Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

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
WIRELESS REMOTE FIRING DEVICE (RFD)

Solicitation No. - N° de l'invitation	**Date**
W8476-145106/A	2014-11-17

Client Reference No. - N° de référence du client
W8476-145106

GETS Reference No. - N° de référence de SEAG
PW-$$BK-370-24796

File No. - N° de dossier	**CCC No./N° CCC - FMS No./N° VME**
370bk.W8476-145106	

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM
on - le 2015-01-19

Time Zone
Fuseau horaire
Eastern Standard Time
EST

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

Address Enquiries to: - Adresser toutes questions à:	**Buyer Id - Id de l'acheteur**
Ruest(370BK), Joanne	370bk

Telephone No. - N° de téléphone	**FAX No. - N° de FAX**
(819) - ( )	(819) 956-5650

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:

Specified Herein
Précisé dans les présentes

Instructions: See Herein

Instructions: Voir aux présentes

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

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
Munitions Division (BK) / Division des munitions (BK)
11 Laurier St./11, rue Laurier
8C2, Place du Portage, Phase III
Gatineau
Québec
K1A 0S5

Canada

SEE ATTACHED REQUEST FOR PROPOSAL.

Contract No. - N° du contrat	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur
W8476-145106/001/BK		370bk
Client Ref. No. - N° de réf. du client	File No. - N° du dossier	
W8476-145106/A	370bk - **W8476-145106**/A	

Remote Firing Device – (W8476-145106/A)

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PART 1 - GENERAL INFORMATION

1. Requirement/Statement of Work

The contractor must provide the items detailed under "Annex A" for the Remote Firing Device.

1.2 Optional Goods and/or Services

The Contractor grants to Canada the irrevocable option(s) to acquire the goods, services or both described at Annex "A" Statement of Work for the Remote Firing Device with quantities detailed in Annex B – Contract End Items List of deliverables of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The Contracting Authority may exercise the option within one (1) year after contract award by sending a written notice to the Contractor.

2. Debriefings

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

3. Approval Documents and Export Licenses

The Contractor must apply for all necessary Governmental and other approval documents, including but not limited to Export Licenses, to deliver the goods to the consignee(s) within seven (7) days after receipt of the contract and, if applicable, receipt of Canadian End-User Certificate, Canadian International Import Certificate and/or Annual Explosive Importation Permit. The Contractor must provide a copy of the application(s) above to the Contracting Authority within seven (7) days of the date of the application(s). Furthermore, the Contractor must provide the Contracting Authority with a copy of available documentation from all Governmental and other approval document authorities regarding the status of all approval document applications within two (2) weeks of the Contracting Authority's request.

4. Trade Agreements

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

PART 2 - BIDDER INSTRUCTIONS

1. Standard Instructions, Clauses and Conditions

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

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

The 2003 (2014-09-25) 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

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 (4 hard copies)

Section II: Financial Bid (2 hard copies)

Section III: Certifications (1 hard 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 Policy on Green Procurement (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, bidders should:

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

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

Section I: Technical Bid

In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work in accordance with Annex A Statement of Work for the Remote Firing Device (RFD).

Section II: Financial Bid

Bidders must submit their financial bid in Canadian Dollars, in accordance with the Basis of Payment. The total amount of Goods and Services Applicable Taxes must be shown separately.

Bidders must submit their financial bid DDP – Delivery Duty Paid.

Section III: Certifications

Bidders must submit the certifications required under Part 5

1.2 SACC Manual Clauses

C3011T (2013-11-06)	Exchange Rate Fluctuation
B4024T (2006-08-15)	No Substitute Products
B1000T (2014-06-26)	Condition of Material

1.3 Delivery

Delivery Schedule shall be in accordance with Annex A – Statement of Work and Annex B – Contract End Items List for the Remote Firing Device.

If unable to meet the above, the best delivery that could be offered is _____.

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, the technical, administration and financial evaluation criteria.

(b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

The Technical Evaluation shall be completed in a two phase process detailed in Annex C - Bid Evaluation Criteria for the Remote Firing Device.

1.2 Financial Evaluation

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

2. Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical, evaluation criteria to be declared responsive. The responsive bid with the lowest cost will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

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

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

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

1. Certifications Precedent to Contract Award

1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003. The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

1.2 Federal Contractors Program for Employment Equity - Bid Certification

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

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid "list at the time of contract award.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Contract.

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

2. Price Justification

In the event that the Bidder's bid is the sole responsive bid received, the Bidder must provide, on Canada's request, one or more of the following price justification:

(a) a current published price list indicating the percentage discount available to Canada; or

(b) a copy of paid invoices for the like quality and quantity of the goods, services or both sold to other customers; or

(c) a price breakdown showing the cost of direct labour, direct materials, purchased items, engineering and plant overheads, general and administrative overhead, transportation, etc., and profit; or

(d) price or rate certifications; or

(e) any other supporting documentation as requested by Canada.

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement/Statement of Work

The Contractor must perform the Work in accordance with Annex A, Statement of Work for the Remote Firing Device.

2.1 Optional Goods

The Contractor grants to Canada the irrevocable option(s) to acquire the goods, services or both described at Annex B, Contract End Items List, of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a Contract Amendment.

2.2 Work Arisings:

Additional Work that is not described in the Statement of Work but that is required to support the RFD and that would fall within the overall scope of the Work (Work Arisings), may be incorporated into the Contract in accordance with the Task Authorization (TA) Process described herein.

2.2.1 Task Authorizations:

Should a Work Arising be incorporated after Contract Award

1. The Technical Authority will provide the Contractor with a description of the task using the DND 626, Task Authorization Form" or "Task Authorization" form.

2. The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis (bases) and methods of payment as specified in the Contract.

3. The Contractor must provide the Technical Authority, within 15 calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract, in accordance with Contract Cost Principals 1031-2.

4. The Contractor must not commence work until a TA authorized by the Technical Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

2.2.2

Task Authorization Limit
The Technical Authority and Requisition Authority may authorise individual task authorizations up to a limit of $25,000.00 Goods and Services Tax or Harmonized Sales Tax included, inclusive of any revisions.

Any task authorizations to be issued in excess of that limit, or any revision to a Task Authorization which results in the total cumulative amount of the Task Authorization being in excess of that limit, must be authorized by the Contracting Authority before issuance.

2.2.3

Canada's Obligation - Portion of the Work - Task Authorizations Canada's obligation with respect to the portion of the Work under the Contract that is performed through Task Authorizations is limited to the total amount of the actual tasks performed by the Contractor.

2.2.4

Task Authorization - Department of National Defence The administration of the Task Authorization process will be carried out by the Requisition Authority identified at 7.2, Authorities. This process includes monitoring, controlling, and reporting on expenditures of the contract with task authorizations to the Contracting Authority.

3. Standard Clauses and Conditions

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

3.1 General Conditions

2010A (2014-09-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Period of the Contract

The period of the contract is from date of Contract Award to_____.

4.1 Delivery

All the deliverables must be received in accordance with the Delivery Schedule detailed in Annex B – Contract End Items List for the Remote Firing Device.

5. Preparation for Delivery – (D3018C) (2014-09-25) Packaging Requirement using Specification D-LM-008-036/SF-000

The Contractor must prepare item number 1for delivery in accordance with the latest issue of the Canadian Forces Packaging Specification D-LM-008-036/SF-000, DND Minimum Requirements for Manufacturer's Standard Pack.

The Contractor must package item number 1 in quantities of 1 by package.

6. Complete Delivery (D0005C) (2007-11-30)

The Contractor must make the complete delivery within **200** calendar days from the effective date of the Kick-off Meeting.

7. Authorities

7.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Joanne Ruest or Designate
Title: Supply Officer
Public Works and Government Services Canada
Acquisitions Branch

Directorate: Defence and Major Projects Sector (DMPS)
Place du Portage, Phase III, 8C2
11 rue Laurier Street
Gatineau, Quebec K1A 0S5
Courier Service Postal Code: J8X4A6

Telephone: 819-956-1773
Facsimile: 819-956-5650
E-mail address: joanne.ruest@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.

7.2 DND Authority

7.2.1 DND Requisition Authority- tba

7.3 Technical Authority - tba

7.3.1 Quality Assurance Authority/Inspection - tba

7.4 Contractor's Representative - tba

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

7.5 Consignee

7 CF Supply Depot Lancaster Park
Receipts and Issues Section
Edmonton, AB
T5J 4J5 – Canada
Telephone: 780-973-4011 ext. 4524

8. Payment

8.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm unit prices totaling $ _____ (insert the amount at contract award). Customs duties are included, and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

8.2 SACC Manual Clauses

C6000C (2011-05-16) Limitation of Price
H1001C (2008-05-12) Multiple Payments
C2000C (2007-11-30) Taxes - Foreign Based Contractors

9. Invoicing Instructions

9.1 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.

a) a copy of the release document and any other documents as specified in the Contract;

9.2 Invoices must be distributed as follows:

(a) The original and one (1) copy must be forwarded to the following address for certification and payment. (Insert the name and address of the organization)

see article 6.2

(b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

see article 6.1

10. Shipping Instructions - Delivery and Destination Schedules Unknown

1. The Contractor must ship the goods prepaid DDP - Delivered Duty Paid, CFB Edmonton (as per Annex A). Unless otherwise directed, delivery must be made by the most economical means. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and taxes.
2. Delivered Duty Paid (DDP) CFB Edmonton, Incoterms 2000 for shipments from a commercial contractor.
3. The Contractor must deliver the goods to Canadian Forces (CF) Supply Depots by appointment only. The Contractor or its carrier must arrange delivery appointments by contacting the Depot Traffic Section at the appropriate location shown above. The consignee may refuse shipments when prior arrangements have not been made.

11. Certifications

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

11.2 Contractors Program for Employment Equity - Default by the Contractor

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

12. Defence Contract

A9006C (2012-07-16) Defence Contract

13. SACC Manual Clauses

A9062C (2011-05-16)	Canadian Forces Site Regulations
B5007C (2010-01-11)	Procedures for Design Change or Additional Work
D2000C (2007-11-30)	Marking
D2001C (2007-11-30)	Labelling
D3010C (2014-06-26)	Dangerous Goods/Hazardous Products
C2611C (2007-11-30)	Customs Duties - Contractor Importer
D5545C (2010-08-16)	ISO 9001:2008 - Quality Management Systems - Requirements (Quality Assurance Code C)
D6010C (2007-11-30)	Palletization
B2025C (2013-11-06)	Wood Packaging Materials

14. Provisioning Parts Breakdown – Contract (B4051C) (2014-06-26)

The Contractor must, _____ days after the design of a deliverable is accepted by the Technical Authority, provide to the Procurement Authority a Provisioning Parts Breakdown (PPB) prepared in accordance with the current issue of Canadian Forces Specification D-01-100-214/SF0-000. Copies of all assembly level drawings and parts lists required to verify the complete and current configuration of the equipment must accompany the PPB. Upon request from the Contractor, the specification will be provided by the Contracting Authority.

Supplementary Provisioning Technical Documentation (SPTD), as prepared by the actual manufacturer of the item, is required for the codification and cataloguing of all items listed in the PPB. The SPTD called up in the above specification must be supplied, as detailed in the specification, within twenty (20) working days after receipt of a request from the Director Supply Chain Operations (DSCO). Specific details of the data elements required must be listed on a Provisioning Documentation Selection Sheet, prepared in accordance with the above specification and the PPB, and be submitted in electronic ASCII text format.
Final acceptance of the PPB and the SPTD will be made by DSCO. Questions regarding the preparation, format or contents of the above provisioning documentation must be directed to Procurement Authority.

15. Bar Coding - Package Marking (D2020C) (2008-05-12)

1. The Contractor must apply, on the package, bar code information for item(s) _____, with Application Identifier(s) ____, using bar code symbology UCC/EAN-128 (Uniform Code Council/EAN International). Below the bar code symbol, the Contractor must apply the Human-Readable Interpretation (HRI) markings.

2. The bar code marking(s) must be legible, applied to a printable surface or label and positioned in accordance with the Canadian Forces Packaging Specification D-LM-008-002/SF-001, Marking for Storage and Shipment (in effect at the closing date of the bid solicitation).

16. Applicable Laws

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

17. 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) Articles of Agreement;
(b) General Conditions 2010A (2014-09-25);
(c) Annex A; Statement of Work
(d) Contractor's Proposal dated: _____.

18. Inspection

Inspection to be carried out by Consignee at Destination.

19. Insurance Requirements

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

STATEMENT OF WORK

FOR

REMOTE FIRING DEVICE

TABLE OF CONTENTS

Related Appendixes & Annex Documents:

Appendix 1 to Annex A: Data Item Description (DID) for Remote Firing Device

Appendix 2 to Annex A: Contract Data Requirements List (CDRL) for Remote Firing Device

Annex B: Contract End Items List for Remote Firing Device

Annex D: Application for Spectrum Supportability (DND 552 Form) for Remote Firing Device

1.0 SCOPE

1.1 Purpose

1.1.1 The purpose of this Statement of Work is to define the work requirements and specifications for the procurement of a wireless remote firing device (RFD) system to initiate explosive charges.

1.2 Background

1.2.1 Experience gained over the past decade by the Canadian Armed Forces (CAF) units on the ground in Afghanistan fighting insurgents whose weapons of choice were improvised explosive devices (IED) has demonstrated that specialized groups such as explosive ordnance disposal (EOD) teams must be equipped with a multitude of tools including means to remotely and wirelessly initiate explosive charges at close range for dismounted operations and occasionally perform demolition tasks.

1.2.2 Under fire in a theatre of operations, there is usually very little time available for EOD operators to dispose of IED. As time on task is of essence, it will not always be possible for operators to recover a radio firing device receiver following initiation of an explosive charge, or the activation of a barrel or water bottle disruptor. Therefore, it is necessary for the RFD receivers to be relatively inexpensive so to be considered disposable, although they will normally be recovered and reused.

1.3 Intended Use

1.3.1 The RFD system will be used to remotely initiate electro-explosive devices (EED) (electric detonators, barrel disruptor's cartridges, etc) via short length firing cable, and non-electric detonators via shock tube.

1.4 Acronyms and Abbreviations

ABCANZ	American, British, Canadian, Australian, New Zealand
AC	Alternating Current
AOP	Allied Ordnance Publication
CA	Contracting Authority
CAF	Canadian Armed Forces
CDRL	Contract Data Requirements List
CEIL	Contract End Item List
CFB	Canadian Forces Base
CFSS	Canadian Forces Supply System
CFTO	Canadian Forces Technical Order
cm	centimetre
COTS	Commercial-off-the-Shelf
DC	Direct Current
DCSEM	Director Combat Support Equipment Management
DGLEPM	Director General Land Equipment Program Management
DID	Data Item Description
DND	Department of National Defence
ECCN	Export Control Classification Number
ECL	Export Control List
EED	Electro-explosive Device

EHS	Environmental Health and Safety
EMC	Electro-magnetic Compatibility
EMI	Electro-magnetic Interference
EOD	Explosive Ordnance Disposal
ESD	Electrostatic Discharge
GHz	Giga-Hertz
HERO	Hazards of Electromagnetic Radiation to Ordnance
hrs	hours
IAW	In Accordance With
IED	Improvised Explosive Device
ILS	Integrated Logistics Support
IP	Ingress Protection
KHz	Kilo-hertz
Lbs	Pounds
LOS	Line-of-Sight
MHz	Mega-Hertz
ms	Millisecond
NATO	North Atlantic Treaty Organization
NSN	NATO Stock Number
PHST	Packaging, Handling, Storage and Transportation
PMP	Project Management Plan
PWGSC	Public Works and Government Services Canada
R&O	Repair & Overhaul
RF	Radio Frequency
RFD	Remote Firing Device
RFP	Request for Proposal
Rx	Receiver
SOW	Statement of Work
SPTD	Supplementary Provisioning Technical Documentation
STANAG	Standing NATO Agreement
STTE	Special Tools and Test Equipment
TA	Technical Authority
TAC	Technical Acceptance Certificate
Tx	Transmitter
UHF	Ultra-High Frequency
VAC	Volt Alternative Current
VDC	Volt Direct Current
VHF	Very-High Frequency

2.0 APPLICABLE DOCUMENTS

2.1 References

2.1.1 Whereas mentioned, the following Standards shall be used for the preparation of deliverables to the extent specified in this SOW:

REFERENCE NUMBER	DATE OF PROMULGATION	TITLE
R.S., 1985, C. H-3		Hazardous Products Act
SOR/86-304		Canada Occupational Health and Safety Regulations
SOR/99-7		Ozone-depleting Substances Regulations, 1998
A-AD-100-100/AG-000		National Defence Publishing Policy and Administration Procedures
A-EN-007-000/FP-001		DND Environmental Assessment Manual
B-GT-D35-001/AG-000	2006-07-10	DNDP 35 Management of the Radio Frequency Spectrum
C-01-100-100/AG-005		Acceptance of Commercial and Foreign Government Publications as Adopted publications
C-02-008-001/TS-000		General Safety Lithium Batteries Handling, Storage, Preservation and Disposal Instructions
C-02-040-009/AG-001		General Safety Standards
C-04-007-005/AG-000		Military Guide for: Selection of Lubricants, Power Transmission Fluids and Corrosion Preventatives for Use in Land Equipment Systems
C-55-040-001/TS-001		Safety Precautions and Incident Prevention Instructions - Radio Frequency Safety Program
DAOD 3026-0	2012-05-04	Radio Frequency Safety
DAOD 3026-1	2012-05-04	Radio Frequency Safety Program
D-01-100-203/SF-000		Specification - Preparation of Operating Instructions
D-01-100-204/SF-000		Specification - Preparation of Preventive Maintenance Instructions
D-01-100-205/SF-000		Specification - Preparation of Corrective Maintenance Instructions

D-01-100-207/SF-002		Specification - Preparation of Interim Illustrated Parts Manuals for Land Equipments
D-01-100-214/SF-000	2002-05-01	Specification for Preparation of Provisioning Documentation for Canadian Forces Equipment
D-01-400-001/SG-000		Standard - Engineering Drawing Practices for Class 1 Drawings and Technical Data List
D-01-400-002/SF-000	1983-11-30	Specification for Levels of Engineering Drawings and Associated Lists
D-02-002-001/SG-001		Standard – Identification Marking of Canadian Military Property
D-LM-008-001/SF-001	1983-02-03	Methods of Packaging
D-LM-008-002/SF-001	1991-08-01	Specification for Marking for Storage and Shipment
D-LM-008-011/SF-001	1988-11-10	Preparation and Use of Packaging Requirements Codes
AECTP 300	Ed. 3 – Jan 2006	Allied Environmental Conditions and Test Publications – Climatic Environmental Tests
AECTP 400	Ed. 3 – Jan 2006	Allied Environmental Conditions and Test Publications – Mechanical Environmental Tests
DEF STAN 00-35 (Part 3)	Issue 4 – Sept 2006	Environmental Handbook for Defence Material – Part 3 – Environmental Test Methods
DEF STAN 61-12 (Part 17)	Issue 1 – Dec 6, 1978	Part 17: Cables, Special Purpose, Electrical (for Detonator Firing Circuits)
DEF STAN 59-114	Issue 1 – Jan 2012	Safety Principles for Electrical Circuits in Systems Incorporating Explosive Components
IEC 61000-4-2		International Standard: Electromagnetic Compatibility (EMC) – part 4-2: - Testing and Measurement Techniques – Electrostatic Discharge Immunity Test
STANAG 2818		Demolition Material: Design, Testing and Assessments
MIL-STD-331C		Department of Defence Test Method Standard: Fuze and Fuze Components, Environmental and Performance Tests
MIL-STD-461E		Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment

MIL-DTL-45468	Rev F. Aug 2012	Cap, Blasting: Electric – M6 Parts for, and loading, assembling and packaging
NEMA IEC 60529		Degrees of Protection Provided by Enclosures - IP Code
Health Canada, Safety Code 6		Limits of Human Exposure to Radiofrequency Fields in the Frequency Range from 3 khz to 300 ghz

2.2 Order of Precedence

2.2.1 Unless otherwise specified, the issue or amendments to the documents for this contract shall be those in effect on the date of contract award. The Contractor shall bring to the attention of the Technical Authority (TA) any perceived inconsistencies between the SOW and the documents attached in the Appendixes and Annexes referenced in this SOW. In the event of conflicts between the content in this SOW and the referenced documents, the content of this SOW shall take precedence.

3.0 TECHNICAL REQUIREMENTS

3.1 Overview

3.1.1 The Contractor shall comply with all specified requirements stated in this section for the requested RFD system IAW the detailed quantities listed in Annex B: Contract End Items List (CEIL), and the delivery schedule within the contract.

3.1.2 The Contractor shall provide an RFD system consisting of the following components, further described in sub-sections following this one:

3.1.2.1 One (1) radio frequency (RF) transmitter;

3.1.2.2 Four (4) RF receivers to fire Electro-explosive Devices (EED) via firing cable;

3.1.2.3 One (1) RF receiver to fire explosive charges via shock tube;

3.1.2.4 One (1) spool of firing cable (25m+/-0.5m length of cable);

3.1.2.5 Associated Tools and Equipment to test and setup the RFD system, as applicable;

3.1.2.6 One (1) hard Carry Case for the above items;

3.1.2.7 **If required**, see para. 3.4.3, one (1) Extended distance transmitter antenna for demolition tasks; and

3.1.2.8 One (1) hard Carry Case for the Extended distance transmitter antenna, **if provided**.

3.1.3 The Contractor shall deliver publications for the RFD system to reflect the delivered system configuration in accordance with (IAW) sub-section 3.10 – *Integrated Logistics Support* – of this Annex.

3.1.4 The Contractor shall deliver training materials and conduct training for the system operation IAW sub-section 3.10 – *Integrated Logistics Support* – of this Annex.

3.1.5 The RFD system deliverables shall be in accordance with the Contract Deliverables as stated in Annex B – *Contract End Items List* – of this contract.

3.2 System Characteristics

3.2.1 General

3.2.1.1 The RFD system requirements shall be met by current commercial or military off-the-shelf technology.

3.2.1.2 The RFD system shall be based on proven, fielded equipment that is in service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian, New Zealand (ABCANZ) military partner, or law enforcement agencies of those countries.

3.2.2 Design

3.2.2.1 The RFD system shall consist of hand-held paired (matched) radio transmitter and receivers designed to:

3.2.2.1.1 Initiate EED (electric detonators, barrel disruptors' cartridges, etc), at short range (like those intended for breaching operations), using a firing cable.

3.2.2.1.2 Initiate non-electric detonators via shock tube.

3.2.2.2 The RFD system transmitters shall only initiate the receivers with which they are paired, and not the receivers of any of the other transmitters.

3.2.2.3 The RFD system transmitters and receivers pairing (matching) shall be set at the factory, after being granted Spectrum Supportability IAW 3.4.1.12, and shall not be end-user adjustable.

3.2.3 **Service Life**

3.2.3.1 The service life of the RFD system shall be no less than ten (10) years.

3.2.4 **Operational Clothing Compatibility**

3.2.4.1 The RFD system shall be useable by an operator wearing summer or winter environment combat clothing, or an EOD bomb suit ensemble without impeding setting-up and operation.

3.2.5 **Transportability**

3.2.5.1 The RFD system shall be transportable by commercial and military fixed and rotary wing aircrafts, cargo ships, rail, and wheeled or tracked vehicles on roads and cross-country.

3.3 Physical Characteristics

3.3.1 **Weight**

3.3.1.1 The RFD system weight, excluding spool of firing cable, excluding associated tools and equipment, and excluding hard Carry Case(s), shall not exceed five (5) kg.

3.3.1.2 The RFD transmitter (Tx), excluding batteries, shall not exceed one (1) kg.

3.3.1.3 The RFD receiver (Rx), (both firing cable or shock tube type) excluding batteries, shall not exceed four hundred (400) grams.

3.3.2 **Dimensions**

3.3.2.1 One (1) RFD Tx shall fit in the Canadian Army load carrying (tactical) vest utility pouch measuring 14cm (width) x 7 (depth) cm x 17 (height) cm.

3.3.2.2 All five (5) RFD Rx (Four (4) RFD Rx to fire Electro-explosive Devices (EED) and one (1) RF Rx to fire explosive charges via shock tube) shall fit in the Canadian Army Tactical Day Pack external pouch measuring 18cm (width) x 10cm (depth) cm x 22cm (height).

3.3.3 **Color**

3.3.3.1 The main body color of the RFD system components shall be matte black, dark olive or dark kaki in color.

3.3.4 **Instruments, Decal, Data Plates and Warnings**

3.3.4.1 All instruments, decals and data plates within the RFD system shall be marked in metric units. Where international symbols are not possible, bilingual markings in English and Canadian French are required.

3.3.4.2 Warning and precautionary data plates for the RFD system shall be provided in both of Canada's official languages - English and Canadian French - where necessary to protect personnel and equipment. Refer to para. 3.10.6 for further details.

3.4 System Components Characteristics

3.4.1 **RFD Transmitter and Receivers**

3.4.1.1 The RFD system shall fire electric detonators and shock tube (which in turn initiates non-electric detonators), as follows:

3.4.1.1.1 Electric detonators: #12 commercial detonators and United States (US) designed M6 detonators (commonly used by several NATO countries).

3.4.1.1.2 Shock Tube: Standard shock tube (3 mm nominal diameter), and mini-shock tube (2 mm nominal diameter).

3.4.1.2 *Coding/Decoding*. The RFD system shall include secure coding/decoding to limit electronic interference (or prevent unintentional (by friendly) or rogue firing (by un-friendly) by other radio systems.

3.4.1.2.1 The Contractor shall provide a **Coding/Decoding Functional Diagram and Explanation** IAW DID RFD-SE-103 at Appendix 1 and its associated CDRL RFD-SE-103 at Appendix 2 to this annex, showing how the RFD system will prevent random or rogue signals from starting the arming or firing sequence.

3.4.1.3 *Firing Circuit Continuity*. The RFD Rx for EED shall include firing circuit continuity test function.

3.4.1.4 *Safety Features*

3.4.1.4.1 The RFD system shall be designed according to the criteria listed in DEF STAN 59-114, STANAG 2818, and related Allied Ordnance Publications (AOP)s.

3.4.1.4.2 The RFD system shall include the following safety features:

3.4.1.4.2.1 A positive confirmation of transmitter activation (Power on-off);

3.4.1.4.2.2 Two (2) separate and distinct actions to fire the system;

3.4.1.4.2.3 Auto De-arming. In the event that no command to fire the RFD Rx is sent after arming the system, the RFD Rx shall auto-disarm within sixty (60) seconds to inhibit firing, and

3.4.1.4.2.4 Safety Delay. RFD Rx shall include a factory set safety delay of at least sixty (60) seconds, to allow the user time to leave the danger area after explosive preparation, before the RFD Rx can be armed.

3.4.1.4.3 Failure mode

3.4.1.4.3.1 The RFD system firing circuit shall be designed so that if the RFD system fails or enters a failure mode, the RFD system shall not be capable of initiating any part of the explosives, detonators or shock tube (such as causing a voltage differential across the firing poles).

3.4.1.4.3.2 The Contractor shall provide a **Functional Hazard Analysis** IAW DID RFD-SE-102 at Appendix 1 and its associated CDRL RFD-SE-102 at Appendix 2 to this annex, to verify system safety.

3.4.1.5 *Electronic Visual Display*. Electronic Visual displays (such as LCDs, etc), if included, shall be readable in bright sunlight and dimmable at night.

3.4.1.6 *Power*

3.4.1.6.1 *RFD Rx Output Energy*.

3.4.1.6.1.1 The RFD Rx output energy for EED initiation, using fully charged batteries, shall be sufficient to:

3.4.1.6.1.1.1 Fire two (2) US M6 electric detonators, attached in series to the RFD Rx through the standard twelve (12) foot length leg wires of the detonators (+/- one (1) foot) and the provided spool of firing cable (25m+/-0.5m), requiring an electric DC current of at least 0.45A for at least 50 milliseconds, as per MIL-DTL-45468F.

3.4.1.6.1.2 The RFD Rx output energy for explosive charge initiation through shock tube, using fully charged batteries, shall be sufficient to initiate standard size (3 mm) and mini-shock tube (2mm).

3.4.1.6.2 *Power Source*. RFD Tx and RFD Rx shall be powered using commercial-off-the-shelf batteries, which shall be replaceable by the user within two (2) minutes.

3.4.1.6.2.1 *Battery Life*. The RFD Rx battery life, once in field position on standby mode, shall be no less than five (5) hours.

3.4.1.6.2.2 If any Lithium or Lithium-polymer batteries are used in the RFD system, then the procedures in C-02-008-001/TS-000 General Safety Lithium Batteries Handling, Storage Preservation and Disposal Instructions shall apply.

3.4.1.7 *Transmitter Programmability*. The RFD Tx shall operate (fire) up to five (5) paired (matched) RFD Receivers all at once when the RFD Receivers are turned on and ready for initiation.

3.4.1.8 *Electro-Magnetic Compatibility (EMC) and Interference (EMI)*. The RFD system shall be protected against undesired signals or energy sources that can degrade or prohibit its operation.

3.4.1.8.1 The RFD Tx (including the Extended distance transmitter antenna if provided) shall meet the requirements of RE102 IAW MIL-STD-461E, or other equivalent international standard.

3.4.1.8.2 The RFD Tx (including the Extended distance transmitter antenna if provided) shall meet the requirements of RS103 IAW MIL-STD-461E, or other equivalent international standard, for Army Ground levels from 2 MHz to 18 GHz.

3.4.1.9 *Electrostatic Discharge (ESD):* The RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components) shall meet the following standard:

3.4.1.9.1 MIL-STD-331C Department of Defense Test Method Standard: Fuze and Fuze Components, Environmental and Performance Tests for – Test F1.1 Personnel-borne, or

3.4.1.9.2 IEC 61000-4-2 International Standard: Electromagnetic Compatibility (EMC) – Part 4-2: - Testing and Measurement Techniques – Electrostatic Discharge Immunity Test – Air Discharge Test Level 4, or other equivalent international standard.

3.4.1.10 *RFD system Operating Frequencies.* The RFD system operating frequencies shall be in the 225-400 MHz VHF/UHF band (Military Band).

3.4.1.10.1 As conditions on deployed operations will often require different operational frequencies than in Canada, the RFD system operating frequency shall be OEM re-programmable should this be needed.

3.4.1.11 *RF Safety.* The RFD system shall meet requirements of DND/CAF RF Safety Program IAW DAOD 3026-0, DAOD 3026-1 and CFTO C-55-040-001TS-002, and it shall be in compliance with the requirements of Health Canada's Safety Code 6: Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz.

3.4.1.12 *Application for Spectrum Supportability*

3.4.1.12.1 For each RFD system RF component (Transmitting and Receiving), the Contractor shall prepare and provide all required information for the **Application for Spectrum Supportability** IAW DID RFD-SE-101 at Appendix 2 to this Annex and its associated CDRL RFD-SE-101 at Appendix 3 to this Annex A and, Annex D – Application for Spectrum Supportability.

3.4.1.12.2 **RFD system RF components shall be certified by Industry Canada or meet Spectrum Supportability.** Spectrum Supportability is granted when RF equipment is found to be in conformity with National Spectrum Policy and Standards to ensure compatibility with existing RF equipment, both military and civilian, currently operating in the same frequency band. DND policy, standards, and organization for spectrum management and instructions for obtaining frequency supportability and licensing can be found in B-GT-D35-001/AG-000 (DNDP 35) Management of the Radio

Frequency Spectrum. National Spectrum Policy and Standards can be found on Industry Canada's website (http://www.ic.gc.ca) at:

http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf01841.html.

3.4.2 **Spool of Firing Cable**

3.4.2.1 The RFD system shall be provided with one (1) spool of firing cable with the following features:

3.4.2.1.1 Spool of firing cable shall have a twenty-five (25) m length (+/- 0.5 m);

3.4.2.1.2 Firing cable shall be equivalent to the standard CAF in-service firing cable (NSN - 6145-21-889-0161) (two conductor, twisted pair, 14 AWG), which follows DEF STAN 61-12 Part 17:

3.4.2.1.2.1 Number of cores – 2;

3.4.2.1.2.2 Conductor Details: Nominal number and nominal diameter of wires forming conductor – 24/0.20mm;

3.4.2.1.2.3 Conductor Details: Cross-sectional area (nominal) – 0.75mm^2;

3.4.2.1.2.4 Conductor Details: Nominal Diameter – 1.14mm;

3.4.2.1.2.5 Mean radial thickness of insulation (minimum) – 0.60mm;

3.4.2.1.2.6 Identification of cores – 1 Brown and 1 Black;

3.4.2.1.2.7 Mean overall diameter of each core – Lower Limit 2.3mm and Upper Limit 2.8mm;

3.4.2.1.2.8 Insulation Resistance (minimum) megohms for 1 km – 2 MOhm;

3.4.3 **Extended distance transmitter antenna (if required)**

3.4.3.1 The Extended distance transmitter antenna shall be provided (if required) to allow for the increased safety distance required for demolition tasks, such as demolition of steel targets. See Operational Range performance requirement, para. 3.5.2.

3.4.4 **Carry Case(s)**

3.4.4.1 The RFD system shall be provided with up to two (2) hard Carry Cases having the following features:

3.4.4.1.1 The first hard Carry Case designed to house all RFD system components in para. 3.1.2.1 to 3.1.2.5, including the Operator Quick Reference Card (para. 3.10.2.1.1); the Operator Manual para. (3.10.2.1.2); and the Maintenance and Parts Handbook (para. 3.10.2.1.3).

3.4.4.1.2 **If required**, the second hard Carry Case (para. 3.1.2.8) designed to house the Extended distance transmitter antenna in para. 3.1.2.7;

3.4.4.1.3 Constructed of man-made material such as molded plastic;

3.4.4.1.4 Have a hinged cover, carry handle and locking features;

3.4.4.1.5 Include a barometric relief valve as the RFD system case(s) will be subjected to altitude pressure changes during tactical air transportation or due to abrupt ambient temperature changes;

3.4.4.1.6 Have internal lining made of form-fitted foam surrounding each RFD system component on all sides; and

3.4.4.1.7 Its colour shall be as per para. 3.3.3.

3.4.5 **Software**

3.4.5.1 Any software required for the maintenance, operation or programming of the RFD system shall be Microsoft Windows based and installable on standard COTS personal computer or laptop platforms with the same software as specified to open the Data Deliverables of this SOW as per para. 3.10.7.

3.5 Performance Characteristics

3.5.1 **General**

3.5.1.1 The RFD system performance shall be consistent across all environmental and operational conditions.

3.5.2 **Operational Range**

3.5.2.1 Dismounted. The dismounted operational range of the RFD system (not using the Extended distance transmitter antenna if provided) shall be minimum four-hundred (400) metres line-of-sight (LOS).

3.5.2.2 Demolition. The demolition operational range of the RFD system, using the Extended distance transmitter antenna (if required), shall be a minimum of one (1) km LOS.

3.5.3 **Durability**

3.5.3.1 The RFD system shall be ruggedized to withstand rough handling under combat conditions.

3.5.3.2 *Vibration*. The vibrations induced by transportation over rough roads and terrain shall not cause the RFD system to malfunction or degrade its performance, and they shall not shorten its operational life. The RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard carry case(s)) shall meet requirements:

3.5.3.2.1 AECTP 400 Method 401 Procedure 3 and Method 406 Procedure 1, or

3.5.3.2.2 DEF STAN 00-35 Test M1 – General Purpose Vibration Test, or other equivalent international standard.

3.5.3.3 *Handling/Drop*. The shock induced by handling or an accidental drop during transit shall not cause the RFD system to malfunction or cause degradation of performance, and it shall not shorten its operational life. Therefore the RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard Carry Case(s)) shall meet requirements:

3.5.3.3.1 AECTP 400 Method 414 Procedure 1, drop height 122cm, 26 drops total, one on each face, edge, and corner, or

3.5.3.3.2 DEF STAN 00-35 Test M5 – Impact (Vertical and Horizontal) Test, fall height of at least 1.25m, or other equivalent international standard.

3.5.3.4 *Immersion*. RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard Carry Case(s)) shall meet requirements:

3.5.3.4.1 IEC 60529 Ingress Protection Code IP67, or

3.5.3.4.2 DEF STAN 00-35 Test CL29 – Immersion, depth of complete immersion of at least 1m, or other equivalent international standard.

3.6 Environmental and Climatic Characteristics

3.6.1 The RFD system shall operate in temperatures ranging from -10°C to +49°C without degradation, and the RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard Carry Case(s)) shall have been tested for low and high temperature operation IAW:

3.6.1.1 Low Temperature Operation Testing:

3.6.1.1.1 AECTP 300 Method 303 Procedure 2, Operational Test, or

3.6.1.1.2 DEF STAN 00-35 Test CL5 – Low Temperature Test, or other equivalent international standard.

3.6.1.2 High Temperature Operation Testing:

3.6.1.2.1 AECTP 300 Method 302 Procedure 2, High Temperature Operation, or

3.6.1.2.2 DEF STAN 00-35 Test CL6 – High Temperature, Humidity and Solar Heating Diurnal Cycle Test, or other equivalent international standard.

3.6.2 The RFD system shall be stored in temperature conditions ranging from -30°C to + 60°C.

3.7 Environmental Health and Safety (EHS)

3.7.1 Environmental Health and Safety (EHS) consideration shall be incorporated and documented into the decision making process for the work performed under this Contract. EHS documentation shall be maintained within the project file throughout the life of this Contract. The Contractor shall provide for and allow DND inspection and monitoring of EHS documentation throughout the life of the contract.

3.7.2 Polychlorinated Biphenyls (PCBs), halocarbons (as identified within the Ozone-Depleting Substances Regulations, 1998), and asbestos shall not be incorporated into the design, operation and maintenance of the equipment, or products used in equipment support activities.

3.7.3 The Contractor shall identify and report all sources of mercury contained or used within the design, operation and maintenance of the equipment, or products used in equipment support activities.

3.7.4 The Department is committed to the Federal programs to reduce or eliminate emissions from toxic substances. Contractors shall identify and submit justifications for the use of all regulated products and those containing substances identified within the Accelerated Reduction/Elimination of Toxics (ARET, http://www.ec.gc.ca/nopp/aret/en/list.cfm), National Pollutant Release Inventory (NPRI, http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm) and/or List of Challenge Substances (http://www.chemicalsubstanceschimiques.gc.ca/challenge-defi/list_e.html), and also for products containing heavy metals (heavy metals are those identified within Schedule 1 of the Canadian Environmental Protection Act (CEPA)) to the technical authority for approval.

3.7.5 Canada Labour Code, Part II dictates that the least hazardous materials should be used at the workplace. Therefore, the Contractor is to strive to use the least hazardous product that meets the requisite performance requirements.

3.7.6 New or amended support documentation created by the Contractor shall incorporate appropriate EHS warnings and instructions in direct relation of the EHS risks presented in the contents. The Contractor shall ensure that revisions to specifications, standards, technical publications and test programs are reviewed for EHS compliance.

3.8 Environmental Management System

3.8.1 The Contractor shall have a management system in place to control environmental, health and safety impacts resulting from their activities, products or services.

3.8.2 The Contractor shall have a formalized set of procedures and control measures in place to achieve conformance with the requirements of this Work, while ensuring environmental, health and safety protection and pollution prevention.

3.8.3 The Contractor shall also make reasonable effort to monitor that all subcontractors are in compliance with applicable environmental laws and regulations.

3.9 Project Management

3.9.1 Project Management Program

3.9.1.1 The Contractor shall designate a Project Manager with the responsibilities to coordinate, execute, and manage the Contractor's project management activities for the Contract. The Contractor's Project Manager shall have the total responsibility for all works required under the Contract.

3.9.1.2 The Contractor's Project Manager shall be the primary point of contact between the Contractor and the DND TA and the PWGSC Contracting Authority (CA) for all issues related to the Contract.

3.9.2 **Project Management Plan (PMP)**

3.9.2.1 The Contractor shall prepare, deliver, maintain and update a **Project Management Plan** (PMP) IAW DID RFD-PM-001 at Appendix 1 and its associated CDRL RFD-PM-001 at Appendix 2 to this annex.

3.9.3 **Project Meetings**

3.9.3.1 *Meeting Organization and Coordination*

3.9.3.1.1 The Contractor shall ensure that data, personnel and facilities are available for each meeting held at the Contractor site.

3.9.3.1.2 As appropriate, meetings will be held at the Contractor or DND facilities at the discretion of the TA.

3.9.3.1.3 The Contractor's Project Manager shall be present at all meetings. If the Project Manager does not have final approval authority for decision making and changes, then the person that has that final approval authority shall also be present at all meetings.

3.9.3.2 *Kick-off Meeting*

3.9.3.2.1 DND will host a Kick-off Meeting (at the DND office site: Louis St-Laurent, 555 Blvd de La Carrière, Gatineau QC CANADA), no later than thirty (30) calendar days after contract award. The aim of the Kick-off Meeting will be to review and secure a common understanding of the requirements expressed in the following documents:

3.9.3.2.1.1 The Contract;

3.9.3.2.1.2 The SOW;

3.9.3.2.1.3 Draft Project Management Plan;

3.9.3.2.1.4 DND assigned serial numbers for the ID Plates; and

3.9.3.2.1.5 Any other contractual or programmatic issues associated with the project as agreed between the TA, CA and the Contractor.

3.9.3.2.2 Top Level Assembly Drawing

3.9.3.2.2.1 The Contractor shall provide a (hardcopy and softcopy) Top Level Assembly Drawing(s) (TLAD) of the RFD system and any of its major components (each component on its own drawing sheet).

3.9.3.2.2.2 The TLAD shall be created IAW section 7.4 of D-01-400-001/SG-000 and DID RFD-ILS-205 at Appendix 1 to this Annex, complete with dimensions and title block.

3.9.3.2.2.3 The TLAD shall be provided to DND at the Kick-off meeting, with reviews timed IAW CDRL RFD-ILS-210 at Appendix 2 to this Annex.

3.9.3.3 *Other Meetings*

3.9.3.3.1 The Contractor and/or the TA may schedule informal reviews, such as teleconferences, video conferences, briefings and technical interchange meetings as necessary to help achieve the requirements of the Contract.

3.9.3.3.2 The Contractor shall formally submit all items that could have a contractual impact as they arise.

3.9.3.4 *Meeting Documentation*

3.9.3.4.1 The Contractor shall prepare and deliver a meeting agenda for all meetings, and the meeting minutes afterward.

3.9.3.4.1.1 The Contractor shall prepare **Meeting Agenda(s)** IAW DID RFD-PM-002 at Appendix 1 and its associated CDRL RFD-PM-002 at Appendix 2 to this annex.

3.9.3.4.1.2 The Contractor shall record, prepare, and deliver the **Meeting Minutes** of each meeting IAW DID RFD-PM-003 at Appendix 1 and its associated CDRL RFD-PM-003 at Appendix 2 to this annex.

3.9.3.4.2 No change in the interpretation of the Project, SOW, cost, or schedule, as defined in the Contract, may be authorized by the minutes of a meeting. Such action shall require formal Contract amendment by the CA.

3.10 Integrated Logistics Support (ILS)

3.10.1 Maintenance Concept

3.10.1.1 Only first level maintenance for the RFD system will be carried out by CF Technicians in the garrison, the field, or in operation. First level maintenance includes:

3.10.1.1.1 Preliminary diagnosis of faults; and,

3.10.1.1.2 Preventive and corrective maintenance and servicing;

3.10.1.1.3 Of minor nature (less than 4 hours for the task).

3.10.2 Technical Publication Package

3.10.2.1 The Contractor shall prepare and deliver a Technical Publication package for the RFD system comprising of:

3.10.2.1.1 **Operator Quick Reference Card**

3.10.2.1.1.1 The Contractor shall deliver the **Operator Quick Reference Card** with each RFD system IAW DID RFD-ILS-201 at Appendix 1 and its associated CDRL RFD-ILS-201 at Appendix 2 to this annex.

3.10.2.1.2 **Operator Manual**

3.10.2.1.2.1 The Contractor shall deliver the **Operator Manual** with each RFD system IAW DID RFD-ILS-202 at Appendix 1 and its associated CDRL RFD-ILS-202 at Appendix 2 to this annex.

3.10.2.1.2.2 Along with the first Operator Manual submission, the Contractor shall loan DND a sample RFD system (sample means it need not be the final version of the equipment, but complete enough to assist with publication review). **Sample will be returned to the Contractor after acceptance of the Operator Manual**.

3.10.2.1.3 **Maintenance and Parts Handbook**

3.10.2.1.3.1 The Contractor shall deliver the **Maintenance and Parts Handbook** with each RFD system IAW DID RFD-ILS-203 at Appendix 1, its associated CDRL RFD-ILS-203 at Appendix 2 to this annex, and the Maintenance Concept of the RFD (see 3.10.1).

3.10.2.1.4 **Operator Training Package**

3.10.2.1.4.1 The Contractor shall provide an **Operator Training Package** IAW DID RFD-ILS-208 at Appendix 1 and its associated CDRL RFD-ILS-208 at Appendix 2 to this annex.

3.10.2.2 The Contractor shall deliver all Technical Publications in English and Canadian French.

3.10.2.3 The Contractor shall have all Technical Publications texts translated by certified translators, such as members of an authorized provincial association of translators, to ensure the quality of translated text.

3.10.2.4 The Contractor shall ensure all translations are consistent with approved DND terminology. Approved terminology sources, in order of priority, are as follows:

3.10.2.4.1 Concise Oxford Dictionary (for English);

3.10.2.4.2 Petit Robert (for French);

3.10.2.4.3 Termium, PWGSC Translation Bureau Linguistic Data Bank (http://termiumplus.gc.ca/site/accueil_home_e.html); and

3.10.2.4.4 Any other available source approved by DND.

3.10.3 **Provisioning Documentation**

3.10.3.1 The Contractor shall prepare and deliver Provisioning Documentation for the RFD system comprising of:

3.10.3.1.1 **Provisioning Parts Breakdown**

3.10.3.1.1.1 The Contractor shall deliver a **Provisioning Parts Breakdown** List IAW DID RFD-ILS-204 at Appendix 1 and its associated CDRL RFD-ILS-204 at Appendix 2 to this annex.

3.10.3.1.2 **Supplementary Provisioning Technical Documentation**

3.10.3.1.2.1 The Contractor shall deliver the **Supplementary Provisioning Technical Documentation** IAW DID RFD-ILS-205 at Appendix 1 and its associated CDRL RFD-ILS-205 at Appendix 2 to this annex.

3.10.3.1.3 **Special Tools & Testing Equipment**

3.10.3.1.3.1 The Contractor shall deliver a **Special Tools and Test Equipment List** IAW DID RFD-ILS-206 at Appendix 1 and its associated CDRL RFD-ILS-206 at Appendix 2 to this annex.

3.10.3.1.3.2 The Contractor shall have basic information regarding the Special Tools and Testing Equipment suite available at the Kick-Off Meeting (3.9.3.2) for preliminary examination by DND.

3.10.4 **Training Session**

3.10.4.1 The Contractor shall provide the Training Sessions at CFB Gagetown, Oromocto NB, Canada, date(s) to be determined by the ILS Manager, within one (1) year of the acceptance of the Training Package (3.10.2.1.4).

3.10.4.1.1 The Training Session shall consist of one (1) training session for Operators (train-the-trainer type) given to up to thirty (30) students per course

3.10.4.1.2 The Contractor shall provide the Training Sessions in English.

3.10.4.2 The instructor(s) shall be:

3.10.4.2.1 Bilingual, in order for him/her to be able to understand and answer questions from the class in both official languages, English and Canadian French; and,

3.10.4.2.2 Subject Matter Expert(s) (SME) on the equipment taught during the training.

3.10.4.3 The Contractor shall provide all the materials and equipment required for the Training Sessions. These materials and equipment will remain the property of the Contractor.

3.10.4.4 The Contractor shall use the approved Operator Training Package (RFD-ILS-208) for the Training Session.

3.10.5 **Packaging, Labels and Codes**

3.10.5.1 Packaging Labels and Codes: The Contractor shall deliver **Packaging, Labels and Codes** IAW DID RFD-ILS-208 at Appendix 1 and its associated CDRL RFD-ILS-208 at Appendix 2 to this annex.

3.10.5.2 Once the sample label is approved, the Contractor shall affix a label on items bought by DND before the items are shipped to DND.

3.10.6 **Identification Plates**

3.10.6.1 The Contractor shall provide all required **Identification Plates** IAW DID RFD-ILS-209 at Appendix 1 and its associated CDRL RFD-ILS-209 at Appendix 2 to this annex.

3.10.6.2 The Contractor shall ensure that all required identification plates are affixed to each RFD system prior to delivery to the Crown.

3.10.6.3 DND will provide serial numbers for each Identification Plate, rather than the Contractor creating their own. The serial numbers will be provided at the Kick-off Meeting, and these will be used for DND supply system tracking.

3.10.7 **Data Deliverable Format**

3.10.7.1 Unless otherwise specified as a specific requirement, the Contractor shall deliver all of the soft copies of data deliverables, in formats compatible with the office software currently in use by the DND as listed below:

3.10.7.1.1 Microsoft (MS) Windows XP Professional Operating System (OS), Multilingual Pack, Service Pack 3;

3.10.7.1.2 MS Internet Explorer (IE) 7.0 with 128 Bit Encryption and associated SP;

3.10.7.1.3 MS Office 2003, Professional Edition, SP3, Multilanguage Pack (Word, Excel, Access, PowerPoint and Outlook);

3.10.7.1.4 MS Office Project 2003;

3.10.7.1.5 Adobe Acrobat 6.0; and

3.10.7.1.6 WinZip 8.1 SR-1;

3.10.7.2 Those compatible formats will allow the files to be recognized, opened, and viewed or read in their intended form and format using DND's office software, as well as allowing the user to modify, select, copy and paste information from the files to other DND office software files.

Canadian Forces Explosive Ordnance Disposal (EOD) Team Equipment

DATA ITEM DESCRIPTION

FOR

REMOTE FIRING DEVICE (RFD)

1.0 DATA ITEM DESCRIPTION (DID) ITEM LIST

DID #	Title	CDRL #
RFD-PM-001	Project Management Plan	RFD-PM-001
RFD-PM-002	Meeting Agenda	RFD-PM-002
RFD-PM-003	Meeting Minutes	RFD-PM-003
RFD-SE-101	Application for Spectrum Supportability	RFD-SE-101
RFD-SE-102	Functional Hazard Analysis	RFD-SE-102
RFD-SE-103	Coding/Decoding Functional Diagram & Explanation	RFD-SE-103
RFD-ILS-201	Operator Quick Reference Card	RFD-ILS-201
RFD-ILS-202	Operator Manual	RFD-ILS-202
RFD-ILS-203	Maintenance and Parts Handbook	RFD-ILS-203
RFD-ILS-204	Provisioning Parts Breakdown	RFD-ILS-204
RFD-ILS-205	Supplementary Provisioning Technical Documentation	RFD-ILS-205
RFD-ILS-206	Special Tool and Test Equipment	RFD-ILS-206
RFD-ILS-207	Operator Training Package	RFD-ILS-207
RFD-ILS-208	Packaging, Labels and Codes	RFD-ILS-208
RFD-ILS-209	Identification Plates	RFD-ILS-209

DATA ITEM DESCRIPTION (DID) DEFINITION

The following section defines the various blocks of information found on the Data Item Description (DID) forms:

BLOCK 1 – TITLE
The title of the data item for the DID.

BLOCK 2 - IDENTIFICATION NUMBER
The Data Item Description (DID) number, consisting of a sequential three-digit number and prefixed with an abbreviation code, to uniquely identify the DID. Note that the 001-099 series is reserved to Project Management (PM) DIDs, the 101-199 series is reserved to Systems Engineering (SE) DIDs and the 201-299 series is reserved to Integrated Logistics Support (ILS) DIDs. The abbreviation codes used for the prefix are:

"PM" for Project Management
"SE" for Systems Engineering
"ILS" for Integrated Logistics Support

BLOCK 3 - DESCRIPTION
Provides a general description of the data content requirements.

BLOCK 4 - APPROVAL DATE
Indicates the date of the originator's approval of the DID.

BLOCK 5 - OFFICE OF PRIMARY INTEREST (OPI)
The office of primary interest for the review, acceptance and/or approval of the data item.

BLOCK 6 - GIDEP APPLICABLE
An "X" indicates that the data is to be submitted by a Government organization or the Contractor to the Government/Industry Data Exchange Program (GIDEP). Otherwise the block is left blank.

BLOCK 7 - APPLICATION / INTERRELATIONSHIP
Provides the application details and interrelationship of the data item to other DIDs or documents.

BLOCK 8 - ORIGINATOR
Indicates the originator's office responsible for the DID.

BLOCK 9 - APPLICABLE FORMS
Indicates any form associated with the DID.

BLOCK 10 - PREPARATION INSTRUCTIONS
Provides the preparation instructions, including format and content requirements for the data.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Project Management Plan (PMP)	**DID RFD-PM-001**

3. DESCRIPTION

The Project Management Plan shall outline the Contractor's approach for managing all aspects of the Project. The PMP will be used to provide the DND Technical Authority (TA) insight into the Contractor's project management practices and procedures as they apply to the Contract.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND/DGLEPM/DCSEM 9	N/A

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the format, content and preparation instructions for the data product generated by the specific and discrete task requirements as delineated in **SOW Annex A. Para. 3.9.2,**

8. ORIGINATOR	9. APPLICABLE FORMS
DND / DGLEPM / DCSEM 9	

10. **PREPARATION INSTRUCTIONS**

10.1. **FORMAT**

10.1.1. The PMP shall be prepared in the Contractor's format.

10.2. **CONTENT**

10.2.1. The PMP shall describe the management processes, administrative procedures and organizational structure that will be used to manage the Work of the Contractor. The PMP shall further detail the practices and procedures for project scheduling, planning, organizing, directing, executing, communicating, reporting, managing risk, managing environmental health and safety issues and impacts, managing information, and closing of action items for all Work required by the Contract. The PMP shall address in detail the above points through the following:

10.2.1.1. Overview:

a. Purpose, Background, Scope and Objectives;

b. Assumptions, Constraints and Risks;

c. All Project Deliverables;

d. Organization Summary; and

e. Schedule Summary.

10.2.1.2. Organization:

a. Project Management Organizational Chart, including internal and external organizations as it pertains to this Contract;

10.2.1.3. Management Processes:

a. Project Management Approach and Procedures;

b. Schedule Control;

c. Quality Assurance;

d. Reporting;

e. Communications;

f. Risk Management (RM);

g. Environmental, Health and Safety Issues Management;

h. Information Management (IM); and

i. Change Control Processes.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Meeting Agenda	**DID RFD-PM-002**

3. DESCRIPTION

Meeting Agendas shall set forth the venue and identify the discussion items to be covered at meetings.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND/DGLEPM/DCSEM 9	N/A

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the format, content and preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the **SOW Annex A. Para. 3.9.3.4.1.1.**

8. ORIGINATOR	9. APPLICABLE FORMS
DND / DGLEPM / DCSEM 9	

10 PREPARATION INSTRUCTIONS

10.1 **FORMAT**

10.1.1 The Meeting Agenda shall be in the Contractor's format.

10.2 **CONTENT**

10.2.1 The Meeting Agenda shall set forth the venue, identify any requirements and list the discussion items to be covered at the meeting.

10.2.1.1 Venue. The Meeting Agenda shall address the venue as follows:

a. Meeting Identification Number;

b. Purpose;

c. Date, time and location (DND will provide meeting facilities in the National Capital Region); and

d. Attendees.

10.2.1.2 Discussion items. The Meeting Agenda shall address the discussion items through the following sections:

a. Opening Remarks;

b. Agenda Review;

c. Review of previous Minutes;

d. Opened Discussion Items;

e. New Discussion Items;

f. Review of Action Items;

g. Next Venue; and

h. Closing Remarks.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Meeting Minutes	**DID RFD-PM-003**

3. DESCRIPTION

Meeting Minutes shall consist of the detailed records of proceedings, discussions, decisions and action items from meetings.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND/DGLEPM/DCSEM 9	N/A

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the format, content and preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the **SOW Annex A. Para. 3.9.3.4.1.2.**

8. ORIGINATOR	9. APPLICABLE FORMS
DND / DGLEPM / DCSEM 9	

10 PREPARATION INSTRUCTIONS

10.1 **FORMAT**

10.1.1 The Meeting Minutes shall be in the Contractor's format.

10.2 **CONTENT**

10.2.1 The Meeting Minutes shall contain the detailed records of proceedings, discussions, decisions and action items from the meeting. The detailed records shall be presented through the following Sections:

a. General - including meeting identification number, purpose, date, time and location;

b. Attendees;

c. Opening Remarks;

d. Agenda Review;

e. Review of previous Minutes;

f. Discussion Items - Including a summary record of proceedings, discussions, decisions, information addresses, action addresses and action completion date, for each item;

g. Next Venue;

h. Closing Remarks; and

i. Signatures of Contractor's Project Manager and signatures of PWGSC CA and DND Technical Authority (TA).

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Application for Spectrum Supportability	**RFD-SE-101**

3. DESCRIPTION

This Application for Spectrum Supportability document (DND form 552) describes the general wireless equipment usage as well as the transmitter, antenna and receiver equipment characteristics of the system that is provided.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND/DGLEPM/DCSEM 9	N/A

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Application for Spectrum Supportability as required by **SOW Annex A. Para 3.4.1.12.**

8. ORIGINATOR	9. APPLICABLE FORMS
DND / DGLEPM / DCSEM 9	N/A

10 PREPARATION INSTRUCTIONS

10.1 **DETAILED REQUIREMENTS**

10.1.1 The Application for Spectrum Supportability shall be completed and provided in accordance with the requirements as outlined in Annex D Application for Spectrum Supportability of this Contract.

10.1.2 The following sections shall be completed (Extended distance transmitter antenna, if included, shall require certain parts to be completed twice for both setups):

10.1.2.1 Part 1, Block 1 – Equipment Nomenclature and/or Model Number;

10.1.2.2 Part 2 – Transmitter Equipment Characteristics;

10.1.2.3 Part 3 – Receiver Equipment Characteristics, and

10.1.2.4 Part 4 – Antenna Equipment Characteristics.

10.1.3 The values entered on the DND 552 forms shall be measured values. Where equipment is developmental, specified values may be substituted for measured values, and so indicated on the forms. If the proposed equipment is in use by the United States military it may already have a US Department of Defence (DoD) Form 1494. If available, a DoD 1494 form will be accepted by DND in lieu of a DND 552.

10.1.4 Along with the Application for Spectrum Supportability, the technical specifications for the antenna (and Extended distance transmitter antenna, if included) shall also be provided, including information on antenna type and dimensions (provided in datasheet format).

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Functional Hazard Analysis	**RFD-SE -102**

3. DESCRIPTION

The functional Hazard Analysis provides confidence that no single fault or failure of any nature can result in an unsafe condition or initiation of the detonator.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND/DGLEPM/DCSEM 9	N/A

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the format, content and preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the **ANNEX A. Para. 3.4.1.4.3.2**

8. ORIGINATOR	9. APPLICABLE FORMS
DND / DGLEPM / DCSEM 9	

10. PREPARATION INSTRUCTIONS

10.1. **FORMAT**

10.1.1. The Functional Hazard Analysis shall be in the Contractor's format.

10.2. **CONTENT**

10.2.1. The Functional Hazard Analysis shall cover the following topics:

10.2.1.1. Be a recognised fault tree or hazard analysis method, using a structured and systematic examination of all planned or possible operations in order to identify and evaluate problems that may represent risks.

10.2.1.2. Cover all intended operation steps.

10.2.1.3. Cover all inadvertent operation of switches by an operator.

10.2.1.4. Cover all likely failure or event for all electronic components.

10.2.1.5. Cover the failure of safety breaks and firing switches, electronic or electromechanical.

10.2.1.6. Covers the functioning of test equipment.

10.2.1.7. Covers errors in the implementation of electronic logic systems.

10.2.1.8. Provide evidence that no event, other than intentional firing, can lead to the firing of a detonator.

10.3. **ELECTRONIC FORMAT**

10.3.1. The Functional Hazard Analysis electronic format shall meet the following:

10.3.1.1. Be a PDF file, which matches the printed publication’s format and layout.

10.3.2. The Functional Hazard Analysis shall be submitted on CD or DVD media, which shall be labelled as follows:

10.3.2.1. The project name: RFD System;

10.3.2.2. The contract number: W8476-145106

10.3.2.3. The Subject Matter: Functional Hazard Analysis;

10.3.2.4. The DID number: (RFD-SE-102)

10.3.2.5. The Revision number;

10.3.2.6. The date of delivery.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Coding / Decoding Functional Diagram and Explanation	**RFD-SE-103**

3. DESCRIPTION

The Coding / Decoding Functional Diagram and Explanation describes the creation and storage of the crypt key during production, how the transmitted code word (encoder) functions (including details on the modulation scheme), and the basic operation of the receiver (decoder). It also describes how the RFD prevents the hijacking of the signal by an enemy to avoid or induce function, or prevents the receiver from interpreting rogue or miscellaneous signals as arming or firing commands.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND/DGLEPM/DCSEM 9	N/A

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the format, content and preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the **ANNEX A. Para.3.4.1.2**

8. ORIGINATOR	9. APPLICABLE FORMS
DND / DGLEPM / DCSEM #	

10. **PREPARATION INSTRUCTIONS**

10.1. **FORMAT**

10.1.1. The Coding / Decoding Functional Diagram and Explanation shall be in the Contractor's format.

10.2. **CONTENT**

10.2.1. The **Coding / Decoding Functional Explanation** shall describe the creation and storage of the crypt key during production, how the transmitted code word (encoder) functions (including details on the modulation scheme), and the basic operation of the receiver (decoder).

10.2.2. The **Coding / Decoding Functional Diagram** shall cover how the RFD manages the following:

10.2.2.1. Firing sequence.

10.2.2.2. Abort sequence

10.2.2.3. Signal interpretation

10.2.2.4. Signal hijacking

10.2.2.5. Rogue signal interpretation

10.2.2.6. Signal copying

10.2.2.7. Other signal related firing risks

10.2.2.8. How the RFD reduces the risk of unintended firing from the above.

10.3. **ELECTRONIC FORMAT**

10.3.1. The Coding / Decoding Functional Diagram and Explanation electronic format shall meet the following:

10.3.1.1. Be a PDF file, which matches the printed publication’s format and layout.

10.3.2. The Coding / Decoding Functional Diagram and Explanation shall be submitted on CD or DVD media, which shall be labelled as follows:

10.3.2.1. The project name: RFD System;

10.3.2.2. The contract number: W8476-145106

10.3.2.3.	The Subject Matter: Coding / Decoding Functional Diagram & Explanation;
10.3.2.4.	The DID number: (RFD-SE-103)
10.3.2.5.	The Revision number;
10.3.2.6.	The date of delivery.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Operator Quick Reference Card	**RFD-ILS-201**

3. DESCRIPTION

Operator Quick Reference Card (OQRC) will allow the trained RFD user to quickly unpack, assemble, and safely use the RFD system.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	RFD System ILS Manager	N/A

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Operator Quick Reference Card as required by **SOW Annex A. Para 3.10.2.1.1** and **DID RFD-ILS-202 Operator Manual,** and **C-01-100-100/AG-006** *Writing, Format and Production of Technical Publications*

8. ORIGINATOR	9. APPLICABLE FORMS
RFD System ILS Technician	N/A

10. **PREPARATION INSTRUCTIONS**

10.1. **FORMAT**

The accepted OQRC shall be provided to the RFD user as follows:

10.1.1. containing no more than 4 sheets;

10.1.2. laminated for protection;

10.1.3. be of dimensions that allow the OQRC to be packed in the RFD's carry case (see article 3.4.1.12 of Annex A – SOW) without being folded or otherwise distorted from flat;

10.1.4. if multiple pages are required, they are to be firmly bound together using corrosion-proof hardware so that the OQRC remains open at the desired page when laid on a flat horizontal surface; and,

10.1.5. produced and printed exclusively in black and white.

10.2. **CONTENT**

10.2.1 The OQRC shall contain the necessary instructions to allow a trained user to quickly, safely and effectively operate the RFD.

10.2.2 The OQRC shall assume that the RFD's initial state is: packed in its carry case (see article 3.4.1.12 of Annex A SOW).

10.2.3 The instructions shall be based on pictograms illustrating the sequence of steps required while using only minimal text to assist in the understanding of the document. Desired look and feel would be similar to commercial airline safety pamphlets describing the use of oxygen masks, emergency exits, etc.

10.2.4 The OQRC shall not introduce new information or procedures relative to the *Operator Manual*: the *Operator Manual* is the master document on how to use the RFD.

10.2.5 The OQRC shall contain, ahead of its main content, a cautionary advisory formatted as shown in Figure 2-1-3 of C-01-100-100/AG-006.

10.2.5.1 The cautionary advisory's heading shall be determined based on the criteria set out in Part 4, Section 2, Para 8 of C-01-100-100/AG-006.

10.2.5.2 The cautionary advisory shall read as follows: "**This Operator Quick Reference Card is intended solely for experienced users who have been trained on this equipment, and have read and understood its Operator Manual (***CFTO# to be*

supplied by DND). **When in doubt, read the Operator Manual before operating this equipment."** The cautionary advisory shall also include, immediately following this text, a brief description of the consequences of misuse of the equipment, linked to the same criteria listed in 10.2.5.1 above.

10.3 **ELECTRONIC FORMAT**

The Quick Start Guide shall be submitted in PDF and native file format (if other than PDF) on CD or DVD media, which shall be labelled as follows:

10.3.1 The project name: RFD;
10.3.2 The contract number: W8476-145106
10.3.3 The DID number: RFD-ILS-201;
10.3.4 The Subject Matter: *Operator Quick Reference Card*;
10.3.5 The Revision number; and,
10.3.6 The date of delivery.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Operator Manual	**RFD-ILS-202**

3. DESCRIPTION

The Operator Manual for the Remote Firing Device (RFD) System will allow the user to effectively operate the RFD System to its utmost capabilities.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	RFD SYSTEM ILS Manager	N/A

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Operator Manual as required by **Annex A of the SOW, Para 3.10.2.1.2**; **C-01-100-100/AG-005,** *Acceptance of Commercial and Foreign Government Publications as Adopted Publications;* and **D-01-100-211/SF-000** *Preservation, Storage and Handling Instructions.*

8. ORIGINATOR	9. APPLICABLE FORMS
RFD System ILS Manager	N/A

10 PREPARATION INSTRUCTIONS

10.1 **FORMAT**

10.1.1 The Operator Manual shall be prepared in the Contractor's format while being in full conformance with the above-stated issue of C-01-100-100/AG-005.

10.1.2 The National Defense Identification Number (NDID) provided to the Contractor by DND, shall be placed on the top right corner of all the pages of the manual.

10.1.3 The accepted Operator Manual's hard copies shall be:

10.1.3.1 furnished with resistant flexible covers;

10.1.3.2 printed on paper with these characteristics:

10.1.3.2.1 Weight: at least 90g/m² (24 lb.); and,

10.1.3.2.2 Brightness: at least 96

10.1.3.3 bound in a manner that will allow the manual to remain open on a flat surface at any page without pages flipping over inadvertently; and,

10.1.3.4 of dimensions that will allow the Operator Manual to be packed in the RFD's carrying case (see SOW Annex A article 3.4.1.12) without needing to be folded or otherwise distorted from flat.

10.2 **CONTENT**

10.2.1 The Operator Manual shall cover the following topics, as well as any other judged pertinent by the Contractor:

10.2.1.1 General Description/Equipment Overview;

10.2.1.2 Description of Controls and Instruments;

10.2.1.3 Pre-use testing/inspection and set up;

10.2.1.4 Use and operation;

10.2.1.5 Operator Maintenance and Care;

10.2.1.6 Troubleshooting table;

10.2.1.7 Procedures for storage, preparation for travel and shipping

10.2.1.8 Safety/Hazardous material issues (if any);

10.2.2 The material covered in 10.2.1 above shall be amplified by illustrations, line drawings, and high quality pictures as appropriate.

10.3 **ELECTRONIC FORMAT**

10.3.1 The Operator Manual shall be provided as a PDF file with searchable text, which matches the printed publication's format and layout. Links, bookmarks and thumbnails are to be included in the PDF file. Any references made to a specific paragraph, figure, appendix, etc., shall be appropriately linked.

10.3.2 Viewing the PDF: pages, regardless of size, containing text or illustrations in landscape, shall be rotated for electronic viewing and reading in landscape.

10.3.3 The Operator Manual PDF and its native file shall be submitted on CD or DVD media, which shall be labelled as follows:

10.3.3.1 The project name: RFD System;

10.3.3.2 The contract number: W8476-145106

10.3.3.3 The Subject Matter: Operator Manual;

10.3.3.4 The DID number: RFD-ILS-202;

10.3.3.5 The Revision number; and,

10.3.3.6 The date of delivery.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Maintenance and Parts Handbook	**RFD-ILS-203**

3. DESCRIPTION

The Maintenance and Parts Handbook for the Remote Firing Device (RFD) will allow a trained technician to effectively maintain and identify parts of the RFD system in order for it to be operable to its utmost capabilities.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	RFD SYSTEM ILS Manager	N/A

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Maintenance and Parts Handbook as required by **Annex A of the SOW, Para 3.10.2.1.3**; and

- D-01-100-205/SF-000 *Specification for Preparation of Corrective Maintenance Instruction*;
- D-01-100-204/SF-000 *Specification for Preparation of Preventive Maintenance Instructions;*
- C-01-100-100/AG-005 *Acceptance of Commercial and Foreign Government Publications as Adopted Publications*
- DID RFD-ILS-202: *Operator Manual*

8. ORIGINATOR	9. APPLICABLE FORMS
RFD SYSTEM ILS Manager	N/A

10 PREPARATION INSTRUCTIONS

10.1 **FORMAT**

10.1.1 The Maintenance and Parts Handbook shall be prepared in the Contractor's format and shall be in full conformance with the above-stated issue of C-01-100-100/AG-005.

10.1.2 The accepted Maintenance and Parts Handbook's hard copies shall be:

10.1.2.1 furnished with resistant flexible covers;

10.1.2.2 printed on paper with these characteristics:

10.1.2.2.1 Weight: at least 90g/m²; and,

10.1.2.2.2 Brightness: at least 96; and,

10.1.2.3 bound in a manner that will allow the manual to remain open while on a flat surface at any page without pages flipping over inadvertently.

10.2 **CONTENT**

10.2.1 **Maintenance**

10.2.1.1 The scope of the Maintenance portion of the Maintenance and Parts Handbook shall cover all RFD maintenance and repair tasks not already covered in the Operator Manual.

10.2.1.2 The Maintenance topics shall include (as well as any other judged pertinent by the Contractor):

10.2.1.2.1 General Description/Equipment Overview;

10.2.1.2.2 Pre-maintenance procedures to safety the RFD, if any;

10.2.1.2.3 Troubleshooting and testing;

10.2.1.2.4 Basic diagnosis and fault finding;

10.2.1.2.5 Adjustments, maintenance and repairs grouped, and presented IAW D-01-100-205/SF-000 and D-01-100-204/SF-000;

10.2.1.2.6 Safety/Hazardous material issues (if any);

10.2.1.3 The material covered in 10.2.1 above shall be amplified by illustrations, line drawings, and good quality pictures as appropriate.

10.2.2 **Parts Handbook:** The Maintenance and Parts Handbook shall include an Illustrated Parts List (IPL) section. This IPL shall contain all the necessary information to positively identify and relate, to each other, all the parts of the RFD which are procurable and those involved in any maintenance tasks outlined in 10.2.1 above. This information shall include:

10.2.2.1 Drawings of the parts or assemblies: line drawings and exploded views in black and white only; and,

10.2.2.2 Corresponding table(s) containing:

10.2.2.2.1 Item Number (callout in the drawing(s));

10.2.2.2.2 Item Name;

10.2.2.2.3 Manufacturer's Part Number;

10.2.2.2.4 Manufacturer's NCAGE code;

10.2.2.2.5 Contractor's Part Number (CPN), if the Contractor is not the original Manufacturer (if applicable);

10.2.2.2.6 NATO Stock Number (NSN), if known; and,

10.2.2.2.7 Quantity per Assembly (QPA).

10.3 **ELECTRONIC FORMAT**

10.3.1 The Maintenance and Parts Handbook shall be submitted in its native file format and as a PDF file with searchable text, which matches the printed publication's format and layout. Links, bookmarks and thumbnails are to be included in the PDF file. Any references made to a specific paragraph, figure, appendix, etc., shall be appropriately linked.

10.3.2 Viewing the PDF version: pages, regardless of size, containing text or illustrations in landscape, shall be rotated for electronic viewing and reading in landscape.

10.3.3 The Maintenance and Parts Handbook shall be submitted on CD or DVD media, which shall be labelled as follows:

10.3.3.1 The project name: RFD;

10.3.3.2 The contract number: W8476-145106

10.3.3.3 The Subject Matter: Maintenance and Parts Handbook;

10.3.3.4 The DID number: (RFD-ILS-203);

10.3.3.5 The Revision number; and,

10.3.3.6 The date of delivery.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Provisioning Parts Breakdown	DID RFD-ILS-204

3. DESCRIPTION/PURPOSE

To provide a top down breakdown of the prime equipment in the configuration in which it is being procured.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	**RFD ILS Manager**	

7. APPLICATION/INTERRELATIONSHIP

This DID contains the Format, Content, and Preparation Instructions for the Provisioning Parts Breakdown, as required by Annex A, **Para 3.10.3.1.1; D-01-100-214/SF-000** *Preparation of Provisioning Documentation for Canadian Forces Equipment*; and **RFD-ILS-205**: *Supplementary Provisioning Technical Documentation*.

8. ORIGINATOR	9. APPLICABLE FORMS
RFD ILS Manager	

10. PREPARATION INSTRUCTIONS

The Provisioning Parts Breakdown is a top down breakdown of the equipment in the configuration in which it is being procured. This breakdown is accomplished by listing *all parts* included in the end item in a lateral and descending family tree/generation breakdown. In this breakdown, all assemblies, subassemblies and parts are listed in relation to the next higher assembly. This relationship is shown by means of an indention code as illustrated in the top down breakdown sequence. For example, an assembly with indention code B shall be followed by a detailed breakdown of all the subsequent indention codes pertaining to that assembly before the next indention code B assembly (if any) is, in turn, broken down.

10.1 **FORMAT**

10.1.1 The Contractor shall provide a PPB as per attached Table 1, which supersedes Figures 1 and 5 in D-01-100-214/SF-000.

10.1.2 Attaching parts, given a “Y” indention code, shall immediately follow the part which they fasten to the next higher indention assembly.

10.1.3 Data Field definitions can be found at section 3.9.4 of the D-01-100-214/SF-000 specification. The following overrides apply (see Table 1 below):

10.1.3.1 The *DMC Reference Paragraph (DMC REF)* is the same as specified in the SPTD for that line item.

10.1.3.2 *Expanded Description (SPTD)* shall contain the line item’s applicable SPTD filename (see ILS-206), hyperlinked to that same file contained on the PPB’s CD-ROM for easy reference (see 10.2 below).

10.1.4 For clarity:

10.1.4.1 *Contractor’s Part Number* refers only to the Contractor with which DND has contracted to supply the RFD; data from sub-contractors for items that they did not manufacture or do not control are not permitted. This field may be left blank if no data is available, or if it is the same as the MRN.

10.1.4.2 *Quantity per Assembly* (QPA) refers to the number of times the item is used in the next higher assembly. For example, a C-level item’s QPA will show the number of times it is used in its related B-level assembly.

10.1.4.3 *Quantity per Equipment* (QPE) refers to the total number of times the item is used in the whole prime equipment (A-level). If that quantity exceeds 99999, the figure will show 99999 in the field, with the true quantity (if known) shown in the Expanded Description field.

DATA FIELDS REQUIRED	Field Length
Item Number	6
Indention Code	1
Item Name	19
MRN	31
NSCM/CAGE	5
Contractor's Part Number	17
NATO Stock Number	16
Quantity Per Assembly (QPA)	4
Quantity Per Equipment (QPE)	5
Standard Unit Price	9
Unit Of Issue	2
Reparability Indicator (REP)	1
Government Supplied Material (GSM)	1
Procurement Lead Time (PLT)	3
Shelf Life	2
Usage Rate	5
Recommended Buy Quantity	8
Demilitarization Code (DMC)	1
DMC Reference Paragraph (DMC REF)	4
SMR Code	10
Expanded Description	34
Expanded Description (SPTD)	33

10.2 **ELECTRONIC FORMAT**

10.2.1 The PPB shall be delivered as both a PDF file and an unlocked, unprotected Excel spreadsheet.

10.2.2 The PPB, along with the Supplementary Provisioning Technical Documentation, shall be submitted on CD or DVD media which shall be labelled as follows:

10.2.2.1 The project name: RFD;

10.2.2.2 The contract number: W8476-145106;

10.2.2.3 The Subject Matters: *PPB and SPTD*;

10.2.2.4 The DID number: RFD-ILS-204 and RFD-ILS-205;

10.2.2.5 The Revision numbers; and,

10.2.2.6 The dates of delivery

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Supplementary Provisioning Technical Documentation	**RFD-ILS-205**

3. DESCRIPTION/PURPOSE

The Supplementary Provisioning Technical Documentation (SPTD) fully identifies and describes every part that may be procured to permit its proper cataloguing in the NATO system.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	**RFD SYSTEM ILS Manager**	N/A

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Supplementary Provisioning Technical Documentation as required by **Annex A, Paragraph 3.10.3.1.2**; and:

- DID RFD-ILS-204: *Provisioning Parts Breakdown*
- SOR/89-202: *Export Control List*.
- D-01-100-214/SF-000: *Preparation of Provisioning Documentation for Canadian Forces Equipment*

8. ORIGINATOR	9. APPLICABLE FORMS
RFD System ILS Manager	N/A

10. **PREPARATION INSTRUCTIONS**

10.1 **FORMAT**

SPTD is to be supplied preferably in PDF file format and exclusively in black and white. The SPTD filenames shall be in the following format: (MRN)_(NCAGE)_(item name).[file type extension]. (Please see D-01-100-214/SF-000 for definitions.)

10.2 **CONTENT**

10.2.1 SPTD shall be prepared IAW sections 3.8.3 to 3.8.8 of D-01-100-214/SF-000 for ***every procurable line item (whether from the prime contractor or from other suppliers)*** of the PPB (RFD ILS-204), first appearance only.

10.2.2 The SPTD supplied must be sufficiently comprehensive to allow DND to classify and fully describe the item within the NATO codification system and must be cross-referenced to the applicable contract number.

10.2.2.1 Key elements of good SPTD:

A. Is produced by the true manufacturer and displays its company logo or other info (ex. NCAGE) on the document.
B. Lists characteristic data of the item (dimensions, electrical requirements, etc.).
C. Clearly shows the item in question, either with a good quality photograph(s) or representative line drawing(s).
D. Show where the item fits in the next higher assembly (if possible)

10.2.3 **Controlled Goods**

10.2.3.1 The SPTD shall identify, for initial provisioning purposes, whether the end item, the components or sub-components are controlled goods or not according to the following instructions. The SPTD shall identify:

A. For US origin controlled goods also known as defence articles, the United States Munitions List (USML) Category and paragraph that apply in accordance with the International Traffic in Arms Regulations (ITAR);

B. For US origin dual use, the Export Control Classification Number (ECCN) of the Commerce Control List that applies;

C. For Canadian origin items, Canada's Export Control List (ECL) articles that apply in accordance with the Schedule of the Defence Production Act (DPA); or,

D. For any other country than Canada or the USA, the category and article of the Wassenaar Control List that applies.

10.2.3.2 The data produced from 10.2.3.1 shall be included in the Provisioning Parts Breakdown as instructed in DID RFD-ILS-204.

10.2.3.3 The SPTD shall identify any components or sub-components that are specifically designed or modified for military purposes, and not spared, as Controlled or Non-Controlled Goods to facilitate the production of Demilitarization Instructions. For items of US or Canadian origin that have been catalogued, the Demilitarization List (DML) / Demilitarization Code (DMC) will be provided.

10.3 **ELECTRONIC FORMAT**

10.3.1 The SPTD shall be submitted on the same disc as the Provisioning Parts Breakdown (DID ILS-RFD-204).

10.3.2 If any amendment is required to either the PPB or the SPTD, a new disc shall be issued with the latest Revisions of both the PPB and the SPTD included therein.

DATA ITEM DESCRIPTION

1. TITLE	2. IDENTIFICATION NUMBER
Special Tools and Test Equipment	**RFD-ILS-206**

3. DESCRIPTION/PURPOSE

To provide a list of all special tools and testing equipment required for the operation and maintenance of the RFD System.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	**RFD SYSTEM ILS Manager**	

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Special Tools and Test Equipment as required by **Annex A, Paragraph 3.10.3.1.3**.

8. ORIGINATOR	9. APPLICABLE FORMS
RFD System ILS Manager	n/a

10 PREPARATION INSTRUCTIONS

10.1 **CONTENT**

10.1.1 For each required item of STTE, include in a list:

- 10.1.1.1 STTE Item Name;
- 10.1.1.2 STTE Reference (Manufacturer's Part) Number;
- 10.1.1.3 NSCM/CAGE Code;
- 10.1.1.4 NSN (if available);
- 10.1.1.5 Maintenance Level;
- 10.1.1.6 Recommended Buy Quantity;
- 10.1.1.7 Standard Unit Price;
- 10.1.1.8 Date of First Article Delivery;
- 10.1.1.9 SPTD reference of the item; and,
- 10.1.1.10 Description and Function of STTE

10.1.2 The above list may be divided into sections as appropriate:

- 10.1.2.1 Common Hand Tools;
- 10.1.2.2 Special Purpose Tools;
- 10.1.2.3 Operations Support Equipment;
- 10.1.2.4 Maintenance Support Equipment;
- 10.1.2.5 Calibration Equipment;
- 10.1.2.6 Test, Measurement and Diagnostic Equipment (TMDE):
  - 10.1.2.6.1 General Purpose; and
  - 10.1.2.6.2 Special Purpose;
- 10.1.2.7 Automatic Test Equipment (ATE) and its Test Program Set (TPS); and
- 10.1.2.8 Computer Resources Support Requirement.

10.2 Canada will select the STTE items based on analysis and recommendations presented by the Contractor at a time agreed to during the Kick-Off Meeting. This viewing shall allow Canada to eliminate any STTE that, although being special to the equipment being purchased, may already be in the CF inventory.

10.3 ELECTRONIC FORMAT

10.3.1 The STTE data shall be submitted in both Excel spreadsheet and a PDF file.
10.3.2 The STTE data shall be submitted on CD or DVD media that shall be labelled as follows:
10.3.2.1 The project name: RFD;
10.3.2.2 The contract number: W8476-145106;
10.3.2.3 The Subject Matter: *Special Tools and Test Equipment;*
10.3.2.4 The DID number: RFD-ILS-206;
10.3.2.5 The revision number; and,
10.3.2.6 The date of delivery.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Operator Training Package	**RFD-ILS-207**

3. **DESCRIPTION**

The Operator Training Package for RFD Operators will allow them to use the RFD to its fullest capabilities.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	RFD System ILS Manager	N/A

7. APPLICATION/INTERRELATIONSHIP

This DID contains the format, content and preparation instructions for the Training Package as required **by SOW Annex A Para 3.10.2.1.4.;** and **DID RFD-ILS-202** *Operator Manual*.

8. ORIGINATOR	9. APPLICABLE FORMS
RFD System ILS Technician	N/A

10. PREPARATION INSTRUCTIONS

10.1. **FORMAT**

10.1.1. The Training Package shall be delivered in the Contractor's format, using MS PowerPoint for the presentation.

10.2. **CONTENT**

10.2.1. The Contractor shall deliver all Training Deliverables in English and Canadian French. The Training Package shall include training documentation as follows (not necessarily in MS PowerPoint format):

10.2.1.1. Lesson plan; and

10.2.1.2. Student handouts.

10.2.2. The following topics shall be addressed in the content of the Operator Training Package:

10.2.2.1. Equipment overview;

10.2.2.2. Pre-use testing/inspection;

10.2.2.3. Equipment set-up and deployment;

10.2.2.4. Use and operation (theory and practical);

10.2.2.5. Operator maintenance and care;

10.2.2.6. Operator Troubleshooting;

10.2.2.7. Storage, and preparation to travel; and

10.2.2.8. Safety, including personnel and equipment including Hazardous material issues.

10.2.3. Topics covered in 10.2.2 above shall not exceed in scope the information presented in the Operator Manual (RFD-ILS-202), excluding any scenario training.

10.3. **ELECTRONIC FORMAT**

10.3.1. The Training Package shall be submitted on CD or DVD media, which shall be labelled as follows:

10.3.1.1. The project name: RFD;

10.3.1.2. The contract number: W8476-145106

10.3.1.3. The Subject Matter: Training Package ;

10.3.1.4. The DID number: RFD ILS-207;

10.3.1.5. The Revision number;

10.3.1.6. The date of delivery.

DATA ITEM DESCRIPTION

DND Form 1409

1. TITLE	2. IDENTIFICATION NUMBER
Packaging, Labels and Codes	DID RFD-ILS-208

3. DESCRIPTION

The Packaging, Labels and Codes ensures that the labelling used to identify packages for items procured by DND and shipped to or stored at a Canadian facility comply with CF Specifications and to obtain a complete record of packaging codes for catalogued items of the RFD system.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST	6. GIDEP APPLICABLE
17 January 2014	DND ILS Manager	N/A

7. APPLICATION/INTERRELATIONSHIP

This Data Item Description (DID) contains the format, content and preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the **ANNEX A. Para. 3.10.7.1 and:**

- D-LM-008-011/SF-001: *Preparation and Use of Packaging Requirements Codes*;
- D-LM-008-002/SF-001: *Specification for Marking for Storage and Shipment*;
- D-01-400-002/SF-000: *Levels of Engineering Drawings and Associated Lists*.

8. ORIGINATOR	9. APPLICABLE FORMS
DND ILS Technician	

10. **PREPARATION INSTRUCTIONS**

10.1. The design of a sample Packaging Label, populated with representative data, shall be provided as Level 2 drawings (as defined in D-01-400-002/SF-000), dimensioned to show the critical measurements as defined by D-LM-008-002/SF-001 (example: text size, bar code dimensions, etc.).

10.2. The Packaging Codes prepared from D-LM-008-011/SF-001 for the Packaging Labels for each item shall be compiled into a spreadsheet containing the following columns of data, titled as below:

10.2.1. Item Name – as given by the Contractor;

10.2.2. Manufacturer's Reference Number (MRN) – Source manufacturer's part number;

10.2.3. NCAGE – Source Manufacturer's NCAGE;

10.2.4. OEM part number – Part number assigned by Contractor;

10.2.5. NATO Nomenclature – Item name as assigned by NATO;

10.2.6. NATO Stock Number;

10.2.7. Packaging Code – as resolved by the Contractor;

10.2.8. Label Number – cross-referenced with the label drawing number from 10.1 above.

10.3. **DELIVERY FORMAT**

10.3.1. Hard Copy: shall be on letter, legal, or 11" x 17" white bond paper, as appropriate for good legibility.

10.3.2. Soft Copy:

10.3.2.1. Label Drawings: as text-searchable PDF files, rotated as appropriate to permit normal viewing on-screen.

10.3.2.2. Packaging Codes spreadsheet:

10.3.2.2.1. As a text-searchable PDF file, rotated as appropriate to permit normal viewing on-screen; and,

10.3.2.2.2. As a MS Excel format spreadsheet.

10.3.3. All files shall be submitted on CD or DVD media, which shall be labelled as follows:

10.3.3.1. The project name: RFD;

10.3.3.2. The contract number: W8476-145106

10.3.3.3. The Subject Matter: Packaging, Labels and Codes;

10.3.3.4. The DID number: RFD-ILS-208

10.3.3.5. The Revision number;

10.3.3.6. The date of delivery.

DATA ITEM DESCRIPTION

1. TITLE **Identification Plates**		**2.** IDENTIFICATION NUMBER **RFD-ILS-209**
3. DESCRIPTION/PURPOSE To uniquely identify equipment and components or spares based on the procedures governing the identification marking of Canadian military property.		
4. APPROVAL DATE 17 January 2014	**5.** OFFICE OF PRIMARY INTEREST **RFD SYSTEM ILS Manager**	**6.** GIDEP APPLICABLE N/A
7. APPLICATION/INTERRELATIONSHIP This DID contains the format, content and preparation instructions for the Identification Plates as required by Annex A of the SOW, **Para 3.10.1.6**; • D-02-002-001/SG-001 – *Identification Marking of Canadian Military Property;* • D-01-400-002/SF-000 – *Levels of Engineering Drawings and Associated Lists.*		
8. ORIGINATOR **RFD System ILS Manager**	**9.** APPLICABLE FORMS N/A	

10. PREPARATION INSTRUCTIONS

10.1 The following items shall have Identification Plates attached to them prior to being delivered to DND for tracking and accountability within the Canadian Forces Supply System:

10.1.1 Prime Equipment;

10.1.2 All Major Components;

10.1.3 Spares;

10.1.4 Training Equipment;

10.1.5 Transportation, Shipping, Storage Containers that are not single-use;

10.1.6 Support Equipment (excluding tools); and

10.1.7 Automatic Test Equipment

10.2 The Identification Plates affixed to each item listed in 10.1 shall contain data in both official languages, and be of size and construction appropriate for the item in question IAW D-02-002-001/SG-001.

10.3 Prior to the production and installation of the Identification Plates, representative Level 2 drawings (see D-01-400-002/SF-000) of each Identification Plate shall be submitted to DND for review and acceptance as follows:

10.3.1 In soft copy in PDF format as described in 10.4 below;

10.3.2 In 1:1 scale hard copy, on white bond paper of standard North American size; and,

10.3.3 The drawings shall include the mounting or installation method for each Identification Plate, with any fasteners described by size, and/or technical standard, and/or NSN, and quantity.

10.4 **ELECTRONIC FORMAT**

10.4.1 Viewing the PDF: pages, regardless of size, containing text or illustrations in landscape, shall be rotated for electronic viewing and reading in landscape.

10.4.2 The Identification Plates drawings in PDF and its native file format shall be submitted on CD or DVD media, which shall be labelled as follows:

10.4.2.1 The project name: RFD;

10.4.2.2 The contract number: W8476-145106

10.4.2.3 The Subject Matter: *Identification Plates*;

10.4.2.4 The DID number: (RFD-ILS-209)

10.4.2.5 The Revision number;

10.4.2.6 The date of delivery.

Canadian Forces Explosive Ordnance Disposal (EOD) Team Equipment

CONTRACT DATA REQUIREMENTS LIST

FOR

REMOTE FIRING DEVICE (RFD)

1.0 CONTRACT DATA REQUIREMENT LIST (CDRL) ITEM LIST

CDRL #	Title	DID #
RFD-PM-001	Project Management Plan	RFD-PM-001
RFD-PM-002	Meeting Agenda	RFD-PM-002
RFD-PM-003	Meeting Minutes	RFD-PM-003
RFD-SE-101	Application for Spectrum Supportability	RFD-SE-101
RFD-SE-102	Functional Hazard Analysis	RFD-SE-102
RFD-SE-103	Coding/Decoding Functional Diagram & Explanation	RFD-SE-103
RFD-ILS-201	Operator Quick Reference Card	RFD-ILS-201
RFD-ILS-202	Operator Manual	RFD-ILS-202
RFD-ILS-203	Maintenance and Parts Handbook	RFD-ILS-203
RFD-ILS-204	Provisioning Parts Breakdown	RFD-ILS-204
RFD-ILS-205	Supplementary Provisioning Technical Documentation	RFD-ILS-205
RFD-ILS-206	Special Tool and Testing Equipment	RFD-ILS-206
RFD-ILS-207	Training Package	RFD-ILS-207
RFD-ILS-208	Packaging, Labels and Codes	RFD-ILS-208
RFD-ILS-209	Identification Plates	RFD-ILS-209
RFD-ILS-210	Top Level Assembly Drawing	RFD-ILS-205

CONTRACT DATA REQUIREMENT LIST (CDRL) DEFINITION

The following section defines the various blocks of information found on the CDRL forms:

BLOCK A – SYSTEM / ITEM
Provides the name of the System or Item for which the CDRL applies.

BLOCK B – CONTRACT / RFP NUMBER
Identifies the Contract or RFP for which the CDRL applies.

BLOCK C – SOW IDENTIFIER
Identifies the SOW for which the CDRL applies.

BLOCK D – DATA CATEGORY
Identifies the general category of the data for which the CDRL is being prepared.

BLOCK E – CONTRACTOR
Identifies the Contractor responsible for the delivery of the CDRL.

BLOCK 1 - ITEM NUMBER
The Item Number is a sequential three-digit number to uniquely identify the individual data item (CDRL number). Note that the 001-099 series is reserved to Project Management (PM) CDRLs, the 101-199 series is reserved to Systems Engineering (SE) CDRLs and the 202-299 series is reserved to Integrated Logistics Support (ILS) CDRLs.

BLOCK 2 - TITLE OR DESCRIPTION OF DATA
The title of the data item being referred to in this CDRL.

BLOCK 3 - SUBTITLE
This block contains the subtitle of the data item for the CDRL if the title requires further identification.

BLOCK 4 - AUTHORITY (DATA ITEM NUMBER)
Indicates the Data Item Description (DID) number to which this CDRL refers.

BLOCK 5 - CONTRACT REFERENCE
The specific paragraph number of the Contract Demand, Statement of Work, Request for Proposal, Specification, or other applicable document to assist in identifying the work effort associated with the data item.

BLOCK 6 – REQUIRING OFFICE
Identifies the technical office of primary interest responsible for defining the data requirement, reviewing, acceptance and/or approval of the data item, and ensuring the adequacy of the delivered data.

BLOCK 7 - INSPECTION
This block indicates the requirement for INSPECTION and ACCEPTANCE of the data. The following codes are used:

CODE	INSPECTION	ACCEPTANCE
SS	Source	Source
DD	Destination	Destination
SD	Source	Destination
DS	Destination	Source

If no applicable code is available for the data item, this block is marked as “N/A”.

BLOCK 8 - APPROVAL CODE (APP CODE)
Indicates items of critical data requiring specific advanced written approval, such as test plans, identified by placing an "A" in this field. These data may require submission of a preliminary draft prior to publication of a final document. When a preliminary draft is required, Block 16 shall show the length of time for Government approval/disapproval and when final is to be delivered. Block 16 also indicates the extent of the approval requirements, eg, approval of technical content and/or format.

If advance approval is not required, this block is marked as "N/A".

BLOCK 9 - INPUT
Indicates if data are the integrated results of specific inputs from associated contractors by placing an "X" in this block. Otherwise the block is left blank.

BLOCK 10 - FREQUENCY
This block indicates the frequency of the delivered data. The following frequency codes are used:

ANNLY	Annually
ASGEN	As generated
ASREQ	As required
BI-MO	Every 2 months
BI-WK	Every2 weeks
DAILY	Daily
MNTHY	Monthly
ONE/R	One time with revisions
OTIME	One time
QRTLY	Quarterly
R/ASR	Revisions as required
SEMIA	Semi-annually
WKLY	Weekly

BLOCK 11 - AS OF DATE
For data items that are submitted only once, the "as of" date or associated constraint is indicated. The following abbreviations are used for the constraints:

ASGEN	As generated
ASREQ	As required
DACA	Days after contract award
MACA	Months after contract award
EOM	End of month
EOQ	End of quarter

If the as-of date is not applicable, leave this block blank.

BLOCK 12 - DATE OF 1ST SUBMISSION
The initial submission date or associated constraint for the 1st submission of the data item is indicated in this block using typical abbreviations as listed above under Block 11.

BLOCK 13 - DATE OF SUBSEQUENT SUBMISSION / EVENT
The date(s) of subsequent submission(s) or associated constraint(s) of the data item is indicated in this block. The abbreviations used for the constraints are as listed above under Block 11. If no subsequent submission or associated are not involved, this block is marked as “N/A”.

BLOCK 14 - DISTRIBUTION AND ADDRESSEES
Indicates the addressees and the respective number of copies (hard copies and soft copies separately), for both the initial or original submissions (Sub-Block “Initial”), and for the final or subsequent submissions (Sub-Block “Final”), for which the data item is required.

Column A contains addresses. The number of initial hard and soft copies for each addressee (as applicable) is indicated in Column B – INITIAL – Hard Copy and Column B – FINAL – Soft Copy.

BLOCK 15 - TOTAL
Indicates the total number of copies (hard copies and soft copies separately) required for both the original submission and for the final submission.

BLOCK 16 - REMARKS
Provides additional or clarifying information. Where other blocks refer to Block 16 – Remarks, then the associated block number is indicated with the information, and a “See Block 16” note would be entered in the referring block.

BLOCKS 17 - 19
These blocks are for Contractor input as required as part of the RFP or Contract. These blocks are not used by TA.

BLOCK - PREPARED BY
This block identifies the CDRL originator’s name and designation.

BLOCK - DATE
This block indicates the date of the CDRL approval.

BLOCK - APPROVED BY
This block contains the identification information, such as name and designation, of the person approving the CDRL.

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Management Data		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-PM-001		2. TITLE OR DESCRIPTION OF DATA Project Management Plan (PMP)		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-PM-001		5. CONTRACT REFERENCE ANNEX A - **SOW Para. 3.9.2**		6. REQUIRING OFFICE DND TA				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12: A draft PMP shall be submitted for review by Canada within thirty (30) calendar days after the Kick-off Meeting. Response Time: Comments on the PMP will be provided by Canada within fourteen (14) calendar days of receipt. Block 13: The updated PMP addressing the comments from Canada shall be submitted for acceptance within fourteen (14) calendar days after the receipt after the receipt of Canada's comments.				PWGSC CA	0	0	1	1
				DND TA	1	1	1	1
PREPARED BY DND RFD SYSTEM TA		APPROVED BY DND RFD SYSTEM PM/DCSEM 9						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Management Data		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-PM-002		2. TITLE OR DESCRIPTION OF DATA Meeting Agenda		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-PM-002		5. CONTRACT REFERENCE SOW Annex A Para. 3.9.3.4.1.1.		6. REQUIRING OFFICE DND TA				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ASGEN	12. DATE OF 1st SUBMISSION See block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE N/A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12: The Meeting Agenda shall be submitted for review by Canada no later than fourteen (14) calendar days prior to each meeting. Response Time: Comments on the Meeting Agenda, including additions or deletions of discussion items, will be provided by Canada no later than seven (7) calendar days of receipt. Block 13: The revised Meeting Agenda addressing the comments from Canada shall be tabled at the meeting.				PWGSC CA	0	0	1	1
				DND TA	1	1	1	1
PREPARED BY DND RFD SYSTEM TA		APPROVED BY DND RFD SYSTEM PM/DCSEM 9						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Management Data		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-PM-003		2. TITLE OR DESCRIPTION OF DATA Meeting Minutes		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-PM-003		5. CONTRACT REFERENCE SOW Annex A Para. 3.9.3.4.1.2		6. REQUIRING OFFICE DND TA				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ASGEN	12. DATE OF 1st SUBMISSION See block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12: Meeting minutes shall be submitted for review by Canada no later than seven (7) calendar days following each meeting. Response Time: Comments on the meeting minutes will be provided by Canada no later than seven (7) calendar days of receipt. Block 13: Revised meeting minutes addressing the comments from Canada shall be submitted for approval no later than seven (7) calendar days after the receipt of Canada's comments.				PWGSC CA	0	0	1	1
				DND TA	1	1	1	1
PREPARED BY DND RFD SYSTEM TA		APPROVED BY DND RFD SYSTEM PM/DCSEM 9						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Engineering Data		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-SE-101		2. TITLE OR DESCRIPTION OF DATA Application for Spectrum Supportability		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-SE-101		5. CONTRACT REFERENCE SOW Annex A Para. 3.4.1.12, and SOW Annex D		6. REQUIRING OFFICE DND TA				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Application for Spectrum Supportability (Annex D) shall be submitted for review by Canada no later than twenty-one (21) calendar days after the Kick-off Meeting. Response Time: Comments on the Application for Spectrum Supportability will be provided by Canada no later than fourteen (14) calendar days after receipt of the draft Application. Block 13: The revised Application for Spectrum Supportability addressing Canada's comments shall be submitted for acceptance no later than fourteen (14) calendar days after the receipt of Canada's comments.				PWGSC CA	0	0	1	1
				DND TA	1	1	1	1
PREPARED BY DND RFD SYSTEM TA		APPROVED BY DND RFD System PM						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD System SOW		D. DATA CATEGORY Engineering Data		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-SE-102		2. TITLE OR DESCRIPTION OF DATA Functional Hazard Analysis		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-SE-102		5. CONTRACT REFERENCE ANNEX A - SOW **Para. 3.4.1.4.3.2**		6. REQUIRING OFFICE DND TA				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS <u>Block 12</u>: Draft Functional Hazard Analysis shall be submitted for review no later than thirty-one (31) calendar days after the kick-off meeting. <u>Response Time</u>: Comments on the draft Functional Hazard Analysis will be provided by Canada within fourteen (14) calendar days of receipt of submission. <u>Block 13</u>: The revised Functional Hazard Analysis, addressing comments from Canada, shall be submitted for review and possible acceptance within fourteen (14) calendar days after the receipt of comments.				DND TA	1	1	2	1
				PWGSC CA	0	0	2	1
PREPARED BY DND RFD System TA		APPROVED BY DND RFD System PM						
DATE		DATE		15. TOTAL	1	1	4	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD System SOW		D. DATA CATEGORY Engineering Data		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-SE-103		2. TITLE OR DESCRIPTION OF DATA Coding/Decoding Functional Diagram & Explanation		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-SE-103		5. CONTRACT REFERENCE ANNEX A - SOW **Para. 3.4.1.2.1**		6. REQUIRING OFFICE DND TA				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS <u>Block 12</u>: Draft Coding/Decoding Functional Diagram & Explanation shall be submitted for review no later than forty-five (45) calendar days after the kick-off meeting. <u>Response Time</u>: Comments on the draft Coding/Decoding Functional Diagram & Explanation will be provided by Canada within fourteen (14) calendar days of receipt of submission. <u>Block 13</u>: The revised Coding/Decoding Functional Diagram & Explanation, addressing comments from Canada, shall be submitted for review and possible acceptance within fourteen (14) calendar days after the receipt of comments.				DND TA	1	1	1	1
				PWGSC CA	0	0	1	1
PREPARED BY DND RFD System TA		APPROVED BY DND RFD System PM						
DATE		DATE		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER **RFD SYSTEM SOW**		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER **CDRL RFD-ILS-201**		2. TITLE OR DESCRIPTION OF DATA Operator Quick Reference Card		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-201		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.2.1.1		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Contractor shall provide a draft English Operator Quick Reference Card (OQRC) for review by Canada at the same time as the submission of the Operator Manual. Response Time: Comments on the OQRC will be provided by Canada no later than twenty-one (21) calendar days after receipt of the draft submission. Block 13: The revised Operator Quick Reference Card addressing Canada's comments shall be submitted for acceptance no later than twenty-one (21) calendar days after the receipt of Canada's comments. Block 12 (Final): The Contractor shall provide a draft Bilingual Operator Quick Reference Card for review by Canada at the same time as the submission of the Bilingual Operator Manual. Response Time: Comments on the draft Bilingual Operator Quick Reference Card will be provided by Canada no later than fourteen (14) calendar days after receipt of the submission. Block 13: The revised Bilingual Operator Quick Reference Card, addressing Canada's comments shall be provided to Canada for acceptance no later than fourteen (14) calendar days after the receipt of comments.				PWGSC CA	0	0	1	1
				DND ILSM	1	1	1	1
				Issued with RFD One each	0	0	42	0
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	2	44	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER **RFD SYSTEM SOW**		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER **CDRL RFD-ILS-202**		2. TITLE OR DESCRIPTION OF DATA Operator Manual		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-202		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.2.1.2		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Contractor shall provide a draft Operator Manual for review by Canada no later than sixty-three (63) calendar days after the Kick off Meeting date. Response Time: Comments on the Operator Manual will be provided by Canada no later than twenty-one (21) calendar days after receipt of draft submission. Block 13: The revised Operator Manual, addressing Canada's comments shall be submitted for acceptance no later than twenty-one (21) calendar days after the receipt of Canada's comments. Block 12 (Final): The Contractor shall provide a draft Bilingual Operator Manual for review by Canada no later than twenty-eight (28) calendar days after the acceptance of the English Operator Manual. Response Time: Comments on the draft Bilingual Operator Manual will be provided by Canada no later than fourteen (14) calendar days after receipt of the submission. Block 13: The revised Bilingual Operator Manual, addressing Canada's comments shall be provided to Canada for acceptance no later than fourteen (14) calendar days after the receipt of comments.				PWGSC CA	0	0	1	1
				DND ILSM	1	1	1	1
				Issued with RFD One each	0	0	42	0
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	44	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER **RFD SYSTEM SOW**		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER **CDRL RFD-ILS-203**		2. TITLE OR DESCRIPTION OF DATA Maintenance and Parts Handbook		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-203		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.2.1.3		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Contractor shall provide a draft Maintenance and Parts Handbook for review by Canada no later than sixty-three (63) calendar days after the Kick off Meeting date. Response Time: Comments on the Maintenance and Parts Handbook will be provided by Canada no later than twenty-one (21) calendar days after receipt of draft submission. Block 13: The revised Maintenance and Parts Handbook, addressing Canada's comments shall be submitted for acceptance no later than twenty-one (14) calendar days after the receipt of Canada's comments. Block 12 (Final): The Contractor shall provide a draft Bilingual Maintenance and Parts Handbook for review by Canada no later than twenty-eight (28) calendar days after the acceptance of the English Maintenance and Parts Handbook. Response Time: Comments on the draft Bilingual Maintenance and Parts Handbook will be provided by Canada no later than fourteen (14) calendar days after receipt of the submission. Block 13: The revised Bilingual Maintenance and Parts Handbook, addressing Canada's comments shall be provided to Canada for acceptance no later than fourteen (14) calendar days after the receipt of comments.				PWGSC CA	0	0	1	1
				DND ILSM	1	1	1	1
				Issued with RFD One each	0	0	42	0
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	44	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER **RFD SYSTEM SOW**		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER **CDRL RFD-ILS-204**		2. TITLE OR DESCRIPTION OF DATA Provisioning Parts Breakdown		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-204		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.3.1.1		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Contractor shall provide a draft Provisioning Parts Breakdown for review by Canada at the same time as the draft Maintenance and Parts Handbook. Response Time: Comments on the Provisioning Parts Breakdown will be provided by Canada no later than twenty-eight (28) calendar days after receipt of draft submission. Block 13: The revised Provisioning Parts Breakdown, addressing Canada's comments shall be submitted for acceptance no later than twenty-eight (28) calendar days after receipt of comments from Canada.				PWGSC CA	0	0	1	1
				DND ILSM	2	1	2	1
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	2	1	3	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-ILS-205		2. TITLE OR DESCRIPTION OF DATA Supplementary Provisioning Technical Documentation		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-205		5. CONTRACT REFERENCE **SOW Annex A Para. 3.10.3.1.2**		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12: The Contractor shall provide a draft SPTD package for review by Canada at the same time as the draft Maintenance and Parts Handbook. Response Time: Comments on the SPTD package will be provided by Canada no later than twenty-eight (28) calendar days after receipt of draft submission. Block 13: The revised SPTD package, addressing Canada's comments shall be submitted for acceptance no later than twenty-eight (28) calendar days following receipt of comments from Canada.				DND ILSM	0	1	1	1
				DSCO	0	1	0	1
				PWGSC CA	0	0	0	1
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	0	2	1	3
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-ILS-206		2. TITLE OR DESCRIPTION OF DATA Special Tool & Test Equipment List		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-206		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.3.1.3		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Contractor shall provide a draft Special Tool & Test Equipment List for review by Canada no later than twenty-eight (28) calendar days after the Kick off Meeting date. Response Time: Comments on the Special Tool & Test Equipment List will be provided by Canada no later than fourteen (14) calendar days after receipt of draft submission. Block 13: The revised Special Tool & Test Equipment List, addressing Canada's comments shall be submitted for acceptance no later than fourteen (14) calendar days after the receipt of Canada's comments.				PWGSC CA	0	0	1	1
				DND ILSM	1	1	1	1
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD SYSTEM SOW		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-ILS-207		2. TITLE OR DESCRIPTION OF DATA Operator Training Package		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-207		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.2.1.4		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12. The Contractor shall provide a draft Operator Training Package for review by Canada within the fourteen (14) calendar days following the acceptance of the English version of the Operator Manual. Response Time: Comments on the Operator Training Package will be provided by Canada no later than twenty-one (21) calendar days after receipt of draft submission. Block 13: The revised Operator Training Package, addressing Canada's comments shall be submitted for acceptance no later than fourteen (14) calendar days after the receipt of Canada's comments. Block 12 (Final): The Contractor shall provide a draft Bilingual Operator Training Package for review by Canada within the twenty-one (21) calendar days after the acceptance of the Bilingual Operator Manual. Response Time: Comments on the draft Bilingual Operator Training Package will be provided by Canada no later than fourteen (14) calendar days after receipt of the submission. Block 13: The revised Bilingual Operator Training Package, addressing Canada's comments shall be provided to Canada for acceptance no later than fourteen (14) calendar days after the receipt of comments.				PWGSC CA	0	0	1	1
				DND ILSM	1	1	2	2
PREPARED BY DND RFD SYSTEM ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	2	3	3
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER RFD System SOW		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER CDRL RFD-ILS-208		2. TITLE OR DESCRIPTION OF DATA Packaging, Labels and Codes		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-208		5. CONTRACT REFERENCE ANNEX A - SOW **Para. 3.10.5**		6. REQUIRING OFFICE DND ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12: The Packaging, Labels and Codes shall be submitted for evaluation and review between zero (0) and twenty-eight (28) calendar days following Canada's acceptance of the PPB (RFD-ILS-204). Response Time: Comments on Packaging, Labels and Codes will be provided by Canada within twenty-one (21) calendar days of receipt of submission. Block 13: The revised Packaging, Labels and Codes, addressing the comments from Canada, shall be submitted for acceptance within fourteen (14) calendar days of receipt of comments. Revisions/Additions to the Packaging, Labels and Codes shall also be provided once a range of spares are chosen from the PPB (RFD-ILS-204) by DND to support the equipment.				DND ILSM	1	1	1	1
				PWGSC CA	0	0	1	1
PREPARED BY DND RFD System ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST				DND Form 1413				
A. SYSTEM / ITEM RFD System				B. CONTRACT / RFP NUMBER W8476-145106				
C. SOW IDENTIFIER **RFD SYSTEM SOW**		D. DATA CATEGORY Integrated Logistics Support		E. CONTRACTOR TBD				
1. ITEM NUMBER **CDRL RFD-ILS-209**		2. TITLE OR DESCRIPTION OF DATA Identification Plates		3. SUBTITLE N/A				
4. AUTHORITY (Data Item Number) RFD-ILS-209		5. CONTRACT REFERENCE SOW Annex A Para. 3.10.6		6. REQUIRING OFFICE RFD SYSTEM ILS Manager				
7. INSPECTION DD	9. INPUT	10. FREQUENCY ONE/R	12. DATE OF 1st SUBMISSION See Block 16	14. DISTRIBUTION and ADDRESSEES				
8. APP CODE A		11. AS OF DATE N/A	13. DATE OF SUB SUBMISSION See Block 16	A. ADDRESS	B. COPIES			
					DRAFT		FINAL	
					Hard Copy	Soft Copy	Hard Copy	Soft Copy
16. REMARKS Block 12 (Template). The Contractor shall provide a draft Identification Plates design template for review by Canada no later than twenty-eight (28) calendar days after the Kick off Meeting date. Response Time: Comments on the Identification Plates design template will be provided by Canada no later than fourteen (14) calendar days after receipt of draft design submission. Block 13: The revised Identification Plates design template, addressing Canada's comments shall be submitted for acceptance no later than fourteen (14) calendar days after the receipt of Canada's comments. Block 12 (Final): The Contractor shall provide all draft populated Identification Plate designs for review by Canada no later than twenty-eight (28) calendar days after acceptance of the Identification Plates template design. Response Time: Comments on the populated Identification Plate designs will be provided by Canada no later than twenty-one (21) calendar days after receipt of draft submission. Block 13: The revised Identification Plates designs, addressing Canada's comments, shall be submitted for acceptance no later than fourteen (14) calendar days after the receipt of Canada's comments.				PWGSC CA	0	0	1	1
				DND ILSM	1	1	1	1
PREPARED BY DND RFD System ILS Technician		APPROVED BY DND RFD System ILS Manager						
DATE 17 January 2014		DATE 17 January 2014		15. TOTAL	1	1	2	2
17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES		19. ESTIMATED PRICE					

CONTRACT DATA REQUIREMENTS LIST — DND Form 1413

A. SYSTEM / ITEM: RFD System				B. CONTRACT / RFP NUMBER: W8476-145106
C. SOW IDENTIFIER: RFD SYSTEM SOW		D. DATA CATEGORY: Integrated Logistics Support		E. CONTRACTOR: TBD
1. ITEM NUMBER: CDRL RFD-ILS-210		2. TITLE OR DESCRIPTION OF DATA: Top Level Assembly Drawing		3. SUBTITLE: N/A
4. AUTHORITY (Data Item Number): DID RFD-ILS-205		5. CONTRACT REFERENCE: **SOW Annex A Para. 3.9.3.2.2**		6. REQUIRING OFFICE: RFD SYSTEM ILS Manager
7. INSPECTION: DD	9. INPUT	10. FREQUENCY: ONE/R	12. DATE OF 1st SUBMISSION: See Block 16	14. DISTRIBUTION and ADDRESSEES
8. APP CODE: A		11. AS OF DATE: N/A	13. DATE OF SUB-SUBMISSION: See Block 16	

16. REMARKS

Block 12: First Submission: The Contractor shall provide a draft Top Level Assembly Drawing (TLAD) for review by Canada during the Kick-Off Meeting (Annex A – SOW para 3.9.3.2)

Response Time: Comments on the TLAD will be provided by Canada no later than twenty-one (21) calendar days after receipt of draft submission.

Block 13: The revised TLAD, addressing Canada's comments shall be submitted for acceptance no later than fourteen (14) calendar days following receipt of comments from Canada.

A. ADDRESS	B. COPIES			
	DRAFT		FINAL	
	Hard Copy	Soft Copy	Hard Copy	Soft Copy
DND ILSM	1	1	1	1
DSCO	0	1	0	1
PWGSC CA	0	0	0	1
15. TOTAL	1	2	1	3

PREPARED BY	APPROVED BY
DND RFD System ILS Technician	DND RFD System ILS Manager
DATE 17 January 2014	DATE 17 January 2014

17. CONTRACT FILE/DOC NUMBER	18. ESTIMATED NO OF PAGES	19. ESTIMATED PRICE

CONTRACT END ITEMS LIST

FOR

REMOTE FIRING DEVICE

TABLE OF CONTENTS

1.0 SCOPE

1.1 Purpose

1.1.1 The purpose of this Contract End Items List document is to outline the deliverables required from the Contractor for the Remote Firing Device (RFD) system. As well, the document specifies the format for the data to be delivered under the Contract.

2.0 CONTRACT DELIVERABLES

2.1 General

2.1.1 The Contractor shall ensure that the RFD systems are delivered correctly, adjusted and serviced such that the systems are ready for transportation and operation upon delivery.

2.1.2 The Contractor shall deliver a total quantity of fifty-two (52) RFD systems, with an option to acquire Special Tools and Test Equipment, after approval from DND, within two (2) years of contract award, including all associated accessories IAW the Contract.

2.2 List of Deliverables

Item	Item Description	Qty
1	RFD system (Annex A para. 3.1.2)	52
2	Coding/Decoding Functional Diagram and Explanation (Annex A para. 3.4.1.2.1)	LOT
3	Functional Hazard Analysis (Annex A para. 3.4.1.4.3.2)	LOT
4	Application for Spectrum Supportability (Annex A para. 3.4.1.12.1)	LOT
5	Project Management Plan (Annex A para. 3.9.2.1)	LOT
6	Meeting Agenda (Annex A para. 3.9.3.4.1.1)	LOT
7	Meeting Minutes (Annex A para. 3.9.3.4.1.2)	LOT
8	Sample RFD System (loaned temporarily to DND) (Annex A para. 3.10.2.1.2.2)	1
9	Operators Quick Reference Card (Annex A para. 3.10.2.1.1)	LOT
10	Operator Manual (Annex A para. 3.10.2.1.2.)	LOT
11	Maintenance and Parts Handbook (Annex A para. 3.10.2.1.3)	LOT
12	Operator Training Package (Annex A para. 3.10.2.1.4)	LOT
13	Training Session (Annex A para. 3.10.4)	1
14	Provisioning Parts Breakdown (Annex A para. 3.10.3.1.1)	LOT
15	Supplementary Provisioning Technical Documentation (Annex A para. 3.10.3.1.2)	LOT
16	Special Tool & Testing Equipment (Annex A para. 3.10.3.1.3)	LOT
17	Packaging, Labels and Codes (Annex A para. 3.10.5)	LOT
18	Identification Plates (Annex A para. 3.10.6)	LOT
19	Top Level Assembly Drawing (Annex A para. 3.9.3.2.2)	LOT
20	**Option** to acquire Special Tool & Testing Equipment after approval from DND	TBD
21	**Option** to acquire Spare Parts (upon approval of the Provisioning Parts Breakdown)	TBD

Table 1: Control End Items List
Note: 'LOT' equates to the quantity needed to fulfill the requirements of the CDRL, including revisions, as necessary until accepted by DND.

2.3 Data Deliverable List

2.3.1 The Contractor shall prepare and deliver all data required under the Contract as summarized in the above article 2.2 Table 1.

2.3.2 The Contractor shall maintain and update all data deliverables, including plans and documents, as required for the duration of the Contract.

2.4 Data Format

2.4.1 All data delivered as part of this SOW, other than those with specific requirements, shall be prepared in the Contractor's own format.

2.4.2 All documentation shall be submitted in hardcopy and in electronic format. Unless otherwise specified, the Contractor shall deliver all of the soft copies of data deliverables in formats compatible with the office software currently in use by DND – refer to Annex A article 3.10.7 Data Deliverable Format.

2.5 Delivery Calendar

2.5.1 The Contractor shall submit a proposed delivery schedule to meet the following delivery requirements for the RFD system:

2.5.1.1 First delivery shall only be initiated (accepted) once the following required data item deliverables are provided and accepted by DND:

2.5.1.1.1 Coding/Decoding Functional Diagram and Explanation

2.5.1.1.2 Functional Hazard Analysis

2.5.1.1.3 Application for Spectrum Supportability;

2.5.1.1.4 Operator Quick Reference Card;

2.5.1.1.5 Operator Manual;

2.5.1.1.6 Maintenance and Parts Handbook;

2.5.1.1.7 Provisioning Parts Breakdown;

2.5.1.1.8 Supplementary Provisioning Technical Documentation;

2.5.1.1.9 Special Tool and Test Equipment;

2.5.1.1.10 Operator Training Package;

2.5.1.1.11 Packaging, Labels and Codes; and,

2.5.1.1.12 Identification Plates;

2.5.1.2 All deliveries shall be completed within two hundreds (200) calendar days after the Kick-off Meeting.

BID EVALUATION CRITERIA

FOR

REMOTE FIRING DEVICE (RFD)

TABLE OF CONTENTS

1 GENERAL

1.1 Introduction

1.1.1 This document defines the criteria that will be used to determine technically compliant bid(s) for the procurement of the Remote Firing Device (RFD) system for the Canadian Armed Forces Explosive Ordnance Disposal (EOD) Team Equipment Project. It describes the evaluation process and lists key mandatory requirements that will be assessed in greater detail. It also outlines the tests and trials procedures to be conducted on candidate RFD systems to confirm they meet stated requirements.

2 PHASE 1: EVALUATION OF KEY MANDATORY REQUIREMENTS

2.1 For each listed requirement, the bidder shall provide a response in the Bidder's Response/References" column in Appendix 1 to clearly explain how the requirement is met, either by including the specific reference to indicate where in their proposal the information is found or including the complete response directly in that column.

2.2 Bidders shall provide the information required for each listed requirement in accordance with the method identified in the "Compliance Documentation Required" column of Appendix 1 to Annex C.

2.3 Appendix 1 - Evaluation of Key Mandatory Requirements

2.3.1 The following compliance methods, as indicated in the "Compliance Documentation Required" column of Appendix 1, define the information required from the bidders against each requirement:

2.3.1.1 **Draft (DR)** - Where "Draft" is identified in the "Compliance Documentation Required" column, the Bidder shall provide a draft of the requested document to describe in detail how the equipment offered fully complies with the requirement.

2.3.1.2 **Compliance Statement (CS)** - Where "Compliance Statement" is identified in the "Compliance Documentation Required" column, bidders shall provide a compliance statement that describes in detail how the equipment offered fully complies with the requirement. **Supporting documentation can be provided**.

2.3.1.3 **Test Report (TR)** - Where "Test Report" is identified in the "Compliance Documentation Required" column, the bidder shall provide a completed and detailed Test Report, possibly including test procedures and data/results, for tests conducted on the equipment offered, to confirm it fully complies with the requirement.

3 PHASE 2: EVALUATION TRIALS

3.1.1 All technical and performance verification tests and trials will be performed by DND Subject Matter Experts (SME) within the Ottawa, ON or Gatineau, QC area. The location of the tests and trials could however be changed to another suitable location within Canada as deemed necessary by the DND TA.

3.1.2 Technical and performance verification tests as well as user trials will be conducted using sample RFD systems supplied by bidders having moved to Phase 1. All submitted RFD systems will be utilised in accordance with the original equipment manufacturers' recommended operating procedures. **Tests and trials will be non-destructive and the RFD systems will be returned on completion of the trials.**

3.2 **Preparation for Evaluation Trials -** Successful bidders advancing to Phase 2 Evaluation Trials shall be required to provide, at no cost to Canada:

3.2.1 **Two (2) RFD systems**, as per Annex A SOW para. 3.1.2 **(only one (1) Extended distance transmitter antenna (if required) will need to be provided)**, including technical manual(s) (either English or French would be acceptable) and hard Carry Case(s), which need not be exactly as specified in the SOW, delivered no later than **forty-five (45) calendar days** after being informed of the successful results of Phase 1 – Evaluation of Key Mandatory Requirements, to the following address:

Attn: Mr. Michael Keller, P.Eng

National Defence, QETE

45 Sacre-Coeur Blvd, 1st floor Rm F113.

Gatineau, QC, J8X 1C6, Canada

Tel: 819-997-1411

3.2.2 **A Field Service Representative (FSR)** to instruct and train the Evaluation staff in the operation of the RFD system before the commencement of test serials, reporting to Mr. Michael Keller.

3.2.3 The instruction and training will occur at the above address on a date to be confirmed in due time by the PWGSC CA, and shall not exceed **four (4) hours per Bidder**.

3.2.4 Bidders not capable of providing the two (2) RFD systems will be deemed non-compliant and the items returned.

3.3 **Appendix 2 - Evaluation Trials - Mandatory Criteria Testing Methodology**

3.3.1 Appendix 2 provides the evaluation trial plan that will be utilized in order to verify compliance with the mandatory criteria listed.

3.3.2 Results of tests on each bidder's RFD system will be compiled and assessed by Technical Staff: DND Project Trials Officer(s) and DND Scientists.

4 BID SELECTION METHODOLOGY

4.1 It is Canada's desire to achieve an optimal capability at an expense of lowest possible cost. Therefore, a "Lowest Cost Compliant" approach will be employed for this acquisition process. This approach will recognize cost competitiveness of compliant bids.

4.2 Selection of the winning proposal will be based on the proposed lowest cost provided that the proposal meets all mandatory requirements and confirmed compliances with the key technical and performance requirements detailed in Appendixes 1 and 2 to this Annex.

Appendix 1 – Evaluation of Key Mandatory Requirements

Serial	Key Requirement Criteria with References	Requirement Description	Compliance Documentation Required DR - Draft CS - Compliance Statement TR – Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M1	Annex A – Para 3.2.1.2	The RFD system shall be based on proven, fielded equipment that is in service with a North Atlantic Treaty Organization (NATO) or American, British, Canadian, Australian, New Zealand (ABCANZ) military partner, or with paramilitary and law enforcement agencies of those countries.	CS			
M2	Annex A – Para 3.4.1.4.3	Failure mode. The RFD system firing circuit shall be designed so that if the RFD system fails or enters a failure mode, the RFD system shall not be capable of initiating any part of the explosives, detonators or shock tube (such as causing a voltage differential across the firing poles).	CS			

Serial	Key Requirement Criteria with References	Requirement Description	Compliance Documentation Required DR - Draft CS - Compliance Statement TR – Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M3	Annex A – Para 3.4.1.8	Electro-Magnetic Compatibility (EMC) and Interference (EMI). The RFD system shall be protected against undesired signals or energy sources that can degrade or prohibit its operation. a) The RFD Tx (including the Extended distance transmitter antenna if provided) shall meet the requirements of RE102 IAW MIL-STD-461E, or other equivalent international standard. b) The RFD Tx (including the Extended distance transmitter antenna if provided) shall meet the requirements of RS103 IAW MIL-STD-461E, or other equivalent international standard, for Army Ground levels from 2 MHz to 18 GHz.	TR			
M4	Annex A – Para 3.4.1.9	Electrostatic Discharge (ESD): The RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components) shall meet the following standard: a) MIL-STD-331C Department of Defense Test Method Standard: Fuze and Fuze Components, Environmental and Performance Tests for – Test F1.1 Personnel-borne, or b) IEC 61000-4-2 International Standard: Electromagnetic Compatibility (EMC) – Part 4-2: - Testing and Measurement Techniques – Electrostatic Discharge Immunity Test – Air Discharge Test Level 4, or other equivalent international standard.	TR			

Serial	Key Requirement Criteria with References	Requirement Description	Compliance Documentation Required DR - Draft CS - Compliance Statement TR – Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M5	Annex A – Para 3.4.1.10	*RFD system Operating Frequencies:* the RFD system operating frequencies shall be in the 225-400 MHz VHF/UHF band (Military Band).	CS			
M6	Annex A – Para 3.4.1.11	*RF Safety.* The RFD system shall meet requirements of DND/CF RF Safety Program IAW DAOD 3026-0, DAOD 3026-1 and CFTO C-55-040-001TS-002, and it shall be in compliance with the requirements of Health Canada's Safety Code 6: Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz.	CS			
M7	Annex A – Para 3.4.1.12	The Contractor shall prepare and provide all required information for the Application for Spectrum Supportability IAW CDRL RFD-SE -101 at Appendix 3 and its associated DID RFD-SE -101 at Appendix 2 to this ANNEX A and ANNEX D. Information within the Application for Spectrum Supportability will be used to verify compliancy of Annex A SOW para. 3.4.1.12.	DR			

Serial	Key Requirement Criteria with References	Requirement Description	Compliance Documentation Required DR - Draft CS - Compliance Statement TR – Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M8	Annex A – Para 3.5.3.2	*Vibration.* The vibrations induced by transportation over rough roads and terrain shall not cause the RFD system to malfunction or degrade its performance, and they shall not shorten its operational life. The RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard carry case) shall meet requirements: a) AECTP 400 Method 401 Procedure 3 and Method 406 Procedure 1, or b) DEF STAN 00-35 Test M1 – General Purpose Vibration Test, or other equivalent international standard.	TR			

Serial	Key Requirement Criteria with References	Requirement Description	Compliance Documentation Required DR - Draft CS - Compliance Statement TR – Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M9	Annex A – Para 3.5.3.3	*Handling/Drop.* The shock induced by handling or an accidental drop during transit shall not cause the RFD system to malfunction or cause degradation of performance, and it shall not shorten its operational life. Therefore the RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard Carry Case) shall meet requirements: a) AECTP 400 Method 414 Procedure 1, drop height 122cm, 26 drops total, one on each face, edge, and corner, or b) DEF STAN 00-35 Test M5 – Impact (Vertical and Horizontal) Test, fall height of at least 1.25m, or other equivalent international standard.	TR			
M10	Annex A – Para 3.5.3.4	*Immersion.* RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard Carry Case) shall meet requirements: a) IEC 60529 Ingress Protection Code IP67, or b) DEF STAN 00-35 Test CL29 – Immersion, depth of complete immersion of at least 1m, or other equivalent international standard.	TR			

Serial	Key Requirement Criteria with References	Requirement Description	Compliance Documentation Required DR - Draft CS - Compliance Statement TR – Test Report	Bidder's Response/References	Compliance (This column is for the Evaluation Team only)	
					"C"	"NC"
M11	Annex A – Para 3.6.1	The RFD system shall operate in temperatures ranging from -10°C to +49°C without degradation, and the RFD system (RFD Tx (including the Extended distance transmitter antenna if provided) and RFD Rx components, not within the hard Carry Case) shall have been tested for low and high temperature operation IAW: a) Low Temperature Operation Testing: i) AECTP 300 Method 303 Procedure 2, Operational Test, or ii) DEF STAN 00-35 Test CL5 – Low Temperature Test, or other equivalent international standard. b) High Temperature Operation Testing: i) AECTP 300 Method 302 Procedure 2, High Temperature Operation, or ii) DEF STAN 00-35 Test CL6 – High Temperature, Humidity and Solar Heating Diurnal Cycle Test, or other equivalent international standard.	TR(s)			

Appendix 2 – Evaluation Trials – Mandatory Criteria Testing Methodology

Serial	Key Requirement Criteria with References	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T1	Annex A – Para 3.3.1	**Weight** The RFD transmitter (Tx), excluding batteries, shall not exceed one (1) kg. The RFD receiver (Rx), (both firing cable or shock tube type) excluding batteries, shall not exceed three-hundred and fifty (350) grams.	Equipment Requirements: One (1) RFD Transmitter (Tx) less batteries; One (1) RFD Receiver (Rx) for shock tube less batteries; calibrated scale. Concept of Test: 1. Evaluator will weigh RFD Transmitter (Tx) and RFD Receiver (Rx) to confirm requirement. 2. Compliance achieved if RFD Tx weighs less than one (1) kg, and RFD Rx weighs less than three-hundred and fifty (350) grams.		
T2	Annex A – Para 3.3.2	**Dimensions** One (1) RFD Tx shall fit in the Canadian Army load carrying (tactical) vest utility pouch measuring 14cm (width) x 7 (depth) cm x 17 (height) cm. All five (5) RFD Rx (Four (4) RFD Rx to fire Electro-explosive Devices (EED) and one (1) RF Rx to fire explosive charges via shock tube) shall fit in the Canadian Army Tactical Day Pack external pouch measuring 18cm (width) x 10cm (depth) cm x 22cm (height).	Equipment Requirements: One (1) RFD Transmitter (Tx); all five (5) RFD Receivers (Rx) for EED and shock tube; one Canadian Army load carrying vest; one Canadian Army Tactical Day Pack external pouch. Concept of test: 1. Evaluator will attempt to insert the RFD Tx into the load carrying vest pouch. 2. Evaluator will attempt to insert all five RFD Rx' into tactical day pack external pouch. 3. Compliance achieved if RFD Tx and all five RFD Rx can fit within their pouches without greatly deforming or protruding from the pouch e.g. they must fit loosely to confirm requirement.		

Serial	Key Requirement Criteria with References	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T3	Annex A – Para 3.4.1.2	**Coding/Decoding** The RFD system shall include secure coding/decoding to limit electronic interference (or prevent unintentional (by friendly) or rogue firing (by un-friendly) by other radio systems.	Equipment Requirements: Two (2) RFD Transmitters (Tx); Four (4) Receivers (Rx) for Electro-explosive Device (EED) initiation (specifically two (2) RFD Rx for each RFD Tx); Firing indicator such as 'squib' or special LED firing indicator; RF recording instruments. Concept of Test: 1. All four (4) RFD Rx will be set-up with firing indicator attached. 2. The first RFD Tx will be used to initiate its matched RFD Rx, observing if the non-matched RFD Rx also initiate. 3. Test is repeated for second RFD Tx. 4. Compliance achieved if each RFD Tx is only able to initiate its two (2) matched RFD Rx, and NOT the other non-matched Rx. Note: This test may be assisted with the use of an RF vector signal analyzer to record and analyze the transmitted digital bit stream.		

Serial	Key Requirement Criteria with References	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T4	Annex A – Para 3.4.1.3 and 3.4.1.4	**Firing Circuit Continuity** The RFD Rx for EED shall include firing circuit continuity test function. **Safety Features** The RFD system shall include the following safety features: a) A positive confirmation of transmitter activation (Power on-off)l; b) Two (2) separate and distinct actions to fire the system; c) Auto De-arming. In the event that no command to fire the RFD Rx is sent after arming the system, the RFD Rx shall auto-disarm within sixty (60) seconds to inhibit firing, and d) Safety Delay. RFD Rx shall include a safety delay of at least sixty (60) seconds, to allow the user time to leave the danger area after explosive preparation, before the RFD Rx can be armed.	Equipment Requirements: One (1) RFD Transmitter (Tx); One (1) RFD Receiver (Rx) for Electro-explosive Device (EED); Firing cable and Firing indicator such as 'squib' or LED indicator; Stopwatch. Concept of Test: 1. This test may be performed in conjunction with test T3 above. 2. Evaluator will confirm circuit continuity using RFD Rx connected to spool of firing cable and indicator. 3. Evaluator will operate RFD Tx and RFD Rx, to confirm positive confirmation of transmitter activation, receiver safety delay, and time-delayed de-arming period (auto-disarm) occurs. 4. Evaluator will operate RFD Tx and RFD Rx, to confirm two (2) separate and distinct actions to fire the system. 5. Compliance achieved if: a. RFD Rx (EED) includes firing circuit continuity test function. b. RFD Tx includes positive confirmation of transmitter activation. c. RFD Rx demonstrates safety delay of at least sixty (60) seconds. d. RFD Rx auto-disarm occurs within sixty (60) seconds. e. RFD Tx includes two (2) separate and distinct actions to arm and fire the system.		

Serial	Key Requirement Criteria with References	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T5	Annex A – Para 3.4.1.6.	**RFD Rx Fire Output Energy** The RFD Rx fire output energy for EED initiation, using fully charged batteries, shall be sufficient to: a) Fire two (2) US M6 electric detonators attached in series to the RFD Rx through the standard twelve (12) foot length leg wires of the detonators (+/- one (1) foot) and the provided spool of firing cable (25m+/-0.5m), requiring an electric DC current of at least 0.45A for at least 50 milliseconds, as per MIL-DTL-45468F. The RFD Rx fire output energy for explosive charges initiation through shock tube, using fully charged batteries, shall be sufficient to initiate standard size (3 mm) shock tube and mini-shock tube (2mm).	Equipment Requirements: One (1) RFD Transmitter (Tx); One (1) RFD Receiver (Rx) for Electro-explosive Device (EED); One (1) RFD Receiver (Rx) for shock tube initiation; M6 detonators; Firing cable spool; Shock tube – either standard size 3mm or mini-shock tube 2mm; Firing indicator such as 'squib' or LED indicator; Concept of Test: 1. Bench Test: Evaluator will set up RFD Tx and RFD Rx EED type, and measure as per the requirement description, that the recommended firing stimulus (0.45A for 50ms) is produced to initiate the two (2) M6 electric detonators. 2. Field Test: Evaluator will set up RFD Tx and RFD Rx EED and RFD Rx Shock Tube type as per the requirement description, and initiate the two (2) M6 electric detonators and either standard size (3 mm) shock tube or mini-shock tube (2mm). 3. Compliance achieved if: a. By measurement, able to generate at least the recommended stimulus energy (0.45A for 50ms) to simultaneously fire two (2) US M6 electric detonators attached through leg wires and spool of firing cable, and **by observation** is able to initiate the actual M6 detonators. b. By observation able to initiate the shock tube.		

Serial	Key Requirement Criteria with References	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T6	Annex A – Para 3.4.1.8	**Electro-Magnetic Compatibility (EMC) and Interference (EMI).** The RFD system shall be protected against undesired signals or energy sources that can degrade or prohibit its operation. a) The RFD Tx (including the Extended distance transmitter antenna if provided) shall meet the requirements of RE102 IAW MIL-STD-461E, or other equivalent international standard. b) The RFD Tx (including the Extended distance transmitter antenna if provided) shall meet the requirements of RS103 IAW MIL-STD-461E, or other equivalent international standard, for Army Ground levels from 2 MHz to 18 GHz.	Equipment Requirements: One (1) RFD system; Firing indicator such as 'squib' or LED indicator; All necessary instrumentation to perform testing. Concept of Test: 1. Evaluator will setup RFD Tx and RFD Rx EED type, attached with the firing indictor, and prepare system for initiation. 2. Before user initiation, Evaluator will perform MIL-STD-461E RS103 testing, for Army Ground levels from 2 MHz to 18 GHz, and monitor if testing causes RFD Rx to initiate (either due to malfunction of RFD Tx or due to RS103 testing itself). 3. Once RS103 testing is complete, Evaluator will verify that RFD Tx and Rx are still operational and RFD Tx will correctly initiate the RFD Rx. 4. Compliance achieved if RFD Tx and Rx both remain operational after RS103 testing, and RFD Rx does not initiate firing indicator due to RFD Tx malfunction or RS103 testing itself.		

Serial	Key Requirement Criteria with References	Requirement Description	Evaluation Trial Method/Plan	Compliance (This column is for the Evaluation Team only)	
				"C"	"NC"
T7	Annex A – Para 3.5.2.1	**Operational Range** Dismounted. The dismounted operational range of the RFD system (not using the Extended distance transmitter antenna if provided) shall be minimum four-hundred (400) metres line-of-sight (LOS). Demolition. The demolition operational range of the RFD system, using the Extended distance transmitter antenna (if required), shall be a minimum of one (1) km LOS.	Equipment Requirements: One (1) RFD system; Extended distance transmitter antenna (if required); 1km open line-of-sight space; Firing indicators such as 'squib' or LED indicator. Concept of Test: 1. Evaluator will place at ground level, one RFD Rx at 400m and one at 1km, from the RFD Tx in line-of-sight and prepare system for initiation using firing indicators. 2. RFD Tx will be operated to fire the RFD Rx at 400m, then along with the Extended distance transmitter antenna if required, operated to fire the RFD Rx at 1km. 3. Compliance achieved if firing indicator demonstrates that initiation occurred on both RFD Rx.		

ANNEX/ANNEXE D
TO/À: W8476-145106
DATED/DATÉ: 21 Oct 2014 / 21 Oct 2014

Application for Spectrum Supportability
Demande d'Octroi de Fréquences

Application for Spectrum Supportability Demande d'octroi de Fréquences	Date	Page
To: À:	From (Office making request): De (Bureau qui présente la demande):	

1. Equipment nomenclature and/or model number
   Désignation du matériel et numéro de modèle

2. Status of supportability request (check one)
   Centre de demande d'octroi (cochez une seule case)

☐	Experimental research or exploratory development Recherche expérimentale ou développement préliminaire	☐	Advanced or engineering development Développement avancé ou ingénierie	☒	Operational Utilisation opérationnelle

1. Equipment Usage – Utilisation du matériel

3. Functional and purpose: HAND-HELD, BATTERY OPERATED, REMOTE FIRING DEVICE (RFD) PURPOSELY DESIGNED TO INITIATE ELECTRO-EXPLOSIVE DEVICES (EED) AND SHOCK TUBES (ST) AT SHORT RANGE (400 METERS LINE-OF-SIGHT) AND ALSO AT A LONGER RANGE (1000 METERS LINE-OF-SIGHT) FOR DEMOLITION TASKS. THE SYSTEM IS COMPOSED OF A RADIO TRANSMITTER (TX) AND PAIRED (MATCHED) RE-USABLE/DISPOSABLE RECEIVERS (RXs) OPERATING IN THE VHF/UHF BAND.

Fonction et but: DISPOSITIF DE MISE À FEU À DISTANCE, PORTATIF, FONCTIONNANT À PILES, CONCU EXPRÉSSEMENT POUR DÉCLENCHER DES ENGINS ELECTRO-EXPLOSIF (EED) ET TUBES À CHOCS (ST) À COURTE DISTANCE (400 MÈTRES EN LIGNE DE VISÉE) ET AUSSI À PLUS GRANDE DISTANCE (1000 MÈTRES EN LIGNE DE VISÉE) POUR DES TÂCHES DE DÉMOLITION. LE SYSTÈME EST COMPOSÉ D'UN TRANSMETTEUR RADIO (TX) ET DES RÉCEPTEURS (RXs) JUMELÉS RÉUTILISABLES/JETABLES OPÉRANTS EN BANDES VHF/UHF.

4. Method of operation: THE TX IS USED TO REMOTELY CONTROL PAIRED RX (INDIVIDUALLY OR IN GROUP), TO WHICH ARE CONNECTED AN ELECTRIC DETONATOR OR A SHOCK TUBE TO INITIATE EED AND DEMOLITION CHARGES.

Mode de fonctionnement: LE TX EST UTILISÉ POUR CONTRÔLER À DISTANCE UN RX JUMELÉ (INDIVIDUELLEMENT OU EN GROUPE) AUQUEL SONT CONNECTÉS UN DÉTONATEUR ÉLECTRIQUE OU UN TUBE À CHOCS POUR DÉCLENCHER DES EED ET DES CHARGED À DÉMOLITION.

5. Extent of use: INTERMITENT USE. COULD BE OPERATED ONCE OR SEVERAL TIMES ON A 24/7 BASIS. MOST USE IS EXPECTED DURING TRAINING. THE RFD WILL BE OPERATED BY TRAINED EOD TECHNICIANS IN THE CONDUCT OF EXPLOSIVE ORDNANCE DISPOSAL AND IMPROVISED EXPLOSIVE DEVICE DISPOSAL TASKS IN PEACE TIME, IN COMBAT, AND IN TRAINING.

Étendue de l'utilisation : UTILISATION INTERMITTENTE. POURRAIT-ÊTRE OPÉRÉ UNE OU PLUSIEURS FOIS SUR UNE BASE 24/7. L'USAGE ANTICIPÉ LE PLUS FRÉQUENT SERA DURANT LA FORMATION. LE RFD SERA OPÉRÉ PAR DES TECHNICIENS EOD QUALIFIÉS POUR LA NEUTRALISATION DE MUNITIONS EXPLOSIVES ET D'ENGIN EXPLOSIF ARTISANALE EN TEMPS DE PAIX, EN COMBAT, ET EN FORMATION.

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6. Operational environment GENERALLY LAND ENVIRONMENTS, BUT THE SYSTEM WILL BE OPERATED NEAR BOATS OR SHIPS, IN OR OUT OF HARBOURS. IT WILL BE OPERATED WHILE MOUNTED OR DISMOUNTED IN URBAN AREAS AND DURING FIELD OPERATIONS IN THE PROXIMITY OF ROUTE CLEARANCE MACHINERY, EOD SUPPORT VEHICLES AND EOD ROBOTS. IT MAY BE OPERATED UNDER FRIENDLY ECM COVER AND WITH RADIO COMMUNICATIONS IN PROGRESS IN THE BACKGROUND. THE RFD WILL BE USED DAY OR NIGHT, ANY DAYS OF THE YEAR, IN PEACE TIME AND IN ANY THEATRE OF OPERATIONS IN CANADA OR ABROAD.

Milieu d'utilisation: GÉNÉRALEMENT EN ENVIRONNEMENT TERRESTRE, MAIS LE SYSTÈME SERA OPÉRÉ PRÈS DE BATEAUX OU VAISSEAUX, DANS OU EN DEHORS DES PORTS. IL SERA OPÉRÉ QUAND EMBARQUÉ OU DÉBARQUÉ EN ZONE URBAINE ET PENDANT DES OPÉRATIONS EN CAMPAGNE EN PROXIMITÉ DE MACHINERIE DE DÉGAGEMENT D'ITINÉRAIRE, VÉHICULES DE SUPPORT EOD, ET ROBOTS EOD. IL POURRAIT ÊTRE OPÉRÉ SOUS LA COUVERTURE AMI DE CME ET AVEC DES COMMUNICATIONS RADIOS ACTIVES EN ARRIÈRE-PLAN. LE RFD SERA UTILISÉ TANT LA NUIT QUE LE JOUR, N'IMPORTE QUEL JOURS DE L'ANNÉE, EN TEMPS DE PAIX, ET N'IMPORTE QUEL THÉÂTRE D'OPÉRATION AU CANADA OU À L'ÉTRANGER.

7. Geographical area of experimental research, or developmental evaluation: NOT APPLICABLE: NO RESEARCH OR DEVELOPMENT INVOLVED.

Région géographique de la recherche expérimentale ou de l'évaluation du développement : NE S'APPLIQUE PAS : AUCUNE RECHERCHE OU DÉVELOPEMENT IMPLIQUÉ.

8. Geographical area of operational use: WORLDWIDE

Région géographique de l'utilisation opérationnelle : PARTOUT DANS LE MONDE

9 Number of equipments in initial phase: NOT APPLICABLE: THERE IS NO EXPERIMENTAL OR DEVELOPMENTAL PHASE.

Nombre d'appareils pendant la phase initiale: NE S'APPLIQUE PAS : IL N'Y A PAS DE PHASE EXPÉRIMENTAL OU DÉVELOPEMENT.

10. Number of equipments planned for operational use: 42 SYSTEMS (AS PER ANNEX A ARTICLE 3.1.2). A SYSTEM IS COMPRISED OF ONE TRANSMITTER WITH FOUR PAIRED RECEIVERS FOR EED; ONE PAIRED RECEIVER FOR SHOCK TUBE.

Nombre d'appareils prévu pour l'utilisation opérationnelle : 42 SYSTÈMES (D'APRÈS L'ARTICLE 3.1.2 DE L'ANNEXE A). UN SYSTÈME COMPRENDS UN TRANSMETTEUR AVEC QUATRE RÉCEPTEURS JUMELÉ POUR L'EED; UN RÉCEPTEUR JUMELÉ POUR TUBES À CHOCS.

11. Number of these equipments operating simultaneously in the same electromagnetic environment: SHOULD NOT NORMALLY EXCEED 4 SYSTEMS IN MOST OPERATIONAL OR TRAINING SCENARIOS.

Nombre d'appareils fonctionnant simultanément dans le même milieu électromagnétique : NE DEVRAIT PAS NORMALEMENT EXCÉDER 4 SYSTÈMES DANS LA PLUPART DE SCÉNARIOS OPÉRATIONNEL OU DE FORMATION.

12. Target date for the start and end of experimental or developmental evaluation: N/A

Date prévue pour le commencement et la fin de l'évaluation expérimentale ou de l'évaluation ou développement : N/A

13. Target date for operational use: SUMMER/FALL 2014

Date prévue d'utilisation opérationnelle : ÉTÉ/AUTOMNE 2014

14. Previous DND 552 application number (for DIMTPS 5 use only)
Numéro d'application de l'ancien formulaire MDN 552 (pour utilisation de DTPSGI 5 seulement)

☐ Continued unchanged (see remarks) / Reste en vigueur (voir les remarques)
☐ Superseded / Est remplacé
☐ Related / Demeure connexe
☐ None / Aucun

DND 552_____ CCEB CF 299_____

DND 552 (4-89)

ANNEX/ANNEXE D
TO/À: W8476-145106
DATED/DATÉ: 21 Oct 2014 / 21 Oct 2014

2. Transmitter Equipment Characteristics - Caractéristiques du matériel émetteur

1. Nomenclature, Manufacturer's Model No.:
Désignation, n° de modèle du fabricant:

2. Manufacturer's Name:
Nom du fabricant:

3. Transmitter Installation:
Installation émettrice:

4. Transmitter Type:
Type d'émetteur:

5. Tuning Range:
Gamme d'accord:

6. Method of Tuning:
Méthode d'accord:

7. RF Channelling Capability:
Répartition des voles RF:

8. Emission Designator(s):
Identificateur(s) d'émission:

9. Frequency Tolerance:
Tolérance de fréquence:

10. Filter Employed — Yes ☐ No ☐
Filtre utilisé: Oui Non

11. Spread Spectrum: — Yes ☐ No ☐
Spectre étalé: Oui Non

12. Emission Bandwidth
Largeur de bande de l'émission:
☐ Calculated / Calculée ☐ Measured / Mesurée

(a) –3 dB _____
(b) –20 dB _____
(c) –40 dB _____
(d) –60 dB _____
(e) OCCBW _____
Largeur de bande occupée

13. Maximum Bit Rate:
Débit binaire maximal:

14. Modulation Techniques and Coding:
Techniques de modulation et de codage:

15. Maximum Modulation Frequency:
Fréquence de modulation et de codage:

16. Pre-emphasis: — Yes ☐ No ☐
Préaccentuation: Oui Non

17. Deviation Ratio:
Rapport de déviation:

18. Pulse Characteristics:
Caractéristiques des impulsions:
(a) Rate – Fréq. de récurrence _____
(b) Width – Durée _____
(c) Rise Time – Temps de montée _____
(d) Fall Time – Temps de descente _____
(e) Comp Ratio – Rapport de comp. _____
Largeur de bande occupée

19. Power – Puissance:
(a) Mean – Moyenne _____
(b) PEP – En crête _____

20. Output Device:
Dispositif de sortie:

21. Harmonic Level:
Niveau des harmoniques:
(a) 2nd – 2e _____
(b) 3rd – 3e _____
(c) Other – Autres _____

22. Spurious Level:
Niveau du rayonnement non essentiel:

23. Industry Canada Type Approval No.:
N° d'homologation de l'industrie Canada:

24. Remarks:
Remarques:

ANNEX/ANNEXE D
TO/À: W8476-145106
DATED/DATÉ: 21 Oct 2014 / 21 Oct 2014

3. Receiver Equipment Characteristics – Caractéristiques du matériel récepteur

1. Nomenclature, Manufacturer's Model No.:
Désignation, n° de modèle du fabricant:

2. Manufacturer's Name:
Nom du fabricant:

3. Receiver Installation:
Installation réceptrice:

4. Receiver Type:
Type de récepteur:

5. Tuning Range:
Gamme d'accord:

6. Method of Tuning:
Méthode d'accord:

7. RF Channelling Capability:
Répartition des voles RF:

8. Emission Designator(s):
Identificateur(s) d'émission:

9. Frequency Tolerance:
Tolérance de fréquence:

10. IF Selectivity: 1st (1ére) 2nd (2e) 3rd (3e)
Sélectivité FI:
(a) –3 dB _____
(b) –20 dB _____
(c) –60 dB _____

12. RF Selectivity:
Sélectivité RF:
Calculated ☐ Calculée Measured ☐ Mesurée
(a) –3 dB _____
(b) –20 dB _____
(c) –40 dB _____

12. IF Frequency:
Fréquence intermédiaire:
(a) 1st – 1ére _____
(b) 2nd – 2e _____
(c) 3rd – 3e _____

13. DIMTPS 5 use only:
Réservé au DTPSGI 5:

14. DIMTPS 5 use only:
Réservé au DTPSGI 5:

15. Oscillator Tuned: 1st (1ére) 2nd (2e) 3rd (3e)
Oscillateur accordé:
(a) Above Tuned Frequency / Au-dessus de la fréq. d'accord ☐ ☐ ☐
(b) Below Tuned Frequency / Au-dessous de la fréq. d'accord ☐ ☐ ☐
(c) Either Above or Below the Frequency / Ou au-dessus ou au-dessous de la fréq. ☐ ☐ ☐

16. Maximum Bit Rate:
Débit binaire maximal:

17. Sensitivity:
Sensibilité:
(a) Sensitivity – Sensibilité _____ dBm
(b) Criteria – Critère _____
(c) Noise Fig – Facteur de bruit dB
(d) Noise Temp – Temp. de bruit _____ Kelvin

18. De-emphasis: Yes Oui ☐ No Non ☐
Désaccentuation:

19. Image Rejection:
Rejet de fréquence image:

20. Spurious Rejection:
Rejet des fréquences parasites:

21. Remarks:
Remarques:

22. Industry Canada Type Approval No.:
N° d'homologation de l'industrie Canada:

ANNEX/ANNEXE D
TO/À: W8476-145106
DATED/DATÉ: 21 Oct 2014 / 21 Oct 2014

4. Antenna Equipment Characteristics – Caractéristiques du matériel d'antenne

1. Transmitting / Émission ☐ Receiving / Réception ☐ Transmitting and Receiving / Émission et réception ☐

2. Nomenclature, Manufacturer's Model No.:
Désignation, n° de modèle du fabricant:

3. Manufacturer's Name:
Nom du fabricant:

4. Frequency Range:
Gamme de fréquences:

5. Type:

6. Polarization – Polarisation:

7. Scan Characteristics:
Caractéristiques de balayage:
(a) Type_____
(b) Vertical Scan:
Balayage vertical:_____
(1) Max Elev
Angle de site max._____
(2) Min Elev
Angle de site min._____
(3) Scan Rate
Vitesse de balayage_____
(c) Horizontal Scan:
Balayage horizontal:_____
(1) Sector Scanned
Secteur balayé_____
(2) Scan Rate
Vitesse de balayage_____
(d) Sector Blanking / Effacement de secteur Yes / Oui ☐ No / Non ☐

8. Gain:
(a) Main Beam
Faisceau principal_____
(b) 1st Major Side Lobe
1er lobe latéral important_____

9. Beamwidth :
Largeur du faisceau:
(a) Horizontal_____
(b) Vertical_____

10. Remarks:
Remarques:

Originator: Rédacteur:	Position:	Telephone Number: Numéro de téléphone:	Date:

INSTRUCTIONS FOR COMPLETING DND FORM 552

ANNEX C

1. **Classification.** Enter classification and downgrading stamp. Indicate by check mark whether for Experimental Research or Exploratory Development, Advanced or Engineering Development, or Operational Utilization. The classification of the title should be appropriately indicated (e.g. (U), (C) or (S)). Classified information contained in the completed form should be indicated:

a) as a general statement in a Remarks block, such as, “The purpose, functions, operational use, frequency band, emission bandwidths, and power are classified X”;

b) by an enumeration of the applicable paragraphs and subparagraphs with their classifications; or

c) the classification may be marked alongside each entry on the form.

PART 1: EQUIPMENT USAGE

Part 1, Block 1: Nomenclature and Model Number

2. Provide nomenclature and equipment type (e.g. AN/FPS-16 Instrumentation Radar).

Part 1, Block 2: Status of Supportability Request

3. The supportability request will be for one of these purposes:

a. Experimental research or exploratory development:

(1) To test the feasibility of new techniques or concepts of natural phenomena and environment, and efforts towards solution of problems in the

INSTRUCTIONS POUR REMPLIR LE FORMULAIRE DND 552

ANNEXE C

1. **Classification.** Entrer la classification et le déclassement. Indiquer par un crochet s’il s’agit d’une recherche expérimentale ou d’un développement préliminaire, d’un développement avancé ou d’ingénierie ou d’une utilisation opérationnelle. La classification du titre doit être indiquée convenablement (par exemple, (U), (C) ou (S)). L’information classifiée du formulaire rempli doit être signalée :

a) en tant qu’énoncé général dans le bloc Remarques tel que : « L’objet, les fonctions, l’utilisation opérationnelle, la bande de fréquences, les largeurs de bandes d’émission et la puissance sont classifiés X »;

b) par une énumération des paragraphes et des sous-paragraphes applicables accompagnés de leur classification; ou

c) la classification peut être indiquée à côté de chaque entrée du formulaire.

PARTIE 1 : UTILISATION DE L’ÉQUIPEMENT

Partie 1, Bloc 1 : Désignation et numéro de modèle

2. Inscrire la nomenclature et le type d’équipement (par exemple, radar d’instrumentation AN/FPS-16).

Partie 1, Bloc 2 : Statut de la demande de soutenabilité

3. La demande de soutenabilité de fréquences est faite pour l’un de ces buts :

a. Recherche expérimentale ou développement préliminaire :

(1) Pour vérifier la faisabilité de techniques ou de concepts nouveaux des phénomènes ou de l’environnement naturel et pour consacrer des efforts

physical, behavioural and social sciences that have no direct military application; and

(2) To test the feasibility of adapting conventional techniques to new purposes prior to projection into development planning. Includes all effort directed toward solution of specific military problems, short of major development projects.

b. Advanced or engineering development:

(1) to develop equipment which have moved into the development of hardware for experimental or operational test;

(2) to modify existing operational equipment for improved performance;

(3) to develop programs being engineered for service use, but have not yet been approved for production and service deployment; and

(4) to continue development of equipment/systems that have been approved for production and service use.

c. To operate and test equipment which have passed the development phase and are planned for operational use for:

(1) tactical and training purposes; or

(2) non-tactical purposes, such as for test range instrumentation.

Part 1, Block 3: Function and Purpose

4. Describe as specifically as possible the function and purpose to be performed. For example: guided missile control radar; troposcatter communications equipment; provides acquisition and tracking information; short range communications; telemetering for quality control.

en vue de trouver une solution à des problèmes liés aux sciences physiques, comportementales et sociales qui n'ont aucune application militaire directe; et

(2) Pour vérifier la faisabilité de l'adaptation de techniques conventionnelles aux nouveaux objectifs avant la projection dans la planification de développement. Cette démarche comprend tous les efforts consacrés à trouver la solution de problèmes militaires spécifiques, à l'exception des projets majeurs de développement.

b. Développement avancé ou d'ingénierie :

(1) pour développer de l'équipement qui s'est introduit dans le développement du matériel pour les essais expérimentaux ou opérationnels;

(2) pour modifier l'équipement opérationnel existant afin d'améliorer la performance;

(3) pour développer des programmes préparés pour l'usage militaire mais qui n'ont pas encore été approuvés pour la production et le déploiement militaire; et

(4) pour continuer le développement de systèmes et d'équipement qui ont été approuvés pour la production et l'usage militaire.

c. Pour exploiter et vérifier l'équipement qui a passé la phase du développement et dont l'utilisation opérationnelle est prévue pour :

(1) fins tactiques et de formation; ou

(2) fins non tactiques telle que l'instrumentation d'un champ de tir d'essai.

Partie 1, Bloc 3 : Fonction et but

4. Décrire aussi précisément que possible la fonction à exécuter et le but à atteindre. Par exemple : radar de contrôle de missile guidé; équipement de communication de diffusion troposphérique; fournit de l'information d'acquisition et de poursuite; communications à courte portée; télémétrie pour le contrôle de la qualité.

Part 1, Block 4: Method of Operation

5. Describe the method of operation. For example: radar activates beacon transponder in missile with coded pulses; beacon provides missile track; radar also transmits coded pulse command signals to missile beacon receiver for guidance.

Part 1, Block 5: Extent of Use

6. Describe operational extent of usage. For example: continuous or intermittent; expected duty cycle during mission; expected number of hours of operation per day or other appropriate time period. Indicate any conditions governing intermittent use. If appropriate, describe mission phase during which system operates.

Part 1, Block 6: Operational Environment

7. Give brief description of ultimate operational environment. For example: amphibious landing operations; defence of strategic target area; sea areas; field army. Provide any additional environmental factors pertinent to a meaningful assessment of electromagnetic compatibility, such as specific vehicle/platform types, expected mobility or other factors affecting the environment variability.

Part 1, Block 7: Geographical Area of Experimental Research or Developmental Evaluation

8. State the geographical area used for the experimental research or development.

Part 1, Block 8: Geographical Area of Operational Use

9. State the geographical area for potential use. Provide latitude and longitude of centre of operational area and radius of operation in kilometres.

Partie 1, Bloc 4 : Mode de fonctionnement

5. Décrire le mode de fonctionnement. Par exemple : le radar actionne le transpondeur de la radiobalise dans le missile par des impulsions codées; la radiobalise détermine la piste de poursuite du missile; les radars transmettent aussi des signaux de commande codés au récepteur de la radiobalise du missile pour le guidage.

Partie 1, Bloc 5 : Étendue de l'utilisation

6. Décrire l'étendue opérationnelle de l'utilisation. Par exemple : continue ou intermittente; facteur d'utilisation prévu au cours de la mission; nombre d'heures d'exploitation prévues par jour ou autre période appropriée. Indiquer toute condition gouvernant l'utilisation intermittente. Décrire au besoin la phase de la mission durant laquelle le système fonctionne.

Partie 1, Bloc 6 : Milieu opérationnel

7. Donner une brève description du milieu opérationnel ultime. Par exemple : opérations amphibies de débarquement; défense d'une zone cible stratégique; zones maritimes; armée de campagne. Fournir tous les facteurs environnementaux supplémentaires pertinents à l'évaluation significative de la compatibilité électromagnétique, tels que les types particuliers de véhicules ou de plates-formes, la mobilité prévue ou les autres facteurs ayant un effet sur la variabilité de l'environnement.

Partie 1, Bloc 7 : Région géographique de la recherche expérimentale ou de l'évaluation du développement

8. Indiquer la région géographique qui sert à la recherche expérimentale ou au développement.

Partie 1, Bloc 8 : Région géographique de l'utilisation opérationnelle

9. Indiquer la région géographique de l'utilisation potentielle. Donner la latitude et la longitude du centre de la zone opérationnelle et le rayon d'opération en kilomètres.

ANNEX/ANNEXE D
TO/À: W8476-145106
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Part 1, Block 9: Number of Equipment in Initial Phase

10. List number of equipment planned for experimental or developmental phase.

Partie 1, Bloc 9 : Nombre d'appareils pendant la phase initiale

10. Indiquer le nombre d'appareils prévus pour la phase expérimentale ou de développement.

Part 1, Block 10: Number of Equipment Planned for Operational Use

11. List number of equipment planned for operational use.

Part 1, Block 11: Number of These Equipment Operating Simultaneously in the Same Electromagnetic Environment

12. Indicate maximum number of these systems that will be operating simultaneously in the same environment. For example: three (3) missiles will be flown simultaneously in an operating area.

Part 1, Block 12: Target Date for the Start and End of Experimental or Developmental Evaluation

13. Indicate the dates on which it is expected that the experimental or developmental phase will start and finish.

Part 1, Block 13: Target Date for Operational Use

14. Indicate target date for operational use.

Part 1, Block 14: Previous DND 552 Application Number

15. For DIMTPS 5 use only.

PART 2: TRANSMITTER EQUIPMENT CHARACTERISTICS

Part 2, Block 1: Nomenclature, Manufacturer's Model No.

16. Enter the Government assigned alphanumeric equipment designation. If not available, enter the manufacturer's model number (e.g. MIT 502), and indicate Manufacturer's Name (Part 2, block 2). If this too is not available, enter a short descriptive title (e.g. ATS-6 Telemetry Transmitter).

Partie 1, Bloc 10 : Nombre d'appareils prévus pour l'utilisation opérationnelle

11. Indiquer le nombre d'appareils prévus pour l'utilisation opérationnelle.

Partie 1, Bloc 11 : Nombre d'appareils fonctionnant simultanément dans le même milieu électromagnétique

12. Indiquer le nombre maximal d'appareils fonctionnant simultanément dans le même environnement. Par exemple : trois (3) missiles voleront simultanément dans la zone opérationnelle.

Partie 1, Bloc 12 : Date prévue pour le commencement et la fin de l'évaluation expérimentale ou de l'évaluation du développement

13. Indiquer les dates auxquelles il est prévu que la phase expérimentale ou de développement débutera et se terminera.

Partie 1, Bloc 13 : Date prévue d'utilisation opérationnelle

14. Indiquer la date prévue pour l'utilisation opérationnelle.

Partie 1, Bloc 14 : Numéro de demande de l'ancien formulaire DND 552

15. À l'usage exclusif du DTPSGI 5.

PARTIE 2 : CARACTÉRISTIQUES DE L'ÉQUIPEMENT ÉMETTEUR

Partie 2, Bloc 1 : Désignation, n° de modèle du fabricant

16. Indiquer la désignation alphanumérique de l'équipement désigné par le gouvernement. S'il n'est pas disponible, indiquer le numéro du modèle du fabricant (par exemple, MIT 502) et indiquer le nom du fabricant (partie 2, bloc 2). Si ces renseignements ne sont également pas disponibles, indiquer un court titre descriptif (par exemple, émetteur de télémétrie ATS-6).

Part 2, Block 2: Manufacturer's Name

17. Enter the manufacturer's name, if available. If a manufacturer's model number is listed in Nomenclature (Part 2, block 1), this block must be completed.

Part 2, Block 3: Transmitter Installation

18. List specific types of vehicles, ships, planes or buildings, etc., where the transmitters will be installed.

Part 2, Block 4: Transmitter Type

19. Enter the generic name of the transmitter (e.g. Frequency Scan, Scan While Track Radar, Monopulse Tracker, AM or PM Communications). In addition, for radar enter the radar type (e.g. Non-FM Pulse, FM Pulse, Frequency Hopping, CW or FM-CW).

Part 2, Block 5: Tuning Range

20. Enter the frequency range through which the transmitter is capable of being tuned (e.g. 225 to 400 MHz). For equipment designed to operate only at a single frequency, enter that frequency. Include units (e.g. kHz, MHz or GHz).

Part 2, Block 6: Method of Tuning

21. Enter the method of tuning (e.g. crystal, synthesizer or cavity). If the equipment is not readily tuneable in the field, indicate in Remarks (Part 2, block 24) the complexity of tuning. Include complexity factors such as skill levels involved, major assemblies involved, time required, and location (factory or depot) where equipment is to be tuned.

Part 2, Block 7: RF Channelling Capability

22. Describe the RF channelling capability:

a. for uniformly spaced channels, enter the centre frequency of the first channel and channel spacing (e.g. first channel 406 MHz, 100 kHz increments);

Partie 2, Bloc 2 : Nom du fabricant

17. Indiquer le nom du fabricant s'il est disponible. Si le numéro du modèle du fabricant est indiqué à la partie 2, bloc 1, ce bloc doit être rempli.

Partie 2, Bloc 3 : Installation émettrice

18. Indiquer les types spécifiques de véhicules, de navires, d'aéronefs ou de bâtiments, etc., où les émetteurs seront installés.

Partie 2, Bloc 4 : Type d'émetteur

19. Indiquer le nom générique de l'émetteur (par exemple, balayage de fréquences, radar de poursuite sur informations discontinues, traqueur monopulse, communications AM ou PM). De plus, pour les radars, indiquer le type du radar (par exemple, à impulsions autres que FM, à impulsions FM, à sauts de fréquence, à ondes continues ou à FM-CW).

Partie 2, Bloc 5 : Gamme d'accord

20. Indiquer la gamme de fréquences sur laquelle l'émetteur peut être accordé (par exemple, de 225 à 400 MHz). Indiquer la fréquence dans le cas de l'équipement conçu pour fonctionner seulement à une seule fréquence. Indiquer les unités (par exemple, kHz, MHz ou GHz).

Partie 2, Bloc 6 : Méthode d'accord

21. Indiquer la méthode d'accord (par exemple, quartz, synthétiseur ou cavité). Si l'équipement ne peut être accordé facilement sur le terrain, indiquer dans le bloc Remarques (partie 2, bloc 24) la complexité de l'accord. Inclure les facteurs de complexité tels que les niveaux de compétence nécessaires, les ensembles principaux nécessaires, le temps nécessaire et l'emplacement (usine ou dépôt) où l'équipement doit être accordé.

Partie 2, Bloc 7 : Répartition des canaux RF

22. Décrire la répartition des canaux RF :

a. pour indiquer la fréquence centrale du premier canal et l'espacement des canaux (par exemple, premier canal à 406 MHz avec incréments de 100 kHz) dans le cas des canaux uniformément espacés;

b. for continuous tuning, enter the lowest frequency and the word “continuous”; and

c. for others, such as SSB or cases where channel selection is under software control, enter a detailed description in Remarks (Part 2 block 24, e.g. degraded channels, internal hardwiring limitations or lockout capability for frequency hopping systems).

Part 2, Block 8: Emission Designators

23. Enter the emission designators, including the necessary bandwidth, for each designator, in accordance with Appendix D3 (e.g. 16K0F3E). For systems with a frequency hopping mode as well as a non-hopping mode, enter the emission designators for each mode. Identify each mode as hopping or non-hopping.

Part 2, Block 9: Frequency Tolerance

24. Enter the frequency tolerance (i.e. the maximum departure of a transmitter from its assigned frequency after normal warm-up time). Indicate the units in parts per million (ppm) for all emission types except single sideband, which shall be indicated in Hertz (Hz).

Part 2, Block 10: Filter Employed

25. Check the appropriate box.

Part 2, Block 11: Spread Spectrum

26. Check the appropriate box. If “Yes”, refer to instructions for Modulation (Part 2, block 14).

Part 2, Block 12: Emission Bandwidth

27. Enter the emission bandwidths for which the transmitter is designed at the -3, -20 and -60 dB levels and the occupied bandwidth. For pulse radar transmitters the bandwidth at -40 dB shall also be entered. The emission bandwidth is defined as the bandwidth appearing at the antenna terminals and

b. pour indiquer la plus basse fréquence et le mot « continu » dans le cas de l’accord continu; et

c. pour les autres, tels que BLU ou les cas où la sélection du canal est commandée par logiciel, entrer une description détaillée (par exemple, canaux dégradés, limitations internes de câblage ou capacité de verrouillage pour les systèmes à sauts de fréquence) dans le bloc Remarques (partie 2, bloc 24).

Partie 2, Bloc 8 : Identificateur(s) d’émission

23. Indiquer le ou les identificateurs d’émission, y compris la largeur de bande nécessaire pour chaque identificateur conformément au contenu de l’appendice D3 (par exemple, 16K0F3E). Entrer les identificateurs d’émission de chaque mode dans le cas des systèmes avec un mode à sauts de fréquence ainsi que ceux avec un mode sans sauts de fréquence. Identifier chaque mode comme étant à sauts ou sans sauts.

Partie 2, Bloc 9 : Tolérance de fréquence

24. Indiquer la tolérance de fréquence (c’est-à-dire, l’écart maximal d’un émetteur de sa fréquence assignée après le temps de réchauffement normal). Indiquer les unités en parties par million (ppm) pour tous les types d’émissions sauf la bande latérale unique, qui doit être indiquée en hertz (Hz).

Partie 2, Bloc 10 : Filtre utilisé

25. Cocher la case appropriée.

Partie 2, Bloc 11 : Spectre étalé

26. Cocher la case appropriée. Se reporter aux instructions pour remplir le bloc Modulation (partie 2, bloc 14) si la case « Oui » est cochée.

Partie 2, Bloc 12 : Largeur de bande de l’émission

27. Indiquer les largeurs de bandes d’émissions pour lesquelles l’émetteur est conçu aux niveaux de -3, -20 et -60 dB et la largeur de bande occupée. Pour les émetteurs radars à impulsions, la largeur de bande de -40 dB doit aussi être indiquée. La largeur de bande d’émission est définie comme étant la

includes any significant attenuation contributed by filtering in the output circuit or transmission lines. Values of emission bandwidth specified should be indicated as calculated or measured, by checking the appropriate box. If calculated, the methods used shall be in accordance with Industry Canada TRC 43, which is available on the Internet. Indicate units used (e.g. Hz, kHz or MHz). Note that the occupied bandwidth (block 12[e]) is defined as the width of the

largeur de bande apparaissant aux bornes de l'antenne et comprend toute atténuation concrète contribuée par le filtrage des circuits de sortie ou des lignes de transmission. Les valeurs des largeurs de bandes d'émission spécifiées doivent être indiquées telles qu'elles sont calculées ou mesurées en cochant la case appropriée. Si les valeurs sont calculées, les méthodes utilisées doivent être conformes aux indications de la Circulaire de la

frequency bandwidth such that, below its lower and above its upper limits, the mean power radiated is each equal to 0.5% of the total mean power radiated.

réglementation des télécommunications 43 (CRT 43) d'Industrie Canada disponibles sur l'Internet. Indiquer les unités utilisées (par exemple, Hz, kHz ou MHz). Remarquer que la largeur de bande occupée (bloc 12[e]) est définie comme étant la largeur de la bande de fréquence telle que, sous sa limite inférieure et au-dessus de sa limite supérieure, la puissance moyenne rayonnée de chacune est égale à 0.5 % de la puissance moyenne rayonnée totale.

Part 2, Block 13: Maximum Bit Rate

28. Enter the maximum information bit rate for digital equipment, in bits per second (bps). If spread spectrum is used, enter the bit rate after encoding.

Partie 2, Bloc 13 : Débit binaire maximal

28. Indiquer le débit binaire maximal en bits par seconde (bps) pour l'équipement numérique. Indiquer le débit binaire après le codage si l'étalement du spectre est utilisé.

Part 2, Block 14: Modulation Techniques and Coding

29. Describe in detail the modulation and coding techniques employed. For complex modulation schemes, such as direct sequence spread spectrum, frequency hopping or frequency agile, provide information relating to the hop rate, processing gain, clock rate, pre-defined hop sets and frequencies, minimum required number of frequencies per hop set, notching capability, etc. If too lengthy, use Remarks (Part 2, block 24).

Partie 2, Bloc 14 : Techniques de modulation et de codage

29. Décrire en détail les techniques de modulation et de codage utilisées. Dans le cas des formules complexes de modulation, telles que l'étalement du spectre en ordre direct, à sauts de fréquence ou à agilité de fréquence, fournir de l'information se rapportant aux taux de sauts, aux gains de traitement, à la fréquence d'horloge, aux ensembles de sauts et de fréquences prédéfinis, au nombre minimal nécessaire de fréquences par ensemble de sauts, à la capacité d'absorption, etc. Utiliser le bloc Remarques (partie 2, bloc 24) si le contenu est trop long.

Part 2, Block 15: Maximum Modulation Frequency

30. Enter the maximum modulation or baseband frequency for a frequency or phase-modulated transmitter. This is assumed to be the frequency at the -3 dB point on the high frequency side of the modulator response curve. Indicate the units (e.g. Hz, kHz or MHz).

Partie 2, Bloc 15 : Fréquence maximale de modulation

30. Indiquer la fréquence maximale de modulation ou de bande de base pour un émetteur modulé en fréquence ou en phase. Il est tenu pour acquis qu'il s'agit de la fréquence au point de -3 dB du côté haute fréquence de la courbe de réponse du modulateur. Indiquer les unités (par exemple, Hz, kHz ou MHz).

Part 2, Block 16: Pre-emphasis

31. For frequency or phase-modulated transmitters, check the appropriate box to indicate whether pre-emphasis is available.

Partie 2, Bloc 16 : Préaccentuation

31. Cocher la case appropriée pour indiquer si la préaccentuation est disponible dans le cas des émetteurs modulés en fréquence ou en phase.

Part 2, Block 17: Deviation Ratio

32. For frequency or phase modulated transmitters, enter the deviation ratio, computed as follows:

$$\text{Deviation Ratio} = \frac{\text{Maximum Frequency Deviation}}{\text{Maximum Modulation Frequency}}$$

Part 2, Block 18: Pulse Characteristics

33. For pulse modulated transmitters:

a. enter the pulse repetition rate, in pulses per second (pps);

b. enter the pulse width at the half voltage levels, in microseconds (µsec);

c. enter the pulse rise time, in microseconds (µsec). This is the time required for the leading edge of the voltage pulse to rise from 10% to 90% of its peak amplitude;

d. enter the pulse fall time, in microseconds (µsec). This is the time required for the trailing edge of the voltage pulse to fall from 90% to 10% of its peak amplitude; and

e. enter the maximum pulse compression ratio, if applicable.

34. For coded pulse waveforms refer to instructions for Modulation (Part 2, block 14).

Part 2, Block 19: Power

35. Enter the mean power delivered to the antenna terminals for all AM and FM emissions, or the peak envelope power (PEP) for all other classes of emissions. If there are any unique situations, such as interrupted CW, provide details in Remarks (Part 2, block 24). Indicate the units (e.g. W or kW).

Partie 2, Bloc 17 : Rapport de déviation

32. Indiquer le rapport de déviation calculé de la façon suivante dans le cas des émetteurs modulés en fréquence ou en phase :

$$\text{Rapport de déviation} = \frac{\text{Déviation maximale de la fréquence}}{\text{Fréquence maximale de modulation}}$$

Partie 2, Bloc 18 : Caractéristiques des impulsions

33. Pour les émetteurs modulés par impulsions :

a. indiquer la fréquence de récurrence d'impulsions en impulsions par seconde (pps);

b. indiquer la largeur d'impulsions aux niveaux de demi-tension en microsecondes (µsec);

c. indiquer le temps de montée de l'impulsion en microsecondes (µsec); C'est le temps nécessaire au flanc avant de l'impulsion de tension pour monter de 10 % à 90 % de son amplitude de crête;

d. indiquer le temps de descente de l'impulsion en microsecondes (µsec); C'est le temps nécessaire au flanc arrière de l'impulsion de tension pour descendre de 90% à 10% de son amplitude de crête; et

e. indiquer le rapport maximal de compression de l'impulsion s'il s'applique.

34. Se reporter aux instructions pour remplir le bloc Modulation (partie 2, bloc 14) s'il s'agit de formes d'ondes d'impulsions codées.

Partie 2, Bloc 19 : Puissance

35. Indiquer la puissance moyenne alimentée aux bornes de l'antenne pour toutes les émissions AM et FM, ou la puissance en crête de modulation pour toutes les autres classes d'émissions. Donner les détails dans le bloc Remarques (partie 2, bloc 24) s'il y a des situations uniques telles que des CW interrompues. Indiquer les unités (par exemple, W ou kW).

Part 2, Block 20: Output Device

36. Enter a description of the device used in the transmitter output stage (e.g. ceramic diode, reflex klystron, transistor or TWT).

Part 2, Block 21: Harmonic Level

37. Enter the harmonic level of the second and third harmonics, in dB, relative to the fundamental. Enter in "other" (block 21[c]) the relative level, in dB, of the highest power harmonic above the third.

Part 2, Block 22: Spurious Level

38. Enter the maximum value of spurious emission, in dB, relative to the fundamental, which occurs outside the -60 dB point on the transmitter fundamental emission spectrum (Part 2, block 12) and does not occur on a harmonic of the fundamental frequency. Indicate, in kHz or MHz, the location of the spurious emission from the fundamental frequency.

Part 2, Block 23: Industry Canada Type Approval No.

39. Enter the Industry Canada type approval number, if applicable.

Part 2, Block 24: Remarks

40. Self-explanatory. Use additional pages if necessary.

PART 3: RECEIVER EQUIPMENT CHARACTERISTICS

Part 3, Block 1: Nomenclature, Manufacturer's Model No.

41. Enter the Government assigned alphanumeric equipment designation. If not available, enter the manufacturer's model number (e.g. MIT 502) and complete Manufacturer's Name (Part 3, block 2). If this too is not available, enter a short descriptive title (e.g. GPS Receiver). A separate receiver submission is required for each receiver in a

Partie 2, Bloc 20 : Dispositif de sortie

36. Entrer une description du dispositif utilisé à l'étage de sortie de l'émetteur (par exemple, diode céramique, klystron réflex, transistor ou TOP).

Partie 2, Bloc 21 : Niveau des harmoniques

37. Indiquer, en dB, le niveau des harmoniques de la deuxième et de la troisième harmonique par rapport à la fréquence fondamentale. Indiquer sous « Autre » (bloc 21[c]) le niveau de puissance relatif, en dB, des plus hautes harmoniques au-dessus de la troisième.

Partie 2, Bloc 22 : Niveau du rayonnement non essentiel

38. Indiquer la valeur maximale du rayonnement non essentiel, en dB, relativement à la fréquence fondamentale, qui se produit à l'extérieur du point de -60 dB sur le spectre d'émission fondamentale de l'émetteur (partie 2, bloc 12) et qui ne se produit pas sur une harmonique de la fréquence fondamentale. Indiquer, en kHz ou en MHz, l'emplacement du rayonnement non essentiel de la fréquence fondamentale.

Partie 2, Bloc 23 : N° du type approuvé d'Industrie Canada

39. Indiquer, s'il y a lieu, le numéro du type approuvé d'Industrie Canada.

Partie 2, Bloc 24 : Remarques

40. Suffisamment explicite. Utiliser au besoin des pages supplémentaires.

PARTIE 3 : CARACTÉRISTIQUES DE L'ÉQUIPEMENT RÉCEPTEUR

Partie 3, Bloc 1 : Désignation, n° de modèle du fabricant

41. Indiquer la désignation alphanumérique de l'équipement désigné par le gouvernement. S'il n'est pas disponible, indiquer le numéro du modèle du fabricant (par exemple, MIT 502) et indiquer le nom du fabricant (partie 3, bloc 2). Si ces renseignements ne sont également pas disponibles, indiquer un court titre descriptif (par exemple, récepteur GPS). Une soumission de récepteur distincte est nécessaire

complex system (e.g. radar ECCM receivers).

Part 3, Block 2: Manufacturer's Name

42. Enter the manufacturer's name, if available. If a manufacturer's model number is listed in Nomenclature (Part 3, block 1), this block must be completed.

pour chaque récepteur d'un système complexe (par exemple, récepteurs radars de CCME).

Partie 3, Bloc 2 : Nom du fabricant

42. Indiquer le nom du fabricant s'il est disponible. Si le numéro du modèle du fabricant est indiqué à la partie 3, bloc 1, ce bloc doit être rempli.

Part 3, Block 3: Receiver Installation

43. List specific types of vehicles, ships, planes or buildings, etc., where the receivers will be installed.

Part 3, Block 4: Receiver Type

44. Enter the generic class (e.g. Dual Conversion Superheterodyne or Homodyne).

Part 3, Block 5: Tuning Range

45. Enter the frequency range through which the receiver is capable of being tuned (e.g. 225 to 400 MHz). For equipment designed to operate only at a single frequency, enter that frequency. Include units (e.g. kHz, MHz or GHz).

Part 3, Block 6: Method of Tuning

46. Enter the method of tuning (e.g. crystal, synthesizer or cavity). If the equipment is not readily tuneable in the field, indicate in Remarks (Part 3, block 21) the complexity of tuning. Include complexity factors such as skill levels involved, major assemblies involved, time required, and location (factory or depot) where equipment is to be tuned.

Part 3, Block 7: RF Channelling Capability

47. Describe the RF channelling capability:

a. for uniformly spaced channels, enter the centre frequency of the first channel and the channel spacing (e.g. first channel 406 MHz, 100 kHz increments);

b. for continuous tuning, enter the lowest frequency and the word “continuous”; and

c. for others, including cases where channel selection is under software control, enter a detailed description in Remarks (Part 3, block 21).

Partie 3, Bloc 3 : Installation réceptrice

43. Indiquer les types spécifiques de véhicules, de navires, d’aéronefs ou de bâtiments, etc., où les récepteurs seront installés.

Partie 3, Bloc 4 : Type de récepteur

44. Indiquer la classe générique (par exemple, superhétérodyne à double changement de fréquence ou homodyne).

Partie 3, Bloc 5 : Gamme d’accord

45. Indiquer la gamme de fréquences sur laquelle le récepteur peut être accordé (par exemple, de 225 à 400 MHz). Indiquer la fréquence dans le cas de l’équipement conçu pour fonctionner seulement à une seule fréquence. Indiquer les unités (par exemple, kHz, MHz ou GHz).

Partie 3, Bloc 6 : Méthode d’accord

46. Indiquer la méthode d’accord (par exemple, quartz, synthétiseur ou cavité). Si l’équipement ne peut être accordé facilement sur le terrain, indiquer dans le bloc Remarques (partie 3, bloc 21) la complexité de l’accord. Inclure les facteurs de complexité tels que les niveaux de compétence nécessaires, les ensembles principaux nécessaires, le temps nécessaire et l’emplacement (usine ou dépôt) où l’équipement doit être accordé.

Partie 3, Bloc 7 : Répartition des canaux RF

47. Décrire la répartition des canaux RF :

a. pour indiquer la fréquence centrale du premier canal et l’espacement des canaux (par exemple, premier canal à 406 MHz avec incréments de 100 kHz) dans le cas des canaux uniformément espacés;

b. pour indiquer la plus basse fréquence et le mot « continu » dans le cas de l’accord continu;

c. pour les autres, y compris les cas où la sélection du canal est commandée par logiciel, entrer une description détaillée dans le bloc Remarques (partie 3, bloc 21).

Part 3, Block 8: Emission Designators

48. Enter the emission designators, including the necessary bandwidth, for each designator, in accordance with Appendix D3 to this publication (e.g. 16K0F3E). For systems with a frequency hopping mode as well as a non-hopping mode, enter the emission designators for each mode. Identify each mode as hopping or non-hopping.

Partie 3, Bloc 8 : Identificateur(s) d'émission

48. Indiquer le ou les identificateurs d'émission, y compris la largeur de bande nécessaire pour chaque identificateur conformément au contenu de l'appendice D3 de la présente publication (par exemple, 16K0F3E). Entrer les identificateurs d'émission de chaque mode dans le cas des systèmes avec un mode à sauts de fréquence ainsi que ceux avec un mode sans sauts de fréquence. Identifier chaque mode comme étant à sauts ou sans saut.

Part 3, Block 9: Frequency Tolerance

49. Enter the frequency tolerance (i.e., the maximum departure of a receiver from its assigned frequency after normal warm-up). Indicate the magnitude, in ppm, for all emission types except single sideband, which shall be indicated in Hertz (Hz).

Partie 3, Bloc 9 : Tolérance de fréquence

49. Indiquer la tolérance de fréquence (c'est-à-dire, l'écart maximal d'un récepteur de sa fréquence assignée après le temps de réchauffement normal). Indiquer la magnitude en ppm pour tous les types d'émissions sauf la bande latérale unique, qui doit être indiquée en hertz (Hz).

Part 3, Block 10: IF Selectivity

50. Enter the bandwidth for each IF stage at the -3, -20 and -60 dB levels. Indicate units (e.g. kHz or MHz).

Partie 3, Bloc 10 : Sélectivité FI

50. Indiquer la largeur de bande pour chaque étage FI aux niveaux de -3, -20 et -60 dB. Indiquer les unités (par exemple, kHz ou MHz).

Part 3, Block 11: RF Selectivity

51. Enter the bandwidth at the -3, -20 and -60 dB levels. The RF bandwidth includes any significant attenuation contributed by filtering in the input circuit or transmission line. Values of RF bandwidth specified should be indicated as calculated or measured by checking the appropriate box. Indicate units (e.g. kHz or MHz). Enter the preselection type (e.g. tuneable cavity).

Partie 3, Bloc 11 : Sélectivité RF

51. Indiquer la largeur de bande aux niveaux de -3, -20 et -60 dB. La largeur de bande RF comprend toute atténuation concrète contribuée par le filtrage dans le circuit d'entrée ou dans la ligne de transmission. Les valeurs de la largeur de bandes RF spécifiées doivent être indiquées telles qu'elles sont calculées ou mesurées en cochant la case appropriée. Indiquer les unités (par exemple, kHz ou MHz). Indiquer le type de présélection (par exemple, cavité accordable).

Part 3, Block 12: IF Frequency

52. Enter the tuned frequency of the first, second and third IF stages. Indicate units (e.g. kHz or MHz).

Partie 3, Bloc 12 : Fréquence FI

52. Indiquer la fréquence accordée du premier, du deuxième et du troisième étage FI. Indiquer les unités (par exemple, kHz ou MHz).

Part 3, Block 13: DIMTPS 5 Use Only

53. Intentionally left blank to match the US form.

Partie 3, Bloc 13 : À l'usage exclusif du DTPSGI 5

53. Bloc laissé intentionnellement vide pour

s’apparier au formulaire américain.

Part 3, Block 14: DIMTPS 5 Use Only

54. Intentionally left blank to match the US form.

Partie 3, Bloc 14 : À l’usage exclusif du DTPSGI 5

54. Bloc laissé intentionnellement vide pour s’apparier au formulaire américain.

Part 3, Block 15: Oscillator Tuned

55. Check the appropriate box to indicate the location of the first, second and third oscillator frequencies with respect to the associated mixer input signal.

Part 3, Block 16: Maximum Bit Rate

56. Where applicable, enter the maximum bit rate (bps) that can be used. If spread spectrum is used, enter the bit rate after decoding. Describe any error detecting/correcting codes under Remarks (Part 3, block 21).

Part 3, Block 17: Sensitivity

57. Complete as follows:

a. enter the sensitivity in dBm;

b. specify criteria used (e.g. 12 dB SINAD, where SINAD is (Signal + Noise + Distortion) /(Noise + Distortion);

c. if the receiver is used with terrestrial systems, enter the receiver noise figure in dB; and

d. if the receiver is used with space or satellite earth stations, enter the receiver noise figure in Kelvin.

Part 3, Block 18: De-emphasis

58. For frequency or phase-modulated receivers, indicate whether de-emphasis is available.

Part 3, Block 19: Image Rejection

59. Enter the image rejection in dB. Image ejection is the ratio of the image frequency signal level required to produce a specified output to the desired signal level required to produce the same output.

Part 3, Block 20: Spurious Frequency Rejection

60. Enter the spurious frequency rejection in dB.

Partie 3, Bloc 15 : Oscillateur accordé

55. Cocher la case appropriée pour indiquer la valeur de la première, de la deuxième et de la troisième fréquence de l'oscillateur par rapport au signal d'entrée du mélangeur connexe.

Partie 3, Bloc 16 : Débit binaire maximal

56. S'il y a lieu, indiquer le débit binaire maximal (bps) qui peut être utilisé. Indiquer le débit binaire après le décodage si le spectre étalé est utilisé. Décrire tout code de détection ou de correction sous Remarques (partie 3, bloc 21).

Partie 3, Bloc 17 : Sensibilité

57. Remplir de la façon suivante :

a. indiquer la sensibilité en dBm;

b. spécifier le critère utilisé (par exemple, SINAD de 12 dB, SINAD étant (signal + bruit + distorsion)/(bruit + distorsion);

c. indiquer la valeur de bruit du récepteur en dB si le récepteur est utilisé avec les systèmes terrestres; et

d. indiquer la valeur de bruit du récepteur en degrés Kelvin si le récepteur est utilisé avec les stations satellites spatiales ou terrestres.

Partie 3, Bloc 18 : Désaccentuation

58. Cocher la case appropriée pour indiquer si la désaccentuation est disponible dans le cas des récepteurs modulés en fréquence ou en phase.

Partie 3, Bloc 19 : Rejet de fréquence image

59. Indiquer le rejet de fréquence image en dB. Le rejet de fréquence image est le rapport du niveau signal de fréquence image nécessaire pour produire une sortie spécifiée au niveau désiré de signal nécessaire pour produire la même sortie.

Partie 3, Bloc 20 : Rejet des fréquences non essentielles

60. Indiquer le rejet des fréquences non

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TO/À: W8476-145106
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Enter the single level of spurious frequency rejection that the receiver meets or exceeds at all frequencies

essentielles en dB. Indiquer le niveau unique du rejet des fréquences non essentielles que le récepteur

outside the -60 dB IF bandwidth. Spurious frequency rejection is the ratio of a particular out-of-band frequency signal level required to produce a specified output, to the desired signal level required to produce the same output.

Part 3, Block 21: Remarks

61. Self-explanatory. Use additional pages if necessary.

Part 3, Block 22: Industry Canada Type Approval No.

62. Enter the Industry Canada type approval number, if applicable.

PART 4: ANTENNA EQUIPMENT CHARACTERISTICS

Part 4, Block 1: Antenna Type

63. Check the appropriate box to indicate the type of antenna. For multiantenna systems use a separate Part 4 form for each antenna.

Part 4, Block 2: Nomenclature, Manufacturer's Model No.

64. Enter the Government assigned alphanumeric equipment designation. If not available, enter the manufacturer's model number (e.g. DS6558) and indicate Manufacturer's Name (Part 4, block 3). If this too is not available, enter a short descriptive title (e.g. ATS-6 Telemetry Antenna).

Part 4, Block 3: Manufacturer's Name

65. Enter the manufacturer's name, if available. If a manufacturer's model number is given in Nomenclature (Part 4, block 2), this block must be completed.

Part 4, Block 4: Frequency Range

66. Enter the range of frequencies for which the

rencontre ou dépasse à toutes les fréquences à l'extérieur de la largeur de bande FI de -60 dB. Le rejet de fréquences non essentielles est le rapport d'un niveau de signal de fréquence hors bande nécessaire pour produire une sortie spécifiée au niveau de signal désiré nécessaire pour produire la même sortie.

Partie 3, Bloc 21 : Remarques

61. Suffisamment explicite. Utiliser au besoin des pages supplémentaires.

Partie 3, Bloc 22 : N° du type approuvé d'Industrie Canada

62. Indiquer, s'il y a lieu, le numéro du type approuvé d'Industrie Canada.

PARTIE 4 : CARACTÉRISTIQUES DE L'ÉQUIPEMENT D'ANTENNE

Partie 4, Bloc 1 : Type d'antenne

63. Cocher la case appropriée pour indiquer le type d'antenne. Utiliser un formulaire distinct pour chaque antenne dans le cas des systèmes à plusieurs antennes.

Partie 4, Bloc 2 : Désignation, n° de modèle du fabricant

64. Indiquer la désignation alphanumérique de l'équipement désigné par le gouvernement. S'il n'est pas disponible, indiquer le numéro du modèle du fabricant (par exemple, DS6558) et indiquer le nom du fabricant (partie 4, bloc 3). Si ces renseignements ne sont pas non plus disponibles, indiquer un court titre descriptif (par exemple, antenne de télémétrie ATS-6).

Partie 4, Bloc 3 : Nom du fabricant

65. Indiquer le nom du fabricant s'il est disponible. Si le numéro du modèle du fabricant est indiqué à la partie 4, bloc 2, ce bloc doit être rempli.

Partie 4, Bloc 4 : Gamme de fréquences

66. Indiquer la gamme de fréquences pour

antenna is designed. Indicate units (e.g. kHz or MHz).

laquelle l'antenne est conçue. Indiquer les unités (par exemple, kHz ou MHz).

Part 4, Block 5: Type

67. Enter the generic name or describe the general technical features (e.g. Horizontal, Log Periodic, Cassegrain with Polarization Twisting, Whip, Phased Array or Conformal Array). To the extent possible, use the standard antenna configuration given in Appendix D1, Figure D1-1.

Part 4, Block 6: Polarization

68. Enter the polarization. If circular, indicate whether it is left or right handed.

Part 4, Block 7: Scan Characteristics

69. Complete as follows:

a. If the antenna scans, enter the type of scanning (e.g. vertical, horizontal, vertical and horizontal);

b. Vertical Scan:

(1) enter the maximum elevation angle, in degrees (positive or negative, referenced to the horizontal), that the antenna can scan;

(2) enter the minimum elevation angle, in degrees (positive or negative, referenced to the horizontal), that the antenna can scan; and

(3) enter the vertical scanning rate, in scans per minute.

c. Horizontal Scan:

(1) enter the angular scanning range, in degrees, of the horizontal sector scanned; and

(2) enter the horizontal scan rate, in scans per minute.

d. Indicate if antenna is capable of being sector blanked. If “yes”, enter details in Remarks (Part 4, block 10b.).

Partie 4, Bloc 5 : Type

67. Indiquer le nom générique ou décrire les caractéristiques techniques générales (par exemple, horizontale, log-périodique, Cassegrain avec torsion de polarisation, fouet, réseau à commande de phase ou réseau conforme). Utiliser, dans la mesure du possible, les configurations normalisées d’antenne indiquées à l’appendice D1, figure D1-1.

Partie 4, Bloc 6 : Polarisation

68. Indiquer la polarisation. Si elle est circulaire, indiquer si elle est orientée à gauche ou à droite.

Partie 4, Bloc 7 : Caractéristiques de balayage

69. Remplir de la façon suivante :

a. Indiquer le type de balayage (par exemple, vertical, horizontal, vertical et horizontal) si l’antenne balaye;

b. Balayage vertical :

(1) indiquer l’angle de site maximal en degrés (positif ou négatif, par rapport à l’horizontal) auquel l’antenne peut balayer;

(2) indiquer l’angle minimal d’élévation en degrés (positif ou négatif, par rapport à l’horizontal) auquel l’antenne peut balayer; et

(3) indiquer la cadence de balayage vertical en balayages par minute.

c. Balayage horizontal :

(1) indiquer la portée angulaire de balayage, en degrés, du secteur horizontal balayé; et

(1) indiquer la cadence de balayage horizontal en balayages par minute.

d. Indiquer si l’antenne est dotée de l’effacement de secteur. Entrer les détails sous Remarques (partie 4, bloc 10b.) si la case « Oui » est cochée.

ANNEX/ANNEXE D
TO/À: W8476-145106
DATED/DATÉ: 21 Oct 2014 / 21 Oct 2014

Part 4, Block 8: Gain

70. If frequency is between 27.5 MHz and 890 MHz, indicate gain of radiator relative to half wave dipole (dB). If frequency is below 27.5 MHz or above 890 MHz, indicate gain of radiator relative to an isotropic radiator (dBi).

a. enter the maximum gain, in dB; and

b. enter the nominal gain of the first major side lobe, in dB, and the angular displacement from the main beam, in degrees.

Part 4, Block 9: Beamwidth

71. Enter the 3 dB beam width in degrees.

Part 4, Block 10: Remarks

72. Describe any unusual characteristics of the antenna, particularly as they relate to the assessment of electromagnetic compatibility and to amplify or clarify any of the information provided above. Use additional pages if necessary. In addition, enter the following information, if applicable:

a. the front-back ratio, in dB, for directional antennas used in radio relay circuits;

b. for phased array antennas enter:

(1) mode of operation, single or multiple beam;

(2) single beam parameters; and

(3) multiple beam parameters:

a) polarization of each beam;

b) gain of each beam;

c) beam width of each beam; and

Partie 4, Bloc 8 : Gain

70. Indiquer le gain de l'antenne active par rapport à l'antenne de type doublet demi-onde (en dB) si la fréquence est entre 27.5 MHz et 890 MHz. Indiquer le gain de l'antenne active par rapport à une antenne isotrope (en dB) si la fréquence est au-dessous de 27.5 MHz ou au-dessus de 890 MHz.

a. indiquer le gain maximal en dB; et

b. indiquer le gain nominal du premier lobe latéral principal en dB et le déplacement angulaire à partir du faisceau principal en degrés.

Partie 4, Bloc 9 : Largeur du faisceau

71. Indiquer la largeur du faisceau à 3 dB en degrés.

Partie 4, Bloc 10 : Remarques

72. Se servir de ce bloc pour décrire toute caractéristique extraordinaire de l'antenne, particulièrement dans le contexte de l'évaluation de la compatibilité électromagnétique et pour amplifier ou clarifier toute information donnée ci-dessus. Utiliser au besoin des pages supplémentaires. De plus, entrer au besoin l'information suivante :

a. le rapport avant-arrière, en dB, pour les antennes directionnelles utilisées dans les circuits de relais radio;

b. indiquer, dans le cas des antennes à commande de phase :

(1) le mode de fonctionnement, à faisceau simple ou multiple;

(2) les paramètres de faisceau simple; et

(3) les paramètres de faisceau multiple :

a) la polarisation de chaque faisceau;

b) le gain de chaque faisceau;

c) la largeur de faisceau de chaque faisceau; et

d) scan characteristics of each beam (Part 4, block 7).

d) les caractéristiques de chaque faisceau (partie 4, bloc 7 de la ci-dessus).