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SIKORSKY AIRCRAFT CORPORATION ENGINEERING REQUIREMENTS

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1 Product Support Obligation

- 1.1 SELLER shall maintain the ability to provide, and shall provide, product support for the Work, which shall include, without limitation, assuring that subcomponents and materials are available, maintaining tooling and other production capability and re-engineering components or systems to address obsolescence until twenty five (25) years after the last Contract is placed by LOCKHEED MARTIN for Work. SELLER shall offer the same pricing for Work purchased under this Agreement, regardless of end-use. If no current pricing agreement is in place the Parties shall negotiate prices for Work in good faith.

2 Changes

All SELLER design changes of Work shall not be made without a dispositioned Engineering Change Proposal. All submitted forms shall be latest revision. SA1359 (for Class I/FAA Major), SA1360 (for Class II/FAA Minor) and SA1410 (for Variances/Waivers/Deviations) forms and submittal instructions can be located at the link below:

<https://www.lockheedmartin.com/en-us/suppliers/business-area-procurement/rms.html>

2.1 For Class I/FAA Major Changes or changes with potential Class I impact: The SELLER shall not implement any Class I or FAA Major Changes (defined by MIL-HDBK-61 Latest Revision), any change with the potential to be a Major change to the Work, including components and software, without prior written approval from LOCKHEED MARTIN through the supplier portal. SELLER shall not act on any verbal or informal authorization provided by LOCKHEED MARTIN. SELLER shall submit such changes on an SA1359 form twelve (12) months prior to delivery date at a minimum and final released engineering change data shall be delivered no later than 30 days prior to the Required Date.

For Class II/FAA Minor changes: When an engineering change is classified as minor, the SELLER certifies that all factors for a major change were reviewed and determined to be non-applicable. Minor changes to the Work, including changes to components or software, shall be prepared and submitted on an SA1360 six (6) months prior to the Required Date. SELLER shall submit the change for concurrence of classification and technical data review prior to or concurrently with the change. SELLER shall not ship any Work where changes have occurred, including to any components or software, without receiving a written concurrence of classification of the Engineering Change, including agreement on its effect on technical data, from LOCKHEED MARTIN through the supplier portal. SELLER assumes total risk for implementation of changes prior to receiving written LOCKHEED MARTIN concurrence. Final released engineering change data shall be delivered to LOCKHEED MARTIN no later than thirty (30) days prior to the Required Date.

For Variances (also known as Deviations or Waivers): SELLER shall submit a Request for Waiver or Deviation (SA1410) to LOCKHEED MARTIN. The request shall be submitted to LOCKHEED MARTIN at the earliest practicable time and always prior to Required Date with sufficient time for LOCKHEED MARTIN to analyze the non-conformity and formulate an appropriate disposition.

2.2 LOCKHEED MARTIN shall have absolute discretion in determining the classification of the Work, and may reject any changed Work which fail to comply with the applicable Change procedures.

2.3 This Section shall apply if Work manufactured or distributed by SELLER at any point is: (i) qualified or requires qualification; (ii) Flight Safety; or (iii) if the Contract, drawing, specification, or any other associated document requires formal written approval from LOCKHEED MARTIN prior to revisions to SELLER's manufacturing processes.

SELLER shall notify LOCKHEED MARTIN of any changes at least six (6) months prior to the requested change implementation or as soon as practicable but no later than thirty (30) days prior. SELLER should be aware a thirty (30) day minimum lead time may not be adequate depending on the changes the SELLER is making. Early notice of any changes is encouraged. SELLER shall not assume the change is approved without written approval from LOCKHEED MARTIN. SELLER shall submit to LOCKHEED MARTIN procurement representative a description of the change and any supporting documentation to substantiate the change. If the Work is Flight Safety, SELLER shall submit a revised frozen process plan package (SA5468) to the Frozen



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Planning Review Board prior to incorporation of any changes to the Work. The package shall be submitted to suppl_frozen_planning.gr-sik@lmco.com in accordance with SS9211.

3 Technical Publications

3.1 Unless otherwise required by specification, statement of work or similar instruction, SELLER shall keep and maintain all technical publications for the Work (“Technical Publications”) so that they are: (i) technically accurate, (ii) adequate to enable LOCKHEED MARTIN and LOCKHEED MARTIN’s customers to perform the functions provided for therein, and (iii) fully compliant with the FAA, CAA, NAA, EASA, or military specification requirements. SELLER shall validate all Technical Publications prior to their issuance and use. Upon LOCKHEED MARTIN’s request, SELLER shall deliver, or make available, Technical Publications at no cost. SELLER hereby grants LOCKHEED MARTIN the unlimited right to use, reproduce or incorporate into end products the contents of Technical Publications.

4 Ground Support Equipment (GSE)

Applicability: Applicable only to Work which require the use of GSE.

- 4.1 Upon request, SELLER shall deliver: (i) a list of all the GSE associated with the Work, (ii) a proposal for all GSE required in maintaining the Work and (iii) depending on contract requirements and GSE item type, a GSE illustrated tool and equipment manual consisting of an illustration, description and explanation of the function for each item of GSE (“GSE Manual”).

5 Reliability

Applicability: Applicable to Work designed or manufactured by SELLER.

- 5.1 SELLER shall, at the request of LOCKHEED MARTIN, compile quantitative metrics for the reliability of the Work including, where applicable, actual mean time between failure (“MTBF”) and actual mean time between unscheduled removal metrics (“MTBUR”). Upon request, the SELLER shall collaborate with LOCKHEED MARTIN to obtain operational and usage data on fielded units (including installation dates, operational hours, removal dates, removal reason, etc.) to support such analysis. SELLER shall also provide status on the reliability management program for the Work; status of the conformity of Work produced; history on Work support, maintenance and overhaul; consumption of spares and sub-components; and other data related to the reliability of Work and support activities (“Reliability Metrics”). SELLER shall maintain supporting data for the Reliability Metrics in a database and establish a continuous improvement process reasonably acceptable to LOCKHEED MARTIN which incorporates corrective actions (reliability improvements) into the Work to address poor performance. The SELLER shall be prepared to support such an effort commencing on the date of the Contract and continuing for no less than twenty five (25) years after the last Contract is placed by LOCKHEED MARTIN for Work.
- 5.2 Upon request, Seller shall deliver to LOCKHEED MARTIN the Reliability Metrics and related Reliability Program Review material in a format acceptable to LOCKHEED MARTIN.
- 5.3 SELLER shall retain detailed records documenting the repair and/or overhaul of all returned Work, including records relating to the disposition of any non-conforming or rejected parts associated with the returned Work. These records shall be complete and made available to LOCKHEED MARTIN upon request during the performance of this Contract.
- 5.4 In addition to any other rights and remedies, in the event any Work is nonconforming to the requirements of this Contract, SELLER shall:
 - 5.4.1 Investigate the root cause for the nonconformance and provide LOCKHEED MARTIN the results of the SELLER's investigation in writing within thirty (30) days, or as otherwise agreed to by the Parties;
 - 5.4.2 Prepare a change proposal, in accordance with Section 2 of this document, to implement the corrective action for the Work (including any corrective action recommended by LOCKHEED MARTIN) to eliminate the root cause of the nonconformance within thirty (30) days, or as otherwise agreed to by the Parties, of providing LOCKHEED MARTIN the results of the SELLER's investigation.

6 Obsolescence Management

- 6.1 SELLER shall maintain, at its expense, an obsolescence management program that includes an on-going review, identification, analysis and implementation of actual and potential obsolescence issues, including but not limited to, obsolescence of components, assemblies, sub-assemblies, and material for the Work and Software, Courseware and Trainers as applicable under the Contract. ("Obsolescence Management Program"). The Obsolescence Management Program shall remedy all obsolescence issues arising for the Work. SELLER shall perform all testing, qualification, non-recurring activities, and engineering services required for maintaining an Obsolescence Management Program. In no event shall remedying an obsolescence issue: (i) entitle SELLER to a price increase, (ii) entitle SELLER to make a claim for equitable adjustment, or (iii) waive, relieve or release SELLER from fulfilling all its duties under the Contract including, without limitation, compliance with Specifications and Required Dates.
- 6.2 SELLER shall, after reasonable notice by LOCKHEED MARTIN, grant access to the SELLER premises (including without limitation to manufacturing and test locations) for an obsolescence process assessment subject to any reasonable access restrictions of SELLER.



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7 Solder

7.1 SELLER, and SELLER's sub-tier suppliers, shall not use lead-free solder in Work. For the purposes of this Section, solder shall be considered lead-free if it has a lead content of less than three percent (3%). SELLER may request a waiver of this duty by applying in writing to LOCKHEED MARTIN's Standards Department in accordance with Section 2.1.

8 Wire and Cable Use and Handling

Applicability: If SELLER uses silver-plated copper wire in any application in Work, SELLER shall comply with the following requirements.

- 8.1 At no time during handling shall the wire/cable (collectively "Wire") ends be exposed to moisture or water. A controlled environment shall be maintained throughout the harness/assembly (collectively "Harness") process to eliminate the necessity of end sealing the Wire. No Wire ends shall be terminated that show any signs or other visual evidence of corrosion (ex: "Red Plague"). Once the packaging has been removed in an uncontrolled environment, all manufacturers, distributors, sub-contractors and partners shall follow the end-seals requirements. Any Wire that has been processed and not terminated for modification, re-work or replacement, that is susceptible to an uncontrolled environment shall be put into a sealed bag with a desiccant. Any Wire that is in an uncontrolled environment and not terminated shall be inspected for evidence of corrosion (ex: "Red Plague"). The Wire bending radius shall not be violated at any time during spooling, manufacturing, modification or re-work. The removal/stripping of Wire shall only be accomplished with approved tools, calibrated to assure that the center conductors and plating are not nicked or damaged.
- 8.2 Storage of Wire shall be in a controlled environment, which is defined as a temperature not to exceed 84 degrees Fahrenheit and humidity not to exceed 70%.
- 8.3 Packaging for Wire shall be as follows:
 - 8.3.1 AWG sizes 10 and smaller
 - 8.3.1.1 Cut and splice all lengths together (i.e., WECO splice)
 - 8.3.1.2 Seal unplaced ends with heat-shrinkable end caps
 - 8.3.1.3 Use plastic spools only
 - 8.3.1.4 Bag each spool in clear plastic with desiccant, then individually box
 - 8.3.1.5 All spools and box labels to include the following statement: "WARNING: MOISTURE DAMAGE WIRE (CABLE) – KEEP ENDS SEALED"
 - 8.3.2 AWG sizes 8 and larger
 - 8.3.1.1 Cut and splice all lengths together (i.e., WECO splice); then cover all splices with heat-shrinkable tubing
 - 8.3.1.2 Seal un-spliced ends with heat-shrinkable end caps
 - 8.3.1.3 Use 24" wood reels, with plastic wrap extending beyond the flanges and covering the spooled wire with a desiccant
 - 8.3.1.4 All reels labeled to include the following statement: "WARNING: MOISTURE DAMAGE WIRE (CABLE) – KEEP ENDS SEALED"
 - 8.3.1.5 The acceptance standards shall be per SS7505.

9 Design and Process Specification Efforts

Applicability: The following provision is applicable when (i) SELLER is designing new Work for LOCKHEED MARTIN, (ii) SELLER is developing new specifications for LOCKHEED MARTIN, or (iii) SELLER is creating new work instructions, assembly instructions, repair instructions or required processes for LOCKHEED MARTIN.

- 9.1 SELLER shall submit to LOCKHEED MARTIN's procurement representative a written report of the hazardous materials in NAS411-1 Hazardous Materials Target List that are used in the production of, or are in, products that are the subject of the design, development or processing efforts.
- 9.2 The Hazardous Materials Report shall be submitted in the format specified by LOCKHEED MARTIN prior to LOCKHEED MARTIN's Preliminary Design Review and again prior to LOCKHEED MARTIN's critical design review (or, if there are no such reviews, concurrently with SELLER's submission of the applicable drawings, specifications and/or instructions).
- 9.3 The Hazardous Materials Report shall give full details regarding the intended use of any materials of concern.
- 9.4 SELLER shall cooperate with LOCKHEED MARTIN to consider other alternative materials as discussed at design reviews.