ANNEX A

STATEMENT OF WORK FOR THE

GALLEY IMPROVEMENT

FOR THE

VICTORIA CLASS SUBMARINE MODERNIZATION

CONTRACT NO. W8472-235880

NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document must continue to apply.

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1 SCOPE

1.1 Purpose

1.1.1 This Statement of Work (SOW) specifies the work and technical performance requirements to be carried out by the Contractor to provide to Canada's Department of National Defense (DND), hereafter referred to as Canada with galley improvements and associated data to the original installed at build galleys on the Royal Canadian Navy's (RCN) *Victoria* Class Submarines.

1.1.2 Canada requires an improved galley that will replace and modernize the old and under-performing galley counters, storage, refrigerator, juice dispensers and cooking equipment that fits within the existing galley footprint without significant modification to any existing piping or electrical cabling. The modernized elements may be of custom design, military off the shelf (MOTS), commercial off the shelf (COTS) or modified MOTS/COTS.

1.2 Background

1.2.1 The RCN's four VCS, *HMCS Chicoutimi* (CHI), *HMCS Victoria* (VIC), *HMCS Windsor* (WSR) and *HMCS Corner Brook* (COR) were designed in the 1980's which were built and delivered in the late 1980's and early 1990's. The current galley configuration is shown in Figure 1 below.

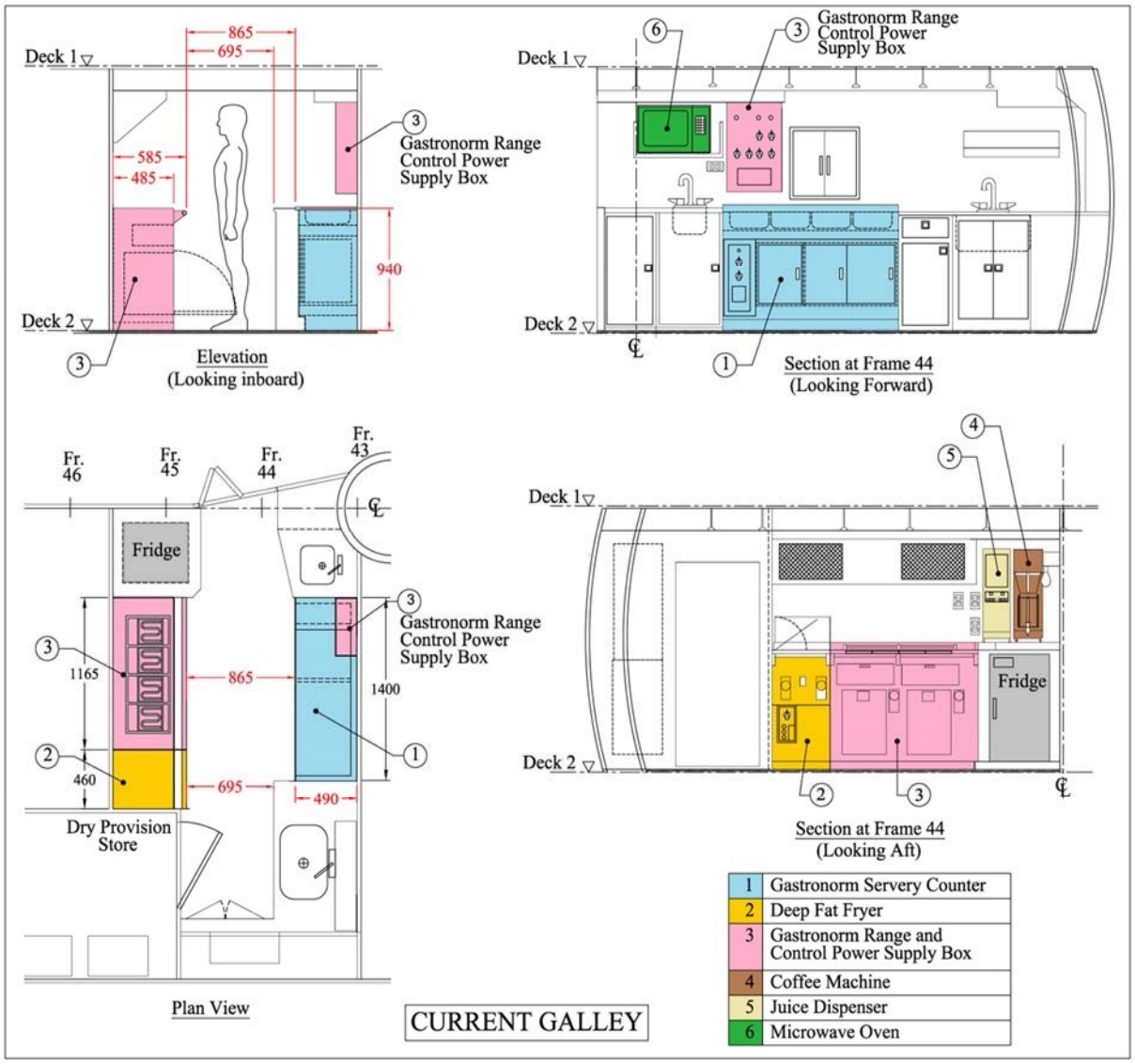

Figure 1-Current Galley Configuration Layout

1.2.2 The current galley's capability has degraded as some of the existing equipment is not performing as required (oven, hot plate units) or is no longer used as intended (deep fryer, milk dispenser, juice dispenser). As such, galley staff have resorted to buying their own equipment to supplement the existing equipment (induction cook top, a refrigerator with drawers as opposed to a door, etc.). The current galley has storage, counters and equipment which are obsolete or not used as intended and need to be replaced.

1.3 Galley Improvement Project Objective

1.3.1 The fundamental objective of the Galley Improvement Project is to provide a modernized functional galley which fits within the existing galley footprint.

1.4 Acronyms and Abbreviations

AIL	Action Item List
CA	Contract Authority or Contract Award
CCM	Contract Closure Meeting
CCP	Contract Change Proposal
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CEPA	Canadian Environmental Protection Act
CEIL	Contract End Items List
CHI	HMCS Chicoutimi
CI	Configuration Item
CM	Configuration Management
CMP	Configuration Management Plan
C of C	Certificate of Conformance
COR	HMCS Corner Brook
COTS	Commercial Off The Shelf
CSA	Configuration Status Account
DA	Design Authority
DD	Detailed Design
DEM	Data Exchange Management
DID	Data Item Description
DND	Department of National Defence
DOD	Department Of Defence
DSS	Depot Spares Sets
EAR	Engineering Analysis Report
EBS	Equipment Breakdown Structure
ECP	Engineering Change Process
ERN	Equipment Reference Number
FAS	First Article System
FAU	First Article Units
FASD	First Article System Design
FAT	Factory Acceptance Testing

FCA	Functional Configuration Audit
FOC	First of Class
FOS	Follow-On-Shipset
FMF	Fleet Maintenance Facility
FPR	Final Project Review
FSR	Field Service Representative
FT	Functional Test
GFI	Government Furnished Information
GQA	Government Quality Assurance
HAT	Harbour Acceptance Testing
HAZMAT	Hazardous Material
HFX	Halifax
HMCS	Her Majesty’s Canadian Ship
IAW	In Accordance With
ILS	Integrated Logistics Support
ILSM	Integrated Logistics Support Manager
IR	Issue Register
ISW	Installation, Setting to Work, Testing And Acceptance
ISO	International Organization of Standardization
ITR	Initial Technical Review
MCN	Material Change Notice
MRI	Master Record Index
MSDS	Material Safety Data Sheet
MRB	Material Review Board
MSDS	Material Safety Data Sheet
MTBF	Mean Time Between Failures
NPMS	Naval Preventive Maintenance Schedules
OBQT	On-Board Qualification Tests
OEM	Original Equipment Manufacturer
PCA	Physical Configuration Audit
PD	Preliminary Design
PDF	Portable Document Format
PDR	Preliminary Design Review
PE	Project Engineer
PHST	Packaging, Handling, Storage and Transportation
PKO	Project Kick Off
PLN	Plan
PM	Project Manager
PMP	Project Management Plan

PPB	Provisioning Parts Breakdown
PPD	Project Principal Designer
PRCD	Procedure
PRM	Progress Review Meeting
PRR	Production Readiness Review
PS	Project Schedule
PSPC	Public Services and Procurement Canada
PSR	Project Status Report
QA	Quality Assurance or Quality Audits
QAA	Quality Assurance Authority
QAR	Quality Assurance Representative
QMS	Quality Management System
RCN	Royal Canadian Navy
RMP	Risk Management Plan
RR	Requirements Review
RSPL	Recommended Spare Parts List
RPT	Report
RVCRM	Requirements Verification Cross Reference Matrix
SBR	System Boundaries Report
SDS	Safety Data Sheets
SME	Subject Matter Expert
SOQR	Statement of Quality Requirements
SOW	Statement of Work
SRCL	Security Requirements Check List
SRR	System Requirements Review
SS	System Specification
SSMRS	Standard Ship Maintenance and Repair Specification
SSSPEC	Sub-System Specification
SS/SSPEC	System/Sub-System Specification
STW	Set-to-Work
TA	Technical Authority
TDP	Technical Data Package
TM	Technical Manual
TRR	Test Readiness Review
TSOR	Technical Statement of Requirement
WBS	Work Breakdown Structure
WSR	HMCS Windsor

WHMIS	Workplace Hazardous Material Information System
VCRM	Verification Cross Reference Matrix
VCS	Victoria Class Submarines
VIC	HMCS Victoria
VISSC	Victoria In-Service Support Contract

1.5 Terminology

1.5.1 Allocation Baseline - The initial approved allocated configuration identification that orientates documentation for a Configuration Item (CI), describes the functional and interface features that are allocated from those of the higher level CI, and describes the verification to demonstrate that the specified features that can be achieved. See also Configuration Baseline, Functional Baseline, and Product Baseline.

1.5.2 Analysis - an element of verification that utilizes established technical evaluation or mathematical models or simulations, algorithms, calculations, charts, graphs, representative data, or other scientific principles and procedures to provide evidence that stated requirements are met. See also Certification, Demonstration, Inspection, Test, and Verification.

1.5.3 Baseline - A configuration identification document or set of such documents formally designated (by the Government) and fixed at a specific time during a configuration item's life cycle. They are established at those points in the project where it is necessary to define a formal departure point for control of future changes in performance, design, production, and related technical requirements. For configuration management purposes there are three baselines, which are normally established chronologically as follows: functional baseline, allocation baseline, and product baseline.

1.5.4 Certification - an element of verification that utilizes already existing, previously completed, detailed, and customer approved qualification tests, including procedures and results, for products or components of products determined to be Military-off-the-Shelf (MOTS) or Commercial-off–the-Shelf (COTS), to provide evidence that the stated requirements are met. See also Analysis, Demonstration, Inspection, Test, and Verification.

1.5.5 Configuration Baseline - a fixed reference established by defining and recording the approved configuration documentation for a system or an individual CI, including related documentation, at a milestone event or at a specified point in the life cycle, thus offering protection from unwarranted and unwanted changes. See also Allocated Baseline, Functional Baseline, and Product Baseline.

1.5.6 Configuration Item (CI) - An item identified by its functional and physical characteristics for the purpose of monitoring, change control and auditing.

1.5.7 Demonstration - an element of verification consisting of actual operation, adjustment, or re-configuration of items to provide evidence through observation under specific scenarios that the requirements are met. The demonstration may require some simple quantitative measurements such as time to perform tasks or dimensions. See also Analysis, Certification, Inspection, Test, and Verification.

1.5.8 Functional Baseline - the approved documentation describing the performance characteristics (functional, inter-operability, and interface features) of a system or top level CI and the verification to demonstrate that the performance requirements can be achieved. See also Allocated Baseline, Configuration Baseline, and Product Baseline.

1.5.9 Functional Configuration Audit – verifies the CIs performance against the approved Functional and Allocated Baselines. See also Physical Configuration Audit.

1.5.10 Inspection - an element of verification not involving the use of special tools and gauges. The inspection is an examination of a product design, product, process or installation. See also Analysis, Certification, Demonstration, Inspection, Test and Verification.

1.5.11 Product Baseline - The initial approved or conditionally approved product configuration identification that describes the configuration of a CI during production, utilization, and support phases of the equipment life cycle. See also Allocated Baseline, Configuration Baseline, and Functional Baseline.

1.5.12 First Article System (FAS) – A system/item that is produced to be tested in support of that system's/item's qualification process. Multiple FAS's may be produced to support parallel qualification testing efforts in an effort to shorten the schedule for system/item qualification.

1.5.13 1st line Maintenance - 1st line maintenance is defined as the preventive and corrective maintenance normally performed by ship's staff.

1.5.14 2nd line maintenance - 2nd line maintenance is defined as the preventive and corrective maintenance normally performed by Fleet Maintenance Facility (FMF) staff.

1.5.15 On-Board Spares (OBS) – Spares carried on board to support 1st line Maintenance.

1.5.16 2nd Line Spares (2L Spares) – Spares carried at the Fleet Maintenance Facility (FMF) to support 2nd line Maintenance.

1.5.17 Shipset – Full Rate Production system/item to be installed on a platform (ship or submarine).

1.5.18 Depot Spare Shipset- Full Rate Production system/item to be kept in the Supply Depot until drawn to replace a Shipset.

1.5.19 Installation – The activities for a system/item that include removing the system/item that is being replaced, preparing the location for the installation of the new system/item, physical installation of the new system/item and connecting it up to any required power, hydraulics, cooling/heating sources, and connecting into any higher level system of which it is a part.

1.5.20 Set To Work – The activities for a system/item that take place after installation and prior testing that initialize and bring the system/item on line and prepare it for follow on harbour and sea acceptance testing.

1.5.21 First Of Class (FOC) Shipset – First installation of a system/item on the 1st target platform (ship or submarine).

1.5.22 On-Board Qualification Tests (OBQTs) – Qualification tests that could only be carried out once the system/item has been installed and set-to-work.

1.5.23 Follow-On-Shipset (FOS) - 2nd, 3rd, 4th, etc. installation of a system/item on follow on platforms of the same class.

1.5.24 Installation and Set-to-Work (ISW) – see the Installation and Set-to-Work descriptions above.

1.5.25 Type Approval -Type Approval is an impartial certification system that provides independent third-party Type Approval Certificates attesting to a product's conformity with specific standards or specifications. It is based on design review and type testing or, where testing is not appropriate, a design analysis.

2 APPLICABLE DOCUMENTS

2.1 Government Documents

2.1.1 The prescribed versions of the following documents are a part of this specification to the extent specified herein.

Table 1: List of Government Documents

Item	Document Number	Title
1.	Drawing # 001279777	Galley Arrangement
2.	Drawing # 001279778	Galley Equipment Stowage
3.	Drawing # 001280036	Seat Galley Equipment
4.	Drawing # 001280625	Seat Galley Range Controller
5.	Drawing # 001280693	Seat Galley FR Heater
6.	Drawing # 001281386	Filter Grease Galley
7.	Drawing # 001281589	Arrangement of Electrical Equip. Galley Cover and MOD Sheet
8.	BRF 1966(25)01	Galley Range
9.	BRF 1966(25)02	Deep Fat Fryer
10.	BRF 1966(25)05	Servery Counter
11.	BR 3021(1)	Shock Manual
12.		Requirements Elicitation Document (RED), BMT Fleet Technologies dated August 2021
13.		NETE Study which includes: 1. Options Analysis Phase 1 2. Options Analysis Phase 2 Recommendations Report for a New Galley Design dated November 2017
14.	DefStan 08-160	Requirements for Electrical Installations, Issue 1, June 2003
15.	DefStan 00-250 Part 3 Section 12	Operations, Maintenance and Support
16.	DefStan 00-250 Part 3 Section 9	People Characteristics
17.	a. CEPA: Schedule 1, Toxic Substances List b. Appendix 2	Canadian Environmental Protection Act, 1999 Hong Kong Convention
18.	D-LM-008-002/SF-001	Specification For Marking For Storage And Shipment

Item	Document Number	Title
19.	D-01-400-001/SG-000	Engineering Drawing Practices for Class Drawing and Technical Data List
20.	C-03-000-000/NQ-E01	Treasury Board hazmat policy & HFX Class G-1 spec (see paras 33,41 & 42)
21	A-LM-505-001/AG-001	Packaging Handling Storage and Transportability

2.2 Non-Government Documents

2.2.1 Where a section of this SOW references a standard, the whole standard may or may not apply. Where the whole standard does not apply, the tailoring required by the Project Manager (PM) or Technical Authority (TA) will be indicated in the section. The Contractor must specify the extent of his compliance to the referenced standard in his proposal.

2.2.2 If any referenced standard has been superseded by a new revision or it has become obsolete and it has been replaced by a new standard or it has not been replaced, then the Contractor must propose the use of the latest revision or replaced standard or an equivalent standard respectively.

Table 2: List of Non-Government Documents

Item	**Standard**	**Title**
1.	ISO21500:212	Guidance on Project Management
2.	IEEE 15288	System Engineering
3.	ISO 9001:2008	Quality Management System - Requirements
4.	EIA-649-A	National Consensus Standard for Configuration Management
5.	MIL-STD-881 C	Work Breakdown Structures for Defense Material Items
6.	MIL-STD-1388 1A	Logistic Support Analysis
7.	MIL-STD-1388 2B 30 May 1997	DOD Requirements for a Logistic Support Analysis Record
8.	MIL-HDBK-881A 30 July 2005	Department of Defence Handbook Work Breakdown structures for Defence Materials Items
9.	MIL-STD-973	Configuration Management
10.		Bunn 23050.6001 Coffee Maker Specification Sheet

Item	**Standard**	**Title**
11.		HP24RO-3-5 Perlick 2 Dwr Refrigerator Specification Sheet (installed onboard HMCS WINDSOR)
12.		Silverking Majestic Series Milk Dispensers Models: SKMAJ21, SKMAJ2, SKMAJ3 115V/60Hz Specification Guide

2.3 Order of Precedence

2.3.1 In the event of a conflict between the documents in Tables 1 and 2, the SOW and the TSOR, the following Order of Precedence must apply:

2.3.1.1 SOW;

2.3.1.2 TSOR; and

2.3.1.3 The documents in Table 1 and Table 2.

2.3.2 In the event that the Contractor cannot resolve a precedence issue, the Contractor is to inform Contract Authority (CA) who will in turn seek resolution from the Technical Authority (TA).

3 GENERAL REQUIREMENTS

3.1 Scope of Work

3.1.1 The Contractor must design/customize, develop, procure, manufacture, integrate, test, qualify, and deliver the equipment associated with the galley improvements and associated data in accordance with the requirements detailed in this SOW and Annex “B” Technical Statements of Requirements (TSOR).

3.1.2 As well, the Contractor must attend and support the installation and set-to-work and harbour acceptance testing of the galley improvements in accordance with the contract.

3.1.3 The Contractor must deliver the galley improvements data as identified in Appendix 1 Contract Data Requirements List.

3.2 Deliverables and Tasks

3.2.1 General

3.2.1.1 The Contractor must supply the following deliverables and services in accordance with the requirements detailed in this SOW and Annex “B”, TSOR:

3.2.2 Project Management

3.2.2.1 The Contractor must establish and maintain a Project Management (PM) capability to meet the requirements of the Contract. PM tasks are detailed in Section 4 of the SOW.

3.2.3 Galley Design

3.2.3.1 The Contractor must perform the galley design activities and any required engineering processes throughout the concept, development, certification and approval, full production, installation and set-to-work, and final tests of the Galley Improvement Project. Galley design and engineering tasks are detailed in Section 5 of the SOW.

3.2.4 Production

3.2.4.1 The Contractor must perform production activities as detailed in Section 6 of the SOW.

3.2.4.2 The Contractor must produce the improved galley as detailed in Section 6 of the SOW.

3.2.4.3 Galley Deliveries. The Contractor must deliver improved galley First Article Shipset (FAS) and Follow On-Shipset (FOS) deliverables in the quantities identified in Table 3 below.

Item	FAS	FOS	Total
Improved Galley Deliverables	1	3	**4**

Table 3: Improved Galley Deliverables

3.2.4.4 The Contractor must produce improved galley On-Board Spares (OBS), FOS OBS, 2nd Line Spares (2L Spares) and Depot Spares as detailed in Section 6 of the SOW.

3.2.4.5 The Contractor must deliver improved galley FAS OBS, FOS OBS, 2L Spares, and depot spares sets in the quantities identified in Table 4 below:

Item	FAS OBS	FOS OBS	2L Spares	Depot Spares	Total
Improved Galley Spares Sets	1	3	2	2	**8**

Table 4 - FAS OBS, FOS OBS, 2L Spares, and Depot Galley Improvement Spares

Note: The spares sets are to be defined by the Contractor's Recommended Spare Parts Lists (RSPL) as approved by Canada.

3.2.5 Installation and Set to Work and Harbour Acceptance Tests

3.2.5.1 The Contractor must execute improved galley Installation and Set to Work (ISW) and Harbour Acceptance Tests (HAT) as detailed in Section 7 of the SOW. This includes the number of instances of the provision of FSR support as identified in Table 5 below:

FSR Support	FAS Installations
Improved Galley	1

Table 5- FSR Support Instances

3.2.6 Quality Assurance. The Contractor must execute improved galley quality assurance tasks as detailed in Section 8 of the SOW.

3.2.7 Configuration Management. The Contractor must execute improved galley configuration management tasks as detailed in Section 9 of the SOW.

3.2.8 Integrated Logistics Support. The Contractor must execute the improved galley's Integrated Logistics Support tasks as detailed in Section 10 of the SOW.

3.2.9 Acceptance Processes. The Contractor must follow the improved galley Acceptance Process as identified in Section 11 of the SOW.

3.3 Assumptions

3.3.1 Equipment

3.3.1.1 The Deep Fat Fryer will be removed without replacement, and the vacant under counter space may be used (as necessary) to accommodate the new range, fridge, and if remaining space is available may become additional dry provision storage.

3.3.1.2 The Gastronorm Servery Counter, Gastronorm Range (and associated Control Power Supply) will be replaced with COTs equivalents. Where it is not possible for a COTs equivalent to meet the requirements, then modified COTs or a custom design with prior approval by DND will be acceptable.

3.3.1.3 The Coffee Machine, Milk Dispenser and Juice Dispenser will be removed without replacement.

3.3.1.4 The Microwave Oven and Refrigerator will be replaced, and a Water Dispenser will be added using COTs equivalents.

3.3.2 Design and Engineering

3.3.2.1 The design and engineering effort associated with this project will include any changes to the galley space to accommodate the new equipment's mounting arrangements and ship's power interfaces and any custom built cabinetry (e.g. under counter cabinet to replace the deep fat fryer) and as necessary any modified COTS or custom designed replacements for the Range and the Servery

3.4 Constraints

3.4.1 Form, Fit, Function Compatibility

3.4.1.1 The improved galley must be form, fit and function compatible with the units that they are replacing. Changes to submarine systems, external to the improved galley, to which the improved galley is interfaced, will not be permitted.

3.5 Support Provided by Canada

3.5.1 Government Furnished Information (GFI)

3.5.1.1 Canada, on Contract Award, will provide to the Contractor the GFI identified in Table 1, Section 2 of this SOW.

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4 PROJECT MANAGEMENT

4.1 General

4.1.1 This section identifies the Contractor’s obligation to establish and maintain a project management capability to meet the requirements of the Contract.

4.1.2 Organization

4.1.3 The Contractor must establish and maintain within its company structure a project management organization (referred to as the "Contractor's Project Management Organization") with suitable capability to perform the contract.

4.1.4 Project Manager (PM). The Contractor must have a qualified PM with a minimum of five (5) years project management experience in the last ten years, responsible for managing the work, to be carried out in the execution of this contract. The Contractor's PM must have the authority to plan, direct, control and make decisions for the Contractor with respect to the contract. The Contractor’s Project Manager must be the main point of contact with Canada.

4.2 Project Planning

4.2.1 Project Management Plan (PMP)

4.2.1.1 The Contractor must, using best commercial practices, prepare and deliver a PMP in accordance with (IAW) CDRL-PM-01 and DID-PM-01.

4.2.1.2 The PMP must describe the Contractor’s plan and processes for organizing, staffing, controlling, and directing the activities necessary to fulfill the requirements of this SOW.

4.2.1.3 The Contractor must manage the project IAW the approved PMP and its schedule.

4.2.2 Work Breakdown Structure (WBS)

4.2.2.1 The Contractor’s PMP must reference the project’s WBS. The Contractor must prepare and deliver a WBS in accordance with CDRL-PM-02 and DID-PM-02.

4.2.3 Project Schedule (PS)

4.2.3.1 The Contractor’s PMP must reference a PS. The PMP must include all major tasks up-to level 3 applying the Critical Path Method in accordance with the reference at Section 2 Applicable Documents Table 2, Item 1. The Contractor must prepare, update and deliver a PS in accordance with CDRL-PM-03 and DID-PM-03.

4.2.4 Data Exchange Management (DEM)

4.2.4.1 The Contractor's PMP must address the Contractor's DEM program to control access and delivery of Contract data and deliverables IAW the approved PMP.

4.3 Reporting and Communications

4.3.1 Progress Report (PR)

4.3.1.1 The Contractor must monitor progress and develop and deliver PRs, in advance of the Section 4.5 Project Review Meetings (PRM), IAW CDRL-PM-04 and DID-PM-04.

4.3.1.2 The PR must focus on issues, concerns and the action taken to address issues and concerns.

4.3.1.3 The Contractor must use the PR as the basis for developing the agenda for the PRM.

4.3.2 Problem Reporting

4.3.2.1 Should an issue arise that could cause a delay in the schedule or impact the contract, the Contractor must advise Canada, by e-mail within three (3) working days of the issue arising. Upon such notification Canada will advise whether an unscheduled meeting or other actions are required.

4.4 Security

4.4.1 Security Requirements. Contract requirements for personnel and facilities security clearances are identified in the contract's Annex D -Security Requirements Check List (SRCL).

4.4.2 Access to Canada's Facilities. The Contractor may be provided site visit access to Canada's facilities, on an as required basis and non-interference basis, to allow the Contractor to view systems and obtain relevant data. Site visits may also be used to interview Canada's system subject matter experts (SMEs) to determine or confirm equipment functionality and operational parameters.

4.4.3 Visit Request Notice. The Contractor must provide at least eight (8) weeks' notice for any submarine site visits.

4.5 Project Meetings and Reviews

4.5.1 Administrative Support. The Contractor must host and attend project meetings and reviews as required by this SOW, at the Contractor's facility or elsewhere

as agreed to by Canada. For all reviews and meetings hosted by the Contractor, the Contractor must:

4.5.1.1 Arrange the venue;

4.5.1.2 Co-ordinate with Canada as appropriate;

4.5.1.3 Provide all administrative facilities and presentation equipment;

4.5.1.4 Ensure that qualified Contractor and subcontractor personnel attend the reviews or meetings;

4.5.1.5 Ensure and report that action items and decisions under the control of the Contractor as a result of the various meetings and reviews are implemented where applicable; and

4.5.1.6 Maintain files, records, documents of all reviews and meetings.

4.5.2 Supporting Documentation.

4.5.2.1 The Contractor must prepare update and submit in source and .PDF format, at least five (5) working days in advance of each type of review or meeting, any supporting documentation required to support the review or meeting.

4.5.3 Meeting Agenda

4.5.3.1 The Contractor must prepare and submit a review or meeting agenda IAW CDRL-PM-05 and DID-PM-05. An electronic copy of the agenda will be submitted to Canada's attendees at least five (5) working days in advance of each type of review or meeting except in the case of unscheduled meetings in which case the Contractor must submit an electronic copy of the agenda in an agreed to time frame prior to the meeting. Canada and the Contractor must mutually agree to the contents of the agenda.

4.5.4 Minutes

4.5.4.1 The Contractor must record, produce, deliver and revise, as required, the minutes for all reviews and meetings IAW CDRL-PM-06 and DID-PM-06. An electronic copy of the minutes will be submitted to Canada within five (5) working days of the review or meeting. Canada will advise the Contractor of any issues with the minutes with two (2) days of receiving the minutes. Minutes are accepted once signed by Canada.

4.5.4.2 No change to the project's SOW, TSOR(s), cost or schedule, as defined by the Contract, may be authorized by the minutes of a meeting. Such action may only be done with the explicit agreement of the CA.

4.5.5 Cancellation

4.5.5.1 The Contract Authority (CA) may cancel any review or meetings at their discretion with a minimum of five (5) working days' notice. Rescheduling of meetings by the Contractor must be done only with the explicit agreement of Canada.

4.5.6 Action Item List (AIL)

4.5.6.1 The Contractor must maintain a historical, chronological and up-to-date list of issues and associated action items resulting from reviews, meetings, or correspondence between the CA and the Contractor in a format acceptable to the CA for the duration of the project.

4.5.6.2 The Contractor must develop, deliver and update the AIL IAW CDRL-PM-07 and DID-PM-07.

4.5.6.3 The Contractor must ensure that, once entered into the AIL, no entry is deleted.

4.5.6.4 The Contractor must include a subset of the AIL containing all open action items as an attachment to the PR.

4.5.6.5 The Contractor must, upon the request by Canada at any time, make a copy or reproduction of the most current AIL, or any portion thereof available to Canada.

4.5.7 Project Kick Off (PKO) Meeting

4.5.7.1 Within two (2) weeks of the Contract Award (CAwd), the Contractor must conduct a PKO at the Contractor's facility.

4.5.7.2 The PKO meeting must include but is not limited to, a review of the:

4.5.7.2.1 Project Deliverable Requirements;

4.5.7.2.2 Technical Requirements;

4.5.7.2.3 Project Schedule including Critical path activities;

4.5.7.2.4 Plan for activities during the following review period;

4.5.7.2.5 Risk management concerns and mitigation actions;

4.5.7.2.6 Issue management concerns and mitigation actions; and

4.5.7.2.7 Any other contractual or programmatic issues associated with the project as mutually agreed between the TA, Contract Authority (CA) and the Contractor.

4.5.8 Progress Review Meetings (PRM)

4.5.8.1 The Contractor must coordinate and conduct PRMs with Canada, at a frequency to be mutually agreed between Canada and the Contractor. The first PRM must commence one month after the PKO meeting. The PRM must include but not be limited to a discussion of the project status against the items reviewed in the PKO review above. PRMs may be held by Teleconference, or when they coincide with Engineering Review, at the Contractor's facility.

4.5.9 Other Scheduled Meetings

4.5.9.1 The Contractor may identify through other requirements stipulated in this SOW, and the submission of his various Plans the necessity to schedule and conduct other meetings with Canada (e.g. Design/Engineering requirements/design reviews). The Contractor must identify and update as necessary, these meetings in the PS. Canada's approval of the PS will confirm Canada's intention to attend such meetings.

4.5.10 Unscheduled Meetings

4.5.10.1 Canada and or the Contractor (hereinafter referred to as the parties) must conduct unscheduled meetings as agreed to by the parties. When calling for and scheduling an unscheduled meeting, the party calling the meeting must provide the other party with reasonable advanced notice of the meeting.

4.5.11 Contract Closure Meeting (CCM)

4.5.11.1 The Contractor must hold the CCM with Canada at a time to be determined by Canada. This meeting must take place no later than one (1) year after acceptance of the last deliverable.

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5 DESIGN AND ENGINEERING

5.1 General

5.1.1 Engineering Organization, Management and Planning

5.1.1.1 The Contractor must establish and maintain within its company a discreet design and engineering organization (referred to as the "Contractor's Project Design and Engineering Organization") with the capability to perform the engineering work identified in the contract.

5.1.1.2 The Contractor must carry out design and engineering for the project in accordance best commercial practices.

5.1.1.3 The Contractor's project design and engineering organization and its plan to execute the project's engineering work must be described in the PMP, WBS and PS. The Contractor must conduct the design and engineering activities in accordance with the PS.

5.1.2 Project Principal Designer (PPD)

5.1.2.1 The Contractor must have a dedicated PPD responsible to the Contractor’s PM to manage the design and engineering tasks required for this project. The Contractor's PPD must have the authority to plan, direct, control and make decisions for the Contractor with respect to the systems engineering tasks of this project.

5.1.3 Design and Engineering Tasks

5.1.3.1 During the conduct of this contract, the Contractor must conduct the following design and engineering tasks:

5.1.3.1.1 Research and recommendation of replacement equipment that will meet the requirements of the improved galley;

5.1.3.1.2 Design the equipment mounting arrangements and interfaces with other ship’s systems (e.g. power);

5.1.3.1.3 Design of any custom cabinetry required and any modified COTS or custom equipment required by the improved galley design; and

5.1.3.2 Prepare and conduct design and engineering reviews and audits.

5.1.4 Type Approval

Note: The COTS appliances may already be CSA (or equivalent) approved. The type approval is expected to be for any custom designed or modified COTS equipment and the mounting arrangements and electrical interfaces and whether these equipment are suitable for use in the marine environment.

5.1.4.1 The Contractor must have their Galley Improvement design and engineering type approved by an appropriate Marine Classification Society.

5.2 Galley Improvement Design

5.2.1 System Definition Objectives

5.2.1.1 The Contractor acknowledges that for the improved galley design the objectives of system definition are to:

5.2.1.1.1 Validate that the improved galley design requirements are complete and well formulated, both individually and in sets;

5.2.1.1.2 Ensure that the improved galley requirements are consistent with Canada's intent;

5.2.1.1.3 Ensure that both Canada and the Contractor have a common understanding of the improved galley requirements; and

5.2.1.1.4 Demonstrate convergence on, and achievability of, the improved galley requirements.

5.2.2 Boat Survey

5.2.2.1 The Contractor must, within two (2) months of contract award, conduct a boat survey. The purpose of this survey is to assist the Contractor with putting the Technical Statement of Requirements (TSOR), for the improved galley design into context and to allow the Contractor to confirm the system boundaries of the improved galley design. This boat survey is not to exceed one week. The Contractor must request the boat survey through Canada. Canada's Technical Authority (TA) will arrange for the boat survey with the RCN.

5.2.3 System Boundaries Report (SB RPT)

5.2.3.1 The Contractor, on completion of the boat survey, must, for the improved galley design develop and deliver a SB RPT in accordance with CDRL-ENG-01 and DID ENG-01.

5.2.4 System Requirements Review Report (SRR RPT)

5.2.4.1 The Contractor, informed by the Boat Survey and the SB RPT must develop and deliver, for the improved galley design a SRR RPT in accordance with CDRL-ENG-02 and DID ENG-02.

5.2.5 System Requirements Review (SRR) Meeting

5.2.5.1 The Contractor must, within one (1) month of the boat survey, conduct with Canada a SRR meeting at the Contractor's facilities. This meeting will review the SRR Report and any recommended and agreed to changes to the TSOR for the improved galley design. Should there be agreed to changes to the TSORs, the contract will be amended to reflect these changes.

5.2.6 System/Subsystem Specifications (SS/SSSPEC)

5.2.6.1 The Contractor must develop and deliver a SS/SSSPEC meeting the requirements of each of the improved galley design TSOR IAW CDRL ENG-03 and DID-ENG-03. Where these items are COTs, their specification sheet shall suffice. Where the item is custom or modified then a SS/SSSPEC will be required.

5.2.7 System/Subsystem Design Document (SSDD)

5.2.7.1 The Contractor must, for each custom or modified item in the improved galley design, develop and deliver a SSDD meeting the requirements for each custom made item as identified in their SS/SSSPEC IAW CDRL-ENG-04 and DID-ENG-04.

5.2.8 Functional Baseline (FBL)

5.2.8.1 The Contractor must, for the improved galley design, submit a Contract Change Proposal (CCP) to establish the SS/SSPEC as the FBL for these items and hence the basis for the development and verification of these items.

5.2.9 Requirements Verification

5.2.9.1 The Requirements Verification Cross Reference Matrix (RVCRM) captures the design requirements, the requirements verification methodology (e.g. analysis, demonstration, inspection, test, similarity etc.) as requested and proposed in the Compliance Verification Matrix in Appendix TBD of this SOW for the improved galley design. It identifies the project developed objective evidence that proves that a requirement has been met. It is completed as the objective evidence becomes available and when complete the RVCRM provides a record that the design requirements have been met.

5.2.10 Engineering Analysis Report (EAR)

5.2.10.1 The Contractor must develop and deliver, for the improved galley design in Contractor format, any EARs, for engineering analysis which is not subsequently covered elsewhere (e.g. in other Data Deliverables). The Contractor is to propose a schedule for the delivery of these EARs.

5.2.11 Requirements Verification Cross Reference Matrices (RVCRM)

5.2.11.1 The Contractor must develop and deliver, for the improved galley design, a RVCRM IAW CDRL-ENG-05 and DID-ENG-05.

5.2.12 Preliminary Design (PD)

5.2.12.1 The Contractor, for the improved galley design must develop a PD meeting the requirements of their respective SS/SSSPECs. This PD may be based on COTS, modified COTS or be of a new design.

5.2.13 Engineering Drawings and Associated Lists

5.2.13.1 Through the design process the Contractor must develop, update and deliver engineering drawings of the improved galley design in accordance with DID-ENG-00.

5.2.14 Equipment Breakdown Structure (EBS)

5.2.14.1 An EBS identifies and recommends potential Configuration Items (CIs) to Canada.

5.2.14.2 The Contractor must, for the improved galley design, develop and deliver an EBS IAW CDRL-ENG-06.

5.2.14.3 The Contractor must regularly update the EBS as the improved galley design evolves, clearly indicating where and how each element of the design is architecturally connected.

5.2.14.4 The Contractor must use the final EBS as part of the established Product Baseline configuration for the improved galley design.

5.2.14.5 The Contractor must build the improved galley design to the established Product Baseline configuration unless deviations and waivers have been approved by Canada.

5.2.15 Obsolescence

5.2.15.1 The Contractor must ensure that the improved galley design does not include parts that have become obsolete or are expected to become obsolete within five (5) years after delivery of the first improved galley design.

5.2.16 Environment and Hazardous Materials Management

5.2.16.1 HAZMAT is defined as any substance capable of posing a risk to health, safety, property or environment when stored, handled or transported, and is so classified in regulations governing transportation. Hazardous materials include (but are not limited to) dangerous goods identified at the reference Section 2 Applicable Documents, Table 1 Item 17, a and b.

5.2.16.2 The Contractor must comply with all applicable environmental legislation, including the Canadian Environmental Protection Act (CEPA) and its regulations such as those listed in this section.

5.2.16.3 The Contractor, in developing the improved galley design must propose materials that are not hazardous. Canada will review and assess the proposed materials and approve them for use in the VCS.

5.2.16.4 To facilitate Canada’s review and assessment of the Contractor’s proposed material, the Contractor must provide a Material List (ML) and any associated Safety Data Sheets (SDS).

5.2.16.5 Where the Contractor cannot propose materials that are not hazardous, the Contractor must, only incorporate hazardous materials in the design of the improved galley with the agreement of Canada when no acceptable, less hazardous substitute is available.

5.2.16.6 Material List/Material Assessment

5.2.16.6.1 The Contractor must develop, deliver and update a list of all materials used in the improved galley design IAW CDRL-ENG-07 and DID-ENG-07. The purpose of this list is for the Contractor, to identify to Canada for review, the materials proposed to be incorporated into the improved galley design so that they may be assessed by Canada for use in submarines.

5.2.16.7 Safety Data Sheets (SDS)

5.2.16.7.1 The Contractor must, for any material assessed as Dangerous/Hazardous under Canada’s Workplace Hazardous Material Legislation included in the improved galley design, deliver for inclusion in the submarine’s Workplace Hazardous Material Information System (WHMIS) that material’s associated SDS IAW CDRL-ENG-08 and DID-ENG-08.

5.2.17 Preliminary Design Report (PD RPT)

5.2.17.1 The Contractor must, for the improved galley design develop and deliver a PD RPT IAW CDRL-ENG-09 and DID-ENG-09.

5.2.18 Preliminary Design Review (PDR) Objectives

5.2.18.1 The Contractor acknowledges that the objectives of the PDR are to:

5.2.18.1.1 Permit the TA to closely review that Contractor’s preliminary design;

5.2.18.1.2 Confirm that all subsystem building block designs satisfy their parent requirements;

5.2.18.1.3 Determine if the preliminary designs are mature and ready to proceed into detailed design;

5.2.18.1.4 Evaluate the progress, technical adequacy and risk resolution on a technical cost and schedule basis;

5.2.18.1.5 Establish the allocated baseline; and

5.2.18.1.6 Confirm that the approaches to the next level have been appropriately planned.

5.2.19 PDR Meeting

5.2.19.1 The Contractor must, within two (2) months of the SRR meeting, conduct a PDR meeting with Canada at the Contractor’s facilities. The PDR meeting will review the PD RPT the improved galley design.

5.2.20 PDR Meeting Exit Criteria

5.2.20.1 The PDR will be considered successful and complete once PDR recommended and agreed to minuted actions with respect to changes to the preliminary design have been taken into account and the respective PD documentation has been updated to reflect these changes.

5.2.21 Detailed Design (DD)

5.2.21.1 The Contractor, for the improved galley design, must develop a DD meeting the requirements of the improved galley design S/SSSPEC and any PD documentation that has been updated as a result of the PDR.

5.2.21.2 The Contractor, for the improved galley design, must develop and deliver a DD RPT IAW CDRL-ENG-10 and DID-ENG-10.

5.2.22 Critical Design Review (CDR) Objectives

5.2.22.1 The Contractor acknowledges that the objectives of the CDR are to demonstrate:

5.2.22.1.1 That all system specifications, drawing and software development documentation have been appropriately defined;

5.2.22.1.2 That building block end product designs satisfy their parent requirements;

5.2.22.1.3 That enabling product requirements have been adequately defined; and

5.2.22.1.4 That the building blocks are either ready for further development, or are adequately defined.

5.2.23 CDR Meeting

5.2.23.1 The Contractor must, within six (6) months of PDR, conduct a CDR meeting at the Contractor’s facilities. The CDR meeting will review the DD Report for the improved galley design.

5.2.24 CDR Exit Criteria

5.2.24.1 The CDR will be considered successful and complete once CDR recommended and agreed to minuted actions with respect to changes to the DD design have been taken into account and the respective DD documentation has been updated to reflect these changes.

5.2.25 First Article System Design (FASD)

5.2.25.1 The Contractor must, for the improved galley design, develop a FASD meeting the requirements of the improved galley design SS/SSSPEC and any DD documentation that has been updated as a result of the CDR. These FASDs must be completed no later than two months after the CDR.

5.2.25.2 FAS Design Report (FASD RPT)

5.2.25.3 The Contractor must, for the improved galley design, develop and deliver a FASD RPTs IAW CDRL-ENG-11 and DID-ENG-11.

5.2.25.4 Type Approval Report

5.2.25.5 The Contractor must, for the improved galley design, develop and deliver a Type Approval Report IAW CDRL-ENG-12, and in contractor format.

Note: It is recognized that most of the elements of the improved galley will be COTs. Sections 5.2.26, 5.2.27 and 5.2.28 below only applies to those elements of the improved galley that are of custom or modified design.

5.2.26 First Article Test Plan (FAT PLN)

5.2.26.1 The Contractor must, for any custom designed or modified COTs equipment for the improved galley, develop a FAT PLN IAW the guidance in DID- TST-01 and deliver and update these FAT PLN IAW CDRL-TST-01.

5.2.26.2 The Contractor must, for the improved galley, develop a FAT PLN in contractor format and deliver this plan IAW CDRL TST-01.

5.2.27 Production Test Plan (PRODT PLN)

5.2.27.1 The Contractor must, for any custom designed or modified COTS equipment for the improved galley, develop a Production Test Plan IAW the guidance in DID- TST-01 and deliver and update these Production Test Plan IAW CDRL-TST-02.

5.2.28 Factory Acceptance Test Procedure (FAT PRCED)

5.2.28.1 The Contractor must, for any custom designed or modified COTS equipment for the improved galley, develop a FAT PRCED IAW the guidance in DID-TST-02. The Contractor must deliver and update the FAT PRCEDs IAW CDRL- TST-03.

5.2.29 Shock Qualification Test Procedure (SHKQT PRCED)

5.2.29.1 The Contractor must, for any custom designed or modified COTS equipment for the improved galley, develop a SHKQT PRCED to prove that the item meets the Shock Requirements found in Tables 3 and 4 TSOR common. The Contractor must develop, deliver and update these procedures IAW CDRL-TST-05 and DID-TST-02.

5.2.30 First Article System (FAS) Test General

5.2.30.1 The purpose of FAS test is to demonstrate that for any custom designed or modified COTS improved galley equipment that this equipment’s design performance and functional requirements have been satisfactorily met.

5.2.30.2 Where the improved galley does include custom or modified COTS equipment, then FAS test will take place at the custom design or modified COTS sub-contractor.

5.2.30.3 FAS testing of custom designed or modified COTS equipment will demonstrate that the equipment meets its SS/SSS requirements.

5.2.30.4 FAS testing must be witnessed and accepted by Canada's Technical Authority (TA) or delegated representative.

5.2.31 Test Readiness Reviews (TRR)

5.2.31.1 For any custom designed or modified COTS equipment, prior to the commencement of each first article and production test activity the Contractor must complete a TRR which:

5.2.31.1.1 Confirms the completeness of the test procedures;

5.2.31.1.2 Assures that the system (or system element) is ready for testing;

5.2.31.1.3 Assures that any Canada resources required are prepared for formal testing; and

5.2.31.1.4 Assures that the Contractor is prepared for formal testing.

5.2.32 Witnessing of Test Activities

5.2.32.1 The Contractor must invite Canada or representatives appointed by Canada to witness all Test activities.

5.2.32.2 Unless otherwise notified in writing by Canada, Canada, or appointed representative(s) will witness system test activities.

5.2.32.3 Unless Canada has notified that it or its representative will not witness a test activity, the Contractor must not conduct the test activity in the absence of Canada or Canada's witness.

5.2.32.4 Unless otherwise agreed in writing by Canada, the Contractor must provide Canada with at least 45 Working Days advance notice of the start date and time of all test activities.

Note: It is recognized that most of the elements of the improved galley will be COTs. Sections 5.2.35 and 5.2.36 below apply only to those elements of the improved galley that are of custom or modified design.

5.2.33 Shock Qualification Testing (SHOCKQT)

5.2.33.1 The Contractor, for each type of custom designed or modified COTS equipment, must conduct FAS SHOCKQT using the approved test procedure.

5.2.33.2 SHOCKQT Report (SHOCKQT RPT)

5.2.33.2.1 On successful completion of SHOCKQT, the Contractor must develop FAS SHOCKQT RPTs in accordance with DID-TST-03 and deliver the Report IAW CDRL-TST-07.

5.2.34 FAS Qualification Test Report (FASQT RPT)

5.2.34.1 On successful completion of all FASQT, the Contractor must, for the improved galley, develop and deliver a FASQT RPT summarizing the results of the FAS qualification activities IAW CDRL-TST-08 and DID-TST-04.

5.2.35 Product Configuration Baselines

5.2.35.1 Once the design is agreed to, the functional, derived and product configuration Baselines are brought under configuration control by the Contractor. Any subsequent changes to these baselines are subject to the design change, deviation and waiver process identified in Section 8.4 below.

6 PRODUCTION

6.1 Production General

6.1.1 Production Organization and Planning

6.1.1.1 The Contractor must, for any custom designed or modified COTs equipment establish and maintain within its company structure a discrete production organization (referred to as the “Contractor’s Production Organization”) with suitable capability to perform the production aspects of the contract. The Contractor’s Production Organization and its plan to execute the project’s production work must be described in the PMP.

6.1.2 Production Manager

6.1.2.1 The Contractor must have a dedicated Production Manager responsible to the PM to carry out the production work required for this project. The Contractor’s production must have the authority to plan, direct, control and make decisions for the Contractor with respect to the production aspects of this project.

6.2 Production Tasks

6.2.1 Production of the Supplies

6.2.1.1 The Contractor must produce the improved galley and spares as identified in Table 3- Improved Galley Deliverables and Table 4-Improved Galley On-Board and Depot Spares.

Note: It is recognized that most of the elements of the improved galley will be COTs. They will come with commercial documentation that is available. The project will not generate any additional documentation with respect to these elements. Sections 6.2.2 and 6.2.3 below apply to those elements of the improved galley that are of custom or modified design

6.2.2 FAT

6.2.2.1 The Contractor, as applicable for the improved galley and spares, must conduct a production Factory Acceptance Test (FAT) using the item's approved FAT Procedure.

6.2.2.2 FAT conduct must be witnessed by Canada's Technical Authority (TA) or delegated representative.

6.2.2.3 FAT RPT

6.2.2.3.1 As applicable, on successful completion of the FAT for the improved galley, and spares, the Contractor must record the results of the production FAT in a FAT RPT prepared IAW the guidance contained in DID-TST-03 and deliver these FAT Report IAW CDRL-PRD-01.

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7 INSTALLATION, SET TO WORK, ACCEPTANCE

7.1 General

7.1.1 The improved galley FAS will be initially installed on a First of Class (FOC) submarine and any custom designed or modified COTS equipment will run through a series of FAS On-Board Qualification Tests (OBQTs). These FOC OBQTs are required to prove certain elements of the design that can only be proven by use on board a submarine. These design proving tests must be identified as such in the appropriate test Plan and Procedures and do not have to be repeated in Follow-On-Shipset (FOS) installations. Provided they are functioning properly, the FAS may remain on-board the submarine.

7.1.2 The Contractor must, for any custom designed or modified COTS equipment, include in the Plan and Procedures identified below, FOC and FOS test Plan and Procedures. The FOC test Plan and Procedures must be clearly annotated as FOC Shipset Only, and not required for FOS.

7.1.3 FOC testing must be witnessed and accepted by Canada's Technical Authority (TA) or delegated representative.

7.2 Plan and Procedures

7.2.1 Installation and Acceptance Plan (IA PLN)

7.2.1.1 The Contractor must, for any custom designed or modified COTS equipment for the improved galley, develop and deliver an IA PLN IAW CDRL-ISW-01 and DID-ISW-01.

7.2.2 Installation and Set to Work Procedures (ISW PRCED)

7.2.2.1 The Contractor must, for any custom designed or modified COTS equipment for the improved galley, develop and deliver an ISW PRCED IAW CDRL-ISW-02 and DID-ISW-02.

7.2.3 Harbour Acceptance Test Procedure (HAT PRCED)

7.2.3.1 The Contractor must, for any custom designed or modified COTS equipment for the improved galley, develop and deliver a HAT PRCED IAW CDRL-ISW-03 and DID-ISW-03.

7.3 Tasks

7.3.1 General

7.3.1.1 Canada will be responsible for installation, setting to work, testing and acceptance of the FAS and FOS improved galleys. The Contractor must, for any custom designed or modified COTS equipment, for the FAS, provide in person Field Service Representative (FSR) support to Canada to advise and support Canada's implementing agency in these installation activities. Canada's implementing agency may be either a Navy Fleet Maintenance Facility (FMF) or a Victoria In-Service Support Contract (VISSC) Shipyard.

7.3.1.2 Canada will provide the Contractor a scheduled requirement for Field Service Representative (FSR) support. Given such notice, the Contractor must provide an FSR or as required FSRs to meet the scheduled requirement.

7.3.1.3 For planning purposes the Contractor is to assume that the FAS may take place in Halifax, Nova Scotia or in Esquimalt British Columbia.

7.3.2 ISW

7.3.2.1 The Contractor must, for one (1) FAS shipset improved galley ISW, provide an FSR for two (2) weeks to advise assist FMF or Shipyard personnel in the scheduled installation of the improved galley carried out IAW the approved ISW PRCED. The purpose of this support is to ensure that the ISW is being done in a manner that will allow the systems to be properly functionally tested on board the submarine in follow on HATs.

7.3.2.2 ISW FSR RPT

7.3.2.2.1 The Contractor must, for the improved galley, produce and deliver ISW FSR RPTs IAW CDRL-ISW-05 and DID-ISW-00.

7.3.3 HAT

7.3.3.1 The Contractor must for the FAS improved galley HAT, provide an FSR for two (2) weeks to advise and assist FMF or shipyard personnel in the HAT of the improved galley carried out IAW the approved HAT PRCEDs. The purpose of this support is to ensure that the HAT is being done in a manner that will allow the systems to be properly functionally tested in follow on SATs.

7.3.3.2 HAT FSR RPT

7.3.3.2.1 The Contractor must, for the improved galley HAT, produce and deliver an FSR HAT RPT IAW CDRL-ISW-06 and DID-ISW-00.

7.3.4 Final Design Acceptance

7.3.4.1 On successful completion of the FAS HAT of the improved galley, Canada will provide the Contractor with a letter of acceptance of the improved galley's final design.

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8 QUALITY ASSURANCE

8.1 General

8.1.1 Quality Organization, Management and Planning

8.1.1.1 The Contractor must establish and maintain within its company structure a discrete Integrated Quality organization (referred to as the “Contractor’s Quality Organization”) with suitable capability and capacity to perform the quality activities of contract. This Quality Organization must be described in the Quality section of the PMP.

8.1.1.2 The Contractor must develop a schedule of quality activities as part of the PS.

8.2 Quality Management System

8.2.1 The Contractor must establish and maintain for the duration of the contract a Quality Management System that complies with the process model for Quality Management System Requirements found at the reference Section 2 Applicable Documents Table 2 Item 3.

8.2.2 The Contractor must conduct Quality Activities in accordance with the Contractor’s PMP and PS.

8.2.3 The Contractor must ensure that all approved Subcontractors have a quality management system appropriate to the work required under the subcontract.

8.2.4 The Contractor must ensure that all work performed under a Subcontract meets the requirements of the QMS to be applied by the Contractor under Section 8.2

8.2.5 Additional Subcontractor Quality Requirements.

8.2.5.1 The Contractor must flow these additional quality requirements to all Approved Subcontractors (as required).

8.2.5.2 The Contractor must ensure that all subcontract work required to meet these additional requirements is performed in accordance with the reference Section 2 Applicable Documents Table 1 Item 1.

8.3 Quality Assurance and Audits

8.3.1 Government Quality Assurance

8.3.1.1 All work will be subject to Government Quality Assurance (GQA) at the Contractor's facility, at the subcontractor(s), or at destination by the Quality Assurance Authority (QAA).

8.3.2 Quality Audits

8.3.2.1 Canada reserves the right to perform Government Quality Audits with a minimum of three (3) working days' notice. This requirement does not relieve the Contractor and/or subcontractor(s) of QA responsibilities for the Work carried out during the Contract. Canada reserves the right to use independent third parties to assist in these reviews.

8.4 Design Change/Deviation and Waiver

8.4.1 Design Change/Deviation Requests/Authorization/Implementation

8.4.1.1 Requests for Design Change/Deviation

8.4.1.1.1 If the Contractor wishes to depart from the requirements of the technical data specified in the Contract, the Contractor must request either a design change or a deviation. The Contractor may request this design change or deviation in contractor format, or may, in accordance with the instructions found at the reference Section 2 Applicable Documents Table 2 Item 4, complete the reference's form DND 672. Requests for design change or deviation will be submitted in accordance with CDRL-QA-01 in MS Word and .PDF format.

8.4.1.2 Authorization of Design Change/Deviation

8.4.1.2.1 Each type of Design Change or Design Deviation request will be authorized by both Canada's Design Authority (DA) and Contracting Authority. Canada's DA has the sole right to deny authorization of a Design Change or Design Deviation. Should this right be exercised, all parties will be advised accordingly by an appropriately annotated copy of the Request for Design Change/Deviation Form.

8.4.1.3 Implementation of Design Change/Deviation

8.4.1.3.1 The Contractor must implement the design change or the design deviation on receipt of authorization.

8.4.2 Waiver Requests/Authorization

8.4.2.1 Request for Waiver Authorization

8.4.2.1.1 When the Contractor wishes to request acceptance of items which are found during or after manufacture to depart from the technical data requirements of the contract the Contractor must request a Waiver. The Contractor may request this Waiver in contractor format, or may, in accordance with the instructions found at the reference Section 2 Applicable Documents Table 2 Item 4, complete the reference's form DND 675. Requests for Waiver will be submitted IAW CDRL-QA-02 in MS Word and .PDF format.

8.4.2.2 Waiver Authorization

8.4.2.2.1 Each type of waiver request will be prepared by the Quality Assurance Representative (QAR) authorized by Canada's Design Authority (DA) and Contracting Authority (CA). Canada's DA has the sole right to refuse the waiver request. Should this right be exercised, all parties will be advised accordingly by an appropriately annotated copy of the Request for Waiver Form.

8.4.3 Material Change Notice

8.4.3.1 Where the design change/deviation/waiver results in new requirements for the improved galley, or spares, the Contractor must originate a Material Change Notice (MCN) in accordance with the instructions found at the reference Section 2 Applicable Documents Table 1 Item 4. MCNs will be submitted IAW CDRL-QA-03 in MS Word and .PDF format and must be reflected in the Contract by amendment.

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9 CONFIGURATION MANAGEMENT

9.1 Configuration Management Approach, Organization and Plan

9.1.1 The Contractor must adhere to the Configuration Management (CM) principles identified at the reference Section 2 Applicable Documents Table 2 Item 9.

9.1.2 The Contractor's CM approach, organization and plan to execute CM must be discussed in the PMP.

9.1.3 The Contractor must develop a schedule of CM activities in the PS.

9.2 Configuration Identification, Status, Baselines

9.2.1 Configuration Status Account

9.2.1.1 The Contractor must, for the improved galley and spares, develop, deliver and update a Configuration Status Account (CSA) IAW CDRL-CM-01 and DID-CM-01.

9.2.2 Configuration Identification

9.2.2.1 The Contractor must for the improved galley:

9.2.2.1.1 identify all the Configuration Items (CIs); and

9.2.2.1.2 uniquely identify all documents that disclose the performance, functional and physical attributes of the improved galley, so that they may be accurately associated with the configuration baseline of the improved galley.

9.2.3 Configuration Baselines

9.2.3.1 The Contractor must, for the improved galley and spares, develop and maintain at least each type of the following configuration baselines during the Contract:

9.2.3.1.1 functional baseline;

9.2.3.1.2 allocated baseline; and

9.2.3.1.3 product baseline.

9.2.3.2 Once the functional, allocated and product baselines have been established and approved, the Contractor must manage design changes and deviations in accordance with Section 8.4 above. This includes their:

9.2.3.2.1 identification;

9.2.3.2.2 request and documentation;

9.2.3.2.3 for configuration changes only, classification as major changes or minor changes;

9.2.3.2.4 evaluation and coordination; and

9.2.3.2.5 implementation and verification of the changes.

9.2.4 Configuration Changes

9.2.4.1 The Contractor must submit to Canada Contract Change Proposals (CCPs) supplemented by ECPs in accordance with the Approved CMP as described in the PMP to implement changes to approved functional and product baselines.

9.2.4.2 All changes to a functional baseline must be classified as a major change.

9.2.4.3 The Contractor must classify changes to a product baseline as either a major change or a minor change.

9.2.4.4 The Contractor must submit all proposed major changes to the product baseline to Canada for approval as CCPs supplemented by ECPs.

9.2.4.5 The Contractor must submit all proposed minor changes to the product baseline to Canada or Canada’s representative for review.

9.2.4.6 At the request of Canada, the Contractor must resubmit a proposed minor change to the product baseline as a proposed major change to that product baseline.

9.2.4.7 The Contractor must, for any proposed change to a configuration baseline, ensure that all configuration baselines will be mutually consistent and compatible.

9.3 Configuration Status Accounting

9.3.1 General

9.3.1.1 The Contractor must establish and maintain, in accordance with the approved CMP as described in the PMP, a Configuration Status Accounting (CSA) system that correlates, stores, maintains and provides readily available views of all configuration information relating to the improved galley and spares system components and their configuration baselines.

9.3.2 Access to Contractor’s CSA System

9.3.2.1 The Contractor must provide all facilities and assistance reasonably required by Canada in order for Canada to access the Contractor's CSA system for the duration of the Contract.

9.3.3 Configuration Status Accounting (CSA) Report

9.3.3.1 The Contractor must deliver a CSA Report to Canada from the Contractor's CSA System Report IAW CDRL-CM-02 and DID-CM-02.

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10 INTEGRATED LOGISTICS SUPPORT

10.1 Integrated Logistics Support Management

10.1.1 Integrated Logistics Support Organization and Planning

10.1.1.1 The Contractor must establish and maintain within its company structure a discrete Integrated Logistics Support (ILS) organization (referred to as the “Contractor’s ILS Organization or ILS Organization”) with the capability to perform the ILS activities of contract. This ILS Organization and its plan to execute the project’s ILS work must be described in the PMP.

10.1.1.2 The Contractor must develop a schedule of ILS activities as part of the PS.

10.1.1.3 The Contractor must conduct ILS activities in accordance with the Contractor’s PMP and PS.

10.1.2 ILS Manager

10.1.2.1 The Contractor must have a designated ILS manager responsible to the PM to carry out the ILS work required for this project. The Contractor’s ILS manager must have the authority to plan, direct, control and make decisions for the Contractor with respect to the ILS aspects of this project.

10.2 ILS Tasks

10.2.1 Naval Preventive Maintenance Schedules (NPMS)

10.2.1.1 The Contractor must, for those elements of the improved galley which require preventive maintenance, prepare individual NPMS meeting the maintenance requirements of Section 3.11 of the TSOR, and deliver NPMSs IAW CDRL-ILS-01 and DID-ILS-01.

10.2.2 Standard Ship Maintenance and Repair Specifications (SSMRS)

10.2.2.1 The Contractor must, for those elements of the improved galley which require maintenance or replacement during a refit, prepare individual SSMRS (SSMRS) meeting the maintenance requirements of Section 3.11 of the TSOR, and deliver an SSMRS IAW CDRL-ILS-02 and DID-ILS-02.

10.2.3 Technical Data Package (TDP)

10.2.3.1 The Contractor, for the improved galley, must develop and deliver a TDP IAW CDRL-ILS-03 and DID-ILS-03.

10.2.4 Improved Galleys

10.2.4.1 The Contractor must deliver new improved galley FAS, FOS, and Depot Spares Set (DSS) as identified in Table 4, improved galley deliverables.

10.2.5 Spares

10.2.5.1 Recommended Spare Parts List (RSPL)

10.2.5.1.1 The Contractor must develop and deliver an improved galley RSPLs IAW CDRL item ILS-04 and DID-ILS-04.

10.2.5.2 RSPL Approval

10.2.5.2.1 Once Canada approves the improved galley RSPL, the Contractor must submit a CCP to update Table 5 FAS OBS, FOS OBS, 2L Spares and Depot Spares to incorporate into the Contract the spares identified in the approved RSPLs.

10.2.5.3 Spares Production

10.2.5.4 The Contractor must procure or manufacture, test and deliver the approved spares as identified in the updated Table 4-Improved Galley On-Board and Depot Level Spares. On board spares must be delivered with each boat's improved galley. Depot level spares must be delivered in an agreed to time frame.

10.2.5.5 Provisioning Parts Breakdown (PPB)

10.2.5.6 The Contractor must, for the improved galley, prepare and deliver a PPB in the electronic format identified by the Canadian Forces Supply System (CFSS) IAW CDRL-ILS-05 and DID-ILS-05.

10.2.6 Packaging Handling Storage and Transportability (PHST)

10.2.6.1 Conduct of PHST

10.2.6.1.1 The Contractor must conduct PHST IAW A-LM-505-001/AG-001 (Section 2, Table 1, item 21.

10.2.6.2 Packaging Methods and Level

10.2.6.2.1 The Contractor must ensure that packaging of the supplies will provide adequate protection for a minimum of five (5) years, consistent with good economy, against damage, deterioration, and loss of identification during storage, handling and shipment.

10.2.6.3 Marking of Packages

10.2.6.3.1 The Contractor must mark all packages, shipping containers and consolidation containers IAW D-LM-008-002/SF-001 (Section 2, Table 1 and Item 18), as applicable.

10.2.6.4 Marking of Dangerous/Hazardous Items

10.2.6.4.1 The Contractor must mark Dangerous/Hazardous Items as follows:

10.2.6.4.2 Shipping Container: “In accordance with the Canada’s Transportation of Dangerous Goods Act”; and

10.2.6.4.3 Immediate Product Container: “In accordance with Canada’s Hazardous Products Act, Controlled Products Regulation.

10.2.6.5 Shelf Life of Items. The Contractor must mark the individual package for each type of Shelf Life Item with:

10.2.6.5.1 Date of manufacture;

10.2.6.5.2 The Shelf Life expiry date;

10.2.6.5.3 The storage environment restrictions (e.g. no freezing, no sunlight); and

10.2.6.5.4 Any storage requirements (e.g. rotate every 20 weeks).

10.2.6.6 Contract End Items List (CEIL)

10.2.6.6.1 The Contractor must, for the improved galley and any delivered Spares, provide a CEIL for these items developed or acquired under this SOW IAW CDRL-ILS-06 and DID-ILS-06.

> Note: It is recognized that most of the elements of the improved galley will be COTs. They will come with commercial technical manuals that they have. The project will not generate any additional documentation with respect to these elements. Section 10.2.7 below applies to those elements of the improved galley that are of custom or modified design

10.2.7 Technical Manuals (TM)

10.2.7.1 The Contractor for the improved galley equipment must deliver their associated technical manuals in both the English and French languages IAW CDRL-ILS-07 and DID-ILS-07.

11 ACCEPTANCE

11.1 Acceptance of Deliverable Data Items

11.1.1 Contractor's Production and Delivery

11.1.1.1 The Contractor must produce, update and deliver to Canada all data items required by this SOW in accordance with the Contract Data Requirements List (CDRL) at Appendix 1 to this SOW. The Contractor must ensure that the document submitted consists of a complete document compliant with the requirements of the deliverable data item defined in that item's Data Item Description (DID) which can be found at Appendix 2 to this SOW.

11.1.2 Canada's Review and Acceptance

11.1.2.1 Data Items delivered to Canada IAW this SOW will be subject to review and comments or review and acceptance by Canada. Unless otherwise indicated, Canada's review will take not more than ten (10) working days from the receipt of the Data Item, at which time Canada will either accept the document or provide comments requiring further clarification by the Contractor prior to document acceptance.

11.1.3 Contractor's Clarification

11.1.3.1 In the event that Canada has provided comments the Contractor must address Canada's comments, and provide, within ten (10) working days either a response, satisfactory to Canada with no data deliverable update required, or an agreed to updated data deliverable.

11.1.4 Canada's Review and Approval of Contractor's Clarification

11.1.4.1 Canada, on receipt of a satisfactory no update required response, or on receipt of an agreed to updated data deliverable, will take no more than ten (10) working days to review and accept the updated data deliverable.

11.2 Acceptance of the Designs

11.2.1 Acceptance of improved galley design will be progressive. Design requirements acceptance criteria and design results are defined and recorded in the Requirements Verification Cross Reference Matrix, detailed in Section 5.2.9.1. Once the Cross-Reference Matrix has been completed showing that all the defined design acceptance criteria have been met, the design will be accepted.

11.3 Acceptance of the Improved Galley and Spares

11.3.1 The improved galley and spares will be inspected on receipt by Canada and provided they pass visual inspection and the accompanying paperwork (including any required test Report and certificates of conformance) is complete, they will be accepted for delivery.

12 DELIVERY

12.1 Improved Galley and Spares

12.1.1 The Contractor must deliver improved galleys and spares sets to both Halifax, Nova Scotia and Esquimalt, British Columbia as follows:

Item	Halifax	Esquimalt
Improved Galleys	1	3
Improved Galley On-Board Spares	1	3
Improved Galley 2nd Line Spares	1	1
Improved Galley Depot Spares	1	1

ANNEX A

APPENDIX 1

CONTRACT DATA REQUIREMENTS LIST

GALLEY IMPROVEMENT

FOR THE

VICTORIA CLASS SUBMARINES

NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document must continue to apply.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

LIST OF EFFECTIVE PAGES

Insert latest changed pages, dispose of superseded pages In Accordance With (IAW) applicable orders.

NOTE

On a changed page, the portion of the text affected by the latest change is indicated by a vertical line in the margin of the page.

Date of issue for original and changed pages are:

Original	DD Month 2020
Change	DD Month 2022

A zero in Change No. column indicates an original page. The Total number of pages in this CDRL is 28 consisting of the following:

Page No.	**Change No.**
All	**Original**

Table of Contents

1 SCOPE

1.1 General

1.1.1 Purpose. The purpose of the Galley Improvement Contract Data Requirements List is to provide a list and schedule of all Contract data deliverables. Preparation instructions for the data deliverables are contained in Data Item Descriptions (DIDs) found in Appendix 2 to this SOW.

1.1.2 Document Changes/Updates. All deliverable documents must be prepared and updated as required by the Contract Data Requirements List (CDRL). All changes to updated versions of documents must be identified as follows:

1.1.2.1 On a change page indicating page numbers, paragraphs numbers, date of change and reason for change;

1.1.2.2 Within the hard copy, by use of change bars in the side margins of the printed document; and

1.1.2.3 Within a soft copy, using a method appropriate to the authoring tools that clearly differentiates old contents from new or revised content.

1.1.3 Deliverable Format and Number of Copies. The deliverable format and number of copies required for the CDRL are defined within the CDRL. Soft copies of deliverable documentation must be delivered in both Searchable Portable Document Format (PDF) and in original editable source file format, e.g. Microsoft Word 2010.

1.1.4 Abbreviations. The abbreviations found in Table 1 below are used in CDRL entries and their DIDs.

A	Approval	PCA	Physical Configuration Audit
AT	Acceptance Test	PDR	Preliminary design Review
CAwd	Contract Award	R	Review
CDR	Critical Design Review	SRR	System Requirements Review
I	Information only	STW	Set To Work
M	Calendar month	wd	Working Day

Table 1 Abbreviations Found in galley improvement CDRLs and DIDs

2 CONTRACT DATA REQUIREMENTS LIST SUMMARY

2.1 Project Management CDRL Summary

Project Management CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-PM-01	DID-PM-01	Project Management Plan	A	Proposal, PKO-10 wd	4.2.1.1
CDRL-PM-02	DID-PM-02	Work Breakdown Structure	R	Proposal, PKO-10 wd	4.2.2.1
CDRL-PM-03	DID-PM-03	Project Schedule	A	Proposal, Monthly with PSR	4.2.3.1
CDRL-PM-04	DID-PM-04	Progress Report	R	PRM- 5 wd	4.3.1.1
CDRL-PM-05	DID-PM-05	Meeting Agenda	A	Meeting – 5 wd	4.5.3.1
CDRL-PM-06	DID-PM-06	Meeting Minutes	A	Meeting or Meeting + 5 wd	4.5.4.1
CDRL-PM-07	DID-PM-07	Action Item List	A	With PR, as requested	4.5.6.2

2.2 System Engineering and Design CDRL Summary

Engineering CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-ENG-01	DID-ENG-01	System Boundaries Report	A	Boat Survey + 15 wd	5.2.3.1
CDRL-ENG-02	DID-ENG-02	System Requirements Review Report	A	PKO/SRR Meeting – 10 wd	5.2.4.1
CDRL-ENG-03	DID-ENG-03	System/Sub-System Specifications	A	PDR – 10 wd CDR-10 wd PRR-10 wd With TDP	5.2.6.1
CDRL-ENG-04	DID-ENG-04	System/Sub-System Design Documents	A	PDR – 10 wd CDR-10 wd PRR-10 wd With TDP	5.2.7.1
CDRL-ENG-05	DID-ENG-05	Requirements Verification Cross Reference Matrices	A	PKO/SRR Meeting – 10 wd PDR -10 wd, PRR-10 wd, FOC SAT + 20wd	5.2.11.1
CDRL-ENG-06	N/A IAW the reference	Equipment Breakdown Structure	A	PDR Meeting -10 wd, CDR Meeting - 10 wd, With TDP	5.2.14.2
CDRL-ENG-07	DID-ENG-07	Material Lists	R	PDR Meeting -10 wd	5.2.16.6.1
CDRL-ENG-08	DID-ENG-08	Safety Data Sheets	A	PDR Meeting – 10 wd CDR Meeting – 10 wd With TDP	5.2.16.7.1
CDRL-ENG-09	DID-ENG-09	Preliminary Design Report	A	PDR Meeting – 10 wd	5.2.17.1

Engineering CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-ENG-10	DID-ENG-10	Detailed Design Report	A	CDR meeting – 10 wd	5.2.21.2
CDRL-ENG-11	DID-ENG-11	First Article System Design Report	A	FAS Build – 10 wd	5.2.25.3
CDRL-ENG-12	N/A Contractor Format	Type Approval Report	A	PRR-10 wd	5.2.25.5

2.3 First Article Test Plan, Procedures and Report CDRL Summary

First Article CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-TST-01	DID-TST-01	First Article Test Plan	A	PDR – 10 wd	5.2.26.1 5.2.26.2
CDRL-TST-02	DID-TST-01	Production Test Plan	A	PDR – 10 wd	5.2.27.1
CDRL-TST-03	DID-TST-02	Factory Acceptance Test Procedures	A	CDR – 10 wd	5.2.28.1
CDRL-TST-04	DID-TST-02	Not Used			
CDRL-TST-05	DID-TST-02	Shock Qualification Test Procedures	A	CDR – 10 wd	5.2.29.1
CDRL-TST-06	DID-TST-03	Not Used			
CDRL-TST-07	DID-TST-03	Shock Qualification Test Report	A	Shock Test + 10 wd	5.2.33.2.1
CDRL-TST-08	DID-TST-04	First Article Systems Qualification Test Report	A	Last FAS Test + 20 wd	5.2.34.1

2.4 Production CDRL Summary

Production CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-PRD-01	DID-TST-03	FAT Report	A	Unit FATs + 10 wd	6.2.2.3.1

2.5 Installation, Set to Work and Acceptance CDRL Summary

Installation, Set to Work and Acceptance CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-ISW-01	DID-ISW-01	Installation and Acceptance Plan	A	CDR-10 wd	7.2.1.1
CDRL-ISW-02	DID-ISW-02	Installation and Set to Work Procedures	A	CDR-10 wd	7.2.2.1
CDRL-ISW-03	DID-ISW-03	Harbour Acceptance Test Procedures	A	CDR-10 wd	7.2.3.1
CDRL-ISW-05	DID-ISW-00	Installation and Set to Work FSR Report	A	ISW + 10 wd	7.3.2.2.1
CDRL-ISW-06	DID-ISW-00	Harbour Acceptance Test FSR Report	A	HAT + 10 wd	7.3.3.2.1

2.6 Quality Assurance CDRL Summary

Quality Assurance CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-QA-01	N N/A IAW Reference	Request for Design Change/Deviation	A	Event + 5 wd	8.4.1.1.1
CDRL-QA-02	N N/A IAW Reference	Request for Waiver	A	Event + 5 wd	8.4.2.1.1
CDRL-QA-03	N/A IAW Reference	Material Change Notice	A	Event + 5 wd	8.4.3.1

2.7 Configuration Management CDRL Summary

Configuration Management CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-CM-01	DID-CM-01	Configuration Status Accounts	R	PDR -10 wd CDR – 10 wd PRR – 10 wd Production Complete + 20 wd	9.2.1.1
CDRL-CM-02	DID-CM-02	Configuration Status Account (CSA) System Report	A	PDR -10 wd CDR – 10 wd PRR – 10 wd Production Complete + 20 wd	9.3.3.1

2.8 Integrated Logistics Support CDRL Summary

Integrated Logistic Support CDRLs					
CDRL #	DID #	Deliverable	Review Level	Due	Section in SOW
CDRL-ILS-01	DID-ILS-01	Naval Preventive Maintenance Schedules (NPMS)	A	With Initial ECIP	10.2.1.1
CDRL-ILS-02	DID-ILS-02	Standard Ship Maintenance and Repair Specifications (SSMRS)	A	PRR – 10 wd	10.2.2.1
CDRL-ILS-03	DID-ILS-03	Technical Data Packages	A	1st Shipset Delivery +10 wd	10.2.3.1
CDRL-ILS-04	DID-ILS-04	Recommended Spare Parts Lists (RSPL)	A	CDR -10 wd	10.2.5.1.1
CDRL-ILS-05	DID-ILS-05	Provisioning Parts Breakdowns (PPB)	A	With Spares delivery	10.2.5.6
CDRL-ILS-06	DID-ILS-06	Contractor End Items List (CEIL)	A	Final Delivery +10wd	10.2.6.6.1
CDRL-ILS-07	DID-ILS-07	Technical Manuals	A	PRR – 10 wd	10.2.7.1

3 CDRL Details

3.1 Project Management CDRL Details

1	Sequence Number	PM – 01
2	Title or Description Number	Project Management Plan
3	Data Item Description Number	DID-PM-01
4	Reference	SOW Section 4.2.1.1
5	First Submission	With Proposal
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/No
8	Delivery Venue	Email
9	Review/Approval Lead Time	NA/NA
10	Subsequent Submission	PKO-10 wd if updates required
11	Remarks	N/A

1	Sequence Number	PM – 02
2	Title or Description Number	Work Breakdown Structure
3	Data Item Description Number	DID-PM-02
4	Reference	SOW Section 4.2.2.1
5	First Submission	With Proposal
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/No
8	Delivery Venue	Email
9	Review/Approval Lead Time	NA/NA
10	Subsequent Submission	PKO-10 wd if updates required
11	Remarks	N/A

1	Sequence Number	PM – 03
2	Title or Description Number	Project Schedule
3	Data Item Description Number	DID-PM-03
4	Reference	SOW Section 4.2.3.1
5	First Submission	With Proposal
6	Number of Copies/Format	1 / Soft Copy in MS Project and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	Review/Approval Lead Time	NA/NA
10	Subsequent Submission	With Monthly Project Status Report
11	Remarks	N/A

1	Sequence Number	PM – 04
2	Title or Description Number	Progress Report
3	Data Item Description Number	DID-PM-04
4	Reference	SOW Section 4.3.1.1
5	First Submission	PKO/SRR Meeting-5 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/No
8	Delivery Venue	Email
9	Review/Approval Lead Time	5 wd / NA
10	Subsequent Submission	PRM- 5 wd
	Remarks	N/A
11		

1	Sequence Number	PM – 05
2	Title or Description Number	Meeting Agenda
3	Data Item Description Number	DID-PM-05
4	Reference	SOW Section 4.5.3.1
5	First Submission	At Meeting or meeting - 5 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	5 wd / 5wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently.

1	Sequence Number	PM – 06
2	Title or Description Number	Meeting Minutes
3	Data Item Description Number	DID-PM-06
4	Reference	SOW Section 4.5.4.1
5	First Submission	Meeting +5 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	5 wd / 5wd
10	Subsequent Submission	N/A
11	Remarks	If possible, minutes should be distributed at the end of the meeting and signed by responsible parties. Where not possible, Review and Approval run concurrently.
1	Sequence Number	PM – 07
2	Title or Description Number	Action Item List
3	Data Item Description Number	DID-PM-07
4	Reference	SOW Section 4.5.6.2
5	First Submission	With first Progress Report
6	Number of Copies/Format	1 / Soft Copy in MS Excel and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	5 wd / 5wd
10	Subsequent Submission	With subsequent Progress Report
11	Remarks	N/A.

3.2 Engineering CDRL Details

1	Sequence Number	ENG-01
2	Title or Description Number	System Boundaries Report
3	Data Item Description Number	DID-ENG-01
4	Reference	SOW Section 5.2.3.1
5	First Submission	Boat Survey + 15 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently.

1	Sequence Number	ENG-02
2	Title or Description Number	System Requirements Review Report
3	Data Item Description Number	DID-ENG-02
4	Reference	SOW Section 5.2.4.1
5	First Submission	SRR Meeting – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MSOffice and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently.

1	Sequence Number	ENG-03
2	Title or Description Number	System /Subsystem Specifications
3	Data Item Description Number	DID-ENG-03
4	Reference	SOW Section 5.2.6.1
5	First Submission	PDR – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / Review Event + 10 wd
10	Subsequent Submission	CDR – 10wd, PRR – 10 wd and with TDP
11	Remarks	N/A

1	Sequence Number	ENG-04
2	Title or Description Number	System /Subsystem Design Documents
3	Data Item Description Number	DID-ENG-04
4	Reference	SOW Section 5.2.7.1
5	First Submission	PDR – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / Review Event + 10 wd
10	Subsequent Submission	CDR – 10wd, PRR – 10 wd and with TDP
11	Remarks	N/A

1	Sequence Number	ENG-05
2	Title or Description Number	Rqmts Verification Cross Reference Matrices
3	Data Item Description Number	DID-ENG-05
4	Reference	SOW Section 5.2.11.1
5	First Submission	PKO/SRR Meeting – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Excel and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / Review Event + 10 wd
10	Subsequent Submission	PDR-10 wd, PRR – 10 wd and FOC SAT + 20 wd
11	Remarks	N/A

1	Sequence Number	ENG-06
2	Title or Description Number	Equipment Breakdown Structure
3	Data Item Description Number	N/A IAW the reference
4	Reference	SOW Section 5.2.14.2
5	First Submission	PDR Meeting – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Excel and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / Review Event + 10 wd
10	Subsequent Submission	CDR Meeting – 10 wd and with TDP
11	Remarks	Review and Approval run concurrently.

1	Sequence Number	ENG-07
2	Title or Description Number	Material Lists
3	Data Item Description Number	DID-ENG-07
4	Reference	SOW Section 5.2.16.5.1
5	First Submission	PDR Meeting – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Excel and .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / Review Event + 10 wd
10	Subsequent Submission	CDR Meeting – 10 wd and with TDP
11	Remarks	Review and Approval run concurrently.

1	Sequence Number	ENG-08
2	Title or Description Number	Safety Data Sheets
3	Data Item Description Number	DID-ENG-08
4	Reference	SOW Section 5.2.16.6.1
5	First Submission	PDR Meeting – 10 wd
6	Number of Copies/Format	1 / Soft Copy in .PDF
7	PM Review/Approval	Yes/Yes
8	Delivery Venue	Email
9	PM Review/Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	CDR Meeting -10 wd and with TDP
11	Remarks	N/A

1	Sequence Number	ENG-09
2	Title or Description Number	Preliminary Design Report
3	Data Item Description Number	DID-ENG-09
4	Reference	SOW Section 5.2.17.1
5	First Submission	PDR Meeting – 5 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd/PDR Meeting + 10wd
10	Subsequent Submission	N/A
11	Remarks	N/A

1	Sequence Number	ENG-10
2	Title or Description Number	Detailed Design Report
3	Data Item Description Number	DID-ENG-10
4	Reference	SOW Section 5.2.21.2
5	First Submission	CDR Meeting – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval	Yes/Yes
9	Approval Lead Time	10 wd / CDR Meeting + 10 wd
10	Subsequent Submission	N/A
11	Remarks	N/A

1	Sequence Number	ENG-11
2	Title or Description Number	First Article System Design Report
3	Data Item Description Number	DID-ENG-11
4	Reference	SOW Section 5.2.25.3
5	First Submission	FAS Build – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd /10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ENG-12
2	Title or Description Number	Type Approval Report
3	Data Item Description Number	N/A In Contractor Format
4	Reference	SOW Section 5.2.25.5
5	First Submission	PRR– 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10wd/10wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

3.3 First Article Testing CDRL Details

1	Sequence Number	TST-01
2	Title or Description Number	First Article Test Plan
3	Data Item Description Number	DID-TST-01
4	Reference	SOW Section 5.2.26.1 and 5.2.26.2
5	First Submission	PDR – 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	TST-02
2	Title or Description Number	Production Test Plan
3	Data Item Description Number	DID-TST-01
4	Reference	SOW Section 5.2.27.1
5	First Submission	PDR – 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

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1	Sequence Number	TST-03
2	Title or Description Number	Factory Acceptance Test Procedures
3	Data Item Description Number	DID-TST-02
4	Reference	SOW Section 5.2.28.1 and 6.2.2.3.1
5	First Submission	CDR – 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	~~TST-04~~
2	Title or Description Number	NOT USED
3	Data Item Description Number	DID-TST-02
4	Reference	
5	First Submission	CDR – 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	TST-05
2	Title or Description Number	Shock Qualification Test Procedures
3	Data Item Description Number	DID-TST-02
4	Reference	SOW Section 5.2.29.1
5	First Submission	CDR – 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	~~TST-06~~
2	Title or Description Number	NOT USED
3	Data Item Description Number	DID-TST-03
4	Reference	
5	First Submission	N&V Test + 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	TST-07
2	Title or Description Number	Shock Qualifications Test Report
3	Data Item Description Number	DID-TST-03
4	Reference	SOW Section 5.2.33.2.1
5	First Submission	Shock Test + 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	TST-08
2	Title or Description Number	First Article System Qualification Test Report
3	Data Item Description Number	DID-TST-04
4	Reference	SOW Section 5.2.34.1
5	First Submission	Last FAS Test + 20 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

3.4 Production CDRL Details

1	Sequence Number	PROD - 01
2	Title or Description Number	FAT Report
3	Data Item Description Number	DID-TST-03
4	Reference	SOW Section 6.2.2.3.1
5	First Submission	FAT + 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

3.5 Installation, STW and Acceptance CDRL Details

1	Sequence Number	ISW-01
2	Title or Description Number	Installation & Acceptance Test Plan (IA PLN)
3	Data Item Description Number	DID-ISW-01
4	Reference	SOW Section 7.2.1.1
5	First Submission	CDR -10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ISW - 02
2	Title or Description Number	Installation/Set to Work Procedures
3	Data Item Description Number	DID-ISWT-02
4	Reference	SOW Section 7.2.2.1
5	First Submission	CDR -10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ISW - 03
2	Title or Description Number	Harbour Acceptance Test Procedures
3	Data Item Description Number	DID-ISW-03
4	Reference	SOW Section 7.2.3.1
5	First Submission	CDR - 10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

ISW – 04 NOT USED

1	Sequence Number	ISW - 05
2	Title or Description Number	Installation and Set to Work FSR Report
3	Data Item Description Number	DID-ISW-00
4	Reference	SOW Section 7.3.2.2.1
5	First Submission	FOC and 1s FOS ISW +10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ISW - 06
2	Title or Description Number	Harbour Acceptance Test FSR Report
3	Data Item Description Number	DID-ISW-00
4	Reference	SOW Section 7.3.3.2.1
5	First Submission	FOC and 1st FOS HAT +10wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

3.6 Quality Assurance Deliverables Summary

1	Sequence Number	QA- 01
2	Title or Description Number	Request for Design Change/Deviation
3	Data Item Description Number	N/A IAW the reference
4	Reference	SOW Section 8.4.1.1.1
5	First Submission	Event + 5wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	QA- 02
2	Title or Description Number	Request for Waiver
3	Data Item Description Number	N/A IAW the reference
4	Reference	SOW Section 8.4.2.1.1
5	First Submission	Event + 5wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	QA- 03
2	Title or Description Number	Material Change Notice
3	Data Item Description Number	N/A IAW the reference
4	Reference	SOW Section 8.4.3.1
5	First Submission	Event + 5wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

3.7 Configuration Management CDRL Details

1	Sequence Number	CM - 01
2	Title or Description Number	Configuration Status Accounts
3	Data Item Description Number	DID-CM-01
4	Reference	SOW Section 9.2.1.1
5	First Submission	PDR – 10 WD
6	Number of Copies/Format	1 / Soft Copy in MS Excel data and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	PDR, CDR, PRR – 10wd, Production Complete + 20 wd
11	Remarks	Review and Approval run concurrently

1	Sequence Number	CM - 02
2	Title or Description Number	Configuration Status Account Report
3	Data Item Description Number	DID-CM-02
4	Reference	SOW Section 9.3.3.1
5	First Submission	PDR – 10 WD
6	Number of Copies/Format	1 / Soft Copy in MS Office data and .PDF
7	Delivery Venue	Email
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	10 wd / 10 wd
10	Subsequent Submission	PDR, CDR, PRR – 10wd, Production Complete + 20 wd
11	Remarks	Review and Approval run concurrently

3.8 Integrated Logistics Support CDRL Summary

1	Sequence Number	ILS -01
2	Title or Description Number	Naval Preventive Maintenance Schedules
3	Data Item Description Number	DID-ILS - 01
4	Reference	SOW Section 10.2.1.1
5	First Submission	PRR – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	60 wd /60 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ILS -02
2	Title or Description Number	Standard Ship Maintenance and Repair Specifications
3	Data Item Description Number	DID-ILS - 02
4	Reference	SOW Section 10.2.2.1
5	First Submission	PRR – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	60 wd /60 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ILS -03
2	Title or Description Number	Technical Data Packages
3	Data Item Description Number	DID-ILS - 03
4	Reference	SOW Section 10.2.3.1
5	First Submission	1st Deliveries + 10 wd
6	Number of Copies/Format	1 / Soft Copy in Source data and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	20 wd 20 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ILS -04
2	Title or Description Number	Recommended Spare Parts Lists
3	Data Item Description Number	DID-ILS -04
4	Reference	SOW Section 10.2.5.1.1
5	First Submission	CDR -10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Excel and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	20 wd 20 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ILS -05
2	Title or Description Number	Provisioning Parts Breakdowns
3	Data Item Description Number	DID-ILS -05
4	Reference	SOW Section 10.2.5.6
5	First Submission	With delivery
6	Number of Copies/Format	1 / Soft Copy in MS Excel and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	20 wd 20 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ILS -06
2	Title or Description Number	Contract End Item List
3	Data Item Description Number	DID-ILS - 06
4	Reference	SOW Section 10.2.6.6.1
5	First Submission	With final delivery
6	Number of Copies/Format	1 / Soft Copy MS Excel and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	20 wd 20 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

1	Sequence Number	ILS -07
2	Title or Description Number	Technical Manual
3	Data Item Description Number	DID-ILS -07
4	Reference	SOW Section 10.2.7.1
5	First Submission	PRR – 10 wd
6	Number of Copies/Format	1 / Soft Copy in MS Office and .PDF
7	Delivery Venue	Email or FTP
8	PM Review/Approval Required	Yes/Yes
9	Approval Lead Time	20 wd 20 wd
10	Subsequent Submission	N/A
11	Remarks	Review and Approval run concurrently

ANNEX A

APPENDIX 2

DATA ITEM DESCRIPTIONS

GALLEY IMPROVEMENT

FOR THE

VICTORIA CLASS SUBMARINES

NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods. Disclosure notices and handling instructions originally received with the document must continue to apply.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées. Les avis de divulgation et les instructions de manutention reçues originalement doivent continuer de s'appliquer.

LIST OF EFFECTIVE PAGES

Insert latest changed pages, dispose of superseded pages In Accordance With (IAW) applicable orders.

NOTE

On a changed page, the portion of the text affected by the latest change is indicated by a vertical line in the margin of the page.

Date of issue for original and changed pages are:

Original	DD Month 2022
Change	DD Month 20XX

A zero in Change No. column indicates an original page. The Total number of pages in this Appendix 2 DIDs is 88 consisting of the following:

Page No.	**Change No.**
All	**Original**

Table of Contents

1 SCOPE

1.1 Purpose

1.1.1 The purpose of the Galley Improvement Data Item Descriptions (DID) is to provide descriptions and associated preparation instructions of the Contract data deliverables found in Appendix 1 to this SOW.

2 PROJECT MANAGEMENT DIDS

2.1 DID-PM-01 Project Management Plan

1. TITLE		2. IDENTIFICATION NUMBER
Project Management Plan		DID-PM-01
3. DESCRIPTION/PURPOSE The project's Project Management Plan (PMP) describes the Contractor's process and activities for managing the development and implementation of the project. The plan describes the managerial, technical and supporting processes and activities. The activities are ordered and assigned resources to create a baseline work plan that is basis for project tracking. In addition PMP defines the organization and infrastructure required to execute the project.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.2.1.1
7. APPLICATION/INTERRELATIONSHIP: This PMP may be used in conjunction with DID-PM-02 Work Breakdown Structure, DID-PM -03, Project Schedule, and DID – PM – 05 Progress Report.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS:
PREPARATION INSTRUCTIONS		

	Reference: ISO 21500: 212 –Guidance on Project Management
10.1	Format: The Project Management Plan (PMP) shall be prepared in Contractor's format using Microsoft (MS) Word.
10.2	Content: Contractor Defined, but using the reference as a guide, should as a minimum include the following sections: 1. Overview: a. Project Summary; i. Purpose, Scope, Objectives; ii. Assumptions and Constraints; iii. Project Deliverables; and iv. Master Schedule and Budget (if applicable) Summary. b. Evolution of the Plan; and c. Document Structure. 2. References: a. Standards and Documents; and b. Deviation and Waivers. 3. Definitions.

4. Project Organizations:
   a. Project Organization, Roles and Responsibilities;
   b. Project Interfaces with External Organizations;
   c. Project Interfaces with Internal Organizations;
5. Management Processes:
   a. Start Up:
      i. Estimations;
      ii. Staffing;
      iii. Resource Acquisitions; and
      iv. Staff Training.
   b. Work planning:
      i. Work Activities;
      ii. Schedule Allocation;
      iii. Resource Allocation; and
      iv. Budget (if applicable) Allocation.
   c. Project Controls:
      i. Requirement Control;
      ii. Schedule Control;
      iii. Budget (if applicable) Control;
      iv. Quality Control; and
      v. Project Reporting Communications.
   d. Contracts/Subcontracts;
   e. Risk and Issue Management; and
   f. Project Close Out.
6. Technical Process:
   a. Product Design Development:
      i. Methods, Tools and Techniques; and
      ii. Infrastructure.
   b. Product Qualifications;
   c. Production:
      i. Methods, tools and Techniques; and
      ii. Infrastructure.
7. Installation Support Services.
8. Supporting Process:
   a. Problem Resolution;
   b. Subcontractor Management;
   c. Documentation Control;
   d. Testing;
   e. Integrated Logistic Support;
   f. Configuration Management;
   g. Quality Assurance; and
   h. Review and Audits.
9. Appendices (delivered once with the PMP):
   a. Project Work Breakdown Structure.
10. Attachments (delivered initially with the PMP, then updated if required throughout the project):
    a. Project Schedule;
    b. Project Supplies Deliverable Register;
    c. Project Risk Register;
    d. Project Issues/Action Register;
    e. Project Data deliverables Register; and
    f. Project Communication Directory.
11. Enclosures (delivered once with the PMP):
    a. Subcontractor Project Management Plan.

10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: With proposal 4. PM review/Approval: Yes/No 5. Review/Approval Lead time: NA/NA 6. Subsequent Submission: PKO-10wd if updates required 7. Remarks: NA

2.2 DID-PM-02 Work Breakdown Structure

1.TITLE Work Breakdown Structure		2.IDENTIFICATION NUMBER DID-PM-02
3.DESCRIPTION/PURPOSE The project's project Work Breakdown Structure (WBS) defines the project in terms of hierarchically related, product-oriented elements. Each element provides logical summary levels for assessing technical accomplishments, supporting the required event-based technical reviews and measuring cost and schedule performance.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.2.2.1
7. APPLICATION/INTERRELATIONSHIP THE WBS may be used in conjunction with the contract Statement of Work, DID-PM – 01 Project Management Plan and DID-PM-03 Project Schedule.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
PREPARATION INSTRUCTIONS		

	Reference **:** MIL-STD-188C dated 3 Oct 2011
10.1	Format: The Project WBS shall be prepared in contractor's format in MS Office.
10.2	Content: The Contractor shall structure the WBS using the reference as guide. The goal is to develop a WBS that defines the logical relationship among all project elements to a specific level (typically 3) of indenture that does not constrain the Contractor's ability to define or manage the project or resources.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: With proposal 4. PM review/Approval: Yes/No 5. Review/Approval Lead time: NA/NA 6. Subsequent Submission: PKO -10wd if updates required 7 .Remarks: NA

2.3 DID-PM-03 Project Schedule

1.TITLE Project Schedule		2.IDENTIFICATION NUMBER DID-PM-03
3. DESCRIPTION/PURPOSE The project's Project Schedule (PS) is to describe Contractor's schedule to execute the tasks and activities described in the contract's Statement of Work (SOW) and Work Breakdown Structure (WBS).		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.2.3.1
7. APPLICATION/INTERRELATIONSHIP THE WBS may be used in conjunction with the contract Statement of Work, DID-PM – 01 Project Management Plan, DID-PM -02, Work Breakdown Structure, and DID – PM – 05 Progress Report		
ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		

	Reference **:** MIL-STD-188C dated 3 Oct 2011
10.1	Format: The Project Schedule shall be prepared in contractor's format in Microsoft Project.
10.2	Content: The PS must contain the contract deliverables, milestones and accomplishments and discreet tasks/activities (including planning packages where applicable) from contract award to the completion of the contract. The schedule shall be in Gantt Chart format. It shall be an integrated, logical network-based schedule that correlates the WBS up to level 3, applies the critical path method, and is vertically and horizontally traceable to the cost/schedule reporting instrument used to address variances (if applicable). The schedule shall have a numbering system that provides traceability to the SOW. It shall contain contractual deliverables, milestones and descriptions and display summary, intermediate, and detailed schedules and periodic analysis of progress to date. It shall include fields and data that enables the user to access the information by product, process or organizational lines.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Project and .PDF 2. Delivery Venue: email 3. First Submission: With proposal 4. PM review/Approval: Yes/No 5. Review/Approval Lead time: NA/NA 6. Subsequent Submission: PKO-10wd if updates required 7 .Remarks: NA

2.4 DID-PM-04 Progress Reports

1.TITLE Progress Report	2. IDENTIFICATION NUMBER DID-PM-04	
3. DESCRIPTION/PURPOSE The purpose of the Progress Report (PR) is to document the status of the Contractor's effort towards achieving the contract's objectives. It defines accomplishment to date and difficulties encountered, and compares the status achieved to planned goals and resources expended. It is used by Canada to monitor and evaluate the progress of the work to date.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.3.1.1
7. APPLICATION/INTERRELATIONSHIP The PR may be used in conjunction with the Contract Statement of Work, DID-PM – 01-Project Management Plan, DID-PM-03-Project Schedule, DID-PM-04-Project Risk Register, and DID-PM-08 Project Action Item List.		
8.ORIGINATOR Project Manager SM 4-2-7	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		

	Format: The PR shall be prepared in contractor's format using Microsoft Office.
10.1	Contents: The content of the PSR shall as a minimum include:
10.2	1. A narrative summary of the Contractor's progress during the reporting period; 2. Review of Milestones/task Deliverables; 3. Schedule critical path review and variation and planned activities for the next reporting period; 4. Review of Arising and Open Issues/Actions; 5. Review of Arising and Open Risks; 6. Review of resources and financial Status; and 7. Other Matters.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: 5wd prior to the first Monthly PRM 4. PM review/Approval: Yes/No 5. Review/Approval Lead time: 5wd/NA 6. Subsequent Submission: Monthly 5wd prior to the PRM 7. Remarks: NA

2.5 DID-PM-05 Meeting Agenda

1.TITLE Meeting Agenda	2. IDENTIFICATION NUMBER DID-PM-05	
3. DESCRIPTION/PURPOSE The purpose of the Meeting Agenda is to propose topics for discussions during the meeting		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Manager SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.5.3.1
7. APPLICATION/INTERRELATIONSHIP The meeting Agenda may be used in support of all project meetings and reviews whether held physically or by teleconference or video conference. The Meeting Agenda may be used in conjunction with DID-PM-07 Meeting Minutes.		
8.ORIGINATOR Project Manager SM 4-2-7	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		

10.1	Format: The Meeting Agenda shall be prepared in contractor's format using Microsoft Office.
10.2	Contents: The content of the Meeting Agenda shall as a minimum include: 1. Purpose of the meeting; 2. Time, date, location, and expected duration of the meeting; 3. List of expected attendees; 4. Security Requirements of the meeting; 5. Facilities and equipment to be provided for the attendees; and 6. List meeting supporting documentation, including Minutes of the previous meeting and associated Action item List, Documents to be reviewed during the meeting (e.g. Progress Reports, Reviews or Other Reports). **NOTE**: The Contractor is to ensure that adequate copies of meetings supporting documentation are available for attendees at the meeting.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: Meeting –5wd 4. PM Review/Approval: Yes/Yes 5. Review/Approval Lead time: 5wd/5wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval Lead Time run concurrently

2.6 DID-PM-06 Meeting Minutes

1.TITLE Meeting Minutes		2. IDENTIFICATION NUMBER DID-PM-06
3. DESCRIPTION/PURPOSE The purpose of the Meeting Minutes is to formally record the discussions, agreements, and actions resolved and assigned (with responsible parties and closure dates) during the meeting.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.5.4.1
7. APPLICATION/INTERRELATIONSHIP The Meeting Minutes may be used in support of all project meetings and reviews whether held physically or by teleconference or video conference. The Meeting Minutes may be used in conjunction with DID-PM-06 Meeting Agenda.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		

10.1	Format: The Meeting Minutes shall be prepared in contractor's format using Microsoft Office.
10.2	Contents: The content of the Meeting Minutes shall as a minimum include: 1. Time, date and location, of the meeting; 2. List of attendees and their contact information (Organization, Position, Telephone, email); 3. Purpose of the meeting; 4. Summary of Action Items; 5. Meeting Agenda/Changes to agenda; and 6. For each item discussed: a. A brief summary of the item; and b. A any agreed to course of action with respect to the item (and associated recommended changes to Action Item List).
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: Meeting – 5wd 4. PM review/Approval: Yes/Yes 5. Review/Approval Lead time: 5wd/5wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval Lead Time run concurrently

2.7 DID-PM-07 Action Item List

1.TITLE Action Item List		2. IDENTIFICATION NUMBER DID-PM-07
3. DESCRIPTION/PURPOSE The purpose of the Action Item List (AIL) is to project issues and the associated actions to resolve them.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Manager SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 4.5.6.2
7. APPLICATION/INTERRELATIONSHIP The meeting AIL may be used in support of all project meetings and reviews whether held physically or by teleconference or video conference. The AIL may be used in conjunction with DID-PM-04 Meeting Minutes.		
8.ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
10.1	Format: The AIL must be prepared in contractor's format using Microsoft (MS) Excel.	
10.2	Contents: The content of the AIL shall include in each row as a minimum: 1. Identification Number; 2. Title or Description; 3. Date Opened; 4. Issue causing action item to be raised; 5. Action required; 6. Priority; 7. Organization and person responsible for taking action; 8. Brief statement of action taken to date and associated results; 9. Status (open/closed); and 10. Date Closed. The Contractor must ensure that once entered into the AIL, no entry is deleted. The Contractor must include a subset of the AIL containing all open action items as an attachment to the Meeting Agenda.	
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Excel and .PDF 2. Delivery Venue: email 3. First Submission: With Meeting Minutes 4. PM review/Approval: Yes/Yes 5. Review/Approval Lead time: 5wd/5wd 6. Subsequent Submission: With Meeting Minutes and if and as requested by Canada 7. Remarks: Review and Approval Lead Time run concurrently	

3 DESIGN AND ENGINEERING DIDS

3.1 DID-ENG-00 Engineering Drawings, Associated Lists and CAD Models

1.TITLE	2. IDENTIFICATION NUMBER
Engineering Drawings, Associated Lists and CAD Models	DID-ENG-00

3. DESCRIPTION/PURPOSE

Level 1 Drawings. Level 1, conceptual and Developmental Design. Engineering Drawings, Associated Lists and CAD Models prepared to this level shall, as a minimum, disclose engineering design information sufficient to evaluate an engineering concept as meeting stated military requirements, and may provide information sufficient to fabricate developmental hardware. These types of drawings generally consist of simple sketches, models, artist's renderings, and/or basic textual data.

Level 2 Drawings. Level 2, Production Prototype and Limited production. Engineering Drawings, Associated Lists and CAD Models prepared to this level shall disclose directly or by reference a design approach suitable to support the manufacture of a production prototype and limited production models. Engineering drawings shall include, as applicable, manufacturing limits, and details of new materials and processes.

Level 3 Drawings. Level 3, Production Engineering Drawings, Associated Lists and CAD Models prepared to this level shall provide engineering definition sufficiently complete to enable a competent manufacturer to produce and maintain quality control of the item. These Engineering Drawings reflect the end product. They reflect approved, tested, and accepted configuration of the defined delivered item and provide the necessary data to permit competitive procurement or re-procurement.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 5

7. APPLICATION/INTERRELATIONSHIP

The Engineering Drawings, Associated Lists and CAD Models may be used in conjunction with System/Sub-System Specification, System/Subsystem Design Documents, Preliminary, Detailed, First Article and Final Design Reports, Production Readiness Reviews, Configuration Audits, and As-Delivered Drawings, Associated Lists and CAD Models.

8. ORIGINATOR	9. APPLICABLE FORMS
Project Manager SM 4-2-7	

10. PREPARATION INSTRUCTIONS

10.1	Format: 1. Commercial Off the Shelf Equipment/Systems-Contractor format in its native Model or Drawing format. 2. Contractor Developed Equipment/Systems-3D Models (see order of preference below) and /or ASME –Y14 Drawing Standards in the Contractor's sheet format. Order of preference for 3D Models: 1. Solid Works part and assembly and or drawing files; 2. STEP format; or 3. IGES format. 3. 2 D drawings of flat items produced in software other than Solid Works (i.e. wiring diagrams) should be prepared in DWG OR DXF format.

10.2	Content: 1. COTS equipment – Level-1 Drawings comprised of available Manufacturers data Sheet and Outline and Installation Drawings and 3D Models. 2. Contractor Developed Equipment – Level 2 Drawings and 3D Models. 3. For all drawings items on the drawing parts list considered to be First Level in accordance C-23-VIC-000/AM-001 shall be annotated as First Level.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/in model or drawing format and .PDF 2. Delivery Venue: email 3. First Submission: With PD Report 4. PM review/Approval: Yes/Yes 5. Review/Approval Lead time: 10wd/10wd 6. Subsequent Submission: With CD, FASD,FD Reports, and with TDP 7. Remarks: Review and Approval run concurrently

3.2 DID-ENG-01 System Boundaries Report

1.TITLE System Boundaries Report		2. IDENTIFICATION NUMBER DID-ENG-01
3. DESCRIPTION/PURPOSE The purpose of the System Boundaries (SB) report is to capture the results of the Contractor's Boat Survey. It includes a System Boundary Diagram (SBD) that fully defines the boundaries that exist between system elements for the Contractor's system, how the Contractor's system or equipment is proposed to interface with the submarine and other external "to the Contractor's system" equipment. The SBD will link the reader to the applicable engineering drawing or interface control drawing (ICD).		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 5.2.3.1
7. APPLICATION/INTERRELATIONSHIP The SB Report may be used in conjunction with DID-ENG-03 System/Sub-System Specifications, DID-ENG-04 System/Subsystem Design Documents.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
10.1	Format**:** The System Boundaries Report shall be prepared in contractor's format using MS Office, Included SBDs shall be in MS VISEO or dwg.	
10.2	Content: the content of the SB report shall as a minimum include: 1. Introduction: a. Background; b. Scope; and c. Objective. 2. System description; 3. System Boundaries Identification; 4. Results; 5. Conclusions; 6. Recommendations; and 7. Annexes: a. Annex A-System Boundaries Diagram (BD) (see below for content). BOUNDARY DIAGRAM CONTENT 1. Level 1 BD. A level 1 BD shall be used to illustrate the interactions between multiple systems. The Level 1 BD is a high level illustration of system boundaries and include the following content: a. It defines the interfaces between the System/Equipment and external elements to that systems; and b. It illustrate key functional locations i.e. pressure hull, inboard versus outboard system elements. 2. Level 2 BD. The Level 2 BD shall show the precise boundary of the interface (s). An item may have more than one interface in a system; however, each interface shall be uniquely identified as to the following type (as applicable): a. Mechanical-include mounting and any mechanical interfaces to other elements of the system;	

	b. Cable-include power and signal; c. Pneumatic; d. Hydraulic; e. Chilled Water ; f. HVAC – Direct Forced Air Cooling; and g. Envelope (volume, externat dimensions). 2. A boundary line or leader line shall appear close to one of the items, not in the middle to clearly represent which item includes the interface detail between the two items; 3. The BD describes the top-level interfaces. Lower level or subordinate interfaces will be documented on separate sheets within the BD or referenced lower level BD; and 4. The BD shall be developed in MS VISIO as a block diagram. Detailed information for specific interfaces (i.e. dimensions, scale size, GD &T etc.) shall be contained in a referenced Interface Control Drawing.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office or dwg format and .PDF 2. Delivery Venue: email 3. First Submission: Boat Survey +15wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently

3.3 DID-ENG-02 Systems Requirements Review Report

1.TITLE System Requirements Review Report		2. IDENTIFICATION NUMBER DID-ENG-02
3. DESCRIPTION/PURPOSE The purpose of the System Requirement Review Report (SRR) is for the Contractor to present the material that will be reviewed with Canada at the SRR Meeting. The SRR meeting is a formal review conducted to ensure that system requirements have been properly identified and that a mutual understanding between Canada and the Contractor exists. It ensures that the system under review can proceed into initial system development and all system and performance requirements derived from the TSOR are defined and testable.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 5.2.4.1
7. APPLICATION/INTERRELATIONSHIP The SRR Report may be used in conjunction with SOW, TSOR, and the SRR Meeting.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
10.1	Format**:** SRR Report shall be prepared in contractor's format using MS Office.	
10.2	Content: the content of the SRR report shall as a minimum include: 1. Section1 – Review Items of Supply and their quantities: a. Identify/recommend changes to existing quantities; and b. Identify/recommend additions/deletions to existing quantities and for addition their quantities. 2. Section 2-Review TSOR: a. Identify/recommend changes to Technical Requirements; b. Identify where clarification is required to existing Technical Requirements; c. Identify/recommend additions/deletions to existing Technical Requirements; and d. Identify/recommend verification method for Technical Requirements. 3. Section 3-Review SOW: a. Identify/recommend changes to existing SOW Requirements; b. Identify where clarification is required to existing SOW Requirements; and c. Identify/recommend deletions to existing SOW Requirements. 4. Section 4 – Project: a. Schedule Progress Report; b. Budget (if applicable) Status Report; c. Resource Status Report; and d. Project Risk Status Report. 5. Enclosures (see their separate CDRLs and associated DIDs): a. Boat Survey Reports.	
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: PDR –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/Review Event +10wd 6. Subsequent Submission: CDR –10wd, PRR-10wd, and with TDP 7. Remarks: NA	

3.4 DID-ENG-03 System/Sub-System Specifications

<table>
<tr><td colspan="2">1.TITLE

System/Sub-System Specification</td><td colspan="2">2. IDENTIFICATION NUMBER

DID-ENG-03</td></tr>
<tr><td colspan="4">3. DESCRIPTION/PURPOSE

The System/Sub-System Specification (SSSS) provides a comprehensive description of the technical requirements for material, equipment and services.</td></tr>
<tr><td colspan="2">4. APPROVAL DATE</td><td>5. OFFICE OF PRIMARY INTEREST (OPI)
Project Authority SM 4-2
Technical Authority SM 4-2-6</td><td>6. SOW SECTION
5.2.6.1</td></tr>
<tr><td colspan="4">7. APPLICATION/INTERRELATIONSHIP

The SSSS may be used in conjunction with the Technical Statement of Requirements (TSOR) Requirement Verification Cross Reference Matrix (RVCRM), and System/Subsystem Design Documents.</td></tr>
<tr><td colspan="2">8.ORIGINATOR
Project Manager SM 4-2-7</td><td colspan="2">9. APPLICABLE FORMS</td></tr>
<tr><td colspan="4">10. PREPARATION INSTRUCTIONS</td></tr>
<tr><td></td><td colspan="3">Reference: MIL-STD-961E Defense and Program-Unique Specifications Format and Content</td></tr>
<tr><td>10.1</td><td colspan="3">Format: the SSSS shall be using the reference as a guide, prepared in Contractor’s format in MS Office.</td></tr>
<tr><td>10.2</td><td colspan="3">Content: The SSSS must be prepared using reference recommended content, as outlined below as a guide. Where the SSSS is describing a COTS item, the COTS item’s Data Sheet may be added as an Appendix and referenced in the main body of the specifications.

1. Section 1 Section 1 –Scope;
2. Section 2 Applicable Documents;
3. Section 3 Requirements:
a. General;
b. Material;
c. Performance;
d. Design;
e. Physical Characteristics;
f. Interface, Interoperability and Compatibility;
g. Process;
h. Parts;
i. Construction, Fabrication and Assembly
j. Operating Characteristics;
k. Workmanship;
l. Reliability;
m. Maintainability; and
n. Environment Operating Requirements.
4. Section 4 Verification:
a. General,
b. First article;
c. Inspection Conditions; and
d. Qualification.</td></tr>
</table>

	5. Section 5 Packaging; and 6. Section 6 Notes.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 softcopy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: PDR –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/Review Event +10wd 6. Subsequent Submission: CDR –10wd, PRR-10wd, and with TDP 7. Remarks: NA

3.5 DID-ENG-04 System/Sub-System Design Document

1.TITLE System/Sub-System Design Document		2. IDENTIFICATION NUMBER DID-ENG-04
3. DESCRIPTION/PURPOSE The System/Sub-System Design Document (SSSDD) describes the system (or subsystem) –wide design and the architectural design of a system (or subsystem). It may be supplemented by Interface Design Descriptions (IDDs) or Database Design Descriptions (DBDDs).		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 5.2.7.1
7. APPLICATION/INTERRELATIONSHIP The SSDD may be used in conjunction with the System/Subsystem Specification, Technical Statement of Requirements (TSOR) and Requirement Verification Cross Reference Matrix (RVCRM), and Engineering Drawings and Associated Lists.		
8.ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		

10.1	Format: the SSDD shall be prepared in Contractor's format in MS Office.
10.2	Content: The SSDD must be prepared using the below as a guide. 1. Section 1 –Scope: a. Identification; b. System Overview; c. Acronyms and Abbreviations; and d. Terminology. 2. Section 2 -Applicable Documents 3. Section 3 -System-Wide Design Decisions This section shall be divided into paragraphs as needed to present system-wide design decisions, and other decisions affecting the selection and design of system components. If all such decisions are explicit in the requirements or are deferred to the design of the system components, this section shall so state. Design decisions that respond to requirements designated critical, such as those for safety, security, or privacy, shall be placed in separate subparagraphs. If a design decision depends upon system states or modes, this dependency shall be indicated. Design conventions needed to understand the design shall be presented or referenced. Examples (there could be many others) of system-wide design decisions follow: a. Inputs and Outputs; b. System Behaviour; c. System Databases/Data Files; d. Safety, Security and Privacy; e. Design and Construction; and f. Other System Wide Decisions. 4. Section 4 -System Architectural Design This section shall be divided into paragraphs which describe the system architectural design. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. Design conventions needed to understand the design shall be presented or referenced.

a. System Components –this paragraph shall identify:
   i. The components of the system (Hardware Configuration Items (HWCIs), Computer Software Configuration Items (CSCIs), and manual operations;
   ii. Show the static ("consists of") relationship(s) of the components. Multiple relationships may be presented, depending on the selected design methodology;
   iii. State the purpose of each component and identify the system requirements and system-wide design decisions allocated to it.
   iv. Identify each component's development status/type, if known (such as a new development, existing component to be reused as is, existing design to be reused as is, existing design or component to be reengineered, component to be developed for reuse, component planned for build N, etc.) For existing design or components, the description shall provide identifying information, such as version, documentation references, location, etc.
   v. For each computer system or other aggregate of computer hardware resources identified for use in system, describe its computer hardware resources (such as processors, memory, input/output devices, auxiliary storage, and communications/network equipment).
   vi. Present a specification tree for the system, that is a diagram that identifies and shows the relationships among the planned specifications for the system components.

b. Concept of Execution
   This paragraph shall describe the concept of execution among the system components. It shall include diagrams and descriptions showing the dynamic relationship of the components, that is how they will interact during system operation, including, as applicable, flow of execution control, data flow, dynamically controlled sequencing, stat transition diagrams, timing diagrams, priorities among components, handling of interrupts, timing/sequencing relationships, exception handling, concurrent execution, dynamic allocation/deallocation, dynamic creation/deletion of objects, processes, tasks and other aspects of dynamic behavior.

c. Interface Design
   This paragraph shall be divided into the following subparagraphs to describe the interface characteristics of the system components. It shall include both interfaces among the components and their interfaces with external entities such as other systems, configuration items, and users. Note: There is no requirement for these interfaces to be completely designed at this level; this paragraph is provided to allow the recording of interface design decisions made as part of the system architectural design. If part or all of this information is contained in Interface Design Descriptions (IDDs) or elsewhere, these sources may be referenced.
   i. Interface Identification and Diagrams. This paragraph shall state the project-unique identifier assigned to each interface 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, as appropriate, to depict the interfaces.
   ii. Project Unique Identifier of Interface. This paragraph shall identify an interface by project-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 SSDD (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 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: (1) Priority assigned to the interface by the interfacing entity(ies); (2) Type of interface to be implemented; (3) Characteristics of what interfacing entity(ies) will provide; (4) Characteristics of the what that the interfacing entity(ies) will provide; and (5) Other characteristics such as physical compatibility of the interfacing entity(ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.) store, what is to be transferred through the interface. 5. Section 5 -Requirements Traceability This paragraph shall contain traceability: a. From each system component identified in the SDD to the system requirements allocated to it; and b. From each system requirement to the system components to which it is allocated. 6. Appendices Appendices may be used to provide information published separately for convenience in document maintenance (e.g. charts, drawings etc.). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendices may be bound as separate documents for ease of handling. Appendices shall be lettered alphabetically (A, B, etc.).
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 softcopy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: PDR –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/Review Event +10wd 6. Subsequent Submission: CDR –10wd, PRR-10wd if changes 7. Remarks: NA

3.6 DID-ENG-05 Requirements Verification Cross Reference Matrix

1.TITLE Requirements Verification Cross-Reference Matrix	2. IDENTIFICATION NUMBER DID-ENG-05	
3. DESCRIPTION/PURPOSE The purpose of the Requirements Verification Cross-Reference Matrix (RVCRM) is to plan and record the results of the Contractor's Verification Activities.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 5.2.11.1
7. APPLICATION/INTERRELATIONSHIP The RVCRM must be used in conjunction with the Technical Statement of Requirements (TSOR), System First Article Test Plans, Procedures and Test Reports, and First of Class Functional, Harbour and Sea Acceptance Test Plans, Procedures and Test Reports.		
8.ORIGINATOR Project Manager SM 4-2-7	9. APPLICABLE FORMS	
10. PREPARATION INSTRUCTIONS		

10.1	Format: The RVCRM shall be prepared in Contractor's format using Microsoft Excel
10.2	Content: 1. General: a. The RVCRM is expected to be an evolving document which is used during the analysis and design phases of the program to capture agreement on how the Functional Baseline requirements are to be verified. b. The RVCRM is likely to be based in electronic form (e.g. database or spreadsheet), but when printed shall consist of a table with an entry for requirement in the Functional Baseline. Canada only requires the RVCRM in order to manage Verification against the Functional baseline; however, the Contractor may choose to include other levels of specification within the same document. In case the Contractor shall clearly identify which entries pertain to the Verification of the Functional Baseline. 2. Part 1 Requirements: a. For delivery of the Part 1 RVCRM requirements, each entry in the RVCRM shall contain at least: i. a unique reference to the corresponding requirement to provide context; ii. the requirement words or a brief precis of the requirement to provide context; iii. the proposed Verification method(s) (i.e. one or more of Inspection, Demonstration, Analysis, Audit, Historical Data, and/or Conformance Certificate; iv. the project phase during which requirements will be Verified and associated Verification method to be applied at this phase; noting that where Verification across multiple phases may be proposed, the scope and aims of the activities at each phase must be clearly described; v. a brief description of the proposed Verification method, intended as a vehicle for early agreement by both parties to define the scope of the Verification activities; and vi. comments, if any, as required.

	3. Part 2 Requirements: a. For the delivery of the Part 2 RVCRM requirements, each entry in the RVCRM shall contain at least: i. the part 1 requirements specified at clause Part 1 of this DID; ii. a reference to the specific Verification/Test procedure and relevant documentation, including unique version identifiers; iii. a reference to the report which contains the pertinent Verification results and, as required, data analysis (including any red-line mark-ups and signatures of witness to those results.); iv. the progressive state of each phase of the Verification program with respect to the requirements; v. a result summary (i.e. PASS/FAIL or verification Incomplete if all of the Verification activities associated with the requirement have been completed); and vi. other comments as required.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Excel and .PDF 2. Delivery Venue: email 3. First Submission: PKO/SRR Meeting –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/Review Event +10wd 6. Subsequent Submission: CDR –10wd, PRR-10wd, FOC SAT +20wd 7. Remarks: NA

3.7 DID-ENG-07 Material List

1.TITLE Material List		2. IDENTIFICATION NUMBER DID-ENG-07
3. DESCRIPTION/PURPOSE The purpose of the Material List (ML) is identify the materials incorporated into supplies being delivered, so that they may be assessed from a suitability for use in submarines perspective.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 5.2.16.6.1
7. APPLICATION/INTERRELATIONSHIP The ML may be used in conjunction with the System/Subsystem Specification, System/Subsystem Design Documents, Engineering Drawings and Associated Lists, and Safety Data Sheets.		
8.ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		

10.1	Format: The ML shall be prepared in Contractor format in Microsoft Excel Spreadsheet.
10.2	Contents: As a minimum, the ML shall include the following content: 1. The spreadsheet shall have rows and be comprised of an indentured list of parts and parts associated components; 2. The spreadsheet shall have as a minimum columns comprised of: a. Parts/Component Identification; b. Part/Component Number; c. Part/Component Material Type; d. Part/Component Material Type Specification; e. Part/Component Material Type Specification safety data Sheet Reference (as applicable); and f. Notes. 3. The ML shall provide disposal instructions for any component that are: a. Repair by replacement; b. Require special handling instructions; and c. Cannot be disposed of by conventional means.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Excel and .PDF 2. Delivery Venue: email 3. First Submission: PDR –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/10wd 6. Subsequent Submission: CDR meeting –10wd, and with TDP 7. Remarks: NA

3.8 DID-ENG-08 Safety Data Sheet

<table>
<tr><td colspan="2">1.TITLE

Safety Data Sheet</td><td colspan="2">2. IDENTIFICATION NUMBER

DID-ENG-08</td></tr>
<tr><td colspan="4">3. DESCRIPTION/PURPOSE
The Safety Data Sheet (SDS) is an important component of product stewardship and Occupational Safety and Health. It is intended to provide workers and emergency personnel with the procedures for handling or working with that substance or material in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill handling procedures.</td></tr>
<tr><td colspan="2">4. APPROVAL DATE</td><td>5. OFFICE OF PRIMARY INTEREST (OPI)
Project Authority SM 4-2
Technical Authority SM 4-2-6</td><td>6. SOW SECTION
5.2.16.7.1</td></tr>
<tr><td colspan="4">7. APPLICATION/INTERRELATIONSHIP

The SDS may be used in conjunction with the Material List, System/Subsystem Specification, System/Subsystem Design Documents, Engineering Drawings and Associated Lists, and Submarine’s Hazardous Material Portfolio (SHMP).</td></tr>
<tr><td colspan="2">8.ORIGINATOR
Project Manager SM 4-2-7</td><td colspan="2">9. APPLICABLE FORMS</td></tr>
<tr><td colspan="4">10. PREPARATION INSTRUCTIONS</td></tr>
<tr><td colspan="2">10.1

10.2</td><td colspan="2">Format: the SDS shall be in the Material Supplier format as a PDF.

Contents: Canadian Hazardous Product Regulations specifies the sections and content for the SDS, as follows in table below:</td></tr>
<tr><td colspan="2">MSDS Section and Heading</td><td colspan="2">Specific Information Elements</td></tr>
<tr><td>1</td><td>Identification</td><td colspan="2">• Product Identifier
• Other means of identification (e.g. product family, synonyms, etc.)
• Recommended Use
• Restriction on use
• Canadian supplier identifier+
o Name, full address and phone number and any restrictions on the use of that number, if applicable</td></tr>
<tr><td>2</td><td>Hazard Identification</td><td colspan="2">• Hazard classification (class, category) of substance or mixture or a description of the identified hazard for Physical or Health hazards Not Otherwise Classified:
• Label Elements:
o Symbol (image) or the name of the symbol (e.g. flame, skull and crossbones)
o Signal Word
o Hazard statement (s)
o Precautionary Statement
• Other hazards which do not result in classification (e.g. molten metal hazard)</td></tr>
<tr><td>3</td><td>Composition/Information on ingredients</td><td colspan="2">• When a hazardous product is a material or substance:
o Chemical Name</td></tr>
</table>

		○ Common name and synonyms ○ Chemical Abstract service (CAS) registry number and any unique identifiers ○ Chemical names of impurities, stabilizing solvents and/or additives * • For each material or substance in a mixture that is classified in a health hazard class** ○ Chemical name ○ Common name and synonyms ○ CAS registry number and any unique identifiers ○ Concentration NOTE: confidential business information rules can apply.
4	First-aid measures	• First-aid measures by route of exposure: ○ Inhalation ○ Skin contact ○ Eye contact ○ Ingestion • Most important symptoms and effects (acute or delayed) • Immediate medical attention and special treatment, if necessary
5	Fire Fighting measures	• Suitable extinguishing media • Unsuitable extinguishing media • Specific hazards arising from the hazardous product (e.g., hazardous combustion products) • Special protective equipment and precautions for fire-fighters
6	Accident release measures	• Personal precautions, protective equipment and emergency procedures • Methods and materials for containment and cleaning up
7	Handling and storage	• Precautions for safe handling • Conditions for safe storage (including incompatible materials)
8	Exposure controls/personal protection	• Control parameters, including occupational exposure guidelines or biological exposure limits and source of those values • Appropriate engineering controls • Individual protection measures (e.g. personal protective equipment)
9	Physical and chemical properties	• Appropriate (physical state, color, etc.) • Odour • Odour threshold • pH • melting point/freezing point • Initial boiling point/boiling range • Flash point • Evaporation rate • Flammability (solid. gas) • Lower flammable/explosive limit • Upper flammable • /explosive limit • Vapour pressure • Vapour density • Relative density

		• Solubility • Partition coefficient --n-octanol/water • Auto-ignition temperature • Decomposition temperature • Viscosity
10	Stability and reactivity	• Reactivity • Chemical stability • Possibility of hazardous reactions • Conditions to avoid (e.g. static discharge, shock, or vibration) • Incompatible materials • Hazardous decomposition products
11	Toxicological information	Concise but complete description of the various toxic health effects and the data used to identify those effects, including; • Information on likely routes of exposure (inhalation, ingestion, skin, and eye contact) • Symptoms related to the physical, chemical and toxicological characteristics • Delayed and immediate effects, and chronic effects form short-term and long-term exposure • Numerical measures of toxicity
12	Ecological Information ***	• Eco-toxicity • Persistence and degradability • Bio-accumulative potential • Mobility in soil • Other adverse effects
13	Disposal consideration***	Information on safe handling for disposal and methods of disposal, including any contaminated packaging.
14	Transport information***	• UN number • UN proper shipping name • Transport hazard class • Packaging group • Environment hazards • Transport in bulk, if applicable • Special precautions
15	Regulatory Information***	• Safety, health and environment regulations specific to the product
16	Other information	Date of the latest revisions of the SDS
10.3		Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/.PDF 2. Delivery Venue: email 3. First Submission: PDR –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/10wd 6. Subsequent Submission: CDR –10wd, and with TDP 7. Remarks: NA

3.9 DID-ENG-09 Preliminary Design Report

1.TITLE Preliminary Design Report	2.IDENTIFICATION NUMBER DID-ENG-09	
3. DESCRIPTION/PURPOSE The purpose of the Preliminary Design (PD) Report is for the Contractor to present the material that will be reviewed with Canada at the Preliminary Design Review (PDR) Meeting. The PDR Meeting is a formal review conducted to ensure that the PD meets all system requirements. The PDR establishes the basis for proceeding with Detailed Design (DD). It will show that the correct design options have been selected, interfaces have been identified, and verification methods have been described.		
4. APPROVAL DATE	5.OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.17.1
7.APPLICATION/INTERRELATIONSHIP The PD Report may be used in conjunction with the System Requirement Review Report, Minutes of the Requirement Review Meeting, System/Sub-System Specifications, System/Subsystem Design Documents, Engineering Drawings and Associated Lists, Requirement Verification Cross Reference Matrix, and First article Plan.		
8.ORIGINATOR Project Manager SM 4-2-7	9.APPLICABLE FORMS	
PREPARATION INSTRUCTIONS		
10.1 10.2	Format: The PD report shall be prepared in Contractor format in MS Office. Content: As a minimum, the PD report shall contain sections (as applicable to the project) under the following headings. 1. Section 1 - Background: a. Project Origin; b. Project Objectives and Significant Requirements; c. Design Approach Overview; d. Key assumptions; e. Changes Since previous Review; f. Competitive Analysis; g. Alternative and Rationale for Selected Design Approach; and h. Risks (expected or encountered). 2. Section 2 - Product Design: a. Design vs Critical Requirements; b. Product Design: i. Hardware supported by preliminary drawings, associated lists and CAD models produced in accordance with DID-ENG-00; and ii. Software/firmware supported by preliminary software Design Documentation c. Process supporting Design (e.g. testing, simulation, calculations); d. Product Risk Assessment and abatement; e. Issues and Associated Recommendations; and f. Issues Requiring Clarifications.	

	3. Section 3 –Project: a. Schedule Status; b. Budget (if applicable) Status report; c. Resource status report; and d. Project risk Status report. 4. Enclosures (see their separate CDRLs and associated DIDs): a. System/Sub-system Specification (draft); b. Engineering Drawings, associated Lists and CAD Models (Preliminary) c. System/Subsystem Design Documents (Preliminary); d. Requirement Verification Cross Reference Matrix; and e. First Article Test Plan (Draft).
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft Copy/MS Office and .PDF 1. Delivery Venue: email 2. First Submission : PDR Meeting –10wd 3. TA Review/Approval: Yes/Yes 4. Review/Approval Lead time: 10wd/PDR +10wd 5. Subsequent Submission: NA 6. Remarks: NA

3.10 DID-ENG-10 Detailed Design Report

1.TITLE	2. IDENTIFICATION NUMBER
Detailed Design Report	DID-ENG-10

2. DESCRIPTION/PURPOSE

The purpose of the Detailed Design (DD) Report is for the Contractor to present the material that will be reviewed with Canada at the Critical Design Review (CDR) Meeting. The CDR Meeting is a formal review conducted to ensure that the maturity of the design is appropriate to support with proceeding with the production, assembly, integration and test of the First article System (s).

4. APPROVAL DATE	5.OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.21.2

7.APPLICATION/INTERRELATIONSHIP
The DD Report may be used in conjunction with the Preliminary Design Report, Minutes of the Preliminary Design review Meeting, System/Sub-System Specifications, System/Subsystem Design Documents, Engineering Drawings and Associated Lists, Requirement Verification Cross Reference Matrix, and First Article Plan, production Test Plan, and First Article Test Procedures.

ORIGINATOR Project Manager SM 4-2-7	APPLICABLE FORMS

10.1 10.2	Format: The DD Report must be prepared in Contractor format in MS Office. Content: As a minimum, the DD report must contain sections (as applicable to the project) under the following headings. 1. Section 1-Background: a. Project Origin; b. Project Objectives and Significant Requirements; c. Design Approach Overview; d. Key Assumptions; e. Changes since Previous Review; and f. Competitive Analysis. 2. Section 2 -Product design: a. Design vs Critical Requirements; b. Product Design; i) Hardware: supported by detailed drawings, associated lists and CAD Models produced in accordance with DID-ENG-00; and ii) Software/Firmware: supported by detailed software Design Documentation. c. Process Supporting Design (e.g. testing, simulation, calculations); d. Assumptions Validation; e. Product Risk assessment and Abatement; f. Issues and Associated Recommendations; and g. Issues Requiring Clarifications 3. Section -3 Project: a. Schedule Status; b. Budget (if applicable) Status Report; c. Resource Status Report; and d. Project Risk status Report.

	4. Enclosures (see their separate CDRLs and associated DIDs): a. System/Sub-system Specifications (Final); b. Engineering Drawings, Associated Lists and CAD Models (Detailed); c. System/Subsystem Design Documents (Detailed); d. Requirements verification Cross Reference Matrix; e. First Article Test Plan (Final); f. Production Test Plan (Draft); and g. First article Test Procedures (including FAT Procedures) (Draft).
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and PDF 2. Delivery Venue: email 3. First Submission: CDR –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval: 10wd/CDR +10wd 6. Subsequent Submission: NA 7. Remarks: NA

3.11 DID-ENG-11 First Article System Design Report

1.TITLE First Article System Design Report		2. IDENTIFICATION NUMBER DID-ENG-11
3.DESCRIPTION/PURPOSE The purpose of the First Article System Design (FASD) Report is for the Contractor to present to Canada any changes to the First Article System Design that have resulted from the results of the CDR.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.25.3
7.APPLICATION/INTERRELATIONSHIP The FASD Report may be used in conjunction with the Detailed Design Report, Minutes of the Critical Design Review Meeting, Engineering Drawings and Associated Lists, Requirement Verification Cross Reference matrix, and First Article Test Procedures.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS
PREPARATION INSTRUCTIONS		
10.1 10.2	Format: The FASD Report shall be prepared in Contractor format in MS Office. Content: As a minimum, the FASD report shall contain sections (as applicable to the project) under the following headings. 1. Section 1 -Background: a. Project Origin; b. Project Objectives and Significant Requirements; c. Design Approach Overview; d. Key Assumptions; e. Changes Since previous Review; and f. Competitive Analysis. 2. Section 2 -Product Design: a. Design vs Critical requirements; b. Product Design; c. Process Supporting Design (e.g. testing, simulation, calculations); d. Assumption validation; e. Product Risk assessment and Abatement; and f. Issues Requiring Clarification. 3. Section 3-Project: a. Schedule Progress Report; b. Budget (if applicable) status Report; c. Resource Status Report; and d. Project Risk status Report. 4. Enclosures (see separate CDRLs and associated DIDs): a. Engineering Drawings, Associated Lists, and CAD Models (Detailed with updates as required); b. System/Subsystem Design Documents (Detailed with updates as required); c. Requirements Verification Cross reference Matrix (Detailed, with updates as required); and	
	d. First Article Test Procedures (including FAT Procedure) (Final with updates as required)	

10.3	Delivery Instructions, review and approval requirements: 1. Number of Copies/format: 1 softcopy/ MS Office and .PDF 2. Delivery Venue: email 3. First submission: FAS Build –1wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval Lead Time: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks Review and Approval run concurrently

4 First Article System Test DIDs

4.1 DID-TST-01 Test Plan

1.TITLE Test Plan		2. IDENTIFICATION NUMBER DID-TST-01
3. DESCRIPTION/PURPOSE The purpose of the Test Plan (TP) is to document the Plan for the types of testing to be done.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.26.1 5.2.27.1
7.APPLICATION/INTERRELATIONSHIP The TP may be used in conjunction with the First Article test Plan and the Production Test Plan.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
10.1	Format**:** A TP shall be prepared in Contractor format in MS Office.	
10.2	Content: As a minimum, the TP Report shall contain sections (as applicable to the project) under the following headings. 1. Section 1-Plan Overview. This section of the TP describes the Contractor's strategy, methodology, processes and sequence of activities for the types of testing involved. The TP provides Inspection and Test Points; 2. Section 2 -Organization and Management. This section of the TP describes the Contractor's organization and management for the types of testing; 3. Section 3-Flow Diagrams. The TP includes a type of test Flow Diagrams for the Test Program; 4. Section 4 -Objectives. The TP outlines the Test Program Objectives. 5. Section 5 -Support Requirements. The TP identifies the significant technical and logistics support required to the types of tests; 6. Section 6 -Special Testing. The TP identifies any Special Testing which forms part of the Test Program; 7. Section 7 -Documentation. The TP identifies the documentation requirements for each type of test in the Test Program; 8. Section 8 -Configuration. The TP provides the System/Equipment Configuration (s) that will be tested and show how this configuration is the same configuration that will be tested and shows how this configuration is the same configuration that will be offered for acceptance; and 9. Section 9 -Failure and Corrective Action Management. The TP describes the Problem Resolution System used for the collection of failure data, track corrective action, and how follow up testing will be managed following a test failure.	
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: Requirement Date –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval Lead Time: 10wd/10wd 6. Subsequent submission: NA 7. Remarks: Review and Approval run concurrently	

4.2 DID-TST-02 Test Procedure

1.TITLE Test Procedure		2. IDENTIFICATION NUMBER DID-TST-02
3. DESCRIPTION/PURPOSE The purpose of the Test Procedure (TP) is to document the step by step operations to be performed on items undergoing development, qualification and acceptance testing. The TP identifies the items to be tested, the test equipment, support required, the test conditions to be imposed, the parameters to be measured, and the pass/fail criteria against which the test results will be measured. The document is a compilation of individual test procedures related to a system, subsystem or equipment.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.28.1, 5.2.29.1
7.APPLICATION/INTERRELATIONSHIP The TP may be used in conjunction with the First Article Test Plan and the Production Test Plan, Factory Acceptance Test Procedure, EMC/EMI Test Procedure, Shock Test Procedure, Environment Test Procedure, Endurance Test Procedure.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS

10. PREPARATION INSTRUCTIONS

10.1 Format: A TP shall be prepared in Contractor format in MS Office.

10.2 Content: As a minimum, the TP shall contain the following information (as applicable).

1. Front Matter:
   a. Cover and Title Page: the following information shall appear on the outside front cover and title page:
      i. Date of Issue;
      ii. Revision date;
      iii. Procedure document identification number;
      iv. Contract Number;
      v. Contractor's name and address;
      vi. Type of procedure. Including purpose (e.g. first article test, developmental evaluation, qualification, environmental (specify), acceptance, or other;
      vii. Identification of the system, subsystem, or equipment to be tested; and
      viii. Security Classification (if applicable).

   b. Record of Changes. A record of change pages shall be included to provide for the tracking of changes to the test procedures.

   c. Table of Contents. A table of content is required when more than one test procedure is included in the test procedure document. It shall identify the page location of each procedure number, procedure title, and related equipment nomenclature.

2. Body of Document. For each test procedure, the following information is required:
   a. Procedure number. Each procedure shall have a unique number assigned to it.
   b. Title of Procedure. The title should relate to the purpose of the test.

c. Introduction. The following shall be addressed in the introduction:
   i. Purpose of test (As specified in the contract tasking document);
   ii. System, sub-system or equipment to be tested. The following shall be provided:

      (1) Nomenclature;
      (2) Model or part number;

3. Type of test item (prototype, production item, laboratory model, etc.);
4. Application specification:
   a. Test requirements. Included the following, each related to the prescribing contract requirement paragraph (specification, standard, plan, or work statement);
   b. Required tests, and parameters to be measured;
   c. Performance requirements, acceptance of compliance limits, and Environmental criteria; and
   d. Referenced documents. A list by title, number, date, and source of those documents cited in the test procedure.
5 Required Test Equipment. Includes the following for each piece of test equipment required to perform the procedure:
   a. Nomenclature;
   b. Model number (if applicable);
   c. Use of test equipment;
   d. Manufacturer (if mandatory);
   e. Accuracy and calibration requirements; and
   f. Range or spectrum of measurements required.
6. Table of tests. This table lists each test to be performed under the procedure in the sequence it is to be performed, identified to the procedure paragraph, and the related specifications/contract requirement.
7. Step by Step procedure. The following shall be included for each step of the test procedure:
   a. Test set-up diagrams, including test equipment connections;
   b. Input and output instrumentation points;
   c. Test item operating limits and test conditions to be imposed;
   d. Performance parameters to be measured;
   e. Step-by-step operations to obtain the required data;
   f. Caution and safety warnings as appropriate;
8. Data Sheets. Data sheets shall be included with the procedure, or be separately attached at the end of all procedures. They shall provide for:
   a. Identification of item tested, including model and serial numbers;
   b. Recording of test measurements;
   c. Identification of required or objective performance values, with tolerances;
   d. Identification of applicable procedure paragraphs;
   e. Date of test;
   f. Signature of technician or inspector performing the tests; and
9. Support requirements. Any special support requirement would be included in this section such as:
   a. Use of special facilities or test ranges;
   b. Personnel requirements (numbers, types, qualifications);
   c. Unusual electrical, hydraulic, pneumatic, etc., requirements; and
   d. Support equipment requirements.

10.3	Delivery Instructions, Review, and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Office and .PDF 2. Delivery Venue: email 3. First Submission: Requirement Date –10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval Lead time: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently

4.3 DID-TST-03 Test Report

1.TITLE Test Report		2. IDENTIFICATION NUMBER DID-TST-03
3. DESCRIPTION/PURPOSE The purpose of the Test Report is to document the test/inspection results, findings and analyses that will enable Canada to evaluate compliance with system requirements, performance objectives, specifications, and test/inspection plans.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.33.2.1, 6.2.2.3.1
7.APPLICATION/INTERRELATIONSHIP The TST Report may be used to report the tests conducted in accordance with Factory Acceptance Test Procedure, EMC/EMI Test procedure, Shock Test Procedure, Environment Test Procedure, Endurance Test Procedure.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS

10. PREPARATION INSTRUCTIONS

10.1 Format: A TST Report shall be prepared in Contractor format in MS Office.

10.2 Content: The TST Report shall contain the following information (as applicable).

1. Front Matter:
   a. Cover and Title Page: The following information shall appear on the outside front cover and title page:
      i. Date of issue;
      ii. Revision date (if applicable);
      iii. Contractor's name, address, and commercial and government entity code;
      iv. Contract number;
      v. Contractor's name and address;
      vi. Type of test/inspection (e.g. EMC/EMI test, Deliverable Unit, 1 FAT Test, etc.);
      vii. Including purpose (e.g. first article test, development evaluation, qualification, environmental (specify), acceptance, or other;
      viii. Identification of the item tested/inspected;
      ix. Date or period of test/inspection;
      x. Name and address of requiring government activity; and
      xi. Security classification (if applicable)
   b. Record of Changes. A record of change pages shall be included to provide for the tracking of changes to the test report.
   c. Table of Contents. A table of contents is required identifying the following:
      i. The title and starting page of each major section, paragraph, and appendix of the report; and
      ii. The page, identifying number and title of each illustration (for example figure, table, photograph, chart, and drawing).

2 Introduction. The introduction shall include the following information.
   a. Test/inspection objective(s). The specific test/inspection objective(s) as specified in the contract tasking document.
   b. Item(s) tested/inspected. Completed identification of the items tested/inspected including the following:
      a. Nomenclature;
      b. NATO Stock Number;

c. Model number, part number, and serial number;
d. Type of item (for example, prototype, production item, laboratory model);
e. Serial or lot number;
f. Applicable engineering changes;
g. Production item specification, if applicable; and
h. Date of manufacture.

c. Test/inspection requirements. Complete identification of the test/inspection requirements correlated to contractual requirements including the following:
a. Required test/inspection parameters; and
b. Performance requirements, acceptance or compliance limits, and environmental criteria.

3. Summary. Complete test/inspection report summary including the following:
a. A brief description of the significant test/inspection results, observations, conclusions, and recommendations covered in greater detail elsewhere in reports;
b. Proposed corrective actions and schedules for failure or problems encountered;
c. Identification of deviation, departures, or limitations; and
d. Tables, graphs, illustrations, or charts as appropriate to simplify the summary date.

4. Reference Documents. Complete identification of all documents referenced in the test/inspection report including the following as applicable:
a. Prior test/inspection reports on the same item;
b. Test/inspection plans and procedure documents;
c. Prior certification of compliance;
d. Contractor's file designation where test/inspection records are maintained; and
e. Input parameters used.

The applicable issue of the documents cited therein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be specified in the contract.

5. Body of Document. For each test procedure, the following information is required.
a. Test Equipment Identification. Complete identification of each item of test equipment used in the test/inspection including the following
i. Nomenclature;
ii. Model number;
iii. Serial number;
iv. Manufacturer;
v. Calibration Status;
vi. Accuracy data; and
vii. Comments, if applicable.
b. Title/inspection facility installation and set-up. Complete description of the physical set-up used in conducting the test/inspection to include the following:
a. Location or orientation of the item;
b. Location, orientation, or settings of the test equipment and instrumentation;
c. Location, orientation, or setting of sensors and probes;
d. Location, orientation of interconnections, cables, and hook ups; and
e. Electrical power and control, pneumatic, fluidic, and hydraulics requirements.

Drawings, illustrations, and photographs may be used for clarification.

c. Test/inspection procedures. Complete description of the procedures used in conducting the test/inspection to include the following:
a. Item selection and inspection that verified suitability for test/inspection; and

b. Summarized sequence of testing/inspection steps, including description of how the item was operated during the test/inspection steps, and any control conditions imposed.

d. Test/inspection results and analysis. A copy of all test/inspection results and analysis to include the following:

i. Recorded Data. The actual recorded data. If the recorded data is extensive provide it as an appendix; and

ii. Test/inspection results. Identification of all test/inspection results to include the following:

(1) Matrices comparing results achieved against test/inspection objectives or requirements;

(2) A discussion of these matrices as to their significance, and how they compare to any prior test/inspections;

(3) Calculation examples; and

(4) Discussion of anomalies, deviation, discrepancies, or failures including their impact, causes, and proposed corrective actions. The discussion shall address discrepancies between design requirements and the tested/inspected configuration.

e. Conclusion: Test/inspection conclusions are distinguished between objective and subjective to include the following:

a. The effectiveness of the test/inspection procedures in measuring item performance;

b. The success or failure of the item to meet required test/inspection objectives;

c. The need for repeat, additional, or alternative tests/inspections;

d. The need for item redesign or further development;

e. The need for improved test/inspection procedures, techniques, or facilities; and

f. The adequacy and completeness of the test/inspection requirements.

f. Recommendations: Recommendations appropriate to the test/inspection results and conclusions including the following:

a. Acceptability of the item tested/inspected (pass or fail);

b. Additional testing/inspection required;

c. Redesign required;

d. Problem resolution;

e. Test/inspection procedure or facility improvements;

f. Disposition of items tested/inspected;

g. Documentation changes required; and

viii. Testing/inspection improvements.

g. Authentication: The following certifications shall be included, as applicable:

i. Authentication of test/inspection results. A statement that the test/inspection was performed in accordance with the applicable test/inspection plans and procedures, and that the results are and accurate. The authentication shall include the signature of the contractor personnel that performed the test(s)/inspection(s), a contractor representative authorised to make such certification, and any government witness;

ii. Authentication of prior validation. A statement identifying those requirements not tested/inspected or measured that were previously validated. Include identification of the data and method employed for such validation (for example, prior test/inspection, analytical verification, equivalent item, and so on). The authentication shall include the signature of a contractor representative authorised to make such authentication and any government witness and

iii. Authentication of acceptability. A statement that the item tested/inspected either passed or failed item acceptability requirements. This authentication

	shall include the signature of a contractor representative authorised to make such authentication and any government witness. 5. Appendices. Appendices shall be used to append detailed test/inspection data, drawings, photographs, or other documentation too voluminous to include in the main body of the report. This includes referenced documentation not previously provided by the government, and test/inspection reports from any associated test/inspection activity that may have performed some of the testing/inspection requirements.
10.3	Delivery Instructions, Review and Approval requirements: 1. Number of Copies/format: 1 soft copy/MS Office and .PDF 2. Delivery venue: email 3. First submission: Test +10wd 4. TA Review/approval: Yes/Yes 5. Review/Approval lead time: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently

4.4 DID-TST-04 First Article System Qualification Test Report

1.TITLE First Article System Qualification Test Report		2. IDENTIFICATION NUMBER DID-TST-04
3. DESCRIPTION/PURPOSE The First Article System (FAS) Qualification Test Report provides a summary of FAS test results, reservation, and any recommended follow on actions.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 5.2.34.1
7.APPLICATION/INTERRELATIONSHIP The FAS Qualification Test Report may be used in conjunction with the First Article Test Plan, First article Test procedures (EMC/EMI, Environmental Qualification, shock and Endurance) and their associated First article Test Reports, as well as Requirements verification Cross Reference Matrix.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
10.1	The FAS Qualification Test Report shall be prepared in Contractor format in MS Office.	
10.2	Content: The FAS Qualification Test Report shall as a minimum, include the following information for each FAS tested: 1. Type of FAS Tested: a. Part number/version number; b. Serial number; and c. Photographs, if available. 2. Summary of FAS Test Results (Pass/Fail), Reservation, Recommended Follow-on Action) for the following tests: a. EMC/EMI; b. Environmental Qualification; c. Shock; and d. Endurance.	
10.3	Delivery Instructions, review and Approval Requirements 1. Number of Copies/format: 1 soft copy/MS Office and .PDF 2. Delivery venue: email 3. First submission: Last FAS Test +20wd 4. TA Review/approval: Yes/Yes 5. Review/Approval lead time: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently	

5 Production DIDs

5.1 No Production DIDs

6 Installation and Set-to-Work DIDs

6.1 DID-ISW-00 Field Service Representative Report

<table>
<tr><td colspan="2">1.TITLE

Field Service Representative Report</td><td colspan="2">2. IDENTIFICATION NUMBER

DID-ISW-00</td></tr>
<tr><td colspan="4">3. DESCRIPTION/PURPOSE
The purpose of the Field Service Representative (FSR) Report is for the FSR supporting the executing agency (Ship’s Staff, Fleet Maintenance Facility (FMF) Facility Personnel, and Shipyard) to report on the FSR’s activities, observations and recommendations during a site visit. Canada will use FSR Reports in conjunction with execution agency task completion reports to accept the particular phase of the work, and once all tasks are complete, to accept the work overall.</td></tr>
<tr><td>4. APPROVAL DATE</td><td colspan="2">5. OFFICE OF PRIMARY INTEREST (OPI)
Project Authority SM 4-2
Technical Authority SM 4-2-6</td><td>6.SOW SECTION
7.3.2.2.1
7.3.3.2.1</td></tr>
<tr><td colspan="4">7.APPLICATION/INTERRELATIONSHIP
The FSR Report may be used in conjunction with the Installation and Acceptance Plan, First of Class and Follow-on Shipset Functional Test procedures, Harbour Acceptance Procedures and Sea Acceptance Test Procedures.</td></tr>
<tr><td colspan="2">8.ORIGINATOR

Project Manager SM 4-2-7</td><td colspan="2">9.APPLICABLE FORMS</td></tr>
<tr><td colspan="4">10. PREPARATION INSTRUCTIONS</td></tr>
<tr><td>10.1</td><td colspan="3">Format: The FSR Report shall be prepared in Contractor’s format in MS Office.</td></tr>
<tr><td>10.2</td><td colspan="3">Content: The FSR report shall include as a minimum, the following content:

1. Contract (Purchase Order) Number;
2. Call Up Number;
3. Date(s) of Service;
4. Name of the FSR;
5. Unit Visited, Location of Unit; (e.g. HMCS Chicoutimi, Victoria, British Columbia);
6. Reason for Call Up;
7. Location of Work Within Unit;
8. Work Performed;
9. Additional Recommendations (if any); and
10. FSR Signature and Date.</td></tr>
<tr><td>10.3</td><td colspan="3">Delivery Instructions, review and Approval Requirements
1. Number of Copies/format: 1 soft copy/MS Office and .PDF
2. Delivery venue: email
3. First submission: FSR Visit +10wd
4. TA Review/approval: Yes/Yes
5. Review/Approval lead time: 10wd/10wd
6. Subsequent Submission: NA
7. Remarks: Review and Approval run concurrently</td></tr>
</table>

6.2 DID-ISW-01 Installation and Acceptance Plan

1. TITLE	2. IDENTIFICATION NUMBER
Installation and Acceptance Plan	DID-ISW-01

3. DESCRIPTION/PURPOSE

The purpose of the Installation and Acceptance (IA) Plan is to provide the organizations planning the installation through to acceptance with the Contractor's recommended sequence of events for installation through to acceptance activities for the Equipment/System.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI)	6. SOW SECTION
	Project Authority SM 4-2 Technical Authority, SM 4-2-6	7.2.1.1

7. APPLICATION/INTERRELATIONSHIP

The IA Plan may be used in conjunction with the Installation and Set to Work Procedure, First of Class and Follow On Class Functional Test Procedures, Harbor Acceptance Test Procedures and Sea Acceptance Test Procedures.

8. ORIGINATOR	9. APPLICABLE FORMS
Project Manager SM 4-2-7	

10. PREPARATION INSTRUCTIONS

Reference: DID-TST-01

10.1 Format: The IA Plan must be prepared, following the guidance at the reference in Contractor's format in MS Office.

10.2 The IA Plan's content must be Contractor defined, but as a minimum needs to cover shipset preparation for installation, set-to-work, first of class and follow-on (if different) harbor and at sea functional testing.

10.3 Delivery Instructions, Review and Approval Requirements:

1. Number of Copies/Format: 1 soft copy/MS Office and .PDF
2. Delivery Venue: email or FTP
3. First Submission: PRR Meeting -10wd
4. TA Review/Approval: Yes/Yes
5. Review/Approval Lead Time: 10wd/10wd
6. Subsequent Submission: NA
7. Remarks: Review and Approval run concurrently

6.3 DID-ISW-02 Installation and Set-to-Work Procedure

1. TITLE	2. IDENTIFICATION NUMBER
Installation and Set-to-Work Procedure	DID-ISW-02

3. DESCRIPTION/PURPOSE
The purpose of the Installation and Set-to-Work Procedure (ISWP) to provide guidance to the executing personnel (Ship's Staff, Fleet Maintenance Facility Personnel, Shipyard, Contractor Field Service Representatives) on how to install and set-to-work the Equipment/System.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI)	6. SOW SECTION
	Project Authority SM 4-2 Technical Authority SM 4-2-6	7.2.2.1

7. APPLICATION/INTERRELATIONSHIP
The ISWP may be used in conjunction with the Installation and Acceptance Plan, Functional Test Procedures, and the ISW Field Service Representative Report.

8. ORIGINATOR	9. APPLICABLE FORMS
Project Manager SM 4-2-7	

10. PREPARATION INSTRUCTIONS

Reference: DID-TST-03

10.1 Format: The ISWP must be prepared, following the guidance at the reference, in Contractor's format in MS Office.

10.2 Content: The ISWP must include as a minimum:

1. Procedures for making safe the interfaces to the Equipment/System to be replaced (see 2 below);
2. Procedures for disconnecting all Equipment/System interfaces to be replaced including:
   a. Electrical/Control;
   b. Hydraulic/Pneumatic;
   c. Cooling;
   d. Mechanical to Other System components;
   e. Mechanical Mounting; and
   f. Any Other Interfaces.
3. Procedures for physical removal of Equipment/System to be replaced.
4. Procedures for any special preparation of replacement Equipment/System prior to physical placement.
5. Procedures for physical placement of replacement Equipment/System.
6. Procedures for physical alignment of replacement Equipment/System (if required) within the higher level system.
7. Procedures for connecting all replacement Equipment/System interfaces (see 2. Above).
8. Procedures for testing all replacement Equipment/System interfaces.
9. Procedures for setting-to-work the replacement Equipment/System.

10.3 Delivery Instructions, Review and Approval Requirements:

1. Number of Copies/Format: 1 soft copy/MS Office and .PDF
2. Delivery Venue: email or FTP
3. First Submission: PRR Meeting -20wd
4. TA Review/Approval: Yes/Yes
5. Review/Approval Lead Time: 20wd/20wd
6. Subsequent Submission: NA
7. Remarks: Review and Approval run concurrently

6.4 DID-ISW-03 Harbour Acceptance Test Procedure

1. TITLE	2. IDENTIFICATION NUMBER
Harbor Acceptance Test Procedure	DID-ISW-03

3. DESCRIPTION/PURPOSE

The purpose of the Harbor Acceptance Test (HAT) Procedure is to provide guidance to the executing personnel (Ship's Staff, Fleet Maintenance Facility Personnel, Shipyard, Contractor Field Service Representatives) on how to perform First of Class (FOC) and Follow-On Shipset (FOS) HAT tests on the installed, set-to-work and functionally tested Equipment/System. Note: FOC HATs are those tests associated with the verification of the design that have to be performed on board. They will only be performed once during the project and will not be repeated with each type of FOS. There may be an alongside and an at sea portion of FOC HATs.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI)	6. SOW SECTION
	Project Authority SM 4-2 Technical Authority SM 4-2-6	7.2.3.1

7. APPLICATION/INTERRELATIONSHIP

The HAT Procedure may be used in conjunction with the Installation and Acceptance Plan, ISW Procedures, Functional Test Procedures, and FOC and FOS HAT Field Service Representative Reports.

8. ORIGINATOR	9. APPLICABLE FORMS
Project Manager SM 4-2-7	

10. PREPARATION INSTRUCTIONS

Reference: DID-TST-02

10.1 Format: The HAT Procedure must be prepared, following the guidance at the reference, in Contractor's format in MS Office.

10.2 Content: The HAT Procedure must include as a minimum:

1. FOC HAT tests required to prove the design; and
2. FOS Class HAT tests. Note: these may be a subset of the FOC FTs.

10.3 Delivery Instructions, Review and Approval Requirements:

1. Number of Copies/Format: 1 soft copy/MS Office and .PDF
2. Delivery Venue: email or FTP
3. First Submission: PRR Meeting -20wd
4. TA Review/Approval: Yes/Yes
5. Review/Approval Lead Time: 20wd/20wd
6. Subsequent Submission: NA
7. Remarks: Review and Approval run concurrently

7 Quality Assurance DIDs

7.1 No QA DIDs

8 Configuration Management DIDs

8.1 DID-CM-01 Configuration Status Account

1.TITLE Configuration Status Account		2. IDENTIFICATION NUMBER DID-CM-01
3.DESCRIPTION/PURPOSE The Configuration Status Account (CSA) is a database that collects, records, stores, handles, verifies and validates and present Configuration Status Accounting Information for each Configuration Item identified with the Configuration Management Plan that is under configuration management and control.		
4.APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 9.2.1.1
7.APPLICATION/INTERRELATIONSHIP The CSA may be used in conjunction with the configuration management Plan for deliverables documents and items of supply.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS

10. PREPARATION INSTRUCTIONS	
10.1	Format: The CSA shall be prepared in Contractor format in Microsoft Excel.
10.2	Content: A Configuration Items Record in CSA shall as a minimum include: 1. An indentured list of the item and its sub-components. 2. For each indentured item (or sub-component): a. The current approved configuration identifier; b. Reference to its associated documentation; c. Proposed changes from initiation, review, approval, disapproval, and implementation; d. Configuration audit results and disposition of identified discrepancies; e. Installation status of approved configuration changes to all CIs at all locations; f. Next higher assembly using the part number, except for assembly into standard parts; g. Composition of any CI or part number with respect to other CIs or part numbers; h. Series number associated with part numbers; i. Critical components by both part number and serial number; j. Reference to specification control numbers associated with any contractor, subcontractor, vendor, or supplier part number; k. Reference to all changes to superseded configuration formally accepted by Canada; and l. All Engineering Changes released for production incorporation.
10.3	Delivery Instructions, review and Approval Requirements 1. Number of Copies/format: 1 soft copy/MS Excel and .PDF 2. Delivery venue: email 3. First submission: PDR Meeting – 10wd 4. TA Review/approval: Yes/NA 5. Review/Approval lead time: 10/NA 6. Subsequent Submission: CDR, PRR Meeting-10wd, Production Complete +20wd 7. Remarks: NA

8.2 DID-CM-02 Configuration Status Account Report

1.TITLE Configuration Status Account Report		2. IDENTIFICATION NUMBER DID-CM-02
3.DESCRIPTION/PURPOSE The Configuration Status Account (CSA) Report provides details about the Configuration Items (CI) being developed under the contract; documentation and identification numbers relating to those CIs and changes to items and their configuration documentation.		
4.APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 9.3.3.1
7.APPLICATION/INTERRELATIONSHIP The CSA Report may be used in conjunction with the Configuration Management Plan and Configuration Status Account.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS

10. PREPARATION INSTRUCTIONS

Reference: ANSI/EIA 649-B Configuration Management Standard.

10.1 Format: The CSA Report shall be prepared in Contractor format in MS Office.

10.2 Contents: The CSA Report shall include.

1. Data from the CSA database including:
   a. The identification of the currently approved configuration documentation and configuration identifiers associated with each CI;
   b. The status of proposed engineering changes from initiation to implementation;
   c. The status and disposition of discrepancies form configuration audits;
   d. The status of requests for deviation and waivers;
   e. The ability to trace changes from the baseline documentation of each CI; and
   f. The effectiveness and installation status of configuration changes to all CIs at all locations.
2. The CSA Report shall identify design information using descriptive documentation and identification numbers meeting the requirements of ANSI/EIA 649:
   a. Specification revision excepting that reference to Source Control Numbers does not apply;
   b. Specification revision history excepting that reference to SCNs does not apply;
   c. Drawing revision level;
   d. Drawing revision history;
   e. Software/Firmware version level;
   f. Software/Firmware version history; and
   g. CI component indentured listing.
3. The CSA Report shall include current information about active change processing meeting the requirements of ANSI/EIA 649:
   a. Change being processed status;
   b. Change being processed history;
   c. Event Date Entries; and
   d. Change processing history.
4. The CSA Report shall include current information about approved changes to CIs;

	5. The CSA Report shall include current information about implementation of approved changes meeting the requirements of ANSI/EIA 649: a. Approved change implementation activities; b. Drawing revision activity; c. Software/Firmware revision activity; d. Technical manual and other related document preparation/revision; e. Spare purchases and distribution; f. Support equipment design, purchase or modification; and g. Retrofit/modification kit development. 6. The CSA Report shall include current information about configuration items meeting the requirements of ANSI/EIA 649-B.
10.3	Delivery Instructions, review and Approval Requirements 1. Number of Copies/format: 1 soft copy/MS Office and .PDF 2. Delivery venue: email 3. First submission: PDR Meeting – 10wd 4. TA Review/approval: Yes/NA 5. Review/Approval lead time: 10/NA 6. Subsequent Submission: CDR, PRR Meeting-10wd, Production Complete +20wd FOC, FOS (SS2, SS3, and SS4) SAT +20wd. 7. 8. Remarks: NA

9 Integrated Logistics Support DIDs

9.1 DID-ILS-01 Naval Preventive Maintenance Plans and Schedules

1.TITLE Naval Preventive Maintenance Schedules		2. IDENTIFICATION NUMBER DID-ILS-01
3. DESCRIPTION/PURPOSE: The purpose of the Naval Preventive Maintenance Schedule (NPMS) is to set out the maintenance routines that are required to be carried out on the Equipment/System by Ship's Staff or by Fleet Maintenance Facility (FMF) Staff.		
4.APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 10.2.1.1
7.APPLICATION/INTERRELATIONSHIP The NPMS may be used in conjunction with the Logistics Support Analysis Record, Technical Manual, Recommended Spare Parts List, and Special Purpose Tools and Equipment List, As Delivered Drawings and Specifications.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
	References: CFTO D-01-100-204/SF-008 – Preparation of Naval Preventive Maintenance Instructions, dated 28 February 2001. CFTO D-01-100/204/SF-009 – Specification of Naval Preventive Maintenance Schedules or Preventive Maintenance Schedule (Repair Facility), dated 25 September 2003	
10.1	Format: The NPMS contents shall be prepared, following the guidance at the references, in MS Office.	
10.2	Content: The NPMS contents shall be in accordance with the reference. Maintenance Schedules are to be built to support two (2), 64 month operation periods between extended docking work periods. Maintenance routines are to be scheduled, as required, as daily, weekly, monthly, 4 monthly, 8 monthly, 16 monthly, 32 monthly, and 64 monthly.	
10.3	Delivery Instructions, review and Approval Requirements 1. Number of Copies/format: 1 soft copy/MS Office and .PDF 2. Delivery venue: email 3. First submission: PRR Meeting-10wd 4. TA Review/approval: Yes/Yes 5. Review/Approval lead time: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently	

9.2 DID-ILS-02 Standard Ship Maintenance and Repair Specifications

<table>
<tr><td colspan="2">1.TITLE

Standard Ship Maintenance and Repair Specifications</td><td colspan="2">2. IDENTIFICATION NUMBER

DID-ILS-02</td></tr>
<tr><td colspan="4">3.DESCRIPTION/PURPOSE
The purpose of the Standard Ship Maintenance and Repair Specifications (SSMRS) is to set out the Maintenance and Repair specifications to be undertaken during Extended Docking Work Periods (EDWP).</td></tr>
<tr><td>4.APPROVAL DATE</td><td colspan="2">5. OFFICE OF PRIMARY INTEREST (OPI)
Project Authority SM 4-2
Technical Authority SM 4-2-6</td><td>6.SOW SECTION
10.2.2.1</td></tr>
<tr><td colspan="4">7.APPLICATION/INTERRELATIONSHIP
The SSMRS may be used in conjunction with the Logistics Support Analysis Record, Technical Manual, As Delivered Drawings and Specifications.</td></tr>
<tr><td colspan="2">8.ORIGINATOR

Project Manager SM 4-2-7</td><td colspan="2">9.APPLICABLE FORMS</td></tr>
<tr><td colspan="4">10. PREPARATION INSTRUCTIONS</td></tr>
<tr><td></td><td colspan="3">References: CFTO D-01-100-231/SF-001 – Specification Preparation of Standard Ship Maintenance and Repair Specifications, dated 27 Nov 2011.</td></tr>
<tr><td>10.1</td><td colspan="3">Format: The SSMRS contents shall be prepared, following the guidance at the references, in MS Office.</td></tr>
<tr><td>10.2</td><td colspan="3">Content: The SSMRS contents shall be in accordance with the reference.</td></tr>
<tr><td>10.3</td><td colspan="3">Delivery Instructions, review and Approval Requirements
1. Number of Copies/format: 1 soft copy/MS Office and .PDF
2. Delivery venue: email
3. First submission: PRR Meeting-10wd
4. TA Review/approval: Yes/Yes
5. Review/Approval lead time: 10wd/10wd
6. Subsequent Submission: NA
7. Remarks: Review and Approval run concurrently</td></tr>
</table>

9.3 DID-ILS-03 Technical Data Package

1.TITLE Technical Data Package		2. IDENTIFICATION NUMBER DID-ILS-03
3.DESCRIPTION/PURPOSE The purpose of the Technical Data Package (TDP) is to provide a final consolidated delivery of project developed Engineering and Integrated Logistics Support documentation required to support the equipment/system In-Service.		
4.APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6.SOW SECTION 10.2.3.1
7.APPLICATION/INTERRELATIONSHIP The TDP may be used in conjunction with the Logistics Support Analysis Record, Technical Manual, As Delivered Drawings and Specifications.		
8.ORIGINATOR Project Manager SM 4-2-7		9.APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		
10.1	Format: The TDP elements shall be prepared, following the guidance of their associated DIDs, in their respective format.	
10.2	Contents: The TDP shall include: 1. Technical Statement of Requirements (TSOR) (Proposal/Contracted). Contracted if different from Proposal. 2. System/subsystem Specifications (Final Version), including Procurement Specifications for Commercial Over/Off the Shelf (COTS) components. 3. Engineering Drawings and associated Lists (as Built Versions). 4. Material List (Final Version). 5. Safety Data Sheet. 6. Technical manuals (final Version). 7. Training Material. 8. Approved Spare parts List (Parts Provisioning Breakdown (PPB). 9. Approved SPTATE List. 10. Installation/set-To-work procedure (Final Version). 11. Functional Test Procedure (Final Version). 12. Harbour Acceptance Test Procedure (Final Version). 13. Sea Acceptance Test Procedure (final version). 14. Naval Preventive Maintenance Schedules; and 15. Standard Ship Maintenance and Repair Specifications.	
10.3	Delivery Instructions, review and Approval Requirements 1. Number of Copies/format: 1 soft copy/Source data and .PDF 2. Delivery venue: email 3. First submission: 1ST Delivery +10wd 4. TA Review/approval: Yes/Yes 5. Review/Approval lead time: 10wd/10wd 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently	

9.4 DID-ILS-04 Recommended Spare Parts List

1. TITLE Recommended Spare Parts List		2. IDENTIFICATION NUMBER DID-ILS-04
3. DESCRIPTION/PURPOSE The purpose of the Recommended Spare Parts List (RSPL) is to propose a list of recommended Installation, On-board, and Depot level Spares required to support the Equipment/System.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 10.2.5.1.1
7. APPLICATION/INTERRELATIONSHIP The RSPL may be used in conjunction with the Contract, Logistics Support Analysis Record, Technical Manual, Special Purpose Tools and Test Equipment List, As Delivered Specifications and Drawings.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS

10. PREPARATION INSTRUCTIONS

References: CFTO D-01-100-214/SF-000 – Preparation of Provisioning Documentation for CF Equipment, dated 1 May 2002

10.1 Format: The RSPL must be prepared, following the guidance at the references, in Microsoft Excel.

10.2 Content:

1. The RSPL for each type of listed item must, have the following completed data fields:
   a. Item Number (unique sequence number for the list);
   b. Indenture Code;
   c. Item Name;
   d. Reference (Manufacturer's Part) Number;
   e. NSCM/CAGE Code;
   f. OEM Part Number;
   g. NATO Stock Number (if available);
   h. Quantity Per Assembly;
   i. Standard Unit Price;
   j. Unit of Issue (UOI);
   k. Unit of Measure;
   l. Reparability Indicator (REP);
   m. Government Supplied Material (GSM);
   n. Procurement Lead Time (PLT);
   o. Reference Designation;
   p. Shelf Life;
   q. Usage Rate;
   r. Mean Time Between Failure;
   s. Recommended Buy Quantity Total summing up:
      i. Recommended Buy Installation Spares/Shipset;
      ii. Recommended Buy On-Board Spares/Shipset; and
      iii. Recommended Buy Depot Spares;
   t. SMR Code;
   u. Logistics Control Number (LCN);
   v. Used On Code; and

w. Extended Price Per Item (Standard Unit Price times Recommended Buy Quantity).
The RSPL must have a recommended Total RSPL price summing up the Extended Price Per Items.

2. Sparing Assumptions:
   a. Installation-Assume quantity four (4) submarine installs;
   b. On-Board Maintenance-Assume quantity four (4) submarines;
   c. Depot-Assume quantity 2 supply depots (1 East and 1 West);
   d. Two (2) years' worth of On-Board Spares; and
   e. Two (2) years' worth of Depot Spares.

10.3 Delivery Instructions, Review and Approval Requirements:

1.	Number of Copies/Format:	1 softcopy/ MS Excel and .PDF
2.	Delivery Venue:	email or FTP
3.	First Submission:	CDR Meeting -10wd
4.	TA Review/Approval:	Yes/Yes
5.	Review/Approval Lead Time:	10/10
6.	Subsequent Submission:	NA
7.	Remarks:	Review and Approval run concurrently

9.5 DID-ILS-05 Provisioning Parts Breakdown

1. TITLE	2. IDENTIFICATION NUMBER
Provisioning Parts Breakdown	DID-ILS-05

3. DESCRIPTION/PURPOSE
The purpose of Provisioning Parts Breakdown (PPB) is to provide the approved list of Installation, On-Board and Depot Level Spares required to support the equipment/system.

4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI)	6. SOW SECTION
	Project Authority SM 4-2 Technical Authority SM 4-2-6	10.2.5.6

7. APPLICATION/INTERRELATIONSHIP
The PPB may be used in conjunction with the Contract, Logistics Support Analysis Record, Technical Manual, Provisioning Special Purpose Tools and Test Equipment Breakdown, As Delivered Specifications and Drawings.

8. ORIGINATOR	9. APPLICABLE FORMS
Project Manager SM 4-2-7	

10. PREPARATION INSTRUCTIONS

Reference: CFTO D-01-100-214/SF-000 – Preparation of Provisioning Documentation for CF Equipment, dated 1 May 2002

10.1 Format: The PPB must be prepared, following the guidance at the references, in Microsoft Excel.

10.2 Content: The PPB, as a minimum, must have the following content for each type of line:

1. The RSPL for each type of listed item must have the following completed data fields:
   a. Item Number (unique sequence number for the list);
   b. Indenture Code;
   c. Item Name;
   d. Reference (Manufacturer's Part) Number;
   e. NSCM/CAGE Code;
   f. OEM Part Number;
   g. NATO Stock Number (if available);
   h. Quantity Per Assembly;
   i. Standard Unit Price;
   j. Unit of Issue (UOI);
   k. Unit of Measure;
   l. Reparability Indicator (REP);
   m. Government Supplied Material (GSM);
   n. Procurement Lead Time (PLT);
   o. Reference Designation;
   p. Shelf Life;
   q. Usage Rate;
   r. Mean Time Between Failure;
   s. Recommended Buy Quantity Total summing up:
      i. Approved Buy Installation Spares/Shipset;
      ii. Approved Buy On-Board Spares/Shipset; and
      iii. Approved Buy Depot Spares
   t. SMR Code;
   u. Logistics Control Number (LCN);
   v. Used On Code; and

	w. Extended Price Per Item (Standard Unit Price times Recommended Buy Quantity). 2. Supplementary Provisioning Technical Documentation (SPTD). For each type of item that has not already been assigned a NATO Stock Number (NSN), the following Supplementary Provisioning Technical Documentation is required to assist in the NSN cataloguing process: a. Item Name; b. Manufacturer's Part Number; c. CAGE Code; and d. As applicable: i. Configuration-drawing of item, assembly, wiring or schematic drawing, illustrated parts list; ii. Technical Specification, including relevant standard; iii. Physical Characteristics, such as dimensions, tolerances, materials, mandatory processes, surface finish, protective coating; iv. Electrical Characteristics; v. Performance data, including the environmental and operating conditions under which the item must perform; vi. Mounting Requirements; vii Special features which contribute to the uniqueness of the item; and viii. Commercial Catalogue Data. 3. The SPTD must be sequenced in the same order as the provisioning list that it supplements; and 4. The SPTD must include identification of any limitations on the use or publication of any data provided.
10.3	Delivery Instructions, Review and Approval Requirements: 1. Number of Copies/Format: 1 soft copy/MS Excel and .PDF 2. Delivery Venue: email or FTP 3. First Submission: PRR -10wd 4. TA Review/Approval: Yes/Yes 5. Review/Approval Lead Time: 10/10 6. Subsequent Submission: NA 7. Remarks: Review and Approval run concurrently

9.6 DID-ILS-06 Contractor End Items List

1. TITLE Contractor End Items List (CEIL)	2. IDENTIFICATION NUMBER DID-ILS-06	
3. DESCRIPTION/PURPOSE The purpose of the Contractor End Items List (CEIL) is to provide a list of all delivered items (excluding CDRL items) and where they were shipped to.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 10.2.6.6.1
7. APPLICATION/INTERRELATIONSHIP The CEIL may be used in conjunction with the Contract and its associated non-CDRL deliverables.		
8. ORIGINATOR Project Manager SM 4-2-7	9. APPLICABLE FORMS	

10. PREPARATION INSTRUCTIONS

10.1 Format: The CEIL List must be prepared, in Contractor format in MS Office.

10.2 Content: As a minimum the CEIL should include: for each delivered item:

1. Item #;
2. Description;
3. Quantity; and
4. Shipped to.

10.3 Delivery Instructions, Review and Approval Requirements:

1. Number of Copies/Format: 1 soft copy/MS Excel and .PDF
2. Delivery Venue: email or FTP
3. First Submission: Final Delivery +10wd
4. TA Review/Approval: Yes/NA
5. Review/Approval Lead Time: 10/NA
6. Subsequent Submission: NA
7. Remarks: NA

9.7 DID-ILS-07 Technical Manual

1. TITLE Technical Manual		2. IDENTIFICATION NUMBER DID-ILS-07
3.DESCRIPTION/PURPOSE The purpose of the technical Volume (TM) is to provide instructions for the Operation and Maintenance of the Equipment or System.		
4. APPROVAL DATE	5. OFFICE OF PRIMARY INTEREST (OPI) Project Authority SM 4-2 Technical Authority SM 4-2-6	6. SOW SECTION 10.2.7.1
7. APPLICATION/INTERRELATIONSHIP: The TM may be used in conjunction with the Recommended Spare Parts List, Special Purpose Tools and Test Equipment List, As Delivered Specifications, As Delivered Drawings, Naval preventive Schedules, Standard Ship Maintenance and Repair Specifications, and Training Documentation.		
8. ORIGINATOR Project Manager SM 4-2-7		9. APPLICABLE FORMS
10. PREPARATION INSTRUCTIONS		

	Reference: CFTO C-01-100-100/AG-006 – Writing Format and Production Technical Publications, dated 1 March 1996.
10.1	The TM shall be prepared, following the guidance at the references, in MS Office.
10.2	Content: The TM, as a minimum, shall have the following content as applicable. 1. Purpose. 2. Identify: a. Manufacturer/Supplier; and b. Equipment location x Quantity, Type/stock Code NSN. 3. Design and performance Data: a. May reference associated publications. 4. Services Required: a. Identify Power and other services. 5. Logistics Requirements: a. Identify any special logistics requirements. 6. Safety Precautions. 7. Associated Documentation: a. Maintenance Schedules; b. Drawings; c. Ship's Operating Procedures (SOP); and d. Emergency Operating procedures (EOPs). 8. Functional Diagrams. 9. Operating Information: a. Cautions 1. "Category 2 operating information defines the design performance intentions based on operational design intent. The equipment operation given in this category is based on manufacturer's recommendations, the procedures and sequences described do not override Ship's Operation Procedures (SOP) or Emergency Operating Procedures (EOP), local orders or statutory requirements concerning operating procedures or safety precautions any adequate or incorrect procedures should be reported to the appropriate administrative authority."
	b. Operating Limitations: i) Normal Mode; ii) Alternative Mode; iii) Arctic and Tropical Climates; iv) Shore Supplies;

	v) Radiation Hazard; vi) Ships Listed; and vii) Defects. c. Pre-start checks and Setting up prior to Starting i) Services required; ii) Equipment/system – general; and iii) Equipment/System Sub-Elements Specific. d. Starting Procedures: i) Normal Mode; and ii) Alternative Mode. e. Running Procedures: i) Normal Mode; ii) Equipment/System Sub-Systems elements; and iii) Additional elements. f. Control change-Over procedures; g. Stopping Instructions: i) Normal Mode; and ii) Alternative Mode. h. Maintenance Procedures: i) Shipboard-refer to Ship's Staff NPMS; and ii) Repair Facility-refer to RF NPMS i. Emergency Procedures i) Emergency Procedure 1; ii) Emergency Procedure 2; and iii) Emergency Procedures etc. j. Diagnostic and Repair Information 1; i) Fault Diagnostic and Rea[pair Information 1; ii) Fault Diagnostic and Repair Information 2; and iii) Fault Diagnostic and Repair information. k. Illustrated Parts Catalogue. In sufficient detail to aid the identification of component parts or assemblies of parts to provide the information necessary for the demanding of spares.
10.3	Delivery Instructions, review and Approval Requirements 1. Number of Copies/format: 1 soft copy/MS Office and .PDF 2. Delivery venue: email 3. First submission: PRR –10wd 4. TA Review/approval: Yes/Yes 5. Review/Approval lead time: 20/20 6. Subsequent Submission: NA 7. Remarks NA