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
Mobile Large Scale Non-Intrusive Sy

Solicitation No. - N° de l'invitation	Date
47064-128639/C	2012-05-31

Client Reference No. - N° de référence du client
1000298639

GETS Reference No. - N° de référence de SEAG
PW-$$PV-924-60610

File No. - N° de dossier	CCC No./N° CCC - FMS No./N° VME
pv924.47064-128639	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2012-07-11

Time Zone
Fuseau horaire
Eastern Daylight Saving Time EDT

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☑ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à:	Buyer Id - Id de l'acheteur
Caron, Anne	pv924

Telephone No. - N° de téléphone	FAX No. - N° de FAX
(819) 956-3874 ( )	(819) 956-3814

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:
CANADA BORDER SERVICES AGENCY
79 BENTLEY AVE
OTTAWA
Ontario
K1A0L8
Canada

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
See Herein	

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**

Issuing Office - Bureau de distribution
Scientific, Medical and Photographic Division / Division de l'équipement scientifique, des produits photographiques et pharmaceutiques
11 Laurier St./ 11 rue, Laurier
6B1, Place du Portage
Gatineau, Québec K1A 0S5

This bid solicitation cancels and supersedes previous bid solicitation number 47064-128639/A dated 2012-01-27 with a closing of 2012-03-26 at 02:00 pm.

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The requirement is detailed under Article 2 of the resulting contract clauses.

2.1 Optional Requirement

The optional requirement is detailed under Article 2.1 of the resulting contract clauses.

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 (http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp) 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 (2012-03-02) 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: one hundred and twenty (120) days

1.1 SACC Manual Clauses

B1000T (2007-11-30), Condition of Material

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 ten (10) 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 (3 hard copies and 3 soft copies on CD)
Section II: Financial Bid (2 hard copies)
Section III: Certifications (1 hard copies)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

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 (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, bidders are encouraged to:

1) use paper containing fibre certified as originating from a sustainably-managed forest and/or 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. Detailed instructions for documentation formats and deliverables may be found in Annex “A”, Annex “B” and Annex “D”.

1.1 Product(s) Offered *(Bidder to complete)*

The Bidder must indicate the make and model number of the products offered (identify specific components which make up the system):

Name of Manufacturer:_____

Model/Part Number: _____

Literature attached: Yes (_____) No (_____)

1.2 Point of Manufacture/Shipping *(Bidder to complete)*

The Bidder must state the point of manufacture/shipping of goods or where service is to be performed:

Location: _____

Postal Code: _____

1.3 Service *(Bidder to complete)*

Purchase of the system must include: regional technical support; technical phone support; support via the Internet; and support via a fax-back document system. Response for this service shall be within 6 hours.

Response for services requiring an on-site Technician shall be within 24 hours or less.

Service must include but not limited to any-and-all corrective maintenance, calibration, and preventive maintenance and repair parts.

Also, provide the following with your bid:

a) Location of available service facilities (after sales service and repair). List the service facilities closest to the destination.
_____
_____
_____

b) Locations of available replacement parts from consumables to major components.
_____
_____
_____

c) Response time re: service calls, and escalation schedule, i.e. (how many days with no resolution to a problem until a more experienced person is called in, and from which location).

_____
_____
_____

d) List the frequency of routine maintenance visits provided by a qualified service technician during the warranty period, if applicable and included in the price.

_____
_____

1.4 Delivery *(Bidder to complete)*

Delivery of the three (3) systems is requested by January 31, 2013, the best delivery that could be offered by the Bidder is _____.

Deliveries and final acceptance must be completed by March 31, 2013.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Part 4, Evaluation Procedures and Basis of Selection, paragraph 1.2, Financial Evaluation.

1.1 Prices - Items

Bidders must submit firm prices for all items listed at Annex "C" including optionnal Requirements. Failure to do so will render a bidder non-compliant and no further consideration will be given to bid.

1.2 Other Pricing

Bidders are requested to submit:

a) a list of recommended spare parts including pricing that CBSA would be wise to keep in its inventory.
b) part numbers and pricing for subsystems of equipment that are more prone to failure
c) list of ongoing resource requirements necessary for continued operational use of the system. Projected resource quantities and costs. The resource requirements may include, but are not limited to: power, fuel, water/sewage, etc.

Note: Prices provided for the above are for information purposes only and will not be part of the financial evaluation.

1.3 SACC Manual Clauses

C3011T (2010-01-11), Exchange Rate Fluctuation

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

All proposals submitted must be completed in full and provide all of the information requested in the Request for Proposal (RFP) package to enable a full and complete evaluation. The onus is on the bidder to provide all the information necessary to ensure a complete and accurate assessment.

1.1.1 Mandatory Technical Criteria & Point Rated Technical Criteria

See Annex “A” – Requirements and Annex “B” – Mandatory Specifications and Point Rated Technical Criteria

Factors for Evaluation

ABILITY TO MEET THE REQUIREMENTS AND SPECIFICATIONS (MANDATORY):

a) For items defined as Requirements in Annex “A”

For requirements referencing a DOCUMENTATION DELIVERABLE, the Bidder must also provide, with their technical bid, all information requested in the referenced Data Item Description (DID) document. By submission of a Bid, the Bidder agrees to provide all remaining information requested in the DID according to the schedule defined therein. Bidders must also sign the compliance acknowledment statement.

b) For items defined as Mandatory Specifications in Annex “B”

The Bidder must clearly demonstrate how each of the Mandatory Specifications are satisfied, by submission of the information requested in the associated Data Item Description (DID) document. Failure to submit any of the requested information, or failure to do so in the requested format will result in the Bid being deemed non-compliant. By submission of a Bid, the Bidder agrees to provide all future information requested in the DIDs, according to the schedule defined therein. Bidders must also sign the compliance acknowledment statement.

DATA VALIDATION TEST (DVT) (MANDATORY):

For all compliant bids, the Bidder must perform a Data Validation Test (DVT) with a system of the type proposed for purchase by the Government of Canada to validate performance claims and system compliance with the requirements as stipulated in Annex "A" and “B”. The Bidder must conduct the Data Validation Test at a mutually agreed upon date/time/location (system must be made available within 30 days after notification of compliant bid), only one DVT will be performed per compliant system; CBSA personnel must be able to observe and direct the testing.

Test results from the DVT will be used to confirm compliance and point allocation based on the Technical Evaluation Matrix. The detailed Matrix will be supplied to the Bidder during the DVT. Failure to demonstrate compliance will result in the Bidder's proposal being declared non-responsive.

CBSA will be responsible for all travel and living expenses for CBSA personnel attending the Testing. The Bidder will be responsible for all costs to furnish test equipment, test fixtures, radiation survey instruments required to demonstrate systems compliance to Annex “A” and “B”. The Bidder will be responsible for all travel and living expenses for its personnel attending/performing the Testing.

CORPORATE EXPERIENCE (MANDATORY):

The Bidder must have designed and manufactured three (3) same or similar systems in the past five (5) years.

The Bidder ***must provide evidence*** of this experience ***as part of the proposal***. Where permitted by the previous customers, the Bidder must provide contact information for these previous installations. Referenced systems must be large-scale imaging systems, at least one of which is built on a mobile platform (can be driven –not towed or transported –between locations). All such referenced systems must be fully operational and demonstrate that the bidder has a proven track record of supplying and maintaining similar equipment. Canada may contact these references. The references will only be used to validate the information submitted by the Bidder

1.2 Financial Evaluation

a) prices will be evaluated in Canadian Funds including any applicable Excise Taxes and Canadian Customs Duty (if applicable) and excluding the Goods and Services Tax (GST) or Harmonized Sales Tax (HST) (if applicable) For evaluation purposes, bids received in a foreign currency will be converted to Canadian funds using the appropriate rate of exchange using the rate quoted by the Bank of Canada as being in effect on date of bid closing.

b) prices will be evaluated on a FOB Destination

c) prices will be evaluated based on all prices included in Annex “C”.

2. Basis of Selection

2.1 Highest Combined Rating of Technical Merit and Price

A bid must comply with the requirements and optionnal requirements of the bid solicitation and meet all mandatory specifications in order to be considered for the point-rated technical evaluation portion (detailed in Annex “A” and “B”). Bidders not meeting the Mandatory Requirements will be deemed non-responsive and no further consideration will be given. The highest responsive combined rating of technical merit and price including optional quantities will be recommended for award of a contract.

- The evaluation will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60 % for the technical merit and 40 % for the price.

- To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available (93 points) multiplied by the ratio of 60 %.

- To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40 %.

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

- Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price including optional quantities will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by the highest overall combined ranking based on a weighting of 60% technical and 40% price, respectively. The total available points equals 30 and the lowest evaluated price is $50,000 (50*).

Example of Highest Overall Combined Rating Technical Merit (60%) and Price (40%)				
Bidder	**Bidder 1**	**Bidder 2**	**Bidder 3**	
Technical Points (Total Possible Points 30)	**27**	**25**	**22**	
Price Quoted	**$70,000.00**	**$55,000.00**	**$50,000.00**	
Calculation	**Technical Points**	**Price Points**	**Total Points**	**Ranking**
Bidder 1	**27/30 x 60 = 54.0**	***50/70 x 40 = 28.6**	**82.6**	**3**
Bidder 2	**25/30 x 60 = 50.0**	***50/55 x 40 = 36.4**	**86.4**	**1**
Bidder 3	**22/30 x 60 = 44.0**	***50/50 x 40 = 40.0**	**84.0**	**2**

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications to be awarded a contract. Canada will declare a bid non-responsive if the required certifications 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 or to comply with the request of the Contracting Authority for additional information will also render the bid non-responsive.

1. Certifications Required with the Bid

Bidders must submit the following duly completed certifications with their bid.

1.1 Federal Contractors Program - $200,000 or more *(Bidder to complete)*

1. The Federal Contractors Program (FCP) requires that some suppliers, including a supplier who is a member of a joint venture, bidding for federal government contracts, valued at $200,000 or more (including all applicable taxes), make a formal commitment to implement employment equity. This is a condition precedent to contract award. If the Bidder, or, if the Bidder is a joint venture and if any member of the joint venture, is subject to the FCP, evidence of its commitment must be provided before the award of the Contract.

   Suppliers who have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive government contracts over thethreshold 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.

2. If the Bidder does not fall within the exceptions enumerated in 3. (a) or (b) below, or does not have a valid certificate number confirming its adherence to the FCP, the Bidder must fax (819-953-8768) a copy of the signed form LAB 1168, Certificate of Commitment to Implement Employment Equity, to the Labour Branch of HRSDC.

3. 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, 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, 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), in which case a duly signed certificate of commitment is attached;

   (d) ( ) is subject to the FCP, and has a valid certificate number as follows: _____ (e.g. has not been declared an ineligible contractor by HRSDC.)

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

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement associated with the requirement.

2. Requirement

The Canada Border Service Agency (CBSA) has a requirement to purchase three (3) Mobile, Large-Scale, Non-Intrusive Inspection (M-LS-NII) Systems to provide an effective means to examine the contents of intermodal cargo containers, transport vehicles and other large objects. The Contractor must provide the items detailed under the Requirements detailed in Annex “A”, and the Mandatory Specifications detailed in Annex “B”.

2.1 Optional Requirement

The Contractor grants to Canada the irrevocable option to purchase the optional requirements under the same terms and conditions and at the prices detailed in Annex “C” 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.

The Contracting Authority may exercise the option within twenty four (24) months after contract award by sending a written notice to the Contractor.

3. Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the (http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp) Manual issued by Public Works and Government Services Canada.

3.1 General Conditions

2010A (2012-03-02), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

Subsection 9 of 2010A General Conditions - Goods or Services, is amended as follows:

Delete: Subsection 9 in it’s entirety.

Insert: " The Work is subject to inspection and acceptance by Canada. Despite prior acceptance of the Work and without restricting any conditions or warranty imposed by law, the Contractor, if requested by the Minister to do so, must replace, repair or correct at its option and its own expense any Work which becomes defective or which fails to conform to the Contract requirements, where applicable. For goods, **the on-site warranty period will be twenty-four (24) months after delivery and acceptance or the length of the Contractor's or manufacturer's standard warranty period, whichever is longer.** The on-site warranty covers parts, labor and all related expenses. Any Work replaced, repaired or corrected pursuant to this section is subject to all provisions of the contract to the same extent as Work initially performed."

4. Term of Contract

The contract will be in force until all warranty or optional provisions of this agreement are expired.

4.1 Delivery Date

All the deliverables must be received on or before (*to be filled in only at contract award*).

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Anne Caron
Public Works and Government Services Canada
Acquisitions Branch
Commercial Consumer Products Directorate
11 Laurier Street, 6A2, Phase III
Place du Portage, Hull, Quebec, K1A 0S5
Telephone: (819) 956-3874
Facsimile: (819) 956-3814
E-mail address: anne.caron@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.

5.2 Project Authority

The Project Authority for the Contract is: *(to be filled in only at contract award)*

The Project 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 Project Authority, however the Project 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

The telephone number of the person responsible for: *(Bidder to complete)*

General Enquiries Name: _____
Telephone No.: _____
Facsimile No.: _____
eMail address:_____

Delivery & Follow-Up Name: _____
Telephone No.: _____
Facsimile No.: _____
eMail address:_____

6. Payment

6.1 Basis of Payment - Firm Price

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 Annex “C” of the contract for a cost of $ *(to be filled in only at contract award)*. Customs duties and excise tax 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 SACC Manual Clauses

H1001C (2008-05-12), Multiple Payment

6.2.1 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No.	Description or "Deliverable"	Firm Amount		Due Date or "Delivery Date"
1	Factory Acceptance	25% of unit price	**$** *(to be filled in only at contract award)*	*(to be filled in at contract award)*
2	Delivery of Equipment	50% of unit price	**$** *(to be filled in only at contract award)*	*(to be filled in at contract award)*
3	Final Acceptance	25% of unit price	**$** *(to be filled in only at contract award)*	*(to be filled in at contract award)*

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. *(to be filled in only 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.

8. Certifications

Compliance with the certifications 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 or 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) the General Conditions 2010A (2012-03-02);
(c) Annex A, Requirements;
(d) Annex B, Mandatory Specifications and Point Rated Technical Criteria;
(e) Annex C, Pricing;
(f) Annex D, Data Item Descriptions (DID)
(g) Annex E, Procurement timeline;
(h) the Contractor's bid dated *(to be filled in only at contract award)*

11. SACC Manual Clauses

B1501C (2006-06-16), Electrical Equipment
A9068C (2010-01-11), Site Regulations
B7500C (2006-06-16), Excess Goods
A2000C (2006-06-16), Foreign Nationals
A2001C (2006-06-16), Foreign Nationals
A9049C (2011-05-16), Vehicle Safety
G1005C (2008-05-12), Insurance

12. Shipping Instructions – FOB Destination

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

FOB Destination as detailed in Annex “C” including all delivery charges and customs duties and taxes.

13. Factory Acceptance Testing (FAT)

The Contractor must perform a Factory Acceptance Test on a fully assembled and configured system, to validate performance claims and system compliance with the requirements. CBSA will work with the Contractor to develop the finalized FAT process. The Contractor must conduct the FAT at a mutually agreed upon date/time; CBSA personnel must be able to observe and direct the testing.

CBSA will be responsible for all travel and living expenses for CBSA personnel attending the FAT. The Contractor will be responsible for all costs to furnish test equipment, test fixtures, radiation survey instruments required to demonstrate systems compliance to Annex “A” and “B” for the FAT. The Contractor will be responsible for all travel and living expenses for its personnel attending/performing the FAT.

The Contractor will report on all collected data and results in a timely manner. CBSA's Science and Engineering Directorate will document all deficiencies during the FAT and the Contractor will rectify all deficiencies prior to system delivery and Site Acceptance Testing.

14. Site Acceptance Testing (SAT)

The Contractor must perform a Site Acceptance Test (SAT) on each system supplied at each installation site. CBSA will work with the Contractor to develop the finalized SAT process. The SAT will include: testing done during the FAT; an inventory check of all supplied peripheral components; verification of the absence of damage; along with any site-specific tests necessary to ensure satisfaction of the requirements. The CBSA will be responsible for all travel and living expenses for CBSA personnel attending the SAT. The Contractor will be responsible for all costs to furnish test equipment, test fixtures, radiation survey instruments required for the SAT. The Contractor will be responsible for all travel and living expenses for its personnel attending/performing the SAT. CBSA's Science and Engineering Directorate will document any deficiencies. The Contractor will rectify all deficiencies prior Final Acceptance.

ANNEX "A" –REQUIREMENTS

The supplied equipment must meet or better all of the requirements defined below. Systems not meeting all the following Requirements will be considered non-compliant.

For requirements referencing a DOCUMENTATION DELIVERABLE, the Bidder must provide all information requested as detailed on the Data Item Description (DID) document.

Compliance Acknowledgement: *(Bidder to complete)*

I, the Bidder, certify that proposed system will be in compliance with all requirements listed below and I agree to provide all remaining information requested in the DID according to the schedule defined therein.

Signed: _____

Date: _____

A1. Scanning
The system must be capable of producing images of the components and contents of large volume targets using non-intrusive radiography.

A2. Multiple Target Scanning
The system must be capable of scanning multiple in-line targets during one continuous action and automatically separate the resulting scan images into separate files for processing.

A3. Night Operation
The system must be equipped with lights for night or interior operations. Lights must be sufficient to properly illuminate all sides of the system and including the target inspection area. It must be possible to manually turn off the lighting system, independent of operational status, if necessary.

A4. Grade for Operation
The system must be supplied in a configuration that can perform quality imaging examinations in operating areas with uneven pavement or grades of up to 3%.

A5. Mobility
The equipment must be a single unit, vehicle mounted and easily re-locatable between Ports-of-Entry (POE's).

A6. Maturity of Design
No prototypes, refurbished or used equipment will be considered.

A7. System Color
The system's vehicle, cabin and boom surfaces must be painted white. The color of white must be of the shade most typically used to supply commercial vehicles in North America.

A8. Certificates
The Bidder ***must be certified to and provide proof*** of certification of ISO 9001:2008 Quality Management System (QMS) ***as part of the proposal***.

A9. System Regulatory Compliance

All systems and subsystems (including vehicular) must be compliant with applicable Canadian regulatory codes and requirements; these may include, but are not limited to standards and regulations defined by, the Canadian Standards Association (CSA), Transport Canada, the Canada Labour Code, the National Fire Code of Canada, and the Canadian Environmental Protection Act.

A10. Canadian Licensing

The Bidder must confirm that the system can be registered for use in any Canadian Province or territory and is permitted for use on common roadways across the country year round.

A11. Provincial Registration

Prior to delivery of the final system, the Contractor must register the vehicle in the jurisdiction of its intended use.

A12. Training

Operator Training:

On-site radiation safety and operator training must be provided in English and/or French (as required, in Quebec) for up to fifteen (15) operators per system delivered. Operator training must be delivered within 14 days of the completion of Final Acceptance testing. All costs associated with the on-site training must be included in the price.

DOCUMENTATION DELIVERABLE: ***DID 005*** - Operator Training

Technical Support During Training:

The Contractor must provide on-site technical support by qualified maintenance technicians during the operator training courses. The technician must be prepared to take immediate action in the event of failure or malfunction.

CBSA Developed Training:

Following the initial training provided by the Contractor, it is CBSA's intention to build its own training course to train and retrain its own staff to accommodate staff changes over time. The Contractor must allow CBSA to use (cut and paste or reproduce) any part(s) of its manuals and/or training materials in order to produce a customized CBSA course. The CBSA will ensure labeling or logo's belonging to the Contractor are removed from the documentation, except where necessary to identify the system (i.e., within images of the device).

A13. Manuals

Operator Manuals:

Each system must be supplied with two (2) hard copies (one in French and one in English) of the Operator’s Manual. Both French and English versions of the Operator’s Manual must be supplied in electronic form (.pdf format) to the CBSA’s Ottawa-based Detection Technology Section (DTS).

DOCUMENTATION DELIVERABLE: ***DID 003*** - Operator's Manuals

Technical Manual(s):

Each system must be supplied with two (2) hard copies (one in French and one in English) of the Technical Manual. Both French and English versions of the Technical Manual must be supplied in electronic form (.pdf format) to the CBSA’s Ottawa-based Detection Technology Section (DTS).

DOCUMENTATION DELIVERABLE: ***DID 004*** - Technical Manuals

A14. Signage
All signs and instructional markings must be permanently painted, etched or silk-screened (or equivalent) onto surfaces. These must have high resistance to mechanical abrasion and signs must not be adversely affected by cleaning solutions or exposure to Canadian environmental conditions. Printed, paper stick-on signs will be deemed non-compliant.

A15. Linguistic Requirements – Signage
All signs and instructional markings must be in French and English on all operator controls and primary systems, and must be of equal size. All signs must be compliant with requirements of the applicable Canadian regulatory authorities for this equipment.

A16. Identification of Controls
All controls (switches/buttons/levers) must be clearly marked in order to identify their function(s). These markings must be bilingual (French and English) or be universal icons, eliminating the need for written words.

A17. Ergonomics
The operator's workstations must be ergonomically well configured to minimize operator stress and fatigue.

A18. Operator Enclosure Temperature Range
Operator occupied areas of the system must employ heating and cooling systems capable of maintaining a work environment temperature from 20° C to 24° C.

A19. Vehicle Warning Lights
The system must have visual warning indicator lights so that it is visible to other vehicles when deployed or in transit, as per provincial and federal transportation requirements. Lights must be positioned in such a way that they are not obstructed by other parts of the system, and must not employ flashing lights known as "law enforcement blue".

A20. Collision Prevention
The inspection system must incorporate collision avoidance technology to preclude and mitigate the effect of any contact between the inspection system and the scanned objects (or their conveyances). Collision avoidance technologies include but are not restricted to: proximity sensors and acoustic and visual warning systems.

A21. Protection from Dirt and Debris
The system's components must be protected from dirt, debris, dust and liquids. The system must be not be affected by operation during adverse weather conditions (e.g., snow, rain, wind, ice). All electronic circuitry must be installed in locations such that debris from examined goods cannot fall onto or infiltrate electronic or mechanical assemblies to cause performance degradation or failure.

A22. Rust Protection
The system vehicle must be treated with a rust protection product to enable operation in the Canadian climate for ten (10) years.

A23. Anti-Theft Device
a) The system must include a vehicle anti theft alarm system that includes exterior door detector switches and engine immobilization.
b) Vibration sensors will not be accepted.

A24. Shore Power Cable
The system must be supplied with two power cables (cords) for the purpose of deriving shore power. The cables must be supplied with the appropriate connectors on each end. The shore power cables must be constructed of heavy duty cable. The power cables must be 10 meters, or more in length.

A25. Paper Manifest
The system must also have the capability to scan and store a copy of the paper manifest.

A26. Inspection Counter
The system must be capable of recording and displaying the number of scans for the following:
a) a scanning session that can be reset by operators;
b) a scanning day that can be reset by operators;
c) the lifetime of the system that cannot be reset by operators or technical personnel.

A27. Fail-safe
The system must include a means for fail-safe and shutdown of all system components in the case of a power loss. This functionality must ensure that radiation emission is stopped, that no data is lost, and that the system may be restarted as normal when power is restored.

A28. Radio Communication
a) The system must be supplied with all radio equipment necessary to enable the driver, operators and two (2) radiation zone spotters (traffic marshals) to communicate with each other.
b) Both traffic marshal(s) must have a hand held radio.

A29. Radio Frequency (RF) Interference
RF interference must not be a problem related to operation of the system. Radio frequencies of operation must be chosen so as to avoid erratic operation. The technologies employed must be implemented to minimize the interaction between the system devices, mobile telephones, hand held transceivers and radar devices.

A30. Radio Communication Compatibility
The Contractor must ensure radio equipment is compatible with existing CBSA infrastructure and security requirements. The Contractor must coordinate such compatibility with the CBSA's Science and Engineering Directorate.

A31. Detector Normalization
The system must employ a scheme of normalization that compensates for the lower levels of radiation encountered at the outer edges of the radiation beam. Detector normalization must not occur when target components are in the primary beam.

A32. Radiation Safety System

The Non-Intrusive Inspection system must incorporate a complete radiation safety system (RSS) which interlocks sensors and protocols so as to prevent unnecessary exposure of radiation to humans. The radiation safety system must automatically cease the production of radiation (if scanning is underway) and otherwise prevent emission in the event that:

a) Radiation levels detected by any of the monitors are above allowable levels
b) The perimeter of the Radiation Safety Zone is breached
c) An emergency stop is initiated
d) The collimation or alignment of the source beam cannot be verified
e) There is accidental contact with an object being scanned
f) Any system sensors indicates an error with the radiation source or detector arrangement
g) Any other system sensors indicates a potential for unwarranted radiation exposure to humans

DOCUMENTATION DELIVERABLE: ***DID 009*** - Radiological Safety Systems Report

A33. Radiation Safety Compliance

Prior to import, all radiation emitting systems to be used in Canada must be in compliance with the applicable regulations, including, but not limited to: the Department of Justice's Radiation Emitting Devices (RED) Act and Regulations, and the Canadian Nuclear Safety Commission's Class II Nuclear Facilities and Prescribed Equipment Regulations.

A34. Handheld Radiation Survey Meters

Two Fluke Biomedical 451B handheld radiation survey meters (or better) must be provided with each system, to perform routine surveys at the boundaries of the radiation safety zone.

The meters must be the type that can be preset to power up in the appropriate (default) range and have sufficiently fast response time to accurately measure radiation dose rates (in SI units) during the course of a scan.

A35. Fixed Radiation Survey Meters

a) Fixed wall mounted radiation survey meter(s) must be securely attached in the image operators' compartment, to monitor radiation exposure to operating personnel. The meter(s) must be affixed at location(s) most likely to detect the highest dose rates while scanning targets. The meter(s) must be integrated within the radiation safety system.
b) One (1) additional meter must be provided to accommodate the logistics of instrument certification without the need to operate the system without an instrument in place.

A36. Shipping of Survey Meters

Survey meters must be of the type that can be shipped by air and do not require shipment as dangerous goods; they must also be provided with hard shelled shipping cases (Pelican or equivalent).

A37. Radiation Beam Filter

The system must employ a radiation beam filter to limit low energy X-ray emission from the source.

A38. Emergency Stop Buttons

The system must employ "red, mushroom cap" emergency stop buttons; strategically located inside, outside, and with the traffic controller, which, on activation, immediately terminate X-ray production, system motion, and other potential hazard(s).

DOCUMENTATION DELIVERABLE: ***DID 009*** - Radiological Safety Systems Report

A39. Warning Systems
Visual and audible warning indicators must operate prior to and during the production of radiation.

DOCUMENTATION DELIVERABLE: ***DID 009*** - Radiological Safety Systems

A40. Traffic Controller Handheld
The system must include a handheld device for use by the Traffic Controller(s) to confirm the initiation of scanning operations and to initiate an emergency stop if necessary.

DOCUMENTATION DELIVERABLE: ***DID 009*** - Radiological Safety Systems

A41. Availability for Scanning Operations
The supplied system must be available for operation in a “high-volume” environment for a minimum of 97.5% of the time; given the following model:

$$A = \frac{MTBF}{MTBF + MTTR}$$

Where:
A = System availability
MTBF = Mean Time Between Failures
MTTR = Mean Time To Repair

DOCUMENTATION DELIVERABLE: ***DID 007*** - Maintenance Reporting

A42. Meant Time Between Failures
The system must have a MTBF of no less than 1000 hrs or 8,000 scans under normal (16 hours/day, 6 days/wk, 52 weeks/y) and/or concentrated (24 hours/day, 7days/wk, 2 weeks consecutively) operations.

DOCUMENTATION DELIVERABLE: ***DID 007*** - Maintenance Reporting

A43. Mean Time to Repair
The Mean Time to Repair, defined as the total time from notification of repair requirement to system ready status, must not exceed 24 hours. The MTTR includes all diagnostic activities.

DOCUMENTATION DELIVERABLE: ***DID 007*** - Maintenance Reporting

A44. Parts availability
Since the CBSA normally performs its own maintenance, it is important that services and components employed in the configuration of the equipment be readily available in regional markets where the CBSA operates.

There may be unique and proprietary parts, however it is required that the CBSA be able to source a significant percentage of general components from within the regional markets where the CBSA operates or has relatively easy access to.

a) Access to parts supplied by the manufacturer must not require any additional service contract.
b) The contractor must be able to supply lower cost parts ($5,000.00 or less) to the CBSA by means of Master Card and Visa Card as a procurement method.
c) Parts and components must be readily available from the manufacturer for a minimum of 10 years from the date of delivery.

A45. Uninterruptible Power
The computer system(s) must be supported by an uninterruptible power supply (UPS) to prevent the loss of data in the event of a break or interruption in the main power source. The UPS must be capable of powering all operator workstation and networking equipment for a period of no less than 60 minutes to enable data retrieval prior to shutdown.

DOCUMENTATION DELIVERABLE: ***DID 002*** - System Power and Network Configuration Report System

A46. Hard Drive Protection
The system's computer hard drives must be protected to prevent damage caused by operation outside the drive's safe operating temperature range. The system server must have a minimum of RAID-1 redundant storage reliability.

DOCUMENTATION DELIVERABLE: ***DID 002*** - System Power and Network Configuration Report

A47. Printer
The system must be supplied with a color laser printer, with a resolution of at least 600 x 600 DPI, a color page print rate of no less than eight (8) pages per minute (PPM), a black and white print rate of at least 12 PPM, and be configured to allow printing from any device connected to the system's network. The printer must be securely attached to its mounting surface.

DOCUMENTATION DELIVERABLE: ***DID 002*** - System Power and Network Configuration Report

A48. Software
All software (including proprietary and Programmable Logic Control software) must be provided to CBSA for installation or re-installation on system hardware.

A49. Software Languages
The system's application software must enable the operator the choice to work in either French or English. It must be possible to toggle easily between languages (i.e., via a language icon on the operator screen) without loss of work.

A50. Boot Image
A bootable image disk for rebuilding computer and server hard drives must be provided to CBSA.

A51. Software Licenses
Each system must be accompanied with the software and a minimum of three (3) licenses for remote image analysis (apart from those already on the system workstations), which may be installed on CBSA computers.

A52. Software Updates
The contractor must provide all software updates to the purchaser for a period of ten (10) year(s) following the acceptance, at no additional cost. The word "updates" means all patches, extensions or other modifications to the software necessary to maintain or achieve the advertised performance and informational security of the system.

A53. Access Levels
The system must employ four levels of system access for CBSA that must enable:
a) Level 1: Operator – All operator functions pertinent to use of system for scanning target objects.
b) Level 2: Supervisor – All Level 1 functions, plus access, manage stored scan data files, and access, create, edit add/remove user accounts.
c) Level 3: Administrator – All Level 2 functions, plus: diagnostic and calibration functions.
d) Level 4: Science and Engineering Administrator – All Level 3 functions, plus make threshold adjustments, set up and manage system data sharing with the Instrumentation Gateway (see Data Management requirements in Annex “B”).

A54. Login
A user login and password must be required prior to any new operations, and if the system has been inactive for 30 minutes.

A55. User Tracking
Each scan must be tagged with an operator identifier, and this must be stored within the produced data.

A56. Data Compliance
The system must be DHS-CPB N.25 compliant (version 1.5 or later), and must be in conformance with the National Information Exchange Model (NIEM) (version 2.1 or later).

A57. IPv6 compatible
All networked systems must be IPv6 compatible.

A58. Data Management
CBSA must be granted “Administrator” rights to the system that will enable automatic acquisition and deletion of CBSA information-of-interest by the Agency’s Instrumentation Gateway (IGW2.0). This information must include, but is not limited to:
a) All scanning data, including, but not limited to: operator notes, camera images, gamma and neutron radiation detection data (raw detector counts).
b) All raw images (prior to any regularization or manipulation).
c) All operator manipulated images and those generated via the export of images tool specified in requirements below;
d) All system performance data, including hard drives and server health status.
e) All radiological safety system data.

Suggested means for data sharing include system database access via Open Data Base Connectivity (ODBC) or Java Database Connectivity (JDBC) or by copying data files in an agreed upon format (i.e., .xml) via network share. Other methods of data sharing will be considered.

A59. File Storage
The system must employ a hard drive (minimum size of 1 TB) with a capacity sufficient to store all data (including all images) from a minimum of 1000 scans.

A60. Approaching Storage Limits
When the maximum capacity of the file storage area is approached, the operating system or system application must display an informative plain language error message, and remain functional (not crash).

A61. Automatic Data Housekeeping
All housekeeping of data on the bidder’s system is the responsibility of the bidder and all data must be maintained for a period no less than 30 days.

A62. Manual Data Housekeeping
CBSA supervisors must have access to the file directory in which scanned data is saved for the purpose of copying and clearing this data manually as required. CBSA supervisors must also have the ability to disable automatic housekeeping of data and to clear and manage this data directly.

A63. Date and Time
The inspection system must incorporate a means for Network Time Protocol (NTP) synchronization. The NTP synchronization will enable the data and time to be displayed on the graphical interface and to stamp (register) on each image file. This may be achieved by time synchronization with the CBSA Instrumentation Gateway, or by a manual method.

A64. Saving Images
The system must automatically save scanned images using date and time of scan as storage and retrieval file name parameters.

A65. Export of Raw Image Data
It must be possible to export raw image data for:
a) processing on a like system;
b) returning to the same system on which the original acquisition was captured;
c) displaying on a remote workstation.

A66. Export of Images
It must be possible to export scan images, without distorting the aspect ratio, in the following standard formats: TIFF, JPEG, BMP.

A67. Manual Retrieval of Scan Data
It must be possible to export scan images and data files by copying and saving them to external media (CD/DVD) and standard storage devices (e.g. USB drive). Such devices must be automatically recognized by the operating system and made available for the movement of files without the need of special computer configuration.

A68. Image Analyst Workstations
The inspection system must include a dual image capable workstation configuration to support image analysis allowing for scanned images to be queued for single or dual analyst operation.

A69. Imaging Tools
The system must enable manipulation of the scanned image to better identify and characterize components of the scanned object and its contents.

A70. Image Analysis Toolbox

The image manipulation capability must include but not be restricted to the use of a full suite of "easy-to-use" tools which can be applied/removed during image analysis and must include common presets to facilitate use. As part of this tool suite, the following basic functionalities must be included:

a) Caliper Tool: to provide a means for operators to measure the approximate size of details in the scanned image.
b) Zoom Tool: to provide a means for operators to zoom in and out of parts of the scanned image for localized analysis.
c) Contrast and Brightness Tool: to provide a means for operators to modify the contrast and brightness of the scanned image.
d) Histogram Tool: to provide a means for operators normalize the image (or part thereof) according to the statistical distribution of detected photons.
e) Image Enhancement/Sharpness Tool: to provide a means for operators to modify image sharpness and color scheme to emphasize or discriminate between different elements in the image.
f) Low Absorption Tool: to provide a means for operators to identify areas of an image where the source penetrability has been highly limited.
g) Undo/back Capability: to provide a means for operators to undo individual actions, and also to return to the original image.
h) Image Annotation: to provide a means for operators to highlight and type in comments about specific areas in an image for future reference and review.
i) Image Polarity Reversal: to provide a means for operators to reverse the video polarity (negative video mode).
j) Image Comparison Tool: to permit operators to search for previous images based on key parameters (eg., truck/conveyance id., license plate, etc.) and compare the retrieved data alongside the scan currently under review.

ANNEX "B" – MANDATORY SPECIFICATIONS and POINT RATED TECHNICAL CRITERIA

MANDATORY SPECIFICATIONS:

The Bidder must clearly demonstrate how each of the Mandatory Specifications is satisfied by submission of the information requested in the associated Data Item Description (DID) documents.

Failure to submit any of the requested information, or failure to do so in the requested format will result in the Bid being deemed non-compliant. By submission of a Bid, the Bidder agrees to provide all future information requested in the DIDs, according to the schedule defined therein.

Compliance Acknowledgement: *(Bidder to complete)*

I, the Bidder, certify that proposed system will be in compliance with all requirements listed below and I agree to provide all remaining information requested in the DID according to the schedule defined therein.

Signed: _____

Date: _____

Item	Description	Data Item Description (DID) Document
B1 - Life Expectancy	The system must be able to perform useful detection tasks in a “high-volume” border protection environment (defined herein as 25,000 scans per year) with proper maintenance, for a minimum of ten (10) years.	***DID 001*** - Reliability Projection Report
B2 - Dimensions of Scanned Targets	a) The system must be capable of safely scanning standard intermodal shipping containers mounted on common truck-drawn conveyances, having approximate combined dimensions of [18 m x 2.4 m x 4.6 m] [L x W x H]). b) The system must also be able to scan other similarly sized objects, including but not restricted to: commercial trucks, recreational vehicles, boats, busses and passenger vehicles.	***DID 006*** - Scanning Operations
B3 - Image Cut-off	For all marine containers, transport trucks and similarly elevated objects, the system must be able to generate images from the top of the target to the bottom of the vehicle axle (approximately 0.3 m from the ground).	***DID 006*** - Scanning Operations
B4 - Scanning Rate	The system must be capable of scanning targets/conveyances that are up to 18 meters in length at a rate of 25 per hour.	***DID 006*** - Scanning Operations
B5 - Scanning Speeds	The inspection system must offer the user the option to scan targets at different speeds.	***DID 006*** - Scanning Operations

B6 - System Operating Temperature Range	The system must be capable of continuous operation in the Canadian environment; including ambient temperatures ranging from -25° C to +40° C, and up to 95% Relative Humidity. The system must be waterproof, dustproof, and must not be adversely affected by exposure to saline air.	***DID 006*** - Scanning Operations
B7 - Operation at Highway Speeds	The system must be capable of safe road travel at speeds of at least 90 km/hour on standard roadways for extended distances/periods of time.	***DID 006*** - Scanning Operations
B8 - Minimum Number of Operators	The system must enable continuous scanning operations with only 3 operators.	***DID 006*** - Scanning Operations
B9 - Wind Speed	The system must be configured such that boom deployment and storage is safe at wind speeds up to 90 km/hour. Scanning operations must be safe at wind speeds up to 60 km/hour.	***DID 006*** - Scanning Operations
B10 - Power for Scanning Operations	Power for scanning operations, including but not limited to: vehicle scanning motion, radiation production, safety systems, communications, steering, braking, boom deployment/storage, heating/cooling and computer operations, must be derived from on-board sources independent of the vehicle's engine. Scanning operations must be possible with the vehicle's engine switched off.	***DID 006*** - Scanning Operations
B11 - Boom Operation	The system must be configured to enable safe deployment/storage of the detector boom arm by one person.	***DID 006*** - Scanning Operations
B12 - Manual Boom Storage	The system must be configured to enable manual storage of the boom arm in the event of loss of power or system interlock failures.	***DID 006*** - Scanning Operations
B13 - Fuel Capacity	The system must be capable of operation that is completely independent of commercial power (shore power), refueling or scheduled maintenance activities for a period of no less than sixteen (16) hours when, being heated and performing imaging scans at its maximum capability.	***DID 006*** - Scanning Operations
B14 - Customer References	The Bidder must provide a list of non-CBSA References for customers using the same or similar systems.	***DID 001*** - Reliability Projections
B15 - Radiation Survey	The bidder must provide a preliminary report on the projected radiation dose rates around the system. The bidder must agree to conduct a CBSA directed radiological survey around a system of the type proposed for purchase by the Government of Canada, at a time no later than 30 days after the Technical Bid submission.	***DID 008*** - Radiological Survey Report

B16 - Radiation Safety Zone	The system must be capable of acquiring scanned images of a standard 40' container mounted on common truck-drawn conveyances within an enclosed radiation safety zone (RSZ) that does not exceed [45.7 m (150 feet) x 22.9 m (75')] [L x W]. Around the entire peripheral of the RSZ, integrated radiation dose rates must be less than: a) 5 µSv per hour of scanning at the inspection rate leading to maximum possible exposure At designated operator positions the integrated radiation dose rates must be less than: b) 0.1 µSv per scan	***DID 008*** - Radiological Survey Report
B17 - Intrusion Detection into the Radiation Safety Zone (RSZ)	a) The system must incorporate an integrated subsystem for detecting intrusion into the RSZ and in response to a RSZ intrusion, must generate an alarm and immediately terminate the production of radiation. b)The intrusion system must be light enough for a single person to deploy; resistant to misalignment by high winds; and able to withstand regular use in an industrial port-of-entry environment for the lifespan of the Large Scale Imaging (LSI) system. c) CBSA personnel with Supervisor level access to the system must have the capability to override and if required disengage the RSZ intrusion system.	***DID 009*** - Radiological Safety Systems
B18 - Maximum Target Dose	The maximum absorbed radiation dose that could be acquired inside a scanned object must not exceed 10 µSv/scan[1].	***DID 008*** - Radiological Survey Report
B19 - Radiation Shielding and Stopping Configurations	Any radiation shielding, or radiation stopping material must be permanently affixed to the system, unless removal is necessary to enable system upgrades or maintenance. If removal is necessary, failure to replace any radiation shielding or stopping components must render the unit inoperable.	***DID 010*** - Radiological Source and Control Report
B20 - X-ray Energy	The maximum X-ray energy emitted by the system must be ≤ 6 MeV (less than or equal to 6 Mega Electron-Volts).	***DID 010*** - Radiological Source and Control Report
B21 - X-ray Beam Alignment	a) The system must employ an infrared-based (or equivalent) arrangement for X-ray beam alignment to ensure the source is properly directed at the opposing detector face.	***DID 010*** - Radiological Source and Control Report

[1] Dose rationale: NCRP Commentary No. 16 – Guidance for Security Screening of Humans using Ionizing Radiation

	b) The X-ray beam alignment must be designed to remain true while scanning over local variations in pavement and grade.	
B22 - X-ray Beam Collimation	The system must employ an X-ray beam collimator that limits the primary beam to the active detection area on the detector assembly.	***DID 010*** - Radiological Source and Control Report
B23 - Penetration	The inspection system must provide a minimum penetration of 270 mm of steel according to the test procedures outlined in ANSI N42.46. This penetration must be achieved with a scanning speed of at least 0.4 meters/second and with source emission levels set to satisfy all radiation safety requirements. *This requirement will be further evaluated on a point based system according to Point Rated Technical Criteria.*	***DID 011*** - System Performance Testing Report
B24 - Spatial Resolution	a) The spatial resolution in the Vertical direction must be ≤ 7mm; b) The spatial resolution in the Horizontal direction must be ≤ 10mm; according to the test procedures outlined in ANSI N42.46. This must be achieved with a scanning speed of at least 0.4 meters/second and with source emission levels set to satisfy all radiation safety requirements. *This requirement will be further evaluated on a point based system according to Point Rated Technical Criteria.*	***DID 011*** - System Performance Report
B25 - Contrast Sensitivity	a) Contrast Sensitivity @ 10% must be ≤ 3%; b) Contrast Sensitivity @ 50% must be ≤ 3%; c) Contrast Sensitivity @ 80% must be ≤ 4%; according to the test procedures outlined in ANSI N42.46. This must be achieved with a scanning speed of at least 0.4 meters/second and with source emission levels set to satisfy all radiation safety requirements. *This requirement will be further evaluated on a point based system according to Point Rated Technical Criteria.*	***DID 011*** - System Performance Testing Report
B26 - Wire Detection	The size of the minimum observable wire size must be ≤ 14 AWG according to the test procedures outlined in ANSI N42.46. This must be achieved with a scanning speed of at least 0.4 meters/second and	***DID 011*** - System Performance Testing Report

	with source emission levels set to satisfy all radiation safety requirements. *This requirement will be further evaluated on a point based system according to Point Rated Technical Criteria.*	

POINT RATED TECHNICAL CRITERIA:

The presence and the performance of options, along with the mandatory requirements, will be considered in evaluating the technical capabilities of the system.

CBSA will evaluate the technical merit of the rated requirements, according to the following matrix. The minimum number of points will be assigned for satisfaction of the minimum required performance; additional points will be assigned on a graded scale according to CBSA evaluation of capability.

Rated Mandatory Requirements		Systems' Result *(bidder to complete)*	Reference to proposal documentation (i,e, Brochure title, page and paragraph numbers)	Min Pts	Max Pts
B23 - Penetration The inspection system must provide a minimum penetration of 270 mm of steel according to the test procedures outlined in ANSI N42.46. This penetration must be achieved with a scanning speed of at least 0.4 meters/second.		_____ mm	***DID 011*** - System Performance Testing Report	3	18
B24 - Spatial Resolution	a) The spatial resolution in the Vertical direction must be ≤ 7mm	_____ mm	***DID 011*** - System Performance Testing Report	2	9
	b) The spatial resolution in the Horizontal direction must be ≤ 10mm	_____ mm	***DID 011*** - System Performance Testing Report	2	9
B25 - Contrast Sensitivity	a) Contrast Sensitivity @ 10% must be ≤ 3%	_____ %	***DID 011*** - System Performance Testing Report	2	5
	b) Contrast Sensitivity @ 50% must be ≤ 3%	_____ %	***DID 011*** - System Performance Testing Report	2	5
	c) Contrast Sensitivity @ 80% must be ≤ 4%	_____ %	***DID 011*** - System Performance Testing Report	2	5
B26 - Wire Detection	The size of the minimum observable wire size must be ≤ 14 AWG.	_____ AWG	***DID 011*** - System Performance Testing Report	3	9

Rated Options		Systems' Result (Select appropriate or enter result) *(bidder to complete)*	Reference to proposal documentation (i,e, Brochure title, page and paragraph numbers)	Min Pts	Max Pts
Material Discrimination The system should have the capability to differentiate between different types of materials (e.g., organics, intermediates/plastics, inorganic/metals, etc.) and display such differences using different colors on the scan image.		___NOT capable ___Organic/Inorganic ___Organic/Inorganic/Intermediate ___Concealed-Organic/Metalic/Plastic/Intermediate/High-Z	***DID 011*** - System Performance Testing Report	0	12
Auto-Threat Detection	The system should have the capability to automatically detect common threat materials (small weapons, explosives, etc.) and to highlight these objects on screen to assist the operator with the scan image review.	___NOT capable ___Minimal (e.g., clear edge detection) ___Advanced (e.g., edge detect, shape recognition, explosives composition)	***DID 011*** - System Performance Testing Report	0	2
Imaging Low Targets	It should be possible to image to the bottom of smaller vehicles or like sized targets by either lowering the boom arm or raising the target object on a ramp or platform.	___NOT capable Min height – source side: _____ cm Min height – detector side: _____ cm	***DID 011*** - System Performance Testing Report	0	2
GPS System	The system should be equipped with a GPS system that integrates coordinates with the scan data.	___NO GPS ___Equipped with GPS	***DID 011*** - System Performance Testing Report	0	1

Radiation Detection Capability	The system should incorporate a subsystem that enables passive detection of x-rays, γ-rays and neutrons from scanned targets. a) The performance of radiation detection subsystems must be tested according to the ANSI N42.35 Standard for Evaluation and Performance of Radiation Detection Portal Monitors for Use in Homeland Security. b) The measured radiation dose levels in SI units (i.e., Sieverts) must be displayed in real-time inside the operator's cabin. The detection of non-system generated radiation must be displayed on the operators screen with the scan image to facilitate source localization. c) It must be possible for CBSA Administrators to adjust the alarming threshold within the system's interface. d) It must be possible for CBSA to calibrate and evaluate the sensitivity of the radiation detection system at any time; the bidder must provide any information pertinent to such testing to the CBSA's Science and Engineering Directorate.	___NOT capable ___Gamma and Neutron (minimal) ___Gamma and Neutron (intermediate) ___Gamma and Neutron - RPM equivalent	***DID 011*** - System Performance Testing Report	0	9

Loading Commercial Manifest	The system should have the capability to: open, read and store information from an electronic manifest file (in XML format) into the generated scan data.	___NOT capable ___System capable	***DID 011*** - System Performance Testing Report	0	2
Scanning Angles	The system should have the capability to scan targets from different incident beam angles.	___NOT capable ___Scan from 2 angles ___Scan from 2 angles > 10 degrees	***DID 011*** - System Performance Testing Report	0	2
Optical Character Recognition	System software should enable automatic reading of container numbers and license plates using Optical Character Recognition (ORC) software.	___NOT capable ___System capable _____% Accuracy	***DID 011*** - System Performance Testing Report	0	1
Access to Raw X-ray Detection Data	The Instrumentation Gateway should be granted sufficient access to enable automatic acquisition of raw X-ray radiation detection data (the raw detector counts used for the generation of a scan image).	___NOT capable ___System capable	***DID 011*** - System Performance Testing Report	0	1
Export of Scientific Image Data	It should be possible to export the raw image data as a Flexible Image Transport System (FITS) file.	___NOT capable ___System capable	***DID 011*** - System Performance Testing Report	0	1

ANNEX "C" – PRICING

1. PRICING FOR MOBILE, LARGE-SCALE, NON-INTRUSIVE INSPECTION (M-LS-NII) SYSTEMS *(Bidder to complete)*

1.1 Requirement

The Canada Border Service Agency (CBSA) has a requirement to purchase three (3) Mobile, Large-Scale, Non-Intrusive Inspection (M-LS-NII) Systems to enable the examination of the contents of intermodal cargo containers, transport vehicles and other large objects.

Installation, maintenance and training are included.

Details	Unit Price $
Unit 1: Delivery to Pacific Highway Border Crossing. Address is: 28, 176th Street, Surrey, BC	
Unit 2: Delivery to Windsor Commercial Off-site. Address is: 4285 Industrial Drive, Windsor, ON	
Unit 3: Delivery to Lacolle Border Crossing. Address is : 300 Route 221, Lacolle, Quebec	

2. PRICING BASIS FOR OPTIONAL REQUIREMENTS *(Bidder to complete)*

2.1 Optional Requirements

The Contractor grants to Canada the irrevocable option to purchase the optional requirements under the same terms and conditions and at the prices detailed in Annex “C” 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.

The Contracting Authority may exercise the option within twenty four (24) months after contract award by sending a written notice to the Contractor.

If Bidder is unable or unwilling to offer additional quantities he will be deemed non-compliant.

2.1.1 Additional five (5) Mobile Inspection Systems

Option Year 1

From_____ to_____ *(to be filled in only at contract award)*

Details	Unit Price $
Delivery to: Prince Rupert Container Examination Facility. Address is: 45 Charlie Currie Way, Prince Rupert, BC	
Delivery to: Fort Erie Border Crossing, Address is: 2 Peace Bridge Plaza, Fort Erie, ON	
Delivery to: Sarnia Border Crossing, Address is: CBSA office at Blue Water Bridge or 1555 Venetian Boulevard, Point Edward, ON	
Delivery to: Emerson Border Crossing, Address is: CBSA Office on Highway 75, Emerson, MB	
Delivery to: Coutts Border Crossing, Address is CBSA Office on Highway 4, Coutts, AB	

Option Year 2

From_____ to_____*(to be filled in only at contract award)*

Details	Unit Price $
Delivery to: Prince Rupert Container Examination Facility. Address is: 45 Charlie Currie Way, Prince Rupert, BC	
Delivery to: Fort Erie Border Crossing, Address is: 2 Peace Bridge Plaza, Fort Erie, ON	
Delivery to: Sarnia Border Crossing, Address is: CBSA office at Blue Water Bridge or 1555 Venetian Boulevard, Point Edward, ON	
Delivery to: Emerson Border Crossing, Address is: CBSA Office on Highway 75, Emerson, MB	
Delivery to: Coutts Border Crossing, Address is CBSA Office on Highway 4, Coutts, AB	

3. PRICING FOR CBSA REQUIRED OPTIONS *(Bidder to complete)*

If the Bidder is unable or unwilling to offer one of the CBSA required Warranty and Maintenance Options the bid will be deemed non-compliant.

3.1 CBSA Required Options

3.1.1 Training Options

Item	Description	Price
3.1.1.1 Additional Operator Training Courses	The Bidder commits to offer additional operator training courses (for up to 15 operators per course) to be delivered on an as needed basis for no less than five (5) years after initial delivery. This option will be available to CBSA at a fixed price (per operator) for 3 years from date of contract award.	$_____ per operator
3.1.1.2 Technical Training	The Bidder commits to offer technical training course(s) (for up to 10 CBSA technicians) on an as needed basis for up to 7 years. This course must address all diagnostic, replacement, adjustment and calibration aspects of the system and must enable CBSA to be the primary maintenance provider for its procured systems. This option will be available to CBSA at a fixed price (per technician) for 3 years from date of contract award.	$_____ per technician

3.1.2 Warranty and Maintenance Options

Item	Description	Price
3.1.2.1 Warranty Extension	The Bidder must provide the cost per year for CBSA to extend the initial all-inclusive 2 year warranty, on an annual basis, for the subsequent three (3) years.	**Year 1 & 2**: included in system price **Year 3:** $_____ **Year 4:** $_____ **Year 5:** $_____
3.1.2.2 Service After Warranty	The Bidder commits to offer CBSA a service contract to maintain the systems after the expiry of the elected warranty period. The service contract must be offered on an annual basis, for no less than ten (10) years after initial delivery. Signature of authorized representative: _____ Date: _____	

3.1.3 Software Options

Item	Description	Price
3.1.3.1 Additional Licenses	The Bidder must provide the cost for additional licenses to install and operate the image analysis software (necessary for remote viewing and analysis of the scanned image and operator notes).	For a single enterprise license (for installation anywhere within the Agency and use by up to 100 people). $_____

ANNEX "D" – DATA ITEM DESCRIPTION SHEETS (DID)

The following information is requested as part of the procurement process; failure to deliver this information in the format or according to the defined schedule will result in a bid being considered non-compliant.

TITLE	**Reliability Projections Report**
DID NUMBER	**001**
DESCRIPTION / PURPOSE	To provide information relating to reliability critical elements of the system and the projected system availability over the course of normal operations
APPLICATION / INTER-RELATIONSHIP	Related to DID 007 Maintenance Reporting
SUBMISSION DATE	**Full submission – with Technical**
INSTRUCTIONS - Format	The Bidder must provide a Reliability Projections Report. This report must be formatted accordingly: - Title page (with DID No, Title, Author, Date) - Table of Contents - Page numbers - Figure and Table numbers Hard copies of all documents must be provided and soft copies (searchable .pdf) are requested at the time of submission.
INSTRUCTIONS- Content	The following information must be provided in the **Reliability Projections Report**. At a minimum the report must contain the following data, and be sectioned accordingly: **A. Critical Items** The Bidder must list all reliability critical items, whose failure would render the system inoperable or could adversely affect system safety. Reliability critical items must be so classified if any of the following apply: 1. Item represents a significant new development or application. 2. Item has critical failure modes. 3. Item has history indicating need for improvement. A Preplanned Product Improvement Plan (PPIP) must be developed and provided by the Bidder for any item with a history of needing improvement. 4. Item has known operating life, limited shelf life, or environmental sensitivity (e.g., vibration, thermal, etc.) that warrants controlled surveillance. 5. Item whose failure can result in the failure of the system and which is not compensated by redundancy or alternate operational procedures For each reliability critical item, the Bidder must specifically address: 1. Probability of failure (referencing previously deployed systems, industry standards, and or original manufacturer claims) 2. Plans to mitigate the effect of reliability critical item failure 3. Projected time to render the system operational after failure of reliability critical item **B. Maintenance Records** The Bidder must present data on the reliability of at least one (1) previously deployed and maintained system of same or similar complexity and purpose (such as: earlier generation mobile systems or fixed-site systems), which should employ similar source and detector configurations as the one proposed

	in the bid response. For each system referenced, the following information must be presented: - a summary of scheduled maintenance activities that were completed - calculated values for MTBF and MTTR for the reporting period - a list of all unscheduled repairs along with the cause of failure and total time to repair **C. Life Expectancy** The Bidder must detail the Projected Life Expectancy of the system. **D. References List** The Bidder must provide a list of references who may be contacted to discuss reliability of same or similar systems already deployed elsewhere. **E. Additional Information** The Bidder may submit any additional technical information they deem to be pertinent to this DID; such as, but is not limited to: test results, 3rd party reports, configuration options, or other raw data. Note that all information specifically requested in previous sections must be presented completely therein. This section must be formatted in the same manner as the rest of the DID and must be properly referenced in the Table of Contents. Any references to additional supporting technical documentation (ex. Technical Brochures) must be specific (Document title, page and paragraph number).
DELIVERABLES (Schedule)	**Full submission – with Technical Bid.**

TITLE	**System Power and Network Configuration Report**
DID NUMBER	**002**
DESCRIPTION / PURPOSE	To provide the information on the lines of power and communication inherent to the system.
APPLICATION / INTER-RELATIONSHIP	Related to: DID 009 - Radiological Safety System Report
SUBMISSION DATE	First submission – 30 days after contract award.
INSTRUCTIONS - Format	The Contractor must provide the System Power and Network Configuration Report. This report must be formatted accordingly: - Title page (with DID No, Title, Author, Date) - Table of Contents - Page numbers - Figure and Table numbers All documents must be provided in both soft (searchable .pdf) and hard copies at the time of submission.
INSTRUCTIONS- Content	The following information must be provided in the Scanning Operations Report. At a minimum the report must contain the following data, and be sectioned according to the following: **A. Power supplies** The Contractor must provide detailed information on all on-board power supplies, specifically: - identifying make and model of all power sources (generators, UPS, etc) - schematic showing all sources and primary lines of power - details on charging of battery operated system components **B. System Network Configuration** The Contractor must provide detailed information on the computers and network configurations, identifying: - schematic showing the networking of the on-board computer systems - IP addresses used and available - data storage media housing CBSA information-of-interest - data structure housing CBSA information-of-interest - network management and security protocols used by the system **C. Additional Information** The Contractor may submit any additional technical information they deem to be pertinent to this DID; such as, but is not limited to: test results, 3rd party reports, configuration options, or other raw data. Note that all information specifically requested in previous sections must be presented completely therein. This section must be formatted in the same manner as the rest of the DID and must be properly referenced in the Table of Contents. Any references to additional supporting technical documentation (ex. Technical Brochures) must be specific (Document title, page and paragraph number).
DELIVERABLES (Schedule)	1. First submission – 30 days after contract award. 2. Review – Government has 30 days to review and comment. 3. Final - Due 30 days after receipt of comments. All documents must be provided in both electronic and hard copies to the CBSA Science and Engineering Directorate.

TITLE	**Operator's Manuals**
DID NUMBER	**003**
DESCRIPTION / PURPOSE	To provide the Operator's Manuals.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	First submission - 60 days prior to first system delivery.
INSTRUCTIONS - Format	Both French and English versions of the Operator's Manual must be supplied in electronic form (searchable .pdf format) to the CBSA's Ottawa-based Detection Technology Section (DTS). Hard copies of the Operator's Manuals (in both French and English) must be included with each system delivered. These must use standard terminology, be logically sectioned and all figures and tables must be properly referenced.
INSTRUCTIONS- Content	Operator Manuals must clearly detail, but not be limited to: **A. Radiation Safety** - ALARA - the radiation safety system and interlocks - precautionary measures to be followed **B. Scanning Operations** - system setup and deployment - initiating and conducting scans - stopping a scan (including emergency situations) - storage and driving the M-LS-NII system **C. Scanning Operations** - image analysis tools - representative examples - importing/exporting capabilities **D. Troubleshooting** - how to troubleshoot operational difficulties with the system **E. Preventative Maintenance** - how to conduct simple preventative maintenance
DELIVERABLES (Schedule)	1. First submission - 60 days prior to first system delivery. 2. Review – CBSA has 30 days review and comment. 3. Final - Due 30 days after receipt of CBSA comments. All documents must be provided in both electronic and hard copies to the CBSA Science and Engineering Directorate.

TITLE	**Technical Manuals**
DID NUMBER	**004**
DESCRIPTION / PURPOSE	To provide the Technical Manuals.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	First submission - 60 days prior to first system delivery.
INSTRUCTIONS - Format	Both French and English versions of the Technical Manual must be supplied in electronic form (searchable .pdf format) to the CBSA's Ottawa-based Detection Technology Section (DTS). These must use standard terminology, be logically sectioned and all figures and tables must be properly referenced.
INSTRUCTIONS- Content	Technical manuals must accurately represent the supplied systems, and must clearly detail, but not be limited to: a) theory of operation, functional descriptions, text, photographs, and schematic diagrams (all figures and tables must be properly labeled and referenced to the text and there must be consistency in the use of terms); b) lines of power and lines of communication (including wiring schematics) between modules of the system and between safety interlocks; c) network and computing architecture of the system, along with all passwords and access requirements to accommodate CBSA defined operations; d) data flow charts for the Radiation Safety System (RSS) and safety interlocks, indicating the default parameters and setting ranges for pertinent components, along with directions on adjusting values; e) sufficient detail so as to enable maintenance on the device by trained CBSA personnel, including troubleshooting information and use of the diagnostic systems; f) schedules of recommended preventive maintenance and replacement instructions for commonly replaced parts.
DELIVERABLES (Schedule)	1. First submission - 60 days prior to first system delivery. 2. Review – CBSA has 30 days to review and comment. 3. Final - Due 30 days after receipt of CBSA comments.

TITLE	**Operator Training**
DID NUMBER	**005**
DESCRIPTION / PURPOSE	To provide information relating to the training curriculum for the procured M-LS-NII system.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	Submission of Operator's Training Outline – with the Technical bid
INSTRUCTIONS - Format	
INSTRUCTIONS- Content	Operator Training must be comprehensive and must include (but not be limited to) detailed instructions on: **A. Radiation and safety** - radiation interactions - biological effects of different dose rates - the ALARA concept - potential hazards of M-LS-NII system **B. System Operations** - setup and storage of M-LS-NII system - conducting and concluding scanning operations - troubleshooting common problems **C. Scan and Informational Analysis** - identifying anomalies - using the image analysis toolbox - annotating images - importing and exporting files - practice and student testing with real scan images/data All Training Materials, including but not limited to manuals and presentations, must be provided to CBSA in both French and English for review prior to course delivery. Training Materials must be provided with course delivery.
DELIVERABLES (Schedule)	**1. Submission of Operator's Training outline – with the Technical bid** 2. First submission of Training Materials - 60 days prior to first system delivery. 3. Review – CBSA has 30 days to review and comment. 4. Final - Due 30 days after receipt of CBSA review. 5. Delivery of Training – within 14 days of Site Acceptance Testing (unless otherwise coordinated with CBSA). All documents must be provided in both electronic and hard copies to the CBSA Science and Engineering Directorate.

TITLE	**Scanning Operations Report**
DID NUMBER	**006**
DESCRIPTION / PURPOSE	To present the Bidder's concept of operations and primary operational constraints for the proposed M-LS-NII system.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	**Full Submission with Technical Bid.**
INSTRUCTIONS - Format	The Bidder must provide a Scanning Operations Report. This report must be formatted accordingly: - Title page (with DID No, Title, Author, Date) - Table of Contents - Page numbers - Figure and Table numbers Hard copies of all documents must be provided and soft copies (searchable .pdf) are requested at the time of submission.
INSTRUCTIONS- Content	The following information must be provided in the Scanning Operations Report. At a minimum the report must contain the following data, and be sectioned according to the following: **A. Concept of Operations** The Bidder must provide the following information relating to the scanning process: - minimum number of operators for scanning - role of each operator - time sequence of events for scanning - max scanning rate (hourly) - system's scanning speeds - maximum target dimensions - image cut-off heights (source side and detector side) - procedures for boom deployment and storage **B. Operating Conditions** The Bidder must provide the following information relating to the operating conditions: - min and max environmental temperatures in which the system can operate - max wind speeds in which scanning may be accomplished - max highway speeds that can be maintained by the system - boom deployment/storage method (powered and manual) **C. Power supply** The Bidder must provide the following information relating to the system power source for scanning (e.g., generator): - Make and model of power source - Max duration of scanning operations (power supply) without refueling or re-charging

	D. Additional Information The Bidder may submit any additional technical information they deem to be pertinent to this DID; such as, but is not limited to: test results, 3rd party reports, configuration options, or other raw data. Note that all information specifically requested in previous sections must be presented completely therein. This section must be formatted in the same manner as the rest of the DID and must be properly referenced in the Table of Contents . Any references to additional supporting technical documentation (ex. Technical Brochures) must be specific (Document title, page and paragraph number).
DELIVERABLES (Schedule)	**Full Submission with Technical Bid.**

TITLE	**Maintenance Reports**
DID NUMBER	**007**
DESCRIPTION / PURPOSE	To present the quarterly reports on maintenance requirements and activities.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	Report submission – each quarter after system delivery.
INSTRUCTIONS - Format	
INSTRUCTIONS- Content	The following information must be provided as part of each Maintenance Report on a quarterly basis. These reports will be used as part of the verification of compliance with Warranty and Service Requirements, and in evaluating the System Availability and Mean Time To Repair parameters for the system. At a minimum each report must contain the following data, and be sectioned accordingly: **A. Quarterly Maintenance Activities** The System Maintenance Provider must provide the following information relating to the maintenance of fielded systems: - a summary of previously scheduled maintenance activities completed over the report timeframe - detailed information on unscheduled repairs, including: time to repair and cause of failure - notification of available upgrades or modifications to the system - notification of planned maintenance activities for the coming quarter
DELIVERABLES (Schedule)	1. Report submission – each quarter after system delivery. 2. Review – Government has 10 days to review and comment. 3. Final - Due 10 days after receipt of comments. All documents must be provided in searchable .pdf format to the CBSA Science and Engineering Directorate.

TITLE	**Radiological Survey Report**
DID NUMBER	**008**
DESCRIPTION / PURPOSE	To present the radiation dose rates at defined positions to enable assessment of the radiological safety of the M-LS-NII system for CBSA operations.
APPLICATION / INTER-RELATIONSHIP	To evaluate the radiation safety and facilitate the regulatory compliance verification process.
SUBMISSION DATE	**Section A: Preliminary Report –Submission with Technical Bid.**
INSTRUCTIONS - <u>Format</u>	The Bidder must conduct the radiological survey defined below, and provide a Radiological Survey Report. This report must be formatted accordingly: - Title page (with DID No, Title, Author, Date) - Table of Contents - Page numbers - Figure and Table numbers Hard copies of all documents must be provided and soft copies (searchable .pdf) are requested at the time of submission.. <u>Test Procedure</u> The Bidder must conduct the following radiological survey, designed to determine the maximum radiation dose rates around the M-LS-NII system when scanning standard commercial cargo and containers. The survey includes measurements using both electronic radiation detectors (to be provided by the Bidder), Thermo-luminescent Dosimeters (TLDs) (to be provided by CBSA) and Electronic Dosimeters (to be provided by CBSA); these measurements may be taken at the same time. All other test apparatus must be supplied by the bidder. CBSA technical personnel will oversee and direct, as needed, the survey process. Survey Plan The M-LS-NII system will be setup to scan a standard 40' marine container within the CBSA defined radiation safety zone, as shown in Figure 1.

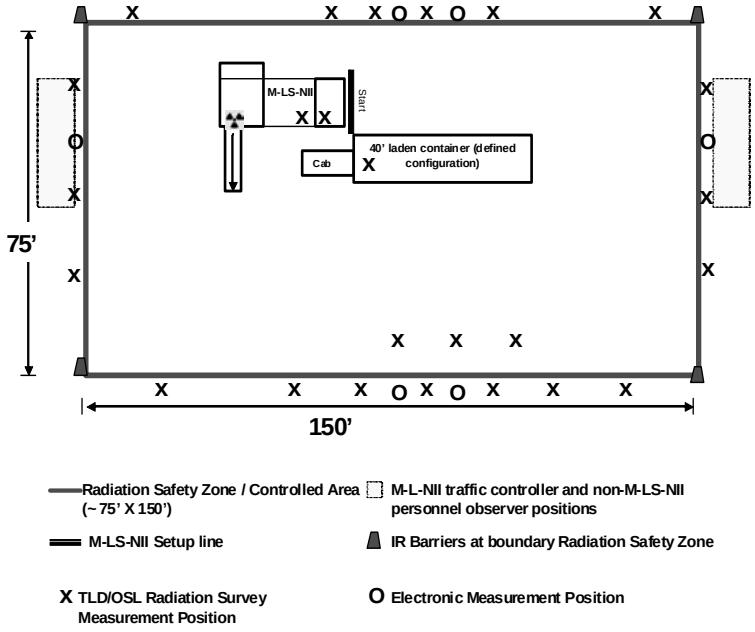

Figure 1 –Radiation survey plan for CBSA operations

The container will either be mounted on a standard conveyance chassis (truck flatbed or equivalent), or raised to similar height on risers. Inside the container will be four (4) standard size [1.2 m x 1.2 m] wooden pallets loaded to a height of 1.5 m with the following commodities: bottles of water, newsprint, crushed aluminum cans, and scrap metal or steel plates.

LSI Radiation Survey Test Configuration:
Laden Cargo Container

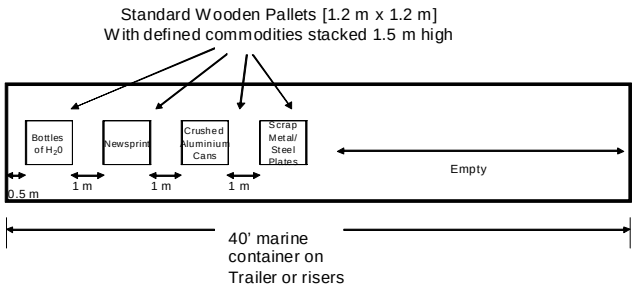

Figure 1 - Laden container configuration

The M-LS-NII system will scan the container and conveyance a minimum of 50 times

	Electronic Measurements At each of the locations designate with an (O) in Figure 1, radiation survey measurements will be taken from a height of 1 m with an electronic radiation survey meter. This meter must have sufficient response time and energy range to measure the radiation fields at all locations, and also a data logging capability to measure the variation in dose rate throughout the course of a scan. At least 3 measurements will be taken from each position with the electronic survey meter. Dosimeter Measurements At each of the locations designate with an (X) in Figure 1, one (1) Thermo-Luminescent Dosimeters (TLD) and 1 Electronic Dosimeter (ED) will be firmly attached to a wooden stake (minimum area of cross section 1 sq. in) at a height of 1 m from the ground, and oriented toward the target object. The serial numbers of each detector and its position will be recorded, and they will be left in place for a minimum of 50 scans of the container. One TLD and one ED will be kept aside to measure the ambient background during scanning.
INSTRUCTIONS- Content	The following information must be provided in the Radiological Survey Report. At a minimum the report must contain the following data, and be sectioned according to the following: **A. Preliminary Report** The Bidder must present a preliminary report detailing the projected radiation dose rates of the system proposed for purchase by the Government of Canada. These projected values must be based on previous testing of same or similar systems (including previous generations or fixed-site units) and/or Monte Carlo Simulations of a fully configured system. These projected values must demonstrate the capability for the proposed system to satisfy the radiation safety zone (RSZ) and target dose rate requirements. **B. Survey Test Overview** The bidder must present a schematic of the test plan indicating: - description of testing area and setup - all test positions and corresponding detector serial numbers - recorded environmental conditions - notes regarding any potential anomalies in data - summary of data: necessary radiation safety zone - summary of data: max target dose rate per scan **C. TLD OSL Measurements** The bidder must present the following data from the TLD/OSL data: - total dose acquired for each position - total number of scans completed **D. Electronic Measurements** The bidder must present the following data from the electronic measurements: - time dependant radiation dose rates measured during the scan - max dose rate reached during the scan - integrated dose rates for each scan

	E. Additional Information The Bidder may submit any additional technical information they deem to be pertinent to this DID; such as, but is not limited to: test results, 3rd party reports, configuration options, or other raw data. Note that all information specifically requested in previous sections must be presented completely therein. This section must be formatted in the same manner as the rest of the DID and must be properly referenced in the Table of Contents (any references to additionnal supporting technical documentation. Any references to additional supporting technical documentation (ex. Technical Brochures) must be specific (Document title, page and paragraph number).
DELIVERABLES (Schedule)	**1. Preliminary Report – submission with Technical Bid.** 2. Radiological Survey Testing – conducted within 30 days of Bid Submission. 3. First submission – within 2 weeks of Survey Testing. 4. Review and Comment – CBSA has 2 weeks provide comments and request changes. 5. Final Submission – within 2 weeks of Review and Comments.

TITLE	**Radiological Safety System Report**
DID NUMBER	**009**
DESCRIPTION / PURPOSE	To provide clear understanding of the instrumentation and protocols on the M-LS-NII system that function to prevent or limit radiation exposure.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	Submission - 30 days after contract award
INSTRUCTIONS - Format	
INSTRUCTIONS- Content	The Contractor must provide detailed information on instrumentation, protocols and parameters affecting the radiation safety of the system, specifically: **A. Parameters and Logic** - schematic showing all lines of communication for Radiological Safety System - decision tree diagrams for fault generation and recovery - description of parameter defaults and thresholds - description of integrated sensors - schematic of system showing Emergency Stop buttons **B. Radiation Detection Equipment** - make and model numbers for all detectors - calibration date for all radiation detectors - recommended calibration schedule for all radiation detectors - calibration process for non-interchangeable radiation detection equipment - response time - energy range - radiation dose range
DELIVERABLES (Schedule)	1. First submission – 30 days after contract award. 2. Review and Comment – CBSA has 30 days to provide comments and request changes. 3. Final Submission – within 30 days of Review and Comments. All documents must be provided in both electronic and hard copies to the CBSA Science and Engineering Directorate.

TITLE	**Radiological Source and Control Report**
DID NUMBER	**010**
DESCRIPTION / PURPOSE	To present information relating to the emission and control of radiation by the M-LS-NII system, to assess its safety for use in CBSA operations.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	**Submission - with Technical Bid**
INSTRUCTIONS - Format	The following information must be provided in the Radiological Source and Control Report. At a minimum the report must contain the following data, and be sectioned accordingly: **A. Shielding and Stopping** The Bidder must provide detailed schematics of the "as-built" radiation shielding and stopping configurations, specifically identifying: - shielding protecting the system operators - beam limiting material behind detectors **B. Radiological Source** The bidder must provide the following radiological source information: - source manufacturer - source make and model numbers - pulse frequency - pulse duration - nominal energy of radiation generated - mean energy of radiation generated - focal spot size - calibration test results - dose measurement test results. **C. Collimator arrangement** The Bidder must provide the following information on collimator arrangement: - schematic of collimator - material composition - projected beam width at detector **D. Beam Filtering** The Bidder must provide the following information on any beam filtering employed by the system, specifically: - schematic of beam filter - material composition - relative effect on dose rate **E. Beam Alignment** The Bidder must provide the following information on the beam alignment system, specifically: - the type of alignment system (i.e., laser, infrared, detector count rates) - the tolerance to misalignment

	F. Additional Information The Bidder may submit any additional technical information they deem to be pertinent to this DID; such as, but is not limited to: test results, 3rd party reports, configuration options, or other raw data. Note that all information specifically requested in previous sections must be presented completely therein. This section must be formatted in the same manner as the rest of the DID and must be properly referenced in the Table of Contents. Any references to additional supporting technical documentation (ex. Technical Brochures) must be specific (Document title, page and paragraph number).
INSTRUCTIONS- Content	
DELIVERABLES (Schedule)	**Full submission - with Technical Bid.** Hard copies of all documents must be provided and soft copies (searchable .pdf) are requested at the time of submission.

TITLE	**System Performance Report**
DID NUMBER	**011**
DESCRIPTION / PURPOSE	To validate the Bidder's claims regarding system performance, and to enable CBSA to complete the Evaluation Matrix of the Technical Bid Evaluation.
APPLICATION / INTER-RELATIONSHIP	
SUBMISSION DATE	**Section A: Preliminary Report – submission with Technical Bid**
INSTRUCTIONS - Format	The Bidder must provide a System Performance Testing Report. This report must be formatted accordingly: - Title page (with DID No, Title, Author, Date) - Table of Contents - Page numbers - Figure and Table numbers Hard copies of all documents must be provided and soft copies (searchable .pdf) are requested at the time of submission.
INSTRUCTIONS- Content	The following information must be provided in the Scanning Operations Report. At a minimum the report must contain the following data, and be sectioned according to the following: **A. Preliminary Report** The Bidder must present a preliminary report detailing the projected performance of the system proposed for purchase by the Government of Canada. These projected values must be based on previous testing of same or similar systems (including previous generations or fixed-site units) and/or Monte Carlo Simulations of a fully configured system. These projected values must demonstrate the capability for the proposed system to satisfy the minimum performance requirements for: - Penetration - Spatial Resolution - Wire Detection - Contrast Sensitivity The report should also present the presence and performance of any of the CBSA rated options of Annex B – Point Rated Technical Criteria. **B. Complete Report** The Contractor must conduct, and report on, a formal system performance test done with a system of the type proposed for purchase by the Government of Canada. The testing will be done according to the procedures defined in the ANSI 42.46 standard, and must clearly evaluate the following aspects: - Penetration - Spatial Resolution - Wire Detection - Contrast Sensitivity The template provided in Annex "B" of the ANSI 42.46 standard must be completed and submitted as part of the report.

	If the proposed system is capable of material discrimination, a test apparatus will be defined by CBSA technical personnel for evaluation of this capability. Testing with this apparatus will follow the same ANSI 42.46 procedures. If the proposed system is capable of material discrimination or any of the CBSA rated options of Annex B – Point Rated Technical Criteria, test equipment will be defined by CBSA technical personnel for evaluation of these capabilities. Testing will follow ANSI procedures. **C. Additional Information** The Bidder may submit any additional technical information they deem to be pertinent to this DID; such as, but is not limited to: test results, 3rd party reports, configuration options, or other raw data. Note that all information specifically requested in previous sections must be presented completely therein. This section must be formatted in the same manner as the rest of the DID and must be properly referenced in the Table of Contents. Any references to additional supporting technical documentation (ex. Technical Brochures) must be specific (Document title, page and paragraph number).
DELIVERABLES (Schedule)	**1. Preliminary Report – submission with Technical Bid.** 2. Data Validation Testing – within 30 days of Bid Submission. DID - System Performance Report within 5 days. 3. One (1) hard copy and one (1) soft copy of the report must be provided. All documents must be provided in both electronic and hard copies to the CBSA Science and Engineering Directorate.

ANNEX "E" – PROCUREMENT TIMELINE

The following is the estimated procurement timeline. The purpose of this timeline is to communicate expected dates that client desires and to enable planning.

TABLE 1 - RFP Posting and evaluation of bids

STEP	START	END
RPF posted on MERX for 40 days	2012-06-01	2012-07-11
Technical Evaluation	2012-07-12	2012-07-20
Compliant bidders notified and scheduling of Technical Data Validation Testing	2012-07-23	2012-07-27

TABLE 2 - Data Validation Testing, Financial Evaluation & Contact Award

STEP	START	END	CONTRACTOR *(Bidder to complete)*	
			EXPECTED DATE	LOCATION
Technical Data Validation Testing (DVT) on system of the type proposed for purchase by the Government of Canada	System must be made available within 30 days after notification of compliant bid			
Financial & Finalizing Evaluation	2012-07-12	2012-08-31		
Contract Award		2012-09-07		

TABLE 3 - FAT, SAT and Delivery

STEP	START	END	CONTRACTOR *(Bidder to complete)*	
			EXPECTED DATE	LOCATION
SYSTEM 1 of 3				
Factory Acceptance Testing (FAT)				
Delivery	Delivery is requested by January 31, 2013.			
Installation				
Site Acceptance Testing (SAT)				
SYSTEM 2 of 3				
Factory Acceptance Testing (FAT)				
Delivery	Delivery is requested by January 31, 2013.			
Installation				
Site Acceptance Testing (SAT)				
SYSTEM 3 of 3				
Factory Acceptance Testing (FAT)				
Delivery	Delivery is requested by January 31, 2013.			
Installation				
Site Acceptance Testing (SAT)				