

APPENDIX 1 TO ANNEX C-ACQ

CANADIAN ARMY MEDIUM RANGE RADAR

DATA ITEM DESCRIPTION (DID)

DID Format Description

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

BLOCK 1 – TITLE

A short descriptive name that identifies its nature and distinguishes it from any other DID

BLOCK 2 - IDENTIFICATION NUMBER

A number assigned by the originator that uniquely identifies the DID

BLOCK 3 – DESCRIPTION / PURPOSE

A concise description of the data content requirements that identifies the purpose for which the DID is required

BLOCK 4 - APPROVAL DATE

Date that the DID was approved by the originator

BLOCK 5 - OFFICE OF PRIMARY INTEREST (OPI)

Authority responsible for specifying the data requirement

BLOCK 6 - GIDEP APPLICABLE

“X” indicates that the data is to be submitted by a Government organization or the Contractor to the Government/Industry Data Exchange Program (GIDEP).

BLOCK 7 - APPLICATION / INTERRELATIONSHIP

Provides the application details and interrelationship of the data item to other DIDs or documents

BLOCK 8 - ORIGINATOR

The originator of the DID

BLOCK 9 - REFERENCES

Indicates any form or references needed to prepare the data

BLOCK 10 - PREPARATION INSTRUCTIONS

Describes the data content and format that the data item must satisfy

List of DIDs

1278-PMP-001 Project Management Plan

1278-PMR-002 Progress Report

1278-PMR-003 Meeting Agenda

1278-PMR-004 Meeting Minutes

1278-PMR-005 In-Service Support Monthly Status Report

1278-SES-001 Product Specification

1278-SES-002 First Article Test Procedures

1278-HWT-007 Acceptance Test Plan

1278-HWT-008 Acceptance Test Description and Procedures

1278-HWT-009 Test Report

1278-SES-006 Interface Control Document (ICD)

1278-SWS-001 Software Description

1278-ILS-001 Integrated Logistics Support Plan (ILSP)

1278-ILS-002 Maintenance Plan (MP)

1278-ILS-003 Recommended Spare Parts List (RSPL)

1278-ILS-004 Special Tools and Test Equipment (STTE) List

1278-ILS-005 Technical Data (Publications and Engineering Drawings)

1278-ILS-006 Training Master Plan (TMP)

1278-ILS-007 Task Analysis, Training

1278-ILS-008 Performance Objectives (PO) and Performance Objective (PO) Checks

1278-ILS-009 Training Package

1278-ILS-0010 Recommended Training Materials List (RTML)

1278-ILS-0011 Configuration Management Plan (CMP)

1278-ILS-0012 Material Safety Data Sheet (MSDS)

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Project Management Plan	2. IDENTIFICATION NUMBER 1278-PMP-001	
3. DESCRIPTION/PURPOSE The Project Management Plan (PMP) describes how the Contractor proposes to manage the contract.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES MIL-STD-881C, Work Breakdown Structures for Defence Materiel Items	
10. PREPARATION INSTRUCTIONS The PMP may be prepared in the Contractor's format, within the constraints imposed herein. 10.1 <u>Structure</u> - The PMP shall contain, as a minimum, the following sections: <ul style="list-style-type: none"> a. Introduction; b. Management Organization and Responsibilities; and c. Schedule and Milestones. 10.2 <u>Content</u> . - The PMP shall, as a minimum, contain information described in the following paragraphs: 10.2.1 <u>Introduction</u> . - This section shall identify the purpose and the scope of the PMP. References and terminology used in the plan shall be clearly defined. 10.2.2 <u>Management Organization and Responsibilities</u> . - The Contractor shall provide a chart showing the overall project organization. The organization chart shall identify, by name, all key management personnel and shall clearly indicate lines of responsibility. A narrative description of the responsibilities and related experience of each individual identified shall be provided. The Contractor shall identify personnel who will interface directly with PWGSC and DND. For each individual so indicated, the Contractor shall delineate their scope of responsibility and Authority. 10.2.3 <u>Schedule and Milestones</u> . - The Contractor shall provide a project "Master Milestone Schedule", showing major activities and milestones and include a detailed production and delivery schedule. Codes used in the schedule forms shall be clearly defined.		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Progress Report	2. IDENTIFICATION NUMBER 1278-PMR-002	
3. DESCRIPTION/PURPOSE Progress reports provide the project status. The report shall be used to evaluate progress and to identify project management, technical and schedule issues.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS Production of this document using automated techniques is encouraged. The contractor's standard format is to be used for charts, tables, matrices, page numbering and document control numbering. Specific content and format instructions for this document are given below. Company confidential material shall be separate from the bulk of the document so that the progress report can be distributed freely. The progress report shall include the following: <ul style="list-style-type: none"> a. <u>Title Page</u>. The title page shall contain the project name, contract number, the contractor's name, the name and "as of" date of the report, and the signature and signature block of the individual responsible for the content of the report; b. <u>Table of Contents</u>. The table of contents shall provide a hierarchical listing of the content of the report by title or topic; c. <u>Executive Summary</u>. The executive summary shall provide a summary of the significant elements of the report including the list of significant problems; d. A description of the contract activities planned for the following reporting period; e. CDRL status: <ul style="list-style-type: none"> • CDRL number; • DID number; • Title description; • Date scheduled for submission; • Date forecast for submission; • Date of actual submission; • Schedule variance; • Type of submission; • Approval status; and 		

- Approval date.
- f. Work Completion and Updated Master Schedule:
 - Identifying work completed, milestones completed and the percent completed on work in progress together with the schedule for its completion.
- g. A table showing the actual invoicing against the planned invoicing for the contract; and
- h. Outstanding action items and newly closed action items from previous progress report(s), review meetings and formal correspondence.

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Meeting Agenda	2. IDENTIFICATION NUMBER 1278-PMR-003	
3. DESCRIPTION/PURPOSE The meeting agenda will provide all parties attending the meeting with the structure and the schedule. It will also contain the preparatory work and decisions required from the meeting.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS <p>The contractor shall prepare and submit a meeting agenda prior to each meeting. The meeting agenda shall provide notification of the upcoming meeting. The Contractor shall ensure that items to be tabled by the Crown are included in the meeting agenda. In addition, prior to the meeting, the agenda shall be updated to include further agenda items proposed by the attendees.</p> <p>10.1 The agenda shall address the following:</p> <ul style="list-style-type: none"> a. the scope, purpose and objectives of the meeting; b. time, date, location and expected duration of the meeting; c. suggested government attendees; d. suggested contractor attendees; e. need for any Crown documentation to be presented at the meeting; f. list of decisions required at the meeting; and g. security classification and visit clearance requirements, if any. <p>10.2 The following shall be the standard agenda items:</p> <ul style="list-style-type: none"> a. agenda review, b. review report items, c. review meeting action item status, d. other agenda items, e. new subjects introduced by members of the meeting, and f. action item generation. <p>10.3 The agenda shall be prepared in contractor's format.</p>		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Meeting Minutes	2. IDENTIFICATION NUMBER 1278-PMR-004	
3. DESCRIPTION/PURPOSE Minutes are used to document the discussions held at meetings between the government representatives and the contractor.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS The minutes shall be a true reflection of the discussion. 10.1 The minutes shall include the following: <ul style="list-style-type: none"> a. the scope, purpose and objectives of the meeting; b. an updated copy of the agenda reflecting the actual agenda for the meeting; c. the time, date, and location; d. attendance record; e. corrections to previous minutes; f. the security classification of the minutes as required; g. the proposed time and location of any follow-up meeting(s); and h. indicates actions taken re agenda items. 10.2 The contractor shall maintain a database of all open and closed action items. The minutes shall contain a table that summarises the action items, date opened, the assigned parties to respond to such items, the schedule time to respond, action taken and date closed. 10.3 Minutes shall be prepared in the contractor's format. 10.4 The following note shall be added to all meeting minutes: All Progress Review Meetings and other meetings are for information purposes only. Any recommended contractual amendments will be reviewed by DND and PWGSC and all changes to the contract will be authorized in writing by the Contracting Authority. The contractor is not to perform work in excess of or outside the scope of this contract based on verbal or written requests or instructions from any government personnel other than the Contracting Authority.		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE In-Service Support Monthly Status Report	2. IDENTIFICATION NUMBER 1278-PMR-005	
3. DESCRIPTION/PURPOSE 3.1 To report the status of all equipment under repair.		
4. APPROVAL DATE 1 Jul 2008	5. OFFICE OF PRIMARY INTEREST DLCSPM 4-8	6. OFFICE OF COLLATERAL INTEREST
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR DPM - WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS 10.1 The Contractor shall submit each Status Report in the Contractors format and shall attach as annexes all applicable graphs, charts and print-outs of test data as well as relevant illustrations and photographs. Electronic format is acceptable. 10.2 Each Status Report shall include but not be limited to the following sections: <ul style="list-style-type: none"> a. Newly received item or previously reported item. Some repair items will be received during one reporting period and not returned until a subsequent reporting period. The status of all items will be reported and report items as being in previous reports will help to account for the repair items correctly; b. Item Part Number; c. Item NSN; d. Item Identification. A clear description of the items complete with ancillaries; e. Item Serial Number. This is the method of separating item with the same part numbers in sequential reports; f. Service Date. The date the items was received for repair action; g. Fault Condition. The reason for non-serviceability. If the item has not been tested yet, include this item in the next report. Identification of any applicable test procedure that may have been done and the test results are required as applicable; h. Recommendations. Suspected reasons for the fault and any remedial or corrective actions required; and i. Operational date. The date the item was returned. If the item is still under repair or test, an estimated return date shall be entered and included in the next report. 10.3 Names of specific individuals to whom queries can be sent during normal business hours as required. 10.4 Nil reports require notification of nil report for the reporting period.		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Product Specification	2. IDENTIFICATION NUMBER 1278-SES-001	
3. DESCRIPTION/PURPOSE The system specifications describe the design specifications of the system		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES D-01-300-100/SG-000	
10. PREPARATION INSTRUCTIONS <p>The Product Specifications shall be prepared in Contractor format.</p> <p>10.1 The Product Specifications shall:</p> <ul style="list-style-type: none"> a. be a product specification in accordance with the definitions in D-01-300-100/SG-000, Part 3; b. map to the DND specifications; and c. describe the total system. <p>10.2 The Product Specifications shall include the following information:</p> <ul style="list-style-type: none"> a. description of the system; b. performance and design requirements of the system; c. design constraints; d. safety goals for the design; e. reliability and maintainability requirements of the system; f. environmental requirements of the system; and g. use of any Government Supplied Material (GSM) in the design. 		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE First Article Test Procedures	2. IDENTIFICATION NUMBER 1278-SES-002	
3. DESCRIPTION/PURPOSE First Article Test Procedures document the criteria and acceptance procedures to demonstrate that the product meets the performance characteristics as defined in the contract.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS <p>10.1 <u>Format</u>. The First Article Test Procedures shall be in the contractor's format describing the tests that are to be used as acceptance criteria for items being delivered.</p> <p>10.2 <u>Content</u>. The First Article Test Procedures shall include the following:</p> <p>10.2.1 <u>Scope</u>. This section shall contain a brief statement that defines the purpose of the procedure.</p> <p>10.2.2 <u>Applicable Documents</u>. This section shall contain a list of documents referenced or specified in the procedure.</p> <p>10.2.3 <u>Test Requirements</u>. This section shall describe the test requirements for each test to be performed.</p> <p>a. General - This section shall contain a resume of “summary” of the requirements as specified in the contractual documents and associated specifications. Reference shall be made herein to the definitive objectives of the First Article Tests.</p> <p>b. Test Hardware and Software -This section shall contain a list of items (hardware and software) required to accomplish the test, correlated with the function it is to perform. This list shall identify items by manufacturer’s name and model number.</p> <p>c. Personnel - This section shall identify the skill sets, and numbers, of the personnel required to accomplish the test.</p> <p>d. Test Conditions - This section shall contain:</p> <p>(1) the environmental conditions and tolerances;</p> <p>(2) the power being applied, if applicable;</p> <p>(3) the frequency of increments, if applicable;</p> <p>(4) the test sequence for all associated tests; and</p> <p>(5) equipment operating time restrictions.</p> <p>e. Detailed Procedure - This section shall include a detailed step-by-step procedure of exactly how each test is to be performed. The methods of inspection or test, the conformance parameters, and the recording of results on data sheets shall be clearly described. The instructions for recording results</p>		

shall state that where accept/reject criteria are quantitative, the results of the test or inspection shall be recorded in quantitative measure, if possible, and that in cases where that is not possible, the reason shall be stated.

- f. Certification - This section shall include a certification statement required on each test report and the title of the person(s) and/or organization who must sign this certificate.

10.2.4 Accept/Reject Criteria. This section shall include criteria extracted from the applicable specification or equivalent for determining whether or not the article has passed the individual tests or inspections satisfactorily. Wherever possible, the criteria shall be expressed quantitatively.

10.2.5 Test Reports. This section is to contain a resume of the type of data that will be contained in the test report.

10.2.6 Definitions, Tables and Figures. This section shall contain definitions and abbreviations, if applicable, and sample data sheets for reporting the results of tests. One set of the data sheets shall be filled out to illustrate the information to be included in the First Article Test Report.

10.2.7 Miscellaneous. This section shall include any additional information that the contractor would like to add to enhance the document and that is not addressed elsewhere in the DID.

10.2.8 Attachments. The attachments contain material that is too bulky or detailed to be placed in the main body text. Attachments are to be referred to in the main body of the text where the information applies.

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Acceptance Test Plan	2. IDENTIFICATION NUMBER 1278-HWT-007	
3. DESCRIPTION/PURPOSE The Acceptance Test Plan details the criteria, performance objectives and list of tests to be performed by the contractor for acceptance tests on systems and equipments.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS The contractor shall submit the Acceptance Test Plan in the contractor's format. 10.1 Overview. Consists of a brief description of the objectives of the acceptance test plan, including flow diagrams, milestones, personnel participation, and security requirements. This section shall include the following: 10.1.1 Flow diagram. A functional description of the acceptance test program using a block diagram portrayal of the functions that must be met to satisfy the total acceptance program. Functions shall be numbered 1.0, 2.0, 3.0, etc; 10.1.2 Milestones and Schedule. Identifies the start and expected completion dates and daily times of each test to be performed; 10.1.3 Participation. Identifies the Government and Contractor participation roles and responsibilities. The Contractor shall provide an organizational chart showing reporting lines for the planned test; 10.1.4 Security. Identify and state briefly any security measures of guidelines to be observed; 10.1.5 Administration Instruction: Identifies all administration, timings, meeting locations, and travel requirements; and 10.1.6 Safety Report: Identifies all the safety features of the system hardware and software design, specific controls, includes a description of any safety hazards and precautions to be followed and outlines the mitigation measures. The Safety Report shall include an analysis of potential health hazards such as heat stress, noise, inadequate ventilation, exhaust, toxic substances, and ionizing and non-ionizing radiation. If the equipment produces non-ionizing radiation, a complete list of the Radio Frequency (RF) parameters and calculations for the hazard range shall be provided. 10.2 Master Test List. Lists all tests to be accomplished in the order they are to be performed. A separated listing for each location shall be provided. This listing shall include the following: 10.2.1 Facility. Location and range layout where the acceptance test is to be performed; 10.2.2 Item number. Number for each piece of equipment or item, that the test will be performed; 10.2.3 Test description. Name and brief description of test to be performed; 10.2.4 Parameters. The number of test cycles the test will be performed and the selected parameters to be		

observed;

10.2.5 Equipment location. Current location of equipment to be tested or used in the acceptance test; and

10.2.6 Special tests. Provides a list of special or unusual tests and examinations necessary to verify satisfactory equipment performance to the specifications.

10.3 Equipment List. The equipment list shall list all equipment to be used in the acceptance test. The listing shall include the following:

10.3.1 Test equipment. List all test equipment by:

- a. Description;
- b. Nomenclature; and
- c. Serial number.

10.3.2 Support equipment. List all support equipment by.

- a. Description;
- b. Nomenclature; and
- c. Serial number.

10.3.3 Special test equipment. List all special test equipment required to be designed or constructed by the Contractor for use on the program with the following details:

- a. Description;
- b. Nomenclature; and
- c. Date required.

10.4. Validation Procedure. Details of the procedures that the contractor will use to validate the test results which includes the following:

10.4.1 Details of the procedures that the Contractor will use to validate the test results;

10.4.2 Details of the procedures that Canada will use to validate the test results; and

10.4.3 Details of the briefing that Canada will receive in order to validate the tests that includes the System configuration, the software configuration and the communication configuration.

10.5 Data Reporting and Recording Plan: Details of the data reporting, data elements and recording plan which includes the following:

10.5.1 Test equipment to be used to recording the shots fired at each gun and mortar, the true location of the weapons and the true location of each impact;

10.5.2 The detailed plan for Canadian witnesses at the gun and mortar lines and test equipment sites;

10.5.3 The detailed plan for a Canadian witness for the flights and test equipment used for the air surveillance tests;

10.5.4. Test equipment used at each Radar System used in the test;

10.5.5 The detailed plan for a Canadian witness at each Radar System used in the test;

10.5.6 The detailed training plan for the Canadian witnesses;

10.5.7 The details of what data will be recorded including data elements, sample data sheets, forms, logs and printouts for all tests;

10.5.8 The detailed plan to report and record any anomalies and/or errors to the proposed Master Test List in order to recorded anomalies and/or errors in an exhaustive manner. If anomalies or errors are not recorded in a sufficiently accurate manner, the applicable parts of the Master Test List during which these anomalies or errors occur will be repeated to the satisfaction of Canada; and

10.5.9 The detailed plan to administer, file and transfer the recorded data to Canada.

10.6 Analysis Procedure. Details of the analysis and calculations that are required, complete with sample analysis and calculations.

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Acceptance Test Description and Procedures	2. IDENTIFICATION NUMBER 1278-HWT-008	
3. DESCRIPTION/PURPOSE To describe the detailed plan and schedule for the implementation and monitoring of all tests, inspections and demonstrations concerning Acceptance Testing.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS The contractor shall submit the Acceptance Test Description and Procedures in the contractor's format.		
<p>10.1 Introduction. This section shall identify the scope, purpose and application of the Acceptance Tests and shall list applicable definitions, references and related documents.</p> <p>10.2 Organization/Management. This section shall describe the organisation and terms of reference for those responsible for implementing Acceptance Testing.</p> <p>10.3 Schedule/Milestones. This section shall provide a detailed schedule of Acceptance Testing including the critical path, all the events and milestones.</p> <p>10.4 Testing. This section shall describe the Acceptance Testing methodology and activities including identification of the configurations items being tested, the burn-in policy, lot sizes, predicted lot rates of failure, sample sizes, sample frequencies and the test procedures, facilities and equipment. The Contractor can make reference in this section to the applicable test procedures to preclude redundancy.</p>		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Test Report	2. IDENTIFICATION NUMBER 1278-HWT-009	
3. DESCRIPTION/PURPOSE To report the data, results, findings, conclusions and recommendations of each test		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS <p>The Contractor shall submit each Test Report in the contractor's format. All applicable graphs, chart and print-outs of test data as well as relevant illustrations and photographs of test set-ups and results shall be attached as annexes.</p> <p>10.1 Each Test Report shall include but not be limited to the following sections:</p> <ol style="list-style-type: none"> a. Test Identification. This section shall identify the applicable Test Procedure. b. Testing Conditions. This section shall identify any changes to the testing conditions from those described in the applicable Test Procedure. c. Procedure. This section shall identify any changes to the procedure from the one described in the applicable Test Procedure. d. Results. This section shall detail all of the test data, expected results and provide sample calculations. Reference in this section can be made to attached annexes. e. Conclusions. This section shall identify the pass/fail result and shall provide a brief analysis of the test results in narrative form; and f. Recommendations. This section shall discuss the suspected or known fault, remedial action already initiated and proposed corrective action for all tests that result in failure. 		

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Interface Control Document (ICD)	2. IDENTIFICATION NUMBER 1278-SES-006	
3. DESCRIPTION/PURPOSE <p>3.1 The Interface Control Document (ICD) specifies the requirements and detailed design for one or more interfaces. As such, the ICD is a combined specification and design document. The ICD serves to communicate and control interface requirements and design decisions.</p> <p>3.2 When a system/subsystem/configuration item provides common services to a number of elements, one ICD should describe those common services, rather than repeating the same information in individual interface documents.</p>		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES	
10. PREPARATION INSTRUCTIONS <p>The contractor shall submit the ICD in the Contractor's format using the following content outline. Sections may be extended as needed to provide an adequate and detailed description. However, sections that are not applicable shall be marked as such.</p> <p>10.1 Content Requirements. The outline is as follows:</p> <ol style="list-style-type: none"> 1. Scope. This section shall be divided into the following paragraphs. <ol style="list-style-type: none"> 1.1 Identification. This paragraph shall contain a full identification of the systems, the interfacing entities, and the interfaces to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s). 1.2 System Overview. This paragraph shall briefly state the purpose of the system(s) and software to which this document applies. It shall describe the general nature of the system and software; summarise the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents. 1.3 Document Overview. This paragraph shall summarise the purpose and contents of this document and shall describe any security or privacy considerations associated with its use. 2. Referenced Documents. This section shall list the number, title, revision, and date of all documents and drawings referenced in this ICD. 3. Mechanical Interfaces. This section includes drawings and supporting data such as footprints, mechanical interface characteristics, dimensions, tolerances, loads, mounting requirements, impact on stress analyses, resulting structural integrity, and constraints. 4. Electrical Power Interfaces. This section includes details of the physical interconnection and electrical characteristics of the required power. 		

5. Analog Signal Interfaces. This section includes a definition of physical interconnections, electrical characteristics and assembly methods required to meet requirements as applicable. Analog signals shall include discrete, audio, synchro and ground signals. Electrical characteristics shall include type of signal, voltage/current, range, timing, resolution and accuracy.
 - 5.1 The analog signal interfaces of each interface shall be clearly identified by its subsystem, wire harness, connector location, relays etc.
6. Digital Signal Interfaces. This section includes a definition of physical interconnection, electrical characteristics and assembly methods required to meet requirements as applicable.
 - 6.1 All digital signal interfaces using a digital data bus shall be clearly identified by its subsystem, wire harness, connector location and shall include the digital word formats. Non-bus (discrete) digital interfaces shall include the digital word formats and electrical characteristics of the interface.
7. Software Interfaces. This section shall be divided into the following paragraphs to specify the requirements and interface characteristics imposed on one or more systems, subsystems, configuration items, manual operations, or other system components to achieve one or more interfaces among these entities. Each requirement shall be assigned a unique identifier to support testing and traceability and shall be stated in such a way that an objective test can be defined for it. Each requirement shall be annotated with associated qualification method(s) (see section 4) and traceability to system (or subsystem, if applicable) requirements (see section 5a) if not provided in those sections. If a given requirement fits into more than one paragraph, it may be stated once and referenced from the other paragraphs. If an interfacing entity included in this document will operate in states and/or modes having interface requirements different from other states and modes, each requirement or group of requirements for that entity shall be correlated to the states and modes. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. If part or all of this information is documented elsewhere, it may be referenced. Design conventions needed to understand the design shall be presented or referenced.
 - 7.1 Interface identification and diagrams. For each interface identified in 1.1, this paragraph shall include a unique identifier and shall identify the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided to depict the interfaces.
 - 7.2 Unique Identifier Of Interface. This paragraph shall identify an interface by unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to describe the interface characteristics of one or both of the interfacing entities. If a given interfacing entity is not covered by this ICD (for example, an external system) but its interface characteristics need to be mentioned to describe interfacing entities that are, these characteristics shall be stated as assumptions or as "When [the entity not covered] does this, [the entity that is covered] will" This paragraph may reference other documents (such as data dictionaries, standards for protocols, and standards for user interfaces) in place of stating the information here. The design description shall include the following, as applicable, presented in any order suited to the information to be provided, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):
 - a. Priority assigned to the interface by the interfacing entity(ies);
 - b. Type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be

- implemented;
- c. Characteristics of individual data elements that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
 - (1) Names/identifiers:
 - (a) Unique identifier;
 - (b) Non-technical (natural-language) name;
 - (c) Technical name (e.g., variable or field name in code or database); and
 - (d) Abbreviation or synonymous names.
 - (2) Data type (alphanumeric, integer, etc.);
 - (3) Size and format (such as length and punctuation of a character string);
 - (4) Units of measurement (such as metres, dollars, nanoseconds);
 - (5) Range or enumeration of possible values (such as 0-99);
 - (6) Accuracy (how correct) and precision (number of significant digits);
 - (7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply;
 - (8) Security and privacy constraints; and
 - (9) Sources (setting/sending entities) and recipients (using/receiving entities).
 - d. Characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity(ies) will provide, store, send, access, receive, etc., such as:
 - (1) Names/identifiers:
 - (a) Unique identifier;
 - (b) Non-technical (natural language) name;
 - (c) Technical name (e.g., record or data structure name in code or database); and
 - (d) Abbreviations or synonymous names.
 - (2) Data elements in the assembly and their structure (number, order, grouping);
 - (3) Medium (such as disk) and structure of data elements/assemblies on the medium;
 - (4) Visual and auditory characteristics of displays and other outputs (such as colours, layouts, fonts, icons and other display elements, beeps, lights);
 - (5) Relationships among assemblies, such as sorting/access characteristics;
 - (6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply;
 - (7) Security and privacy constraints; and
 - (8) Sources (setting/sending entities) and recipients (using/receiving entities).
 - e. Characteristics of communication methods that the interfacing entity(ies) will use for the interface, such as:
 - (1) Unique identifier(s);

- (2) Communication links/bands/frequencies/media and their characteristics;
 - (3) Message formatting;
 - (4) Flow control (such as sequence numbering and buffer allocation);
 - (5) Data transfer rate, whether periodic/aperiodic, and interval between transfers;
 - (6) Routing, addressing, and naming conventions;
 - (7) Transmission services, including priority and grade; and
 - (8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalisation, and auditing.
- f. Characteristics of protocols the interfacing entity(ies) will use for the interface, such as:
- (1) Unique identifier(s);
 - (2) Priority/layer of the protocol;
 - (3) Packeting, including fragmentation and reassembly, routing, and addressing;
 - (4) Legality checks, error control, and recovery procedures;
 - (5) Synchronization, including connection establishment, maintenance, termination; and
 - (6) Status, identification, and any other reporting features.
- g. Other characteristics, such as physical compatibility of the interfacing entity(ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.).
8. Qualification provisions. This section shall define a set of qualification methods and shall specify, for each requirement in Section 3, the qualification method(s) to be used to ensure that the requirement has been met. A table may be used to present this information, or each requirement in Section 3 may be annotated with the method(s) to be used. Qualification methods may include:
- a. Demonstration: The operation of interfacing entities that relies on observable functional operation not requiring the use of instrumentation, special test equipment, or subsequent analysis;
 - b. Test: The operation of interfacing entities using instrumentation or special test equipment to collect data for later analysis;
 - c. Analysis: The processing of accumulated data obtained from other qualification methods. Examples are reduction, interpretation, or extrapolation of test results;
 - d. Inspection: The visual examination of interfacing entities, documentation, etc; and
 - e. Special qualification methods: Any special qualification methods for the interfacing entities, such as special tools, techniques, procedures, facilities, and acceptance limits.
9. Requirements traceability. For system-level interfacing entities, this paragraph does not apply. For each subsystem or lower-level interfacing entity covered by this ICD, this paragraph shall contain:
- a. Traceability from each interfacing entity covered by this ICD to the system or CSCI requirements addressed by the entity's interface design; and
 - b. Traceability from each system or CSCI requirement that affects an interface covered in this ICD to the interfacing entities that address it.

10. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

DATA ITEM DESCRIPTION		DND Form 1409
1. TITLE Software Description	2. IDENTIFICATION NUMBER 1278-SWS-001	
3. DESCRIPTION/PURPOSE To identify and describe a software version consisting of one or more Computer Software Configuration Items (CSCIs). It is used to release, track, record, identify and control the exact software version delivered to the user.. The term "version" may be applied to the initial release of the software, to a subsequent release of that software, or to one of multiple forms of the software released at approximately the same time (for example, to different sites).		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST PMO ISTAR	6. GIDEP APPLICABLE
7. APPLICATION/INTERRELATIONSHIP		
8. ORIGINATOR PMO ISTAR, WLS	9. REFERENCES MIL-STD-973A	
10. PREPARATION INSTRUCTIONS 10.1 The numbers shown shall designate the top level paragraph numbers to be used in the document. The document shall include title page, table of contents, and page numbering. 1. <u>Scope</u> . This section shall be divided into the following paragraphs. 1.1 <u>Identification</u> . This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s). It shall also identify the intended recipients of the SVD to the extent that this identification affects the contents of the software released (for example, source code may not be released to all recipients.) 1.2 <u>System overview</u> . This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents. 1.3 <u>Document overview</u> . This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use. 2. <u>Referenced documents</u> . This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities. 3. <u>Version description</u> . This section shall be divided into the following paragraphs. 3.1 <u>Inventory of materials released</u> . This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all physical media (for example, listings, tapes, disks) and associated documentation that make up the software version being released. It shall include applicable security and privacy considerations for these items, safeguards for handling them, such as concerns for static and magnetic fields, and instructions and restrictions regarding duplication and license provisions.		

3.2 Inventory of software contents. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all computer files that make up the software version being released. Any applicable security and privacy considerations shall be included.

3.3 Changes installed. This paragraph shall contain a list of all changes incorporated into the software version since the previous version. If change classes have been used, such as the Class I/Class II changes in MIL-STD-973A, the changes shall be separated into these classes. This paragraph shall identify, as applicable, the problem reports, change proposals, and change notices associated with each change and the effects, if any, of each change on system operation and on interfaces with other hardware and software. This paragraph does not apply to the initial software version.

3.4 Adaptation data. This paragraph shall identify or reference all unique-to-site data contained in the software version. For software versions after the first, this paragraph shall describe changes made to the adaptation data.

3.5 Related documents. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all documents pertinent to the software version being released but not included in the release.

3.6 Installation instructions. This paragraph shall provide or reference the following information, as applicable:

- a. Instructions for installing the software version;
- b. Identification of other changes that have to be installed for this version to be used, including site-unique adaptation data not included in the software version;
- c. Security, privacy, or safety precautions relevant to the installation;
- d. Procedures for determining whether the version has been installed properly; and
- e. A point of contact to be consulted if there are problems or questions with the installation.

3.7 Possible problems and known errors. This paragraph shall identify any possible problems or known errors with the software version at the time of release, any steps being taken to resolve the problems or errors, and instructions (either directly or by reference) for recognizing, avoiding, correcting, or otherwise handling each one. The information presented shall be appropriate to the intended recipient of the SVD (for example, a user agency may need advice on avoiding errors, a support agency on correcting them).

4. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

DATA ITEM DESCRIPTION		
1. TITLE Integrated Logistics Support Plan (ILSP)	2. IDENTIFICATION NUMBER 1278-ILS-001	
3. DESCRIPTION / PURPOSE The ILSP describes the support concept and identifies all ILS elements.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSM 7-4	9. REFERENCES	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The ILSP shall define the activities, tasks and procedures necessary for the introduction of new equipment into service with the Canadian Forces. The plan should give an overview of all ILS elements and further identification as necessary of all support activities as related to the life cycle support of the equipment. The following should not be considered as an exclusive list, but rather the minimum from which the support concepts, including Logistics Support Analysis, Support Equipment and Supply Support Program, shall be described.</p> <p>10.2.2 While a full Logistics Support Analysis (LSA) is not required, the plan shall identify the parameters used to determine recommendations for maintenance and supportability.</p> <p>10.2.3 The plan shall identify the process for determining Support Equipment (SE) requirements, which includes General Purpose Equipment, Special Purpose Equipment, and all other equipment and special and common tools used to service, store, inspect, repair, overhaul, assemble, disassemble, test and otherwise maintain the system. The results of this analysis will provide content for DID LS-002 - Maintenance Plan. Further amplification of Special Tools and Test Equipment (STTE) is required under DID 1278-ILS-004.</p> <p>10.2.4 The Supply Support program fundamental objective is to ensure adequate spares and repair parts are available to support the system. Planning of spares, repair parts, training equipment and SE are based on inputs from both LSA and Provisioning functions. Factors used to determine sparing should include operational factors, such as useage, environmental harshness, and geographic isolation. Additionally, maintenance factors including reliability and maintainability data, such as Mean Time Between Failure (MTBF), Mean Time To Repair (MTTR) and Maintenance Induced Failure should all be considered. The resulting deliverable from this activity is the Recommended Spare Parts List (RSPL) DID 1278-ILS-003.</p>		

DATA ITEM DESCRIPTION		
1. TITLE Maintenance Plan (MP)	2. IDENTIFICATION NUMBER 1278-ILS-002	
3. DESCRIPTION / PURPOSE The MP describes the system, maintenance concept, repair schedules and repair times.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable for the System Description and Maintenance Concept. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The MP shall include:</p> <ul style="list-style-type: none"> a. System Description; b. Maintenance Concept; and c. Preventative and corrective maintenance tasks to be performed by CF personnel with a task description, detailed procedures, time to complete the task, task interval (for preventative maintenance tasks) spare and repair parts required and any tools or test equipment necessary to complete the task. 		

DATA ITEM DESCRIPTION		
1. TITLE Recommended Spare Parts List (RSPL)	2. IDENTIFICATION NUMBER 1278-ILS-003	
3. DESCRIPTION / PURPOSE The RSPL includes all consumables, Line Replaceable Units (LRU) and Shop Replaceable Units (SRU) that are required to operate and maintain the system.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES D-01-100-214/SF-000	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The RSPL shall be prepared in accordance with the current issue of Canadian Forces Specification D-01-100-214/SF-000. The RSPL must contain the Contractor's recommendation for spares required to maintain the equipment for a 24-month period, and must provide the basis for the spares selection to be made by Department of National Defence. Details of the data elements required must be listed on a Provisioning Data Selection Sheet, prepared in accordance with the above specification, and be submitted in electronic format.</p> <p>10.2.2 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 RSPL. The SPTD called up in the above specification must accompany the RSPL. Questions regarding the preparation, format or contents of the above provisioning documentation must be directed to the Procurement Authority.</p>		

DATA ITEM DESCRIPTION		
1. TITLE Special Tools and Test Equipment (STTE) List	2. IDENTIFICATION NUMBER 1278-ILS-004	
3. DESCRIPTION / PURPOSE The STTE List identifies all support equipment required to support and maintain the system while in service with the Canadian Forces.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The STTE List shall identify all Support Equipment (SE) required to inspect, repair, overhaul, assemble, disassemble, test and otherwise maintain the system. As a minimum, equipment shall be identified by OEM Part Number and CAGE Code. SE includes the following:</p> <ul style="list-style-type: none"> a. General Purpose Test Equipment; b. Special Purpose Test Equipment; c. General Purpose Tools for Maintenance; and d. Special Purpose Tools for Maintenance. <p>10.2.2 Special Tools and Test Equipment (STTE) is the subset of SE that includes following:</p> <ul style="list-style-type: none"> a. Special Purpose Test Equipment; and b. Special Purpose Tools for Maintenance. 		

DATA ITEM DESCRIPTION		
1. TITLE Technical Data (Publications and Engineering Drawings)	2. IDENTIFICATION NUMBER 1278-ILS-005	
3. DESCRIPTION / PURPOSE The technical publications and engineering drawings (which includes associated lists and reference documents) are the references required for DND/Canadian Forces personnel to operate and support the system in operations and throughout the system/equipment's life cycle.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES ASME Y14.100, ASME Y14.24 ASME Y14.34M C-01-100-100/AG-005 C-01-100-100/AG-006 D-01-400-001/SG-000 D-01-400-002/SF-000 D-LM-008-022/SG-000 ISO 9660 Z234.1-00	
10. PREPARATION INSTRUCTIONS 10.1 Format 10.1.1 <u>Technical Publications</u> . The Contractor to provide technical publications in the English language and to provide a licence for DND to translate into the French language. Publications shall be provided to a minimum Class 2 Interactive Electronic Technical Manuals (IETM). The Contractor must provide and clearly label all technical publications required for description, operation, operator maintenance, maintenance (including trouble shooting / fault finding procedures) and repair of the deliverable end items as follows. <u>UNILINGUAL PUBLICATIONS</u> Option 1: Newly Written Manuals The Contractor must provide the publications in full compliance with the latest issue of C-01-100-100/AG-006, Specification - Writing, Format and Production of Technical Publications. The Contractor shall provide an option to translate the publications into Canada's other official language and a licence to allow DND to translated the publications into Canada's other official language independent of the contractor. Option 2: Existing Manuals The Contractor must provide the publications as existing commercial or foreign government off-the-shelf		

manuals, in full compliance with the latest issue of C-01-100-100/AG-005, Adoption of Commercial and Foreign Government Publications. The Contractor shall provide an option to translate the publications into Canada's other official language and a licence to allow DND to translated the publications into Canada's other official language independent of the contractor.

Option 3: Alternate Format

The Contractor must provide the publications in the format approved in writing by the Technical Authority. The format must be in full compliance with the latest issue of C-01-100-100/AG-005, Adoption of Commercial and Foreign Government Publications. The Contractor shall provide an option to translate the publications into Canada's other official language and a licence to allow DND to translated the publications into Canada's other official language independent of the contractor.

10.1.2 **Content**

10.1.2.1 Tech Publications. The publications shall contain as a minimum:

- a. Front matter;
- b. Equipment data;
- c. Preparation for use and installation instructions;
- d. General theory of operation;
- e. Operating instructions;
- f. Maintenance instructions (preventive and corrective);
- g. Overhaul instructions;
- h. Preparation for shipment instructions;
- i. Storage instructions;
- j. Illustrated parts list;
- k. Illustrations;
- l. Cautionary advisories and explanatory notes; and
- m. End matter.

10.2 Engineering Drawings.

10.2.1 The contractor shall provide Engineering Drawings as specified in D-01-400-002/SF-000 for Level 2 Production Prototype and Limited Design. For Commercial and/or foreign government existing engineering drawings, refer to Para 3.2 of that reference which specifies what is acceptable.

10.2.2 Engineering Drawings.

Engineering Drawings, Associated Lists and Reference Documents shall be provided in accordance with the following requirements and in the final form specified below. Where the direction is specific to Contractor-format drawings only, the content will be qualified by the statement "Contractor drawings only". Where the direction is specific to DND-format drawings only, the content will be qualified by the statement "DND drawings only". Otherwise, the Contractor shall proceed on the basis that the direction is applicable to both DND and Contractor-format drawings.

The Directorate Supply Chain Operations DSCO 4.3.2. plays an important role in Engineering Drawings and, where appropriate, the Technical Authority will refer submissions to DSCO 4.3.2 to confirm acceptance of submissions, or will forward requests to DSCO 4.3.2 related to Engineering Drawings. With the agreement of the TA, after contract award some direct contact may be established between the Contractor and DSCO 4.3.2 as appropriate for

efficiency.

10.2.2.1 Technical Data Action Notice (TDAN) Number:

The following number has been assigned to control the acquisition of all Engineering Drawings and Associated Lists produced under this contract:

TDAN Number: 124471144

10.2.2.2 Governing Specification: (DND drawings only):

D-01-400-002/SF-000 dated 2011-03-01 Drawings, Engineering and Associated Lists.

10.2.2.3 Governing Standard (DND drawings only):

D-01-400-001/SG-000 dated 79-07-05, Engineering Drawing Practices. (1975-04-02)

10.2.2.4 Applicable Documents:

D-01-400-002/SF-000 dated 2011-03-01, Drawings, Engineering and Associated Lists

D-LM-008-022/SG-000, Standard for Packaging of Documentation (1981-01-16)

ASME Y14.100, Engineering Drawing Practices (Contractor drawings only)

ASME Y14.24, Types and Applications of Engineering Drawings

ASME Y14.34M, Associated Lists (Contractor drawings only)

ISO 9660, Information Processing - Volume and File Structure of CDROM for Information Interchange

Z234.1-00, Canadian Metric Practices Guide

10.2.2.5 New Drawings:

The contractor shall prepare and deliver Engineering Drawings and Associated Lists which meet the design, disclosure and legibility requirements of the specified level as defined by D-01-400-002/SF-000.

10.2.2.5.1 Drawing Level:

Level 1 - Design Concept (DND drawings only)

Level 2 - Prototype / Limited Production (Contractor and DND drawings)

Level 3 – Production (DND drawings only)

10.2.2.6 Drawing Practices:

Drawing practices shall be in accordance with ASME Y14.100 (Contractor drawings only).

10.2.2.7 Data Lists (and DND/CF Data Lists NSCM 35907 – for DND drawings only):

Data Lists complete with Cover Sheets are required and shall be prepared in accordance with ASME Y14.34M (Contractor drawings), or in accordance with the governing standard (DND drawings) and supplied as part of the Engineering Drawings. Data Lists shall be prepared at the item level of assembly (and/or end item) declared for future production by the Technical Authority. Cover sheets shall be prepared as sheet one (1) of the Data List. Cover Sheets shall include the Contract Number and a note which details the Intellectual Property Rights that apply to the data identified on the Data List (see para 7).

10.2.2.8 Reference Documents:

Reference documents called up on the Engineering Drawings (excepting those, which are government, society and readily available industrial specifications or standards) shall be included as part of the Engineering Drawings and Associated Lists.

10.2.2.9 Contractor Drawings:

Existing Contractor Drawings being provided as part of the Engineering Drawing Package shall meet the

requirements of paragraph 3.2 of D-01-400-002/SF-000. In the event that Contractor Drawings do not meet the specified requirements the contractor shall rework the drawings to ensure that the requirements are met.

10.2.2.10 Drawing System:

The mono-detail drawing system shall be used.

10.2.2.10.1 Technical Data Action Notice (TDAN):

A TDAN shall be prepared that lists all Drawings and Associated Lists delivered as a result of the contract. A sample TDAN can be provided upon request.

10.2.2.10.2 Drawing Types:

The contractor shall provide the necessary types of drawings that will satisfy the sophistication of the specified drawing level. Type selection shall be subject to the approval of both the DND Technical Authority and DSCO 4-3-2. Contractor drawings: Drawing types selected shall be in accordance with ASME Y14.24.

10.2.2.10.3 Parts Lists:

Parts lists shall be prepared integral with the drawings. On multi-sheet drawings, the parts list shall be placed on sheet one (1).

10.2.2.10.4 Control Drawings:

Contractor Control Drawings as defined in ASME Y14.24 (for DND drawings: Control Drawings as defined in the governing standard) shall be prepared for commercial items approved for use in the design, which are not defined by Government or nationally recognized industrial specifications and standards.

10.2.2.10.5 Family-Tree Drawing(s):

The contractor shall prepare a Family-Tree Drawing(s) of the complete configuration of the Engineering Drawing Package and it shall be subject to the approval of the DND Technical Authority.

10.2.2.10.6 Units of Measure:

The DND Technical Authority will determine the units of measure (metric or Imperial). Metric drawings shall comply with Z234.1-00 Canadian Metric Practices Guide.

10.2.2.10.7 DND drawings only:

10.2.2.10.7.1 Drawing Number Allocation:

Canadian Forces drawing numbers shall be allocated for use on DND/CF engineering drawings and associated lists (data lists and cover sheets). The allotment shall be requested in writing from the TA. Requests shall specify the quantity of required numbers, the contract number and contract name. Drawing number requests shall be sufficiently liberal to preclude the necessity of subsequent requests. Allocated Canadian Forces drawing numbers shall be used for this contract only.

10.2.2.10.7.2 Forms:

Drawing and Associated List electronic forms shall be Government supplied material and obtained by written request to the TA.

10.2.2.10.7.3 Title / Revision Blocks:

Identifiers shall be inserted in the Title / Revision Block of each Drawing and Associated List as shown in Table 1.

10.2.2.11 Integration:

The prime Contractor shall be fully responsible for the integration of the new and existing drawings to form a

complete Engineering Drawing Package.

10.2.2.12 Data Rights:

The Government of Canada shall have rights in data as detailed in the Terms and Conditions of the contract.

10.2.2.12.1 Contractor Drawings only: Data Rights Legend:

The Contractor shall mark all Foreground & Background Engineering Drawings & Associated Lists delivered under this contract with a complete notation as detailed at "Intellectual Property Rights" and/or "Data Rights" clause(s) of the contract.

10.2.2.12.2 DND drawings only:

Unless otherwise specified in the Terms and Conditions of the contract, the Government of Canada shall have rights in data as set out below.

10.2.2.12.2.1 Unlimited Rights (Foreground Data-NSCM 35907):

The Government of Canada shall have unlimited rights in all Engineering Drawings, Associated Lists and Reference Documents produced or provided as a result of this contract. The Government of Canada shall have the right to use, translate into Canada's other official language, duplicate, revise or disclose such technical data, in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so.

10.2.2.12.2.2 Limited Rights (Background Data):

The Government of Canada shall have limited rights only and shall hold in confidence all Existing Engineering Drawings, Associated Lists and Reference Documents supplied under this contract that bears the Contractor's "Limited Proprietary Rights" restrictive legend. The Government of Canada shall have the right to use, translate, duplicate or disclose such technical data, in whole or in part, by or for the Government of Canada, with the express limitation that such technical data shall not, without the express written permission of the Contractor furnishing such technical data, be:

- Released or disclosed in whole or in part outside the Government of Canada;
- Used in whole or in part by the Government of Canada for manufacture; and
- Used by a party other than the Government of Canada, except for:
 - Emergency repair or overhaul work only, by or for the Government of Canada, where the item or process concerned is not reasonably available to enable timely performance of the work, provided that the release or disclosure thereof outside the Government of Canada shall be made subject to the prohibition against further use, release or disclosure, and
 - Release to other Governments for the furtherance of the mutual defence of Canada and other such Governments, only for the information and evaluation within such Governments, or for such Governments under the conditions of (1) above.

10.2.2.13 Acceptance:

Acceptance of the Engineering Drawings, Associated Lists and Reference Documents for technical content requirements will be the responsibility of the DND Technical Authority. The Technical Authority will confirm the acceptance of the Engineering Drawings, Associated Lists, Reference Documents and Electronic Data Deliverables for format requirements with DSCO 4-3-2.

10.2.2.13.1 Level 1 - Design Concept (DND drawings only):

Level 1 Engineering Drawings, Associated Lists and Reference Documents shall be forwarded to the Technical Authority upon completion.

10.2.2.13.2. Level 2 - Prototype / Limited Production:

Contractor Level 2 and DND Level 2 Engineering Drawings, Associated Lists and Reference Documents shall be

forwarded to the Technical Authority.

10.2.2.13.3. Level 3 – Production (DND drawings only):

Level 3 Engineering Drawings, Associated Lists and Reference Documents shall be forwarded to the Technical Authority.

10.2.2.14 Final Deliverables:

Upon acceptance, the Level 2 Engineering Drawings, Associated Lists and Reference Data, and Level 3 Engineering Drawings, Associated Lists and Reference Documents (DND drawings only) shall be delivered in soft copy form as outlined herein.

10.2.2.14.1 Soft Copy Deliverables:

Soft copy deliverables shall include the Engineering Drawings, Associated Lists, Reference Data and the associated Metadata in electronic form.

10.2.2.14.1.1 Engineering Drawings:

Contractor drawings: Engineering Drawings shall be delivered as PDF files as detailed herein.

10.2.2.14.1.2 DND drawings:

Unless otherwise specified in the individual tasks, Engineering Drawings shall be delivered in the native format, Vector data and the distributed format, PDF.

Vector data shall be delivered in their native file format in which the data was originally created.

PDF data shall be delivered in accordance with Para 9.1.6 herein.

10.2.2.14.1.3 Associated Lists:

Associated Lists shall be delivered as a PDF file (300 DPI) or in a format deemed acceptable by the Technical Authority.

10.2.2.14.1.4 Reference Documents:

Reference Documents shall be delivered as a PDF file (300 DPI) or in a format deemed acceptable by the Technical Authority.

10.2.2.14.1.5 TDAN:

The TDAN shall be delivered in the native MSWord file and a PDF file (300 DPI). Alternate file formats may be acceptable provided they have been discussed and approved in writing by the Technical Authority. NOTE: One (1) hard copy of the TDAN complete with contractor's signatures shall be provided with the final deliverables.

10.2.2.14.1.6 Metadata (Capture of Related Information):

Metadata (the data that describes data objects) shall be provided for all Engineering Drawings, Associated Lists and Reference Data deliverables. Metadata records shall contain the information in the order shown in Table 2.

Metadata shall be delivered as a Microsoft Access 2003 database shown at Figure 1 or in a version of Microsoft Access deemed acceptable by the Technical Authority.

10.2.2.14.1.6.1 DATABASE TABLE:

Each delivered image shall have a corresponding database record. All records shall be entered into a single Microsoft Access 2003 database table (or in a version of Microsoft Access deemed acceptable by the Technical Authority). Fields without corresponding information shall remain blank. The Microsoft Access 2003 database file shall be named "metadata.mdb".

10.2.2.14.1.7 Image Sizes:

Image sizes as outlined in Table 3 are provided as a guide and sizes may vary slightly, but no more than plus or minus one inch (25 mm) in either width or length.

10.2.2.14.1.8 Cropping:

Images shall be cropped such that the engineering drawing is free from extraneous information. For example, drawing formats having an inside and an outside border shall be cropped closely to the outside of the outside border. Drawing formats having only one border, where zone or quadrant identification is outside of that border shall be cropped such that the zone information is retained.

10.2.2.14.1.9 Skew Correction:

In general, skew correction is not required. If the Contractor deems it necessary, correction shall be done to 0 degrees and 90 degrees.

10.2.2.14.1.10 De-speckling:

If any de-speckling is required, the Contractor shall ensure that data integrity is not compromised by this operation.

10.2.2.14.1.11 Image Foreground /Background:

Images shall be black on white background.

10.2.2.14.1.12 File Names/Batch Number Allocation:

File names and a batch number shall be requested in writing from the Technical Authority who will pass on the request to DSCO 4-3-2. Quantity of file names required shall be specified at the time of the request.

10.2.2.15 Inquiries:

After contract award, subject to the agreement of the Technical Authority, DSCO 4-3-2 may be contacted at (819) 994-9352,

Fax (819) 997-0302. The address is:

Department of National Defence

Louis St. Laurent Building

555 boul de la Carriere,

GATINEAU QC J8Y 6R5

Attention: DSCO 4-3-2

TABLE 1 Title and Revision Block Entries (DND drawings)

Title Block	Insert
DESIGN AGENT / CONCEPTION	The contractor shall insert their company name or NSCM.
NSCM / CAO F	The contractor shall insert "35907".
INSPECT/INSPECTE	The contractor shall insert "DSCO 4-3-2"
CF APPVL / APP FC	The contractor shall insert the DND Technical Authority's designation.
APPVL DATE D'APPROB	The contractor shall contact the Drawing Authority (DSCO 4-3-2) for the appropriate date to be inserted in this block.

Revision Block	Insert
ZONE	The contractor shall insert a dash "-".
LTR / LET	The contractor shall insert a dash "-".
REVISION	The contractor shall insert the TDAN NUMBER in this block (see para 1.1).
DATE	The contractor shall insert a dash "-".
DWN / DES	The contractor shall insert a dash "-".
CKD / VER	The contractor shall insert a dash "-".
APPVL / APP	The contractor shall insert a dash "-".

TABLE 2 INDEX FIELDS

Order	Field Name	Max Field Length	Field Definition / Description	Example Entry
1	FILENAME <i>(all one word)</i>	12 (8.3)	Name of electronic file - unique filename for uploading in database. File names will be issued by DSCO 4-3-2. Alpha characters shall be uppercase.	LZ000235.TIF
2	BATCHNO <i>(all one word)</i>	8	Batch number - used for uploading files in database. Batch number will be assigned with filenames. Alpha characters shall be uppercase.	LZ001
3	DOCUMENTNO <i>(all one word)</i>	25	This field shall contain the document number.	9775458
4	REVISION	3	Letter or number indicating the revision level. If there is no rev, indicate with dash ("-")	B
5	SHEETNO <i>(all one word)</i>	3	Sheet number x of y. Enter the value of x.	1
6	NOOFSHEETS <i>(all one word)</i>	3	Sheet number x of y. Enter the value of y.	1
7	FRAMENO <i>(all one word)</i>	3	Frame number x of y. Enter the value of x. (This field is applicable only when capturing data from	

			aperture cards.) When field is not applicable, leave blank.	
8	NOOFFRAMES <i>(all one word)</i>	3	Frame number x of y. Enter the value of y. (This field is applicable only when capturing data from aperture cards.) When field is not applicable, leave blank.	
9	NSCM	5	This field shall contain the NATO Supply Code for Manufacturers (NSCM) of the Owner of the data. (Also known as FSCM, CAGE or NCAGE code.)	35907
10	SIZE	2	This field contains the document size. -For imperial sizes use A, B, C, D, E, F, G, H, J, K and LE (for legal) -For metric sizes use A4, A3, A2, A1, A0 and B1.	A2
11	ADDITIONALIDENTIFIER <i>(all one word)</i>	10	This open field shall be used when two (2) or more documents have the same document number but are different documents. e.g. Document 12345, Document 12345 DCR 001, then "DCR 001" would be entered in this field. When field is not applicable, leave blank.	DCR 001
12	DATARIGHTS <i>(all one word)</i>	1	The data rights as specified in the contract. "L" for "LIMITED" or "U" for "UNLIMITED"	U
13	DOCUMENTTITLE <i>(all one word)</i>	240	Title of document. (i.e. Drawing title)	BRACKET ASSY
14	TDANNO <i>(all one word)</i>	12	This field shall be used to enter the TDAN number assigned for the project.	124471144
15	ERN	12	This field shall be used for the Equipment Registration Number. Information shall be provided if required, otherwise the field shall be left blank.	

16	EAC	8	This field shall be used for the Equipment Application Code. Information shall be provided if required, otherwise the field shall be left blank.	
17	EQUIPMENT	75	Name of the Equipment. Information shall be provided if required, otherwise the field shall be left blank.	
18	CTAT	1	If the data is "Controlled Goods", DM Code "D" shall be entered, otherwise the field shall be left blank	D
19	PROJECTNAME	30	This field shall be used for "Controlled Goods" data and will be filled in by DSCO 4-6. This field shall be left blank.	

TABLE 3 DRAWING SIZES

METRIC DRAWING SIZES			
Drawing Size	W x L (max) (mm)	Pels Per Line	Number of Lines
A4	210 X 297	1656	2344
A3	297 X 420	2344	3312
A2	420 X 594	3312	4680
A1	594 X 841	4680	6624
A0	841 X 1189	6624	9368
B1	707 X 1000	5567	7875
NORTH AMERICAN / IMPERIAL DRAWING SIZES			
Drawing Size	W x L (max) (inches)	Pels Per Line	Number of Lines
A	8.5 x 11	1704	2200
B	11 x 17	2200	3400
C	17 x 22	3400	4400
D	22 x 34	4400	6800

E	34 x 44	6800	8800
F	28 x 40	5600	8000
G	11 x 90	2200	18000
H	28 x 143	5600	28600
J	34 x 176	6800	35200
K	40 x 143	8000	28600
Legal	8.5 x 14	1704	2800

Sample record entries (Metadata) in database table:

(The following table is shown on three lines to suit page width.)

FILENAME	BATCHNO	DOCUMENTNO	REVISION	SHEETNO	NOOFSHEETS	FRAMENO	NOOFFRAMES
LZ000235.TIF	LZ001	9775458	B	1	1	1	1
LZ000236.TIF	LZ001	9775457	-	1	1		

NSCM	SIZE	ADDITIONAL IDENTIFIER	DATA RIGHTS	DOCUMENT TITLE	TDANNO	ERN	EAC	EQUIPMENT
35097	A2	DCR 001	U	BRACKET ASSY	124471144			
35097	A1		U	BRACKET	124471144			

CTAT	PROJECTNAME
D	
D	

FIGURE 1 Sample Metadata Records

DATA ITEM DESCRIPTION		
1. TITLE Training Master Plan (TMP)	2. IDENTIFICATION NUMBER 1278-ILS-006	
3. DESCRIPTION / PURPOSE To describe the Contractor's approach and detailed plan for meeting the requirements of the Training Program.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES A-P9-050-000/PT-Volumes 1 to 13	
10. PREPARATION INSTRUCTIONS The Training Master Plan (TMP) shall be prepared in English in the Contractor's format. The TMP shall describe how the Contractor will integrate the efforts of all parties involved in the Training Program and the activities required to meet the requirements of the ILS and/or any other Requirements Specification as it relates to any aspects of training. 10.1 Content Requirements. The Training Master Plan shall include, but not necessarily be limited to, the following: <ul style="list-style-type: none"> a. Introduction. Prepare an introductory section detailing the Contractor's approach and general plan for meeting the ILS requirements of the System Specification as they apply to the Training Program. Provide a training overview that makes maximum use of diagrams to explain the various processes, strategies or tools to be used for training development and management; b. Work Flow Diagram. Prepare a time phased process flow diagram supported by a narrative explanation describing the activities associated with each block of the Work Flow Diagram, indicating, on a time scale, the programmed work and milestones to be accomplished in providing training; c. Media Selection Criteria. Define the Media Selection Criteria employed by the Contractor in determining the most efficient and effective method of instruction delivery; d. Training Equipment. Identify and describes all the training equipment required to support the proposed training; e. Data rights. In accordance with the provisions of the contract, all rights to reproduce, modify, amend or otherwise change all training materials are conveyed to the Canadian Forces on delivery of these materials, and the Contractor shall deliver to DND, as part of the course packages, all master drawings, photographic negatives, printing masters, electronic media and other original materials used to produce the elements of each course package, to facilitate any reproduction, modification, or amendment activities; f. Training Schedules. Detail the schedule for training development and the conduct of the training by the Contractor. Include links to the roll-out schedule and development milestone as identified in all training related Project Plan tasks; and g. Preliminary Course/OJT Information. Prepare an annex, in a format acceptable to the PMO ISTAR training Authority, outlining preliminary course/on-job training information for each phase of training, including currency training (Course Description Sheets). Include in the annex the following information: 		

- (1) a brief description of the training content and training status (e.g., fully developed, requires minor development or requires major development);
- (2) proposed training location and a brief description of the training facilities to be used;
- (3) the type of media proposed for the presentation of course information (training methodology);
- (4) estimated duration of the training in training hours and days and a brief description of a typical training week, to include a train the trainer serial as well as normal operator qualification training;
- (5) recommended class size (minimum, maximum, optimum);
- (6) a list of the training equipments required to support the training;
- (7) a list of the training aids, learning aids and training equipment required to support the training;
- (8) a course syllabus;
- (9) course cost in term of student/instructor ratio and facilities;
- (10) prerequisite training requirements; and
- (11) the language of the course, e.g., bilingual, French only or English only.

DATA ITEM DESCRIPTION		
1. TITLE Task Analysis, Training	2. IDENTIFICATION NUMBER 1278-ILS-007	
3. DESCRIPTION / PURPOSE To present the results of a detailed analysis of the task list resulting from all identified data sources in a scalar format. This visual breakdown of the system level duties and tasks will help people visualize the whole challenge and focus on their areas of responsibilities.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES	
10. PREPARATION INSTRUCTIONS Prepare the System Level Task Analysis Scalars in English in two parts: <ul style="list-style-type: none"> a. Summary Data; and b. Specifications Data. <p>10.1 Summary Data. List the different tasks required to show how the operation, deployment, maintenance and the support of all components of the complete system will be performed (i.e. the contractor may decide to group two or more functions together on one scalar)</p> <p>10.2 Specification Data. Provide a graphical representation of each scalar listing all the jobs, duties and tasks to be performed for the entire system.</p> <p>10.3 Approval. The acceptability of the scalars is fundamental to the success of the entire training program. All subsequent training development is based on this foundation. It is imperative that the Summary and Specifications data be acceptable to the TA and DND Training Authority.</p>		

DATA ITEM DESCRIPTION		
1. TITLE Performance Objectives (PO) and Performance Objective (PO) Checks	2. IDENTIFICATION NUMBER 1278-ILS-008	
3. DESCRIPTION / PURPOSE The POs and PO Checks provide guidelines for the conduct of training and the assessment of trainees by describing the tasks the graduate must be able to perform on the job, the conditions under which they must be performed and the minimum acceptable standard of performance.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES A-P9-050-000/PT-003	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable. A-P9-050-000/PT-003 may be used as a guide for training development. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The PO and PO Checks shall contain the following:</p> <ul style="list-style-type: none"> a. a performance statement that describes the task(s) to be performed in the operational environment that describes what the member must do; b. a description of the situation under which the performance must be completed and the circumstances which effect how the job is done; c. a description of how well the performance must be completed; and d. a description of the performance checks that will be used to evaluate student progress. 		

DATA ITEM DESCRIPTION		
1. TITLE Training Package	2. IDENTIFICATION NUMBER 1278-ILS-009	
3. DESCRIPTION / PURPOSE The Training Package provides the detailed plan and materials for meeting the requirements of the training program.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES A-P9-050-000/PT-004 A-P9-050-000/PT-005	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable. A-P9-050-000/PT-004 and A-P9-050-000/PT-005 may be used as a guide for training development. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The Training Package shall contain all the materials required to conduct the applicable training and shall include the following:</p> <ul style="list-style-type: none"> a. General – the aim of training, outline of training, and training strategy; b. Training Management – planning factors, resources, constraints, training prerequisites, training duration, and related documents; c. Lesson Specification – information normally contained in course Qualification Standards and Course Training Plans including enabling objectives and lesson plans; d. Training Schedule(s); e. Training Materials – including projectables, handouts, training aids, job aids, forms, videos, and computer software/courseware; and f. Reference List. 		

DATA ITEM DESCRIPTION		
1. TITLE Recommended Training Materials List (RTML)	2. IDENTIFICATION NUMBER 1278-ILS-010	
3. DESCRIPTION / PURPOSE To present results of a detailed analysis of all the training material requirements (facilities, equipment, tools, etc) necessary to design, implement, evaluate and maintain the training program.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES	
10. PREPARATION INSTRUCTIONS The Recommended Training Materials List (RTML) shall be prepared in Contractor format. 10.1 Content Requirements. The RTML shall include, but not necessarily be limited to the following : <ul style="list-style-type: none"> a. Introduction: Provide a brief overview of the purpose and expected application of this report; and b. Detailed Description of Resource Requirements for each Category of Training and Course: Before providing final detailed resource requirement descriptions, the ILS Training Authority must agree on the category of training and course structure provided by the Contractor. Include such items as: training aids to be used by the instructors, handouts/learning aids to be retained by students, references, recommended publications, etc, in the detail resource requirements list. 10.2 Training Devices. Identify recommended training devices such as simulators, audio visual aids, computer based education system, mock-ups, etc. 10.3 Justification of Recommendations. Provide justification for the recommended selection of training equipment and devices. Include the number of individual training tasks that can be supported by an item and the amount of training time that will be required to use the equipment. Describe and substantiate the training effectiveness of any simulators proposed and describe the training functions simulated. 10.4 Training Facilities. Identify appropriate recommended facilities for the most learning effective delivery of training including simulation, Computer Based Training (CBT), etc. Facilities requirements shall include size and arrangement of classroom and work space, laboratories, audio visual areas, student study areas, reference area, break areas, toilets, instructors' offices, training aids, production area and administrative offices. 10.5 Special Tools. List, by training module, all special tools not currently held in the DND supply system that are required to achieve a specific performance objective. 10.6 Training Consumables. Identify the estimated consumables, e.g. paper product, fuses, cables, etc., required for each course. The consumable list shall identify the total quantity of each item required for one course. The Contractor shall clearly state and provide an unequivocal acknowledgement in the report of his responsibility to provide all training consumables for all Pilot and Initial Cadre Training courses, or to accept billing by the Crown if courses are directed to be run at a DND School or other training facility. 10.7 Spare Parts. Identify, by training tasks, an estimate of spare parts required to support training activities. Base the estimated quantities of spare parts required on the premise that components used as training aids must be returned to a serviceable condition on termination of training or, if a component is to be used during training, it		

must be maintained in a serviceable and safe condition. Cross-reference the required spare parts to items on the Recommended Spare Parts List. Categorize the parts as follows:

- a. parts definitely requiring replacement on each course;
- b. parts definitely requiring replacement at the end of training; and
- c. parts potentially requiring replacement.

DATA ITEM DESCRIPTION		
1. TITLE Configuration Management Plan (CMP)	2. IDENTIFICATION NUMBER 1278-ILS-011	
3. DESCRIPTION / PURPOSE The CMP describes how the configuration of the system will be maintained while in service with the Canadian Forces.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 7-4	9. REFERENCES	
10. PREPARATION INSTRUCTIONS		
<p>10.1 Format</p> <p>10.1.1 Contractor format is acceptable. Hard copies shall use 8.5 inch x 11 inch (216 mm x 279 mm) paper. Soft copies shall be compatible with MS Office Suite 2003.</p> <p>10.2 Content</p> <p>10.2.1 The CMP shall:</p> <ol style="list-style-type: none"> a. identify the CM software system used by the Contractor to maintain configuration of the system; b. record and report information needed to manage configuration items effectively, including the status of proposed and approved configuration changes; c. identify and document the functional and physical characteristics of configuration items; d. submit Class 1 engineering changes to DND for approval and Class 2 changes for information; e. audit configuration items to verify conformance to documented requirements, including conduct of a Physical Configuration Audit before qualification of the system; and f. identify procedures that are, or will be put in place to identify Material Changes. Material Changes, are changes to the system which require part number changes or revisions based on operational availability or obsolescence throughout the system's in-service life with the Canadian Forces. 		

DATA ITEM DESCRIPTION		
1. TITLE Material Data Safety Sheet (MSDS)	2. IDENTIFICATION NUMBER 1278-ILS-012	
3. DESCRIPTION / PURPOSE This DID describes th4e information required in an MSDS sheet..		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Technical Authority	6. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP		
8. ORIGINATOR DLCSPM 4-8	9. REFERENCES	
10. PREPARATION INSTRUCTIONS 10.1 Format 10.1.1 Contractor format is acceptable. 10.2 The MSDS sheet shall be filled out in accordance with the guidance provided at the following website: www.ccohs.ca/oshanswers/legisl/msds_prep.html		