

# **1 DSD-AJISS-LCMM-001 Life Cycle Materiel Management (LCMM) Services**

## **1.1 DSD NUMBER**

DSD-AJISS-LCMM-001

## **1.2 TITLE**

Life Cycle Materiel Management (LCMM) Services.

## **1.3 DESCRIPTION AND INTENDED USE**

This DSD identifies the Life Cycle Materiel Management Services required to be provided by the Contractor to support the requirements identified in Chapter 4 of the PWS.

This DSD is intended to be the head or lead DSD for LCMM, and is applicable where the Contractor is required to provide routine Services in the fields of:

- a. Management of Design Intent;
- b. Maintenance Program Management;
- c. Management of Engineering Changes;
- d. Configuration Management;
- e. Spares and Asset Inventory Management;
- f. Supply Chain Management;
- g. Technical Data Management;
- h. Obsolescence Management; and,
- i. Disposal Management.

## **1.4 INTER-RELATIONSHIPS**

This DSD forms part of the PWS.

This DSD must be applied in conjunction with the LCMM services defined in the LCMM of the PWS and the other associated DSDs.

## **1.5 APPLICABLE DOCUMENTS**

The following documents form a part of this DSD to the extent specified herein:

### **Reference Documents**

- a. D-01-400-001/SG-000 Standard - Engineering Drawing Practices for Class 1 Drawings and Technical Data List;
- b. D-01-003-001/SG-000 Standard Requirements for the Engineering Content of Ship Drawings and Associated Lists;
- c. D-01-400-002/SF-000 Specification for Levels of Engineering Drawings and Associated Lists;
- d. AAP 7001.053 Technical Airworthiness Management Manual (TAMM); and

### **Related Documents**

- a. C-03-005-012/AM-001 Naval Materiel Management System Manual (NaMMS), dated 1 August 2012;
- b. A-LM-505-019/JS-001, LCMM Activities Handbook, Chapter 12, Disposal Support, Revised July 2012;
- c. A-LM-505-001/AG-002, Department of National Defence Demilitarization Manual;

- d. A-LM-505-001/AG-003 Military Standard Logistics Support Analysis requirements and resources as a guide;
- e. A-LP-005-000/AG-008 GUIDANCE MANUAL LOGISTICS SUPPORT ANALYSIS;
- f. A-GG-040-001/AG-001 General Safety Program Volume 1: Policy and Program; and
- g. C-02-040-009/AG-001 General Safety Program Volume 2: General Safety Standards.

## **1.6 SERVICE DESCRIPTION**

### **1.6.1 Introduction**

#### **1.6.1.1 Scope of DSD**

The Contractor must provide LCMM Services, as described in this DSD as follows:

- a. Engineering Management; and
- b. Engineering Support.

### **1.6.2 Services**

#### **1.6.2.1 Engineering Management**

The Contractor must provide engineering management services.

The Contractor must conduct logistics, engineering and maintenance planning in the form of Logistics Support Analysis (LSA) using A-LM-505-001/AG-003 and A-LM-505-001/AG-002 references as a guide, disregarding the MIL-STD-1388-2B component, which is outdated and has been replaced by GEIA-0007.

The Contractor must maintain existing software versions and ensure any new software introduced to AOPS/JSS is compatible with existing software systems.

The naval Equipment Health Monitoring (EHM) program consists of the various EHM techniques and associated tools that are used on naval equipment for the purpose of collecting, monitoring and analyzing equipment health and performance data.

The Contractor must determine the equipment that would benefit from the application of EHM techniques as part of their maintenance plans.

The Contractor must assess the applicable cost-effectiveness of EHM techniques for the health and performance of equipment during the initial maintenance phase.

The Contractor must conduct structural surveys within each maintenance cycle, as part of the baseline activity.

The Contractor may be asked to manage and support Technical Investigations (TI) as required by Canada. TIs may be required in order to:

- a. maintain the operational availability and other Performance Measures set out in the Contract;
- b. maintain safety in relation to the Products being supported;
- c. support the provision of Maintenance Services;
- d. support the provision of Configuration Management Services; and
- e. support rectification of any Defects requiring rectification under the Contract.

The Contractor must use a Maintenance Management Information System (MMIS) to:

- a. manage inputs and outputs of process tasks;
- b. record provide traceability to engineering decisions;
- c. record details of engineering authority and delegations; and
- d. store or record the reference to engineering documents, drawings and reports.

The Contractor must manage and conduct Engineering Studies prioritized by Canada in order to investigate potential operational improvements and opportunities for technical research.

#### ***1.6.2.2 Engineering Support***

The Contractor must establish and maintain a Technical Problem Database for the tracking of all outstanding and closed Technical Problem activities. As a minimum, the following information must be recorded:

- a. equipment or system Technical Data Package (TDP) reference;
- b. technical support activity description;
- c. relevant dates;
- d. impact on other ships (ship specific or Class problem); and
- e. recommended solution and final result.

The Contractor must provide, as a minimum, the following LCMM Support Services:

- a. development of system/equipment tests and trials;
  - b. annual hull and structural surveys;
  - c. all data required to complete the Summary of Structural Surveys to Canada;
  - d. underwater hull surveys;
  - e. software support;
  - f. drafting services;
  - g. preparation of Trial Agendas;
  - h. annual review and update of Preventive Maintenance (PM) routines;
  - i. all data required to complete Lifting Appliance Certification ;
  - j. providing all data required to complete the Safety Management Plan (SMP) and yearly audit to Canada.
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- k. Engineering and Maintenance (E&M) inspections on materiel and equipment state;
  - l. preparing docking specifications including pre-docking surveys (not including underwater surveys);
  - m. preparing repair and painting specifications;
  - n. preparing engineering procurement specifications in support of ECs;
  - o. determining the requirement for and preparing Obsolescence Reports.
  - p. provide all data required to complete Margin Management (ex. Weight, PG&D, HVAC, Piping) to Canada;
  - q. ensure that Electromagnetic Compatibility and Interference Analysis is conducted on all new installation of equipment and cabling; and
  - r. complete engineering requirements for ship dockings and provide data and reports to Canada.

## **2 DSD-AJISS-LCMM-002 Configuration Management Services**

### **2.1 DSD NUMBER**

DSD-AJISS-LCMM-002

### **2.2 TITLE**

Configuration Management Services

### **2.3 DESCRIPTION AND INTENDED USE**

This DSD defines the requirements for Services activities related to Configuration Management Services of the products and ships for the contract.

Canada uses this DSD to define the range and scope of work related to Configuration Management Services required under the Contract.

The Contractor uses this DSD to identify the work requirements and Canada's interfaces, related to Configuration Management services, required under the contract.

### **2.4 INTER-RELATIONSHIPS**

This DSD forms part of the PWS.

This DSD must be applied in conjunction with the Configuration Management services defined in the LCMM requirements of the PWS and the other associated DSDs.

### **2.5 APPLICABLE DOCUMENTS**

The following documents form a part of this DSD to the extent specified herein:

#### ***2.5.0-1.1 Reference Documents***

- a. A-LM-505-001/AG-003 – Military Standard Logistics Support Analysis requirements;
- b. DI(G) LOG 4-5-006, Defence Policy on Configuration Management;
- c. MSD Logistics Instruction 07-1 Configuration Management;
- d. D-01-400-001/SG-000 Standard - Engineering Drawing Practices for Class 1 Drawings and Technical Data List;
- e. D-01-003-001/SG-000 Standard Requirements for the Engineering Content of Ship Drawings and Associated Lists; and
- f. D-01-400-002/SF-000 Drawings, Engineering and Associated Lists.

#### ***2.5.0-1.2 Related Documents***

- a. DAOD 3003 Controlled Goods;
- b. MMI 1852 – Validation of DMC in CGCS and Demilitarization Instructions Prior to Disposal or Transfer Action;
- c. C-71-010-008/MN-000 Procedure for Preparing Equipment as Memorial or Museum Pieces;
- d. A-LM-007-014/AG-001 Canadian Forces Supply Manual; and
- e. DAOD 3013-1 Disposal of Surplus Materiel.

## **2.6 SERVICE DESCRIPTION**

### **2.6.1 Introduction**

#### **2.6.1.1 Scope of DSD**

The Contractor must provide Configuration Management Services for the products and ships for:

- a. Configuration Planning;
- b. Configuration Identification;
- c. Configuration Control;
- d. Configuration Status Accounting Hardware; and
- e. Configuration Audit functions.

### **2.6.2 Services**

#### **2.6.2.1 Configuration Planning**

The Contractor must implement and maintain an integrated Configuration Management Program in accordance with best commercial practices.

The Contractor must develop and maintain the Configuration Plan in accordance with DID-AJISS-PM-007.

The Contractor must utilize Configuration Management for systems, equipment, hardware, firmware, software and training within the LCMM support to manage and track changes to the ship's baseline configuration.

The Contractor must conduct logistics, engineering and maintenance planning in the form of Logistics Support Analysis (LSA).

The Contractor must maintain existing software and ensure any new software introduced to AOPS/JSS is compatible with existing software systems.

#### **2.6.2.2 Configuration Identification**

The Contractor must manage, implement and distribute changes made to the Technical Data Package (TDP) as the result of the implementation/modification of as-fitted equipment and structure.

The Contractor must create all new drawings in accordance with existing standard.

The Contractor must ensure that all new design documents must be stamped and signed by the Contractor's Engineering Manager to certify all engineering disciplines are covered by the design.

The Contractor must correct all mistakes and errors to the final product for EC TDPs, drawings, data lists, TDANs, publications and all other deliverables.

The Contractor must ensure that all deliverables for updates to TDP must be processed within 60 days of final completion of work activity.

#### **2.6.2.3 Configuration Control**

The Contractor must ensure that all deliverables for Configuration control complies with Chapter 9 of the PWS.

#### **2.6.2.4 Configuration Status Accounting**

The Contractor must record and report all appropriate data about the configuration item to include, but not limited to, the following:

- a. listing of approved configuration identification;
- b. status of proposed changes; and,
- c. implementation status of approved changes.

#### ***2.6.2.5 Configuration Audit Functions***

The Contractor must support an independent Configuration audit conducted by Canada, or agent of Canada.

## **3 DSD-AJISS-LCMM-003 Management of Maintenance Program Documentation**

### **3.1 DSD NUMBER**

DSD-AJISS-LCMM-003

### **3.2 TITLE**

Management of Maintenance Program Documentation

### **3.3 DESCRIPTION AND INTENDED USE**

This DSD defines the requirements for services and activities related to Maintenance Program Management Documentation (MPMD) of AOPS and JSS.

Canada uses this DSD to define the range and scope of work related to MPMD documentation required under the Contract.

The Contractor uses this DSD to identify the work requirements and Canada's interfaces, related to MPMD required under the contract.

### **3.4 INTER-RELATIONSHIPS**

This DSD forms part of the PWS.

This DSD must be applied in conjunction with the MPMD defined in the Maintenance Program Management requirements of the PWS and the other associated DSDs.

### **3.5 APPLICABLE DOCUMENTS**

The following documents form a part of this DSD to the extent specified herein;

#### ***3.5.0-1.1 Reference Documents***

- a. C-03-005-012/AM-001 Naval Materiel Management System Manual (NaMMS); and
- b. D-01-100-231/SF-001 PREPARATION OF STANDARD SHIP MAINTENANCE AND REPAIR SPECIFICATIONS.

#### ***3.5.0-1.2 Reference Documents***

Nil

## **3.6 SERVICE DESCRIPTION**

### **3.6.1 Introduction**

#### ***3.6.1.1 Scope of DSD***

The following documentation must be maintained and updated as part of the Maintenance Program:

- a. Preventive Maintenance Instructions;
- b. Corrective Maintenance Instructions;
- c. Standard Ships Maintenance and Repair Specifications (SSMRS);
- d. Original Equipment Manufacturer (OEM) Manuals and System Schematic drawings;
- e. Docking Work Period Schedule;
- f. Short Work Period Schedule; and,
- g. Ship Maintenance Schedule.

### **3.6.2 Services**

#### ***3.6.2.1 Preventive Maintenance (PM) Instructions***

The Contractor must maintain and update all Preventative Maintenance Instructions (PMI).  
The PMI must contain:

- a. purpose and scope of the naval PMI.
- b. all the instructions needed to conduct PM activities including:
  - i. being technical trade and class of ship specific;
  - ii. Naval PM Load Chart;
  - iii. Naval PM Planning Chart;
  - iv. applicable Naval PM Schedules; and,
  - v. applicable Naval PM Performance Tests.

#### ***3.6.2.2 Corrective Maintenance (CM) Instructions***

The Contractor must maintain and update all Corrective Maintenance Instructions (CMI).  
The CMI must contain:

- a. purpose and scope of the naval CMI;
- b. Corrective Maintenance Tasks including:
  - i. diagnosis;
  - ii. repair;
  - iii. rebuild;
  - iv. overhaul; and,
  - v. recovery.

The Contractor must return equipment systems to a serviceable condition through corrective maintenance;

The Contractor must review Corrective Maintenance Orders to review what was damaged, how it was damaged and what was done to fix it.

#### ***3.6.2.3 Standard Ships Maintenance and Repair Specifications***

The Contractor must maintain and update Standard Ship Maintenance and Repair Specifications (SSMRS).

The specifications must contain:

- a. a generic Level Three Maintenance and repair specification for an equipment, system, or assembly, applicable to a specific class of ship;
- b. incorporate results from tests/trials, surveys, outstanding defects and deficiencies and time-based or condition-based PM schedule requirements, and further amended, where required, for the integration of approved EC Specifications;
- c. Tell the Repair Facility what is required, including quality and performance standards; and
- d. The trials required to be performed during Level Three Maintenance periods.

#### ***3.6.2.4 Original Equipment Manufacturer (OEM) instructions and System Schematics***

The Contractor must maintain the most current copy of OEM instructions and System Schematics that are applicable to the current ship configuration.



#### ***3.6.2.5 Docking Work Period***

The Contractor must prepare and submit a Service Delivery Project Plan for each Docking Work Period in accordance with CDRL # DID-AJISS-TSM-003.

The Contractor has care and custody of the vessel during DWPs.

The Contractor must perform Level One, Two and Three Maintenance activities for each ship during Work Periods.

#### ***3.6.2.6 Short Work Period Schedule***

The Contractor must prepare and submit a Service Delivery Project Plan for each Short Work Period in accordance with CDRL # DID-AJISS-TSM-003.

The Contractor must perform SWPs in the respective Naval Dockyards.

#### ***3.6.2.7 Ship Maintenance Schedule***

A ship's maintenance schedule must be captured within the Service Delivery Annual Operating Plan for each coast submitted in accordance with CDRL # DID-AJISS-TSM-002.

## **4 DSD-AJISS-TSM-001 Technical Schedule Management Services (TSMS)**

### **4.1 DSD NUMBER**

DSD-AJISS-TSM-001

### **4.2 TITLE**

Technical Schedule Management Services (TSMS)

### **4.3 DESCRIPTION AND INTENDED USE**

This DSD identifies the TSMS required to be provided by the Contractor to support the services identified in Chapter 5 of the PWS.

This DSD is intended to be the head or lead DSD for TSMS, and is applicable where the Contractor is required to provide routine TSMS in the fields of technical schedule management.

### **4.4 INTER-RELATIONSHIPS**

This DSD forms part of the PWS.

This DSD must be applied in conjunction with the Maintenance Services defined in the TSMS requirements of the PWS and the other associated DSDs.

### **4.5 APPLICABLE DOCUMENTS**

The following documents form a part of this DSD to the extent specified herein:

#### ***4.5.0-1.1 Reference Documents***

- a. C-03-005-012/AM-001 Naval Materiel Management System Manual (NaMMS), Part 7 - Naval Configuration Management;
- b. CD-523 (NSN 7530-21-909-5435) Docking Report Form;
- c. C-28-020-001/TB-001 Technical Bulletin (Marine) For Tests of Shipboard Lifting Appliances; and
- d. CFCD 129 Readiness and Sustainment Policy

#### ***4.5.0-1.2 Related Documents***

- a. SOR/86-304 Canada Occupational Health and Safety Regulations;
- b. H-3 Hazardous Products Act; and
- c. A-LP-005-000/AG-008 Equipment Management Team Handbook.

## **4.6 SERVICE DESCRIPTION**

### **4.6.1 Introduction**

#### ***4.6.1.1 Scope of DSD***

The Contractor must provide TSMS, as described in this DSD as follows:

- a. Technical Schedule Management;
- b. Maintenance Reporting;

The Contractor must provide TSMS, based on information provided through the Service Delivery function:

- a. provide a clear and accurate understanding of what operational capability and what degree of DI compliance can be delivered during the operational program with the available resources;
- b. perform what-if analyses on the impacts of unforecasted and immediate operational requirements to support informed decisions;
- c. assess and respond to unforecasted and immediate operational requirements;
- d. assess and report the impacts of responding to unforecasted and immediate operational requirements that will result in a revising the Technical Schedule; and,
- e. contribute and inform to the RCN planning and prioritization of limited materiel support resources assigned to ships based on the needs of the operational program.

## **4.6.2 Services**

### **4.6.2.1 Technical Schedule Management**

JSS and AOPS will be made available to the Contractor for maintenance during work periods each year aligned with the fleet schedule. Work periods will be followed by trials alongside or at sea.

The Contractor may take advantage of opportunity alongside time where the ship is not in a work period for maintenance which can be conducted on a non-interference basis within the ship's specified Operational Schedule.

The Contractor must remain flexible to changes in ship availability due to events that will impact the work of the Contractor and its subcontractors. Many of these events cannot be forecasted in advance such as interference from the work being carried out on adjacent ships, emergencies or emergency exercises within the dockyard, movements of ships by Queen's Harbour Master, or dockyard resources availability changes.

The Contractor must retain relevant technical, planning and estimating expertise in order to provide flexibility to react to functional changes:

- a. full understanding of technical capability for mission profiles;
  - b. technical assessment to design intent as a result of operational schedule or mission profile changes;
  - c. planning and estimating for unforecasted service delivery activities;
  - d. clearly articulating to RCN authorities the subsequent impact of operational changes; and,
  - e. participate and contribute to Technical Schedule development within an operational context.
- Canada reserves the right to defer all maintenance to a later date.

Repairs or additional work that may arise as a result of PM is considered Corrective Maintenance.

The Contractor must manage all schedule changes to the work.

### **4.6.2.2 Maintenance Reporting**

#### **4.6.2.2.1 Technical Management Status Report**

The Contractor must prepare and report a Technical Management Status Report for AOPS and JSS in accordance with CDRL Item TSM-004.

#### **4.6.2.2.2 Docking Report**

The Contractor prepare and submit a Docking Report for AOPS and JSS in accordance with CDRL Item TSM-005.

#### 4.6.2.2.3 Ship Configuration Audit

The Contractor must prepare and submit a Ship Configuration Audit Report for AOPS and JSS in accordance with CDRL Item LCMM-003.

## **5 DSD-AJISS-IDE-001 DRMIS Master Data Validation**

### **5.1 DSD NUMBER**

DSD-AJISS-IDE-001

### **5.2 TITLE**

DRMIS Master Data Validation

### **5.3 DESCRIPTION AND INTENDED USE**

The DRMIS Master Data Validation document identifies the master data validation services to be provided by the Contractor to ensure master data consistency between DRMIS and the Contractor's Data Management Environment (DME).

### **5.4 INTER-RELATIONSHIPS**

Nil

### **5.5 APPLICABLE DOCUMENTS**

The following documents form a part of this DSD to the extent specified herein:

#### ***5.5.0-1.1 Reference Documents***

a. Navy DRMIS Master Data Guidelines (Be advised that the DRMIS master data solution is currently under review, which may have an impact on the supporting guidelines documentation.)

#### ***5.5.0-1.2 Related Documents***

- a. GEIA 0007 LSAR Data Standard; and
- b. S1000 D Technical Publication Standard.

### **5.6 SERVICE DESCRIPTION**

#### **5.6.1 Introduction**

##### ***5.6.1.1 Scope***

The Contractor must provide DRMIS Master Validation Services, as described in this DSD.

##### **5.6.2 Services**

The Contractor must validate the DRMIS initial data related to the Level One, Two and Three Maintenance activities in accordance with Navy DRMIS Master Data Guidelines.

The data validation must include:

- a. Structure (allowed and actuals);
- b. Materiel Identification;
- c. Maintenance Significant Items;
- d. Maintenance Tasks;
- e. PM Documents and Measuring Points; and
- f. PM Plans.