

Appendix III

Data Deliverables

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1. Introduction

1.1. Purpose

This document defines the data deliverables of this contract.

1.2. Scope

The data deliverables cover all the documents required for the SOW specified in the Appendix II.

2. Related Documents

2.1. Applicable Documents

N/A

2.2. Reference Documents

N/A

3. Data Deliverables

The data deliverables shall be prepared, maintained, and delivered to the TASA in accordance with the requirements set forth in this attachment. The data deliverables for the project, including the End Item Data Package (EIDP), are listed in Contract Data Requirement List (CDRL). The EIDP is the collection of documents that shall be delivered with hardware shipment for the case that the Contractor is responsible for the hardware delivery. The detailed review and approval procedures for CDRL items are specified in Appendix VI: Acceptance Criteria and Procedures.

4. General Requirements

4.1. Data Deliverables Format

Unless otherwise explicitly specified in the followings, the Contractor's format for the data deliverables is acceptable.

The harness for the deployable panels shall be defined and a preliminary design of the routing will be agreed for the performance of functional tests on flight representative harness provided by the Customer. This functional test at harness level will be performed by the Contractor under representative thermal conditions to determine the harness resistance torque to be considered for the deployment mechanism.

4.1.1. Electronic files

Unless otherwise specified, the disk copy of electronic files shall be in the editable and unprotected text type Portable Document Format (.pdf) by Adobe Acrobat. For code 1 CDRL items, the Microsoft Office 2000 or upgrade version for PC Windows format shall be provided in addition to the PDF files. Scanned PDF files will be acceptable for the test reports with written test results and signature entries.

4.1.2. Engineering Drawings

The electronic file for engineering drawings shall be either in CREO PTC, or that can be readable by those programs.

The electronic files for electrical schematics and PCB layout drawing shall be Cadence Or CAD compatible.

4.2. End Item Data Package

An End Item Data Package (EIDP) shall be delivered to TASA with flight hardware shipment. In general, the contents of EIDP include, but not limit to, the following:

- (1) Approval Signature and Certificates of Conformance (COC).
- (2) Shipping Package: shipping documents, identification of delivered items, etc.
- (3) Log sheets
- (4) As-Built Status List (applicable and relevant document list (specifications, technical notes, manuals, reports, plans, test procedures / reports, etc.)
- (5) Design Package: development plan, design reports, specifications, etc.
- (6) Manufacturing Package: manufacturing plan and procedures, as-designed, as-built and as-shipped configuration, assembly kitting lists, travelers, bill of material, part lists, mechanical installation list, etc.
- (7) Verification Package: requirement verification plan, analysis reports, test plan and procedures, inspection data and reports, test data and reports, operating time records, calibration records and evidences for test equipment and instruments, proof load test records and evidences for load bearing items, etc.
- (8) Product Assurance Package: discrepancy report, non-conformance report, failure reports, hazard report, MRB and FRB logs, waivers/deviation log, CCB log, etc.
- (9) Operation Package: user manual, installation procedures, etc.
- (10) Maintenance Package: warranty plan, maintenance plan, maintenance procedures, troubleshooting and diagnosis guidelines, etc.
- (11) Other technical documents related to the delivered equipment, if any

The Contractor format will be acceptable for each End Item Data Package. During the product procurement phase all related product documentation (design, manufacturing

and maintenance documentation) will be delivered to TASA or made available for insight and review. The documents already delivered during the procurement phase need not to be delivered additionally inside the EIDP.

4.3. Document Identification

Each data deliverable is identified with a CDRL number as the document number. The document number, change legend, title, and date constitute the minimum identification requirement of the specific document and shall appear on the title page.

Contractor may use his own document numbering system to define the document number. Both CDRL number specified in this attachment and Contractor's document number shall be identified on the front (title page) of each document if Contractor uses his own document numbering system as the document number.

The contract number and the content name and designation shall also appear on the title page as separate markings. In addition, the originator and organization shall also be included on the title page.

The document number (either CDRL number or Contractor's document number), change legend, title, date, and page number shall appear on each page of the document.

Successive issues or revision of documents shall be identified in the same manner as the basic issue and shall have the appropriate change identification. Engineering drawings are excluded from the marking provisions of this paragraph.

A four digits series code constitute the change legend of the CDRL number. The first 2 digits constitute an issue number, and the last two digits constitute a revision number. The specific issue number of the CDRL items need to be submitted by Contractor in conjunction with milestone schedule is specified by TASA. After the required submission and before the next submitted schedule, Contractor may make the data changes and submission, if required, with the last two digits revision number starting from sequential number 01.

For example:

CDRL Number	CDRL Title	Issue / Revision	Meaning
xxxx-CDRL-001	[Title]	0000	First Issue (prescribed by TASA)
		0001	First Revision After First Issue
		0100	Second Issue (prescribed by TASA)
		0101	First Revision After Second Issue

4.4. Documentation Approval Code

Contractor shall be responsible for the resolution of the action items raised by TASA. Contractor shall also resolve errors and omissions in the data that have been reviewed

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and identified by the TASA. There are two codes, code 1 and code 2, as shown in the table below.

Notice of approval about approval code 1 items shall be given within two (2) weeks after data delivery except there is any questions or comments. Those data items requiring TASA approval code 1 will not be accepted until questions and comments regarding the data have been resolved.

Approval Code	Description
1	Data submitted to the TASA as declaration of successful completion of equipment or service tasks in the SOW and other contract documents. Notice of acceptance of the final version of CDRL item will be issued by the TASA in writing following the successful completion of the review and satisfactory closure of the action item(s), if any, by Contractor.
2	Data submitted to the TASA as declaration of successful completion of a service or equipment tasks of the Contract. Formal notice of acceptance by the TASA is not required.

4.5. Delivery and Distribution of Data

Unless otherwise specified, Contractor shall send one (1) electronic files disk copy of data to TASA. In the event that the CDRL items generated by Contractor is not consistent with the requirements provided or cannot be delivered on time, Contractor shall notify TASA thirty (30) or more days prior to the delivery of the item. The duplication and distribution of data will be done by TASA.

4.6. Cost of Data

Except as otherwise provided, the cost of data to be furnished in response to the data deliverable is included in the price of the Contract.

4.7. Data Not Required by the Contract

Additional data generated within the normal course of contract work, which is not a part of the data required by the Contract, shall be made available to TASA upon request. The contents shall be by mutual agreement between TASA and Contractor for each specified task.

5. CDRL Items

The CDRL Items are listed in Table 5-1.

Table 5-1. CDRL List

CDRL Item #	CDRL Title	Approval Code	Related SOW Section	Delivery
FS9SARME-CDRL-1001	<ul style="list-style-type: none"> • Presentation data package • Preliminary Design Review (PDR) Report 	1	SOW 4.1	PDR
FS9SARME-CDRL-1002	<ul style="list-style-type: none"> • Presentation data package • Critical Design Review (CDR) Report 	1	SOW 4.2	CDR
FS9SARME-CDRL-1003	<ul style="list-style-type: none"> • Presentation data package • Manufacturing Readiness Review (MRR) Report 	1	SOW 4.3	MRR
FS9SARME-CDRL-1004	<ul style="list-style-type: none"> • Presentation data package • Consent to Ship Review (CSR) Report 	1	SOW 4.5 SOW 4.7 SOW 4.9	EM CSR, PFM1 CSR, PFM2 CSR,
FS9SARME-CDRL-1005	Requirements Compliance Matrix	1	SOW 4.1 SOW 4.2	PDR, CDR
FS9SARME-CDRL-1006	Qualification Status List	1	SOW 4.1 SOW 4.2 SOW 4.4 SOW 4.6 SOW 4.8	PDR CDR EM TRR PFM1 TRR PFM2 TRR
FS9SARME-CDRL-1007	Technical Description	2	SOW 4.1 SOW 4.2	PDR, CDR
FS9SARME-CDRL-1008	Failure Mode and Effects Analysis (FMEA)	2	SOW 4.2	CDR
FS9SARME-CDRL-1009	Long lead item list	2	SOW 4.1	PDR
FS9SARME-CDRL-1010	Parts Materials and Processes List	2	SOW 4.1 SOW 4.2	PDR, CDR
FS9SARME-CDRL-1011	Design and Analysis Report (Mechanical/ Thermal)	2	SOW 4.1 SOW 4.2	PDR, CDR

FS9SARME-CDRL-1012	User Manual (Assembly and integration procedure, Deployment test procedure, Functional test procedure, Training Document, Deployment Mechanism Adjustment Procedure)	2	SOW 4.5 SOW 4.7 SOW 4.9	EM CSR, PFM1 CSR, PFM2 CSR
FS9SARME-CDRL-1013	Mechanical, Thermal and Electrical ICD	1	SOW 4.1 SOW 4.2	PDR, CDR
FS9SARME-CDRL-1014	Test Plan	1	SOW 4.4 SOW 4.6 SOW 4.8	EM TRR PFM1 TRR, PFM2 TRR
FS9SARME-CDRL-1015	Test Results / reports	2	SOW 4.4 SOW 4.6 SOW 4.8	EM TRR PFM1 TRR, PFM2 TRR
FS9SARME-CDRL-1016	Certificate of Conformance	1	SOW 4.5 SOW 4.7 SOW 4.9 SOW 4.10	EM CSR, PFM1 CSR, PFM2 CSR FR
FS9SARME-CDRL-1017	Handling, storage, Refurbish and cleaning procedures	2	SOW 4.5 SOW 4.8 SOW 4.9	EM CSR, PFM1 CSR, PFM2 CSR
FS9SARME-CDRL-1018	All Work Completion Certificate, AWCC	2	SOW 4.10	FR
FS9SARME-CDRL-1019	Drawings	1	SOW 4.5 SOW 4.8	EM CSR, PFM1 CSR

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1001	2. Title Preliminary Design Review (PDR) Report	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission PDR– 2 weeks		6. Date of Subsequent Submission(s) PDR	
7. Contract Reference SOW 4.1			
8. Remarks: The PDR shall include, but not limited to, the following: <ol style="list-style-type: none"> 1. Program management and status (including schedule) 2. Compliance status of the requirement specification 3. Preliminary mechanical design model (CAD), Finite Element Model (FEM). <ul style="list-style-type: none"> ● CAD files shall be CREO PTC or STEP (including material and optical properties) ● FEM files shall be compatible with MSC/NASTRAN Version 2014. ● Thermal model shall be delivered in ESABASE or Sinda compatible format(10 nodes maximum). 4. A list of critical items / areas related to specification compliance (waivers), potential performance problems, potential exceeding of budgets / constraints, potential schedule risk. 5. Identification of any discrepancies/changes of proposed solution; 6. Identification of any change to the testing strategy; 7. Review of Manufacturing & Testing Schedule. 8. Review of Test plan and schedule 9. Program management and status (including schedule) 10. Compliance status of the requirement specification 11. A list of critical items / areas related to specification compliance (waivers), potential performance problems, potential exceeding of budgets / constraints, potential schedule risk. Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1002	2. Title Critical Design Review (CDR) Report	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission CDR– 2 weeks		6. Date of Subsequent Submission(s) CDR	
7. Contract Reference SOW 4.2			
8. Remarks: The CDR shall include, but not limited to, the following: <ol style="list-style-type: none"> 1. Review of Manufacturing & Testing results 2. Compliance status of the requirement specification 3. Identification of the compliance of requirements; 4. Identification of delivered documents; 5. Manufacturing BOM 6. Identification of delivered hardware; Contractor’s format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1003	2. Title Manufacturing Readiness Review (MRR) Report	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission MRR – 2 weeks		6. Date of Subsequent Submission(s) MRR	
7. Contract Reference SOW 4.3			
8. Remarks: The TBR item shall be confirmed as completed before the MRR phase, followed by contract amendments regarding the TBR content, which shall be mutually agreed upon and signed by both parties. Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1004	2. Title Consent to Ship Review (CSR) Report	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission CSR– 2 weeks		6. Date of Subsequent Submission(s) EM CSR, PFM1 CSR, PFM2 CSR	
7. Contract Reference SOW 4.5, SOW 4.7, SOW 4.9			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1005	2. Title Requirements Compliance Matrix	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR, CDR	
7. Contract Reference SOW 4.1, SOW 4.2			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1006	2. Title Qualification Status List	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR, CDR, EM TRR, PFM1 TRR, PFM2 TRR	
7. Contract Reference SOW 4.1, SOW 4.2, SOW 4.4, SOW 4.6, SOW 4.8,			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1007	2. Title Technical Description	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR, CDR	
7. Contract Reference SOW 4.1, SOW 4.2			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1008	2. Title Failure Mode and Effects Analysis (FMEA)	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) CDR	
7. Contract Reference SOW 4.2			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1009	2. Title Long lead item list	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR	
7. Contract Reference SOW 4.1			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1010	2. Title Parts Materials and Processes List	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR, CDR	
7. Contract Reference SOW 4.1, SOW 4.2			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1011	2. Title Design and Analysis Report (Mechanical/ Thermal)	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR, CDR	
7. Contract Reference SOW 4.1, SOW 4.2			
8. Remarks: 1.This report shall describe structure model and structure analysis process and analysis results. 2.This report shall describe thermal model and thermal analysis process and analysis results. Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1012	2. Title User Manual (installation and ground test)	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) EM CSR, PFM1 CSR, PFM2 CSR	
7. Contract Reference SOW 4.5, SOW 4.7, SOW 4.9			
8. Remarks: This document shall include, at least, Assembly and integration procedure, Deployment test procedure, Functional test procedure, Training Document, Deployment Mechanism Adjustment Procedure. Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1013	2. Title Mechanical, Thermal and Electrical ICD	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) PDR, CDR	
7. Contract Reference SOW 4.1, SOW 4.2			
<p>8. This document shall define and outline to an adequate level the mechanical, thermal and electrical interfaces of the XPAA mechanism towards the spacecraft.</p> <p>This document shall also include the following information as a minimum:</p> <ol style="list-style-type: none"> 1. Electrical Interface Control Document (EICD) 2. Mechanical Interface Control Document (MICD) 3. Thermal Interface Control Document (TICD) <p>Contractor's format will be acceptable.</p>			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1014	2. Title Test Plan	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) EM TRR, PFM1 TRR, PFM2 TRR	
7. Contract Reference SOW 4.4, SOW 4.6, SOW 4.8			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1015	2. Title Test Results Reports	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) EM TRR, PFM1 TRR, PFM2 TRR	
7. Contract Reference SOW 4.4, SOW 4.6, SOW 4.8			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1016	2. Title Certificate of Conformance	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) EM CSR, PFM1 CSR, PFM2 CSR, FR	
7. Contract Reference SOW 4.5, SOW 4.7, SOW 4.9, SOW 4.10			
8. Remarks: This document shall include a list of all specification compliance (waivers) status. Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS7RSA-CDRL-1017	2. Title Handling, Storage, Repair and Cleaning Procedures	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) EM CSR, PFM1 CSR, PFM2 CSR,	
7. Contract Reference SOW 4.5, SOW 4.8, SOW 4.9			
8. Remarks: This document shall identify all procedures planned to satisfy the handling, storage, repair and cleaning, safety, security, etc. and constraints associated with transporting the solar array to TASA I&T facility at Hsin-Chu, Taiwan. Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1018	2. Title All Work Completion Certificate, AWCC	3. Approval Code 1	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) FR	
7. Contract Reference SOW 4.10			
8. Remarks: Contractor's format will be acceptable.			

Contract Data Requirements List			
1. Item FS9SARME- CDRL-1019	2. Title Drawings	3. Approval Code 2	4. Distribution TASA
5. Date of First Submission – 2 weeks		6. Date of Subsequent Submission(s) EM CSR, PFM1 CSR	
7. Contract Reference SOW 4.5, SOW 4.8			
8. Remarks: Contractor's format will be acceptable.			