of the booth, looking in) Minimum door size is 812mm (2'-8") x 2032mm (6'-8"). A safety interlock switch meeting OSHA requirements is required for the man door, prohibiting nozzle operation if the door is not fully closed. Door requires fitted panic hardware, viewer and luminous exit signs. **Page No:_____**

1.8 **LIGHTING:** Lighting is to be fluorescent, ceiling and wall mounted in dust-tight enclosures, serviceable from outside the room. Fixtures shall be of such material as to not be damaged by the blasting being done within the enclosure. **Page No:_____**

1.9 **AIRFLOW:** Exhauster suction, through the dust collector and ducting network, must create ½" negative pressure in the blast room to ensure no dust enters the main building area. Exhaust air and inlet air shall be designed to develop cross draft airflow. Exhaust outlets are to be baffled to permit only carryout of dust-laden air. Inlets and outlets must be proportionately sized to ensure proper air volume and flow. Air is to be re-circulated from the dust collector back through the room. The intake plenum shall be located at the rear of the booth with one exhaust outlet on either side of the front of the booth and a plenum on the ceiling at the front. See drawings for locations. **Page No:_____**

1.10 **Rubber Curtains:** The interior walls of the blast room shall be protected by 3.175mm (1/8") thick black neoprene rubber curtains. The rubber curtains shall be the full height of the booth with areas removed for the lights on the walls. **Page No:_____**

2.0 Work Car and Track System:

2.1) An electric powered work car and track system is required to convey parts into and out of the blasting enclosure with the following requirements:

- a.) WORKCAR DIMENSION: 1828.8mm (6') wide by 3048mm (10') long.
Page No: _____
- b.) LOAD CAPACITY: 4535 kg (10,000 lbs)
Page No: _____
- c.) CONSTRUCTION: Heavy structural steel with solid steel top plate. The top surface of the plate is to be covered with an abrasive resistant sheet coating.
Page No: _____
- d.) TRACK: The track assembly extends the length of the blast enclosure, to a distance of approximately 6096mm (20'-0") outside the enclosure.
Page No: _____
- e.) DRIVE SYSTEM: The work car unit is to be powered in and out of the blast room by an explosion proof electric motor.
Page No: _____

3.0 Blast Media Recovery System:

3.1 A suitable system is to be provided for the pneumatic recovery of Aluminum oxide or similar medias with the following requirements:

- a.) RECOVERY OPERATION: Media is swept through the hinged grating into the recovery area, and is moved pneumatically to the cyclone re-claimer. The transfer pipe is to be fabricated from suitable grade steel for the conveying of aluminum oxide or similar medias. **Page No:** _____
- b.) GRATING: The recovery pit is to be covered with steel grating, designed for 3174 kg/m² (650lb/ft²) uniform load capacity. This grating is to be supplied with a hinged side to allow for the grating to be leaned up against the side or back wall of the booth for access to the pit. **Page No:** _____

4.0 Reclaim Separation System

4.1 The reclaim separation system must be a cyclone type system, capable of retaining a minimum of 80% of original sized media by weight. Components shall be fabricated from minimum 12-gauge steel. Abrasive resistant lining shall be used in all areas where wear will occur. A 0.509m³ (18 ft³) storage hopper shall be provided. **Page No:** _____

5.0 Reclaim System Dust Collection Equipment

5.1 A cartridge type, reverse pulse style dust collector, designed and built for continuous duty operation and heavy-duty construction to be supplied. The fan shall be mounted on the dust collector. Dust collector shall be provided with a differential pressure gauge and an adjustable timer. Access doors and removable panels shall be provided for easy maintenance and filter change. **Page No:** _____

6.0 Pressure Blast Machine

6.1 The pressure blast equipment must be able to be used with Baking soda and other similar medias with the following requirements:

- a.) **PRESSURE VESSEL:** 0.283m3 (10ft3) capacity pressure vessel. Must be ASME approved and certified for a minimum 862 kPa (125psi) operating pressure. The pressure vessel is required to have a Nova Scotia CRN. Maintenance access and legs for stationary mounting on the floor must be provided.
Page No: _____
- b.) **MEDIA FLOW VALVE:** The media flow valve shall be adjustable for precise, even flow of any abrasive media with compressed air.
Page No: _____
- c.) **ABRASIVE CUT-OFF SWITCH:** A switch is required on the blast hose to cut off media flow only. This will allow the operator to blow off work pieces.
Page No: _____
- d.) **BLAST HOSE:** The hose is to be rated at a minimum working pressure of 1207kPa (175 psig). The hose lining should be carbon-black impregnated rubber for static dissipation. Hose couplings shall be externally mounted.
Page No: _____
- e.) **BLAST NOZZLE:** One 9.525mm (3/8") ID boron or tungsten carbide nozzle is to be provided with the blast machine.
Page No: _____
- f.) **OPERATOR REMOTE CONTROLS:** The operator remote controls must be pneumatic and OSHA approved. Controls are to prohibit blasting when operator is not squeezing the handle.
Page No: _____

7.0 Operator Protective Equipment

7.1 **SUPPLIED AIR RESPIRATOR (HELMET):** To be manufactured in conformance with and the approval of NIOSH. The helmet is to be fitted with a cape, a removable inner collar, an adjustable headband and uniform air distribution. The view window should be large with replacement tear away outer lenses. **Page No:** _____

7.2 **BREATHING AIR FILTER:** A filter is required for removing moisture and particles from the supplied air stream. A pressure regulator and a pressure relief valve are to be provided. **Page No:** _____

7.3 **AIR CONDITIONER:** A cool air tube is required for air going into the hood. This unit must have NIOSH approvals as part of the full system and with the same approval numbers. The adjustment control for cool air to the helmet shall be located within easy reach of the operator. **Page No:** _____

7.4 **CARBON MONOXIDE MONITOR:** A Carbon monoxide monitor is required to detect the presence of CO in the breathing air supply. Monitor shall be set at 10 PPM in accordance with OSHA 1910.134 (d) (1) and (2). It shall be panel mounted and include an audible alarm, warning lights and calibration kit. **Page No:** _____

7.5 **NOISE LEVELS:** Maximum noise levels generated by the respirator inside the helmet must not exceed 80 dBA. **Page No:** _____

8.0 Dust Collection Equipment

8.1 The dust collector will be located within a building on a Mezzanine level. A low profile is required. See drawings for location and available space. It shall be a dry cartridge type system with continuous online cleaning by high velocity compressed air jets. It shall be designed and built for continuous duty operation with the following requirement:

a.) **CFM:** 5437.44 L/s (11, 520 cfm@ 10" w.g.) **Page No:** _____

8.2 **ASSEMBLY:** The collector shall be partially assembled prior to shipping. Major subassemblies are to include; filter section, hopper/leg section, and the fan. Lifting points are to be provided for handling and set up. The major subassemblies include the filter section, the hopper and leg components, and the exhaustor. **Page No:** _____

8.3 **CONSTRUCTION:** A minimum of 10 gauge steel, formed and reinforced to maintain structural integrity to a minimum 25" w. g. shall be used. All wiring, air piping, solenoid and diaphragm valves are to be mounted externally. Inlet and outlets shall be flanged for ease of ducting connection. Inlets shall be 406mm (16") diameter to maintain dust-Conveying velocities in the main duct as required by SMACNA. The inlet shall reduce the velocity of media entering the dust collector to increase cartridge life. Abrasive resistant inlet adapters are required. **Page No:** _____

8.4 **CARTRIDGES:** Cartridge cleaning is to be "on line" by reverse pulse flow of air or approved alternative. Filter media efficiency is to be a minimum of 99.9% for 0.5-micron size particles. Air shall be re-circulated back into the abrasive blast booth. Appropriate filtration is required. Filter cartridges shall be of face loading type media. **Page No:** _____

8.5 DIFFERENTIAL PRESSURE GAUGE: A differential pressure gauge is required to monitor the pressure between the dirty and clean side of the filters. **Page No:**_____

8.6 ADJUSTABLE TIMER: An adjustable timer for controlling the "On" and "Off" time of the air pulse, enclosed in a NEMA-4 control panel, is required. **Page No:**_____

8.7 FILTER ACCESS DOORS: Access doors are required for filter service and maintenance. **Page No:**_____

8.8 DUST DRUMS: Two 208L (55-gallon) drums and drum lid packages are to be provided. **Page No:**_____

8.9 EXHAUSTER: Floor mounted, single width, single inlet blower. Provide base isolation and flanged fan silencer on outlet. Flanged inlets and outlets shall be provided. Fans shall be constant v-belt drive with 1.3 service factor with opposed blade outlet damper and outlet silencer. Fan shall have premium efficiency TEFC motor. **Page No:**_____

8.10 ABRASIVE RESISTANT INLETS: Abrasive resistant inlets suitable for baking soda shall be provided. **Page No:**_____

8.11 NOISE LEVELS: Maximum noise levels generated by the dust collector assembly, including fan, shall not be higher than stated by the Occupational Health and Safety Act for indoor applications without requiring hearing protection. A sound enclosure or suppression system shall be priced as an option if required. Noise generated from the fan shall be 80dBA or below. **Page No:**_____

9.0 Electrical Control Panel

9.1 The control panel is to be designed and manufactured in accordance with appropriate NFPA 79 and NEMA 12 and 13 specifications. All motor starters, over current protection With breakers or HRC fuses and pushbutton controls for supplied equipment are to be included in the control panel. All control buttons, indicator lights, and meters shall be mounted in the enclosure door, and shall be labelled for their particular function. Panel is to be mounted to wall of room, in location indicated by FMF Cape Scott IED designated representative. **Page No:**_____

9.2 PRIMARY VOLTAGE: 208 V, 3 ph, 60 Hz, a step down transformer shall be supplied for a fused, control circuit. **Page No:**_____

9.3 MOTOR STARTERS: Provide starters for all motors. **Page No:**_____

9.4 REDUCED VOLTAGE STARTER: Provide reduced voltage auto-transformer type starters for motors 10 hp and larger. **Page No:**_____

9.5 **MOTORIZED DAMPER TERMINAL:** Provide terminal in control panel for motorized duct dampers. Motorized dampers shall fully open on start up of fan. **Page No:**_____

9.6 **ELAPSED TIME INDICATOR:** An hour meter is required to indicate recovery system operation and for determining maintenance schedules. **Page No:**_____

9.7 **LIGHTING:** Booth lighting shall be powered from this control panel. Provide breaker for lighting sized as per manufacturer's recommendation. **Page No:**_____

9.8 **EMERGENCY STROBES AND EMERGENCY STOP:** An emergency stop button shall be provided within the booth that will stop the fan when depressed. The booth shall also be supplied with strobe lights on the exterior of the booth above the man door. A green strobe shall activate when fan is in operation and a red strobe shall activate when the emergency stop button has been depressed. (The green strobe shall turn off when the red strobe is activated).

Page No:_____

9.9 **GENERAL PROVISIONS:** The electrical panel should be completely preassembled and wired. All wires are to be identified and marked at both ends. Two copies of the wiring schematic and the overload heater list are to be provided inside the panel door, with two more copies provided at system delivery. **Page No:**_____

10.0. Electrical Certification: The equipment shall be certified by an acceptable Electrical Certification Organization. The following Certification Organizations are acceptable. The electrical control must bear a label from one of these organizations in order to be recognized as approved. Identify which Organization shall be used:**Page No:**_____

- a.) Canadian Standards Association (CSA),
- b.) QPS/Entela,
- c.) Intertek Testing Services,
- d.) Underwriters Laboratories of Canada (ULC),
- e.) Underwriters Laboratories Inc. (UL),
- f.) Met Laboratories Inc. (MET),
- g.) TUV Rheinland of North America,
- h.) Quality Auditing Institute (QAI),

i.) TUV America Inc.

NOTE: Labels from all Organizations above (with the exception of CSA and ULC), must be accompanied by a small "c" at the eight o'clock position or Canadian Standard number to indicate the product has been certified to the Canadian Standard.,

Electrical equipment that is not certified by one of the above agencies can only be accepted if the equipment is "field" inspected and labelled (complete with verification documentation) by the Canadian Standards Association (CSA), QPS/Entela, Intertek Testing Services, MET Laboratories, TUV America Inc, Underwriters Laboratories of Canada under the Special Inspection Program. This inspection must take place before equipment delivery.

11.0 WARRANTY

The equipment shall be guaranteed to be free from manufacturing and operational defects for a period of twelve (12) months from the date it was set-to-work by the contractor's representative and accepted as operationally satisfactory by the FMFCS Industrial Engineering Officer or his designated representative.

Page No:_____

12.0 Delivery and Commissioning

Start-up assistance as well as operation and maintenance training must be provided for a minimum of four (4) day at our facility in Halifax, Nova Scotia, including travel and living expenses. The dates of this service will be scheduled by DND in accordance with delivery.

Page No:_____

Solicitation No. - N° de l'invitation

W355B-141426/A

Client Ref. No. - N° de réf. du client

W355B-14-1426

Amd. No. - N° de la modif.

File No. - N° du dossier

HAL-3-71123

Buyer ID - Id de l'acheteur

hal503

CCC No./N° CCC - FMS No/ N° VME

ANNEX B

BASIS OF PAYMENT

The contractor will be paid in accordance with the following basis of payment for work performed and the deliverables received, pursuant to the contract.

Delivery Duty Paid firm lot price for:

1. **Supply**
2. **Delivery**
3. **Start Up Assistance**
4. **Maintenance Training**

Item	Description	Unit Price
1	All Inclusive Grit Blast System	
		Evaluated Price

Applicable taxes extra.

