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LETTER OF INTEREST
LETTRE D'INTÉRÊT

Title - Sujet
AMMUNITION BRASS CERTIFICATION

Solicitation No. - N° de l'invitation	Date
W8476-185847/B	2018-04-06
Client Reference No. - N° de référence du client	**GETS Ref. No. - N° de réf. de SEAG**
W8476-185847	PW-$$BM-036-26780
File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
036bm.W8476-185847	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2018-05-18

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
Langdon (bm div), Darren	036bm
Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(819) 939-0951 ( )	( ) -

Destination - of Goods, Services, and Construction:
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Telephone No. - N°de téléphone
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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
Weapons Systems Division/Division des systémes d'arme
11 Laurier St. / 11, rue Laurier
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Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	LETTER OF INTEREST	D - 1	W8476	1	Each	$	$	See Herein	

DEPLOYABLE SMALL ARMS AMMUNITION BRASS CERTIFICATION
Letter of Interest
Nº W8476-185847

1. Purpose and Nature of the Letter of Interest (LOI):

1.1. The purpose of this Letter of Interest (LOI) is to inform Industry of a possible upcoming competitive procurement process for the Department of National Defence's (DND) requirement to procure, integrate and support a new deployable small arms ammunition brass certification capability.

1.2. Public Services and Procurement Canada's (PSPC) intent for this LOI is to engage Industry in a consultative process by seeking Industry feedback via the responses to questions identified herein. In addition, DND has a requirement to understand the availability and affordability of options on behalf of Canada.

1.3. Interested firms are encouraged to review the documentation attached to the LOI and provide comments and/or questions, in writing, to the PWGSC Contracting Authority identified herein at Section 6.

2. Requirement:

2.1. The Canadian Armed Forces (CAF) has a requirement to possibly acquire a demilitarization and disposal capability for expended Small Arms Ammunition (SAA) cartridge cases, a major component of ammunition salvage.

2.2. In the context of this LOI, SAA is considered to be the ammunition of all sizes of rifled firearms up to and including those of 12.7mm (.50 caliber), unless otherwise indicated. The cartridge cases of functioned SAA are conventionally known as "Brass", whether the case is made of brass or of steel.

2.3. The intent is to procure equipment, of either commercial or military origin, or a mix of both, to meet the list of requirements provided below. The main deliverables will be the supply of the equipment, provide two (2) years of spares, and train the users for operations and maintenance.

3. Potential Scope and Constraints:

3.1. The LOI is not subject to the Controlled Goods Program, however any resulting competitive process may be. For information pertaining to the Controlled Goods Program, please refer to the Public Services and Procurement Canada (http://ssi-iss.tpsgc-pwgsc.gc.ca/dmccgd/index-eng.html) website.

3.2. The Federal Contractors Program for Employment Equity (FCP-EE) will apply to the upcoming competitive procurement process. Further details on the FCP-EE will be communicated on https://buyandsell.gc.ca/ as part of the upcoming competitive procurement process.

3.3. There are no security requirements associated with this LOI, however, there may be security requirements associated with any resulting competitive procurement process. Additional information on the security requirements will be communicated on https://buyandsell.gc.ca/ as part of the upcoming competitive procurement process.

3.4. Should Industry require information on personnel and organization security screening or security clauses, please refer to the Canadian Industrial Security Directorate (CISD), Industrial and Security Program of Public Services and Procurement Canada (http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html) website.

3.5. Any additional information on the potential scope and constraints will be communicated on https://buyandsell.gc.ca/ as part of any competitive process.

4. Legislation, Trade Agreements, and Government Policies:

4.1. The following is a list of some legislation and government policies that will govern the upcoming competitive procurement process:

a) Defence Production Act (DPA)
b) Controlled Goods Program (CGP)

c) Federal Contractors Program for Employment Equity (FCP-EE)
d) Government Contract Regulations (GCR)
e) Policy on Green Procurement

4.2. Any additional information pertaining to Legislation and Government Policies will be communicated on https://buyandsell.gc.ca/ as they become available throughout the period of this LOI or as part of any resulting competitive procurement process.

5. Schedule:

5.1. The following is the tentative schedule associated with both the LOI and potential competitive procurement process:

a) Release of Letter of Interest: April 2018
b) LOI Closing date: May 2018
c) Analyze responses and determine a course of action: June 2018
d) Release potential Request for Proposal: July 2018
e) Potential Contract Award: September 2018
f) First Delivery: Spring 2019

5.2. Any changes to the tentative schedule will be communicated on https://buyandsell.gc.ca/ as they become available throughout the period of this LOI.

6. PSPC Contracting Authority:

Important Notes to Respondents:

All information, communication or correspondence must be directed to the Contracting Authority ONLY. No other member or representative of the Government of Canada can be informed, challenged or otherwise communicated with, including carbon copy or blind carbon copy on an emails or written correspondence regarding this LOI.

6.1. Any correspondence must be directed, in writing, in either official language of Canada, to the PWGSC Contract Authority identified below, preferably via email:

Darren Langdon
Supply Team Leader
Munitions and Weapons Systems Division - BK/BM,
Public Services and Procurement Canada (PSPC)
975 Blvd Saint-Joseph. Gatineau, Quebec K1A 0K2

Phone: (819) 939-0951 / (819) 639-3772
E-mail: darren.langdon@pwgsc-tpsgc.gc.ca

6.2. Changes to this LOI may occur and will be advertised on the Government Electronic Tendering System, https://buyandsell.gc.ca/

6.3. Canada asks interested parties to visit https://buyandsell.gc.ca/ regularly to check for changes, if any.

7. Industry Interaction:

7.1. To ensure a successful procurement process for the provision of a brass certification capability, Canada intends is to engage Industry in a consultative process. The consultative process associated with this LOI includes specific questions aimed to help determine the viability and capabilities of such a scope. It may include follow-up questions, hosting a plenary Industry Day and/or holding One-on-One Sessions.

7.2. Canada's intent in seeking Industry feedback is mainly to solicit feedback and information on the following topics:

a) Industry Capability;
b) Varying solutions; and
c) Affordability.

7.3. All Questions and Answers throughout the engagement process will be recorded and posted on https://buyandsell.gc.ca/

7.4. Participants will be asked to submit any additional feedback to the Industry Interaction, in writing, to the PSPC Contracting Authority, identified herein at Section 6, on or before 22 June 2018.

7.5. Non-attendance at any resulting Industry Day or One-on-One Sessions will not preclude any firm from bidding on this requirement should a follow-on solicitation be issued.

7.6. All submitted information, comments and/or questions must be based solely on the documentation herein and Industry should not reference any other past procurement process.

8. NOTES TO INTERESTED INDUSTRY PARTICIPANTS:

8.1. This LOI is neither a call for tender nor an RFP, and no agreement or contract for the procurement of the requirement described herein will be entered into solely as a result of this LOI. The issuance of this LOI is not to be considered in any way as a commitment by Canada nor as authority to potential Respondents to undertake any work that could be charged to Canada.

8.2. This LOI is not to be considered as a commitment to issue a subsequent solicitation or award contract(s) for the work described herein. Canada does not intend to award a contract on the basis of this notice or otherwise pay for the information solicited. Any and all expenses incurred by the Respondent in pursuing this opportunity, including the provision of information and potential visits, are at the Respondent's sole risk and expense.

8.3. Any discussions on this subject with project staff representing DND, PSPC or any other Government of Canada representative or other personnel involved in project activities, must not be construed as an offer to purchase or as a commitment by Canada.

8.4. Respondents may provide documents / information / data collected as commercial-in-confidence (and if identified as such, will be treated accordingly by Canada). However, Canada reserves the right to use the information to assist them in drafting performance specifications and for budgetary purposes in consultation with both national and international stakeholders. Requirements are subject to change, which may be as a result of information provided in response to this LOI. Participants are advised that any information submitted to Canada in response to this LOI may or may not be used by Canada in the development of the potential subsequent RFP. The issuance of this LOI does not create an obligation for Canada to issue a subsequent RFP and does not bind Canada legally or otherwise, to enter into any agreement or to accept or reject any suggestions.

8.5. Respondents are encouraged to clearly identify, in writing, in the information they share with Canada, any information they feel is commercial-in-confidence, proprietary, third party or personal. Please note that Canada may be obligated by law (e.g. in response to a request under the Access to Information and Privacy Act) to disclose proprietary or commercially-sensitive information concerning a Respondent (for more information: http://laws-lois.justice.gc.ca/eng/acts/a-1/).

8.6. Respondents are asked to identify, in writing, if their response, or any part of their response, is subject to the Controlled Goods Regulations.

8.7. Participation in this LOI is encouraged, but is not mandatory. There will be no shortlisting of potential suppliers for the purposes of undertaking any future work as a result of this LOI. Similarly, participation in this LOI is not a condition or prerequisite for the participation in any potential subsequent solicitation.

8.8. Respondents will not be reimbursed for any cost incurred by participating in this LOI.

9. Attached Documents:

ANNEX A – DEPLOYABLE SMALL ARMS AMMUNITION BRASS CERTIFICATION CAPABILITY REQUIREMENTS
ANNEX B – SAA BRASS CERTIFICATION CAPABILITY REQUIREMENTS
ANNEX C – SUSTAINMENT REQUIREMENTS
ANNEX D – DOCUMENTATION REQUIREMENTS
ANNEX E – RESPONSE TEMPLATE

10. Closing date for the Letter of Interest:

10.1. The LOI (Industry Engagement) closing date is currently planned for 18 May 2018. Respondents are asked to submit their responses to the questions posed in Annex A by 2:00 pm Eastern Daylight Time (EDT) on 1 May 2018.

ANNEX A – DEPLOYABLE SMALL ARMS AMMUNITION BRASS CERTIFICATION CAPABILITY REQUIREMENTS

1. General

1.1. The Canadian Armed Forces (CAF) has a requirement to possibly acquire a demilitarization and disposal services capability for expended Small Arms Ammunition (SAA) cartridge cases, a major component of ammunition salvage.

1.2. In the context of this LOI, SAA is considered to be the ammunition of all sizes of rifled firearms up to and including those of 12.7mm (.50 caliber), unless otherwise indicated. The cartridge cases of functioned SAA are conventionally known as “Brass”, whether the case is made of brass or of steel.

1.3. The intent is to procure equipment, of either commercial or military origin, or a mix of both, to meet the list of requirements provided below. The main deliverables will be the supply of the equipment, provide two (2) years of spares, and train the users for operations and maintenance.

2. Project Scope

2.1. The SAA Brass Certification Capability project may include the following system components:

a) SAA Brass sorter that automatically detects and separates live SAA rounds from an SAA cartridge case disposal stream;
b) Thermal treatment equipment that heats the SAA Brass to deflagrate live rounds and any residual propellant in the functioned cartridge cases; and
c) Deforming capability to deform or mutilated the heat treated cartridge cases.

3. Role and Function

3.1. The role of the SAA Brass Certification capability is to:

a) Identify and remove live rounds that may have been inadvertently included in the collection, as ammunition salvage, of the cartridge cases;
b) Remove potentially hazardous levels of residual live propellant from the cartridge cases; and
c) Remove the possibility of reuse of the cartridge cases by deforming or mutilating them by mechanical means.

4. Constraints

4.1. To mitigate risk and reduce cost the solution should be operationally fielded and fully developed system components.

5. Requirements

5.1. The SAA Brass Certification Capability is predicated on the set of functional and performance requirements contained within Annex B. Respondents are asked to provide input and/or suggestions for change or improvement to these performance requirements.

6. Requested Information

6.1. Respondents are encouraged to be innovative in their proposed method(s) of capability delivery and support options. Based on the requirements detailed in this document, the LOI seeks the following information:

a) The equipment would your company propose for any one (1), two (2) or all three (3) of the capabilities required by DND? Please identify the equipment type and the specific make and model that you would propose for each capability requirement.
b) Which of the equipment that you propose does your company manufacture, and which would you propose being provided by another manufacturer in partnership or as a sub-contractor to you?

c) Whether you company would be prepared to procure any equipment that you do not manufacture?

d) Which of the specification requirements would you propose to change e.g., relax, delete, strengthen, and what would the changes be?

e) What requirements would you propose adding to any or all of the capability specifications?

f) An estimated production time for each of the equipment that your company produces?

g) A rough cost for each equipment (FOB OEM location) that your company produces?

h) A rough cost for each documentation deliverable identified in Annex B?

i) Are there any aspects of the documentation detailed in Annex D that should be relaxed, removed, modified or added?

j) A rough time-line for delivery of each equipment?

k) Do you currently have test data to demonstrate availability for your equipment, and would you be willing to provide this data as part of the bid proposal?

ANNEX B – SAA BRASS CERTIFICATION CAPABILITY REQUIREMENTS

1. General

1.1. This annex contains the requirements for the SAA Brass Certification Capability.

2. Mission and Scenarios

2.1. The SAA Brass Certification Capability Project will deliver a demilitarization and disposal services capability for expended small arms cartridge cases, a major component of ammunition salvage. All three (3) components listed in Annex A will be initially located in CFAD Dundurn, Saskatchewan, Canada.

2.2 The heat treatment and deforming capabilities must be deployable to other Canadian depots and bases, and overseas to support Canadian expeditionary operations. Deployable in this context means that:

a) For equipment which is mounted on and supplied with a trailer, the trailer will comply with Canadian Motor Vehicle Safety Standards and the 2016 MOU on Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada;
b) For equipment which is not mounted on and supplied with a trailer, the equipment will be supplied in such a way as to render it easily mountable and transportable by a flatbed trailer, and the system consisting of the equipment mounted on a flatbed trailer will comply with the 2016 MOU on Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada;
c) The equipment must fit into RCAF CC-177 Globemaster III Cargo Aircraft, and should fit into RCAF CC-130 Hercules Cargo Aircraft;
d) The equipment can be easily containerized if sea-going transportation is required; and
e) The unpack, locate and set-to-work of the transported equipment can be performed by Canadian Armed Forces (CAF) personnel i.e., the OEM or Vendor are not required to bring the equipment to an operational state;

2.3 The SAA Brass sorter capability will be housed in an all-season work shop. The equipment will be expected to operate from +5˚C to +35˚C.

2.4 The heat treatment and deformer capabilities will be located on a hardened pad, serviced with electricity and the suitable fuel, outside and adjacent to the ammunition workshops at CFAD Dundurn. The pad location will include a safety perimeter and adequate space for SAA Brass loading into and unloading from the processing equipment. The equipment is expected to be stored with a temporary shelter or tarpaulin in location during the winter with temperature ranges to -40˚C.

3. Concept of Operations

3.1. Operation of the sorting capability equipment will be in accordance with the following factors:

a) The sorting capability equipment will be installed and operated by a crew of two (2) consisting of an operator and a supervisor,
b) The sorting capability will be located in an enclosed, winterized facility at CFAD Dundurn. Once installed, it is not expected that the sorting capability will move;
c) The equipment will be operated 8 hours/day, 5 days/week for 48 weeks of the year, subject to maintenance requirements, and
d) The primary users of the system will be CFAD Dundurn civilian and military ammunition technician personnel initially trained by the original equipment manufacturer (OEM), or Vendor on the use of the equipment.

3.2 Operation of the heat treatment and deformer capability equipment will be in accordance with the following factors:

a) The heat treatment and deformer capability equipment will be operated by a crew of three consisting of operator, loader and supervisor on an out-door hardened pad at CFAD Dundurn. The heat treatment and deformer capabilities will be deployable, both within Canada and to support overseas operations;

b) The equipment will be operated 8 hours/day, 5 days/week in weather conditions consistent with its operating profile, and subject to maintenance requirements, and
c) The primary users of the system will be CFAD Dundurn civilian and military ammunition technician personnel initially trained by the original equipment manufacturer (OEM) or Vendor on the use of the equipment.

4. Design and Concept Guidance

4.1 The following should be used to guide the solution to the Brass Certification capability requirements:

a) The Certification capability is not expected to be provided by a single piece of equipment;
b) Each piece of equipment must be designed such that the operators can perform their monitor and control functions without risk of injury;
c) The thermal treatment and deformer components will be located on hardened pads out-side;
d) The thermal treatment and deformer capabilities must be deployable, where deployable means that the disassembly and reassembly required for the transportation is within the capability of CAF personnel, and the equipment must fit into RCAF CC-177 Globemaster III Cargo Aircraft, and should fit into RCAF CC-130 Hercules Cargo Aircraft;
e) The equipment should be easily containerized if sea-going transportation is required; and
f) It is strongly preferred that the SAA Brass Certification units' power sources be land-based for all uses, except for the burner(s), which should use diesel fuel. In the event that the unit generate its own electricity then the preferred fuel for the generator set is also diesel fuel;

5. Sorting Capability

The purpose of the sorting capability is to remove live rounds from the demilitarization/disposal stream.

5.1 Sorting Capability Requirements

a) Must sort all calibers of SAA cartridge cases, excluding shotgun cartridge cases, from 5.56 mm to .50 caliber inclusive;
b) Must deposit the sorted SAA cartridge cases into separate bins based on caliber;
c) Must sort and bin up to and including five (5) different selected calibers of SAA cartridge cases, excluding .50 caliber, simultaneously;
d) Must identify cartridge cases that have not been selected for sorting and eject them into a separate (reject) bin from the bins allocated to the selected calibers;
e) Must identify live rounds (those containing an in-place projectile) and sort them into a separate (reject) bin from the expended cartridge case bins with a capture rate of 99.99%.
f) Must sort and bin a minimum of 5000 SAA cartridge cases per hour;
g) Must auto-feed cartridge cases from a reservoir, and
h) Must auto-stop when any recipient bin is full.

5.2 User Interface

The following general requirements apply to the sorting capability user interface:

a) The sorter should have a control panel that conforms to CSA C22.2 NO. 286-17 or equivalent (NFPA 79 or IEC 60204-1:2016) with industry standard controls and indicators for normal, abnormal and emergency system conditions.
b) The sorting capability user interface should be centralized at a single operator station excluding an emergency STOP control which can be at multiple locations.
c) The sorting capability user interface must provide controls, status information, and alarm indications.
d) The sorting capability should perform a self-test on start-up that and provide indications of system status and operational readiness.

5.2.1 Operator Controls

The following operator control requirements apply to the sorting capability user interface:

a) The user interface must provide an emergency STOP control that instantly cuts power to all moving components and processing tasks, except for system safety features;
b) The sorter power-on control must energize the system and put it into a wait state;
c) The user interface must provide a START/GO control that orders the system to start processing;
d) The sorter must provide a menu of SAA cartridge case calibers from which the operator must select up to and including five (5) different calibers to be sorted;
e) The sorter must provide a menu of SAA cartridge case sizes from which to select the cartridge cases to be sorted;
f) The sorter must present as items on the SAA cartridge case menu the following calibers of cartridge case:
    1. 12.7 x 99 mm (.50 caliber);
    2. 9 x 19 mm;
    3. 7.62 x 51mm (.308 in.) NATO;
    4. 8.58 x 70 mm (.338 in.) Lapua Magnum, and
    5. 5.56 x 45 mm NATO;
g) In addition to the five (5) cartridge case sizes identified above, the sorter SAA cartridge case menu should provide an additional ten (10) cartridge case sizes for operator selection for sorting including:
    1. Commonly used AK-47 cartridge case sizes;
    2. Commonly used NATO cartridge case sizes not identified above;
    3. Commonly used North American hunting rifle cartridge case sizes; and
    4. Commonly used North American hand gun cartridge case sizes;
h) The sorter SAA cartridge case menu should be expandable to enable the definition by DND of new SAA cartridge case sizes in the future;
i) The sorter should provide the user with a control to select the rate of sorting if it is controllable;
j) The user must be provided with the option to select a single cartridge case type for sorting, in which case all bins except the reject bin must be used for the selected cartridge case type;

5.2.2 Status Information

The following status information display requirements apply to the sorting capability user interface”

a) The sorter capability should clearly indicate the operational status e.g., warm-up, ready, run, and system fault, as applicable.
b) The sorter capability must provide displays, indications and/or readouts that indicate system faults or conditions that require operator attention.
c) The sorter capability should provide information on system health and the statuses of replenishable lubricants.
d) The sorter capability should provide information on current faults or malfunctions.

5.2.3 Alarms

The sorting capability must provide visual or audible (or both) alarms relevant to its operation to protect both the operator(s) from injury and the equipment from damage in the event of an out-of-tolerance condition occurring in the equipment.

5.3 Services

The sorting capability:

a) Must operate connected to a land-based power source at 60 Hz, for all its electrical requirements;
b) Must provide an uninterruptible power source/supply, and
c) Must provide power surge protection appropriate to the voltage, current and phases of the power source used;

5.4 Human Engineering

The sorting capability should comply with the following paragraphs of MIL-STD-1472G Human Engineering, 11 January 2012:

a) Paragraph 5.7.1 – General;
b) Paragraph 5.7.2 – Display of Warnings and Hazards;
c) Paragraph 5.7.3 – Visual Display;
d) Paragraph 5.7.6 – General Workplace Hazards; and
e) Paragraph 5.7.9.2 – Mechanical Hazards.

5.5 Operating Environment

5.5.1 Temperature

The sorting capability equipment should operate throughout a temperature range of 5°C to 35°C without performance degradation.

5.5.2 Humidity

The sorting capability equipment must operate throughout a relative humidity range of 5% to 100% (non-condensing) without performance degradation.

5.6 Survivability

5.6.1 The equipment procured by this Project should comply with all CSA or equivalent industry standards for quality and durability.

5.6.2 Where there are automatic feeds, the equipment must be provided with sensing, operator warning mechanisms and automatic shut-down switches to prevent damage in the event of material jams.

6. Thermal Treatment Capability

The purpose of the thermal treatment capability is to remove live rounds from the demilitarization/disposal stream.

6.1 Thermal Treatment Capability Requirements

The thermal treatment capability:

a) Must thermally treat and thereby neutralize the residual propellant remaining in all calibers of expended SAA cartridge cases, excluding shotgun cartridge cases, up to .50 caliber inclusive;
b) Must thermally treat up to and including 200 kg/hr of expended SAA cartridge cases; however, the ability to treat more is desirable;
c) Must thermally treat up to and including 200 kg/hr of cartridge material and render the output 99.99% free of live cartridges, when live cartridges comprise up to and including 1% of the materiel being processed;
d) Should thermally treat up to and including 400 kg/hr of cartridge material and render the output 99.99% free of live cartridges, when live cartridges comprise up to and including 1% of the materiel being processed;
e) Should thermally treat, without incurring noticeable damage, up to and including 3% of the materiel being processed being live cartridges;
f) Must thermally treat, without incurring damage, “live” blanks of all SAA calibers, up to .50 caliber inclusive;
g) In the event of a power failure, the unit must not have to be emptied before it can be restarted.

6.2 User Interface

The following general requirements apply to the thermal treatment unit user interface:

a) The thermal treatment unit should have a control panel that conforms to CSA C22.2 NO. 286-17 or equivalent (NFPA 79 or IEC 60204-1:2016) with industry standard controls and indicators for normal, abnormal and emergency system conditions;
b) The thermal treatment unit user interface should be centralized at a single operator station excluding emergency STOP controls which can be at multiple locations;
c) The thermal treatment unit user interface must provide controls, status information, and alarm indications, and
d) The thermal treatment unit should perform a self-test on start-up and provide indications of system status and operational readiness.

6.2.1 Operator Controls

The following operator control requirements apply to the thermal treatment unit user interface:

a) The user interface must provide an emergency STOP control that instantly cut power to all moving components and processing tasks, except for system safety features;
b) The thermal treatment unit power-on control must energize the system and put it into a wait state;
c) The user interface must provide a START/GO control that orders the system to start processing;
d) If the thermal treatment unit is a rotary kiln type, then the user interface must provide the user with controls to select rates of feed of the cartridge cases consistent with the throughput requirements of the unit; and
e) Must provide the option to switch (at start-up) between the land-based power source used, and an on-board generator, providing the electrical power requirements;

6.2.2 Status Information

The following status information display requirements apply to the thermal treatment unit user interface:

a) The thermal treatment unit should clearly indicate the operational status e.g., warm-up, ready, run, and system fault, as applicable;
b) The thermal treatment unit should provide displays, indications and/or readouts that indicate system faults or conditions that require operator attention;
c) The thermal treatment unit should provide information on system health;
d) The thermal treatment unit should provide information on the statuses of replenishable lubricants; and
e) The thermal treatment unit should provide information on current faults or malfunctions.

6.2.3 Alarms

The thermal treatment unit must provide visual or audible (or both) alarms relevant to its operation to protect both the operator(s) from injury and the equipment from damage in the event of an out-of-tolerance condition occurring in the equipment.

6.3 Services

The thermal treatment capability:

a) Must operate connected to a land-based power source at 60 Hz, for all its electrical requirements;
b) Must have an on-board generator set that can provide all the electrical requirements;
c) On-board generator set must run on one of diesel fuel, natural gas, or propane;
d) In order of preference, the on-board generator set should run on diesel fuel, natural gas, or propane;
e) The heating chamber must run on the same fuel as the on-board generator set; and
f) Must provide power surge protection appropriate to the voltage, current and phases of the power source used;

6.4 Health and Safety

6.4.1 Human Engineering

The thermal treatment capability solution should comply with the following paragraphs of MIL-STD-1472G Human Engineering, 11 January 2012:

a) Paragraph 5.7.1 – General;
b) Paragraph 5.7.2 – Display of Warnings and Hazards;
c) Paragraph 5.7.3 – Visual Display;
d) Paragraph 5.7.6 – General Workplace Hazards; and
e) Paragraph 5.7.9.2 – Mechanical Hazards.

6.4.2 Projectile Debris

The thermal treatment equipment must not allow projectile debris caused directly or indirectly by cartridge deflagration or ignition to exit the heating chamber.

6.5 Operating Environment

6.5.1 Operating Temperature

The thermal treatment equipment should operate throughout a temperature range of 5°C to 40°C without performance degradation.

6.5.2 Storage Temperature

The thermal treatment equipment must be safely (for the equipment) storable outside throughout a temperature range of -40°C to 40°C while only protected by a tarpaulin.

6.5.3 Humidity

The thermal treatment equipment must operate throughout a relative humidity range of 5% to 100% (non-condensing) without performance degradation.

6.5.4 Rainfall

There is no intent to operate the thermal treatment equipment in a steady rain, or in sleet; however, the following features must be incorporated:

a) All electrical boxes, panels and cabinets must be watertight;
b) All wiring and connectors must designed for outdoor use and be water proof (not immersion proof), and
c) On cessation of rain, it must be possible to safely immediately resume the thermal treatment of cartridge cases.

6.6 Survivability

6.6.1 The equipment procured by this Project should comply with or exceed all appropriate CSA, or equivalent, industry standards for quality and durability.

6.6.2 Where there are automatic feeds, the equipment must be provided with sensing, operator warning mechanisms and automatic shut-down switches to prevent damage in the event of material jams.

6.7 Deployability

The following requirements support the deployability for the thermal treatment capability:

a) For equipment which is mounted on and supplied with a trailer, the trailer must comply with Canadian Motor Vehicle Safety Standards and the 2016 MOU on Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada;
b) For equipment which is not mounted on and supplied with a trailer, the equipment must be supplied in such a way as to render it easily mountable and transportable by a flatbed trailer, and the system consisting of the equipment mounted on a flatbed trailer must comply with the 2016 MOU on Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada;

c) The equipment must fit into RCAF CC-177 Globemaster III Cargo Aircraft, and should fit into RCAF CC-130 Hercules Cargo Aircraft;
d) The equipment should be easily containerized if sea-going transportation is required; and
e) The unpack, locate and set-to-work of the transported equipment must be performed by Canadian Armed Forces (CAF) personnel i.e., the OEM or Vendor are not required to bring the equipment to an operational state;

7. Deforming Capability

The purpose of the deforming capability is to deform expended and certified free from explosives SAA cartridge cases, and thereby redirect the cartridge cases from any reuse stream to a material recycling stream. The deformation need not be extreme – there is no need to shred the cartridge cases, just damage them sufficiently to prevent reloading. However, it is expected that this capability can be met by a variety of equipment types including those that are popularly known as deformers as well as shredders and hammer-mills.

7.1 Deformer Capability Requirements

The deformer capability:

a) Must deform all calibers of SAA cartridge cases from 5.56 mm to .50 caliber inclusive;
b) Should deform all calibers of cartridge cases up to .50 caliber inclusive;
c) Must deform up to and including 450 kgs/hr of expended cartridge cases;
d) Must process, without incurring noticeable damage, 1 in 10,000 cartridge cases being live and of any caliber;
e) Must include an in-feed hopper, and
f) Must incorporate a feed metering or management mechanism that ensures that the rate of cartridge case feed to the deformer mechanism does not exceed the deformer mechanism processing capability.

7.2 User Interface

The following general requirements apply to the deformer capability user interface:

a) The deformer capability should have a control panel that conforms to CSA C22.2 NO. 286-17 or equivalent (NFPA 79 or IEC 60204-1:2016) with industry standard controls and indicators for normal, abnormal and emergency system conditions;
b) The deformer capability user interface should be centralized at a single operator station excluding emergency STOP controls which can be at multiple locations;
c) The deformer capability user interface must provide controls, status information, and alarm indications, and
d) The deformer capability should perform a self-test on start-up and provide indications of system status and operational readiness.

7.2.1 Operator Controls

The following operator control requirements apply to the deformer capability user interface:

a) The user interface must provide an emergency STOP control that instantly cut power to all moving components and processing tasks, but the system remains powered;
b) The power-on control must energize the system and put it into a wait state;
c) The user interface should provide a deformer REVERSE control that either alone or in combination with another control stops the in-feed function and reverses the deformer function;
d) The user interface must provide a START/GO control that orders the system to start processing, and
e) Must provide the option to switch (at start-up) between the land-based power source used, and an on-board generator, providing the electrical power requirements;

7.2.2 Status Information

The following status information display requirements apply to the deformer capability user interface:

a) The unit should clearly indicate the operational status e.g., warm-up, ready, run, and system fault, as applicable;
b) The unit should provide displays, indications and/or readouts that indicate system faults or conditions that require operator attention;
c) The unit should provide information on system health;
d) The unit should provide information on the statuses of replenishable lubricants, and
e) The unit should provide information on current faults or malfunctions.

7.2.3 Alarms

The deformer capability unit must provide visual or audible (or both) alarms relevant to its operation to protect both the operator(s) from injury and the equipment from damage in the event of an out-of-tolerance condition occurring in the equipment.

7.3 Lubrication

7.3.1 All moving parts that require lubrication continuously or at regular intervals while in operations must be automatically lubricated by the equipment.

7.3.2 All equipment knives or cutters that require cutting lubrication at continuous or regular intervals must be automatically lubricated by the equipment.

7.4 Manual and Auto Feed

7.4.1 The deforming equipment must have the options of both of continuous (conveyer belt or hopper multiple sequential item feed) and manual feeding.

7.4.2 The deforming equipment must not overspeed or be in any way damaged if the cutting system is on but not processing any material

7.5 Services

The deformer capability:

a) Must operate connected to a land-based power source at 60 Hz, for all its electrical requirements;
b) Must have an on-board generator set that can provide all the electrical requirements.
c) On-board generator set must run on one of diesel, natural gas, or propane;
d) In order of preference, the on-board generator set should run on diesel fuel, natural gas, or propane, and
e) Must provide power surge protection appropriate to the voltage, current and phases of the power source used;

7.6 Health and Safety

7.6.1 Human Engineering

The deformer capability solution should comply with the following paragraphs of MIL-STD-1472G Human Engineering, 11 January 2012:

a) Paragraph 5.7.1 – General;
b) Paragraph 5.7.2 – Display of Warnings and Hazards;
c) Paragraph 5.7.3 – Visual Display;
d) Paragraph 5.7.6 – General Workplace Hazards; and
e) Paragraph 5.7.9.2 – Mechanical Hazards.

7.6.2 Projectile Debris

The deformer equipment must not allow projectile debris to exit the processing chamber.

7.7 Operating Environment

7.7.1 Operating Temperature

The deformer equipment should operate throughout a temperature range of 5°C to 35°C without performance degradation

7.7.2 Storage Temperature

The deformer equipment must be safely (for the equipment) storable outside throughout a temperature range of -40°C to +40°C while only protected by a tarpaulin.

7.7.3 Humidity

The deformer equipment must operate throughout a relative humidity range of 5% to 100% (non-condensing) without performance degradation.

7.7.4 Rainfall

There is no intent to operate the deformer equipment in a steady rain, or in sleet; however, the following features must be incorporated:

a) All electrical boxes, panels and cabinets must be watertight;
b) All wiring and connectors must designed for outdoor use and be water proof (not immersion proof), and
c) On cessation of rain, it must be possible to safely immediately resume the processing of cartridge cases.

7.8 Survivability

7.8.1 The equipment procured by this Project should be of industrial quality and comply or exceed all CSA and industry standards for quality and durability.

7.8.2 Where there are automatic feeds, the equipment must be provided with sensing, operator warning mechanisms and automatic shut-down switches to prevent damage in the event of material jams.

7.9 Deployability

To support deployability, the deformer capability:

a) For equipment which is mounted on and supplied with a trailer, the trailer must comply with Canadian Motor Vehicle Safety Standards and the 2016 MOU on Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada;
b) For equipment which is not mounted on and supplied with a trailer, the equipment must be supplied in such a way as to render it easily mountable and transportable by a flatbed trailer, and the system consisting of the equipment mounted on a flatbed trailer must comply with the 2016 MOU on Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada;
c) The equipment must fit into RCAF CC-177 Globemaster III Cargo Aircraft, and should fit into RCAF CC-130 Hercules Cargo Aircraft;
d) The equipment should be easily containerized if sea-going transportation is required; and
e) The unpack, locate and set-to-work of the transported equipment must be performed by Canadian Armed Forces (CAF) personnel i.e., the OEM or Vendor are not required to bring the equipment to an operational state;

ANNEX C – SUSTAINMENT REQUIREMENTS

1. Objectives

1.1. The SAA Brass Certification Capability must be supported by flexible, proficient and available technicians and supply personnel, both while in Canada and on operations.

1.2. The SAA Brass Certification Capability must have an efficient logistic support footprint.

2. Concept of Support

2.1 The Concept of Support incorporates three support elements:

a) Maximization of the use of the existing support structure to minimize the requirements for any new resources or support infrastructure to maintain the required level of equipment availability;
b) Central management of the equipment by DAEME, and
c) Implementation of a "First to Third Line" approach for managing and implementing maintenance. The CFAD Dundurn user community will perform routine, preventive and elementary corrective maintenance while extensive corrective maintenance and overhaul will be performed by the OEM or Vendor Contractor as appropriate.

Accordingly, the SAA Brass Certification Capability project must procure, as part of the equipment procurement contracts:

a) An initial stock of spares sufficient for 2 years of equipment operation at the planned activity levels;
b) Initial cadre operator and maintenance training sufficient to provide a knowledge base for further in-house training as required;
c) Maintenance manuals that are to include top-down systems diagrams and parts lists, as well as, electrical trace diagrams for trouble-shooting, and
d) Operator and maintenance manuals that cover all aspects of equipment operation and maintenance activities that are required. They are to include diagrams or illustrations of the operator's station(s) and control panel(s) with descriptions of all controls and indicators/readouts.

2.2 Key Maintenance Tasks

The following are the key tasks for the maintenance of the SAA Brass Certification capability:

a) Routine maintenance and morning readiness checks;
b) System monitoring and adjustment as required;
c) Schedule maintenance;
d) Problem analysis and reporting (to 3rd line support);
e) Winterization of those components that will be stored out-side during the winter, and
f) Preparation and re-activation of those components that have been stored out-side during the winter.

3. Availability

Each equipment must have a 90% availability based on operation 8 hours/day, 5 days/week for 48 weeks of the year.

4. Safety and Health

The SAA Brass Certification capability must not pose a safety or health hazard to the operator. Equipment that has been listed or certified to an appropriate commercial or government standard by a nationally recognized test laboratory, e.g., Underwriters Laboratories (UL), Canadian Standards Association (CSA), TUV Rhineland, or CE marking, may be considered as having met this requirement; and, from a product safety perspective, may be accepted for use without further modification. Otherwise, the TA will review the standards and practices applied for each candidate equipment and determine the suitability of the safety measures incorporated.

5. Training

The OEM or Vendor shall be contracted to provide “train-the-trainer” initial cadre training to the operational and maintenance staff at CFAD Dundurn.

Course candidate selection shall be in accordance with the organization and operational requirements of CFAD Dundurn

ANNEX D – DOCUMENTATION REQUIREMENTS

1. Objectives

1.1 DND will be requiring documentation deliverables to:

a) Support the management of the procurement of the SAA Brass Certification equipment;
b) Provide information that explains the technical design developed by the Contractor, rationalizes the equipment selected in response to the design, and sets out the test program to prove the equipment provided; and
c) Provides to DND the information required to catalog the equipment and its spares, and to operate and maintain the equipment.

1.2 The documents identified for each purpose are denoted by PM (Project Management), SE (System Engineering), and ILS (Integrated Logistic Support) respectively.

1.2 The documents required with a brief summary of the content expected for each are provided below. Unless otherwise indicated, the Contractor's format for each document will be accepted provided that the material is presented in a logical manner, formatted with appropriate levels of subsections and referenced with a tables of contents, figures, illustrations etc.

2. The Documents Required

The following is a tabulated list of the documents expected to be required. Note that the missing sequence numbers refer to documents not expected to be required for this contract.

Ident	Title
PM-002	Master Project Schedule (MPS), and Work Breakdown Structure (WBS)
PM-007	Equipment Environmental Assessment (EEA)
SE-102	Technical Data Package (TDP), including Equipment Specifications and Engineering Drawings
SE-105	Test and Evaluation Master Plan (TEMP)
SE-106	Test Procedures (TP)
SE-108	Test Report (TR)
SE-110	Engineering Change Proposal (ECP)
ILS-202	Recommended Spare Parts List (RSPL)
ILS-204	Supplementary Provisioning Technical Documentation (SPTD)
ILS-211	Maintenance Manual (MM), including Maintenance Plan (MP)
ILS-213	User Manual (UM)
ILS-216	Training Material (TM)

3. Document Descriptions

3.1 PM-002 Master Project Schedule (MPS), and Work Breakdown Structure (WBS)

The MPS details the activities, their sequencing, duration and dependencies against a calendar time-base and all WBS activities for the requirements of the Contract. The MPS and WBS detail all activities covering the complete duration of the Contract. Updates to the MPS and WBS provide the TA with the visibility of accomplishments to date at a level of detail that is indicative of overall performance.

3.2 PM-007 Equipment Environmental Assessment (EEA)

The EEA identifies and documents potential environmental impacts of the equipment over various life-cycle phases (test and evaluation following production, operation and maintenance, and demilitarization and disposal) and the associated mitigation measures required to reduce or eliminate them.

3.3 SE-102 Technical Data Package (TDP)

TDP to include Equipment Specifications and Engineering Drawings of the equipment system. The Equipment Specifications establish the performance, design, development and test requirements for hardware and software/firmware to meet a set of capability requirements. The level of detail is sufficient to enable the specification of specific equipment requirements.

3.4 SE-105 Test and Evaluation Master Plan (TEMP)

The TEMP describes in detail the Test & Evaluation (T&E) Program to be conducted to ensure that the design and the manufactured products comply with the Contract Requirements Specification (RS). The TEMP addresses the overall test philosophy, concept, methodology, process and approach. The TEMP provides a master schedule of the Acceptance Tests to be conducted as part of the Contract. The TEMP also includes the completed Requirements Verification Matrix (RVM) from the Requirements Specification (Appendix 1 to Annex A to the Contract). The RVM will be used by both the Contractor and DND to determine the nature and extent of the tests to be performed, and as a traceability tool to ensure all required tests are conducted and all requirements are met.

3.5 SE-106 Test Procedures (TP)

The Test Procedures identify and describe all of the test details and information applicable to the scheduling, planning, organizing, conduct, controlling and coordination of each particular Acceptance Test to be conducted as part of the a test and evaluation (T&E) Program.

3.6 SE-108 Test Report (TR)

The Test Reports document the proceedings, results, recommendations and action items of the Tests conducted as part of the T&E Program.

3.7 SE-110 Engineering Change Proposal (ECP)

The ECP fully describes and substantiates any engineering change required for a proposed alteration in the configuration of an equipment and/or its related documentation. The ECP enables the Contractor and the DND TA to fully evaluate for authorization the engineering change proposed.

3.8 ILS-202 Recommended Spare Parts List (RSPL)

The RSPL lists all spare parts necessary to maintain the equipment and its associated support equipment.

3.9 ILS-204 Supplementary Provisioning Technical Documentation (SPTD)

The SPTD provides the information required to uniquely identify, for cataloguing purposes, all Configuration Items (CI) and DND Spare Parts and Consumable Items within the scope of this Contract that are not already in the Canadian Government Catalogue of Materiel (CGCM).

3.10 ILS-211 Maintenance Manual (MM), including Maintenance Plan (MP)

The MM provides a detailed description of all maintenance tasks and procedures for the equipment, including related data such as descriptive information, fault detection and part lists. It is anticipated that the MM will be an existing document. The MM also includes the Maintenance Plan, which documents the results of the Maintenance Analysis by the Contractor as detailed in the SOW. It describes how the equipment will be supported, at all levels, provides the rationale for acquiring logistics support resources and forms the basis for provisioning and technical manual.

3.11 ILS-213 User Manual (UM)

The purpose of the Operator Manual is to provide users and First Line maintainers with a description of the equipment, and all information required to operate and complete First Line maintenance.

3.12 ILS-216 Training Material (TM)

The Training Material contains the information and presentation used for training DND and CAF personnel.

ANNEX E – RESPONSE TEMPLATE

1. Along with a submission of their proposed technical solution, respondents should use the following headers as a template for responses to questions.

1.1. Which of the equipment that you propose does your company manufacture, and which would be provided by another manufacturer in partnership or as a sub-contractor to you?

1.2. Whether you company would be prepared to procure, on behalf of Canada, any equipment that you do not manufacture?

1.3. Which of the specification requirements would you propose to change e.g., relax, delete, strengthen, and what would the changes be?

1.4. What requirements would you propose adding to any or all of the capability specifications?

1.5. What is an estimated production time for each of the equipment that your company produces?

1.6. What is the rough cost for the total Technical solution being suggested?

1.7. What is rough cost for each documentation deliverable identified in Annex D?

1.8. Are there any aspects of the documentation detailed in Annex D that should be relaxed, removed, modified or added?

1.9. What would be a rough time-line for delivery of each equipment?

1.10. Do you currently have test data to demonstrate availability for your equipment, and would you be willing to provide this data as part of the bid proposal?