Appendix C: LaRC Compliance Matrix for Class D Software (not Safety Critical)

*Instructions: For each STEP and Appendix listed below, complete the 3rd and 4th column of this matrix or equivalent; complete all remaining columns for each tailoring request. Obtain the approvals listed at the bottom of the matrix. See “Appendices for LMS-CP-7150.5: Class D Software” at:* [*https://sites-e.larc.nasa.gov/sweng/supporting-products/*](https://sites-e.larc.nasa.gov/sweng/supporting-products/) *for a Microsoft Word electronic copy of this Matrix.*

*Note: To add additional rows within a STEP, right click on a cell in the middle of the row, select “Insert,” select “Insert Rows Above” or “Insert Rows Below”; follow a similar process for adding columns.*

**Name of Project: ICAROUS Date Approval Requested: 10/6/2016 [SWE-125]**

| **LMS Procedure** | | **Planned Implementation** | | **Tailoring** |
| --- | --- | --- | --- | --- |
| **Step**  **#** | **Step Name** | **Step or substep ID#** | **Responsible party** | **If an LMS CP step is tailored, explain the tailoring requested** | | **Impacts/risks associated with the tailoring request** | **Justification for tailoring requests (why impacts and risks are acceptable)** |
| 1 | Assess options for software development vs. acquisition | a, b | Cesear Munoz,  Maria Consiglio |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 2 | Acquisition preparation |  |  |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 3 | Develop software plans | a, b | Cesar Munoz |  | |  |  |
| c, d | Cesar Munoz,  Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
| 4 | Review Software Management Plan (SMP) and Compliance Matrix | a, c | Cesar Munoz |  | |  |  |
| b. | Leslie Johnson |  | |  |  |
|  |  |  | |  |  |
| 5 | Execute plans and manage software activities | All | Cesar Munoz |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 6 | Ensure requirements and test documentation Is maintained | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 7 | Develop Software Requirements Specification | All | Cesar Munoz,  Maria Consiglio,  Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 8 | Develop Software Design Description | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 9 | Develop Test Plans concurrently with Steps 7, 8, & 10 | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 10 | Develop, verify, & validate code | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| 11 | Deliver Software Products or Data |  |  |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |

| **LMS Procedure** | | **Planned Implementation** | | **Tailoring** |
| --- | --- | --- | --- | --- |
| **Appen-dix #** | **Appendix name** | **Appendix item or subitem ID#** | **Responsible party** | **If an LMS CP Appendix item is tailored or Not Applicable, explain tailoring request or mark it as NA[[1]](#footnote-1)** | | **Impacts/risks associated with the tailoring request** | **Justification for tailoring requests (why impacts and risks are acceptable)** |
| A1 | Software Management Plan (SMP) | All | Cesar Munoz |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| A2 | Software Configuration Management Plan | All | Cesar Munoz |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| A3 | Software Test Plan | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| A4 | Software Requirements Specification | All | Cesar Munoz |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| A5 | Software Design Description | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |
| A6 | Software Version Description | All | Swee Balachandran |  | |  |  |
|  |  |  | |  |  |
|  |  |  | |  |  |

**Approvals Required for Planned Implementation**

**[[2]](#footnote-2)Software Manager: Cesar A. Munoz Date: 10/6/2016 Approved (Yes, No) Sig.[[3]](#footnote-3)**

**[[4]](#footnote-4)Software Manager’s Line Manager: Date: Approved (Yes, No) Sig.3**

**Additional Approvals Required if Tailoring is Requested** (Follow requirements for obtaining approvals in *LPR 7150.2, Section 2.Tailoring and Waivers*.)

**[[5]](#footnote-5)Applicable project personnel: Date: Approved (Yes, No) Sig. 3**

**Mission Assurance Branch (C201): Date: Approved (Yes, No) Sig. 3**

**[[6]](#footnote-6)Software Engineering Process Group Rep: Date: Concurred (Yes, No) Sig. 3**

**[[7]](#footnote-7)Technical Authority (Directorate Head): Date: Approved (Yes, No) Sig. 3**

**[[8]](#footnote-8)Other: Date: Approved (Yes, No) Sig. 3**

1. As specified in Appendix A of LMS-CP-7150.5: Class D Software, only those requirements in Appendix A1 thru A6 marked with an asterisk “\*” may be denoted as “NA.” [↑](#footnote-ref-1)
2. Approval by the Software Manager confirms that the project plans to complete all LMS-CP-7150.5 requirements and any requested tailoring specified in the above Compliance Matrix. [↑](#footnote-ref-2)
3. Optional: Written or electronic signature. [↑](#footnote-ref-3)
4. The Line Manager reviews & approves the SMP and Compliance Matrix to ensure the project complies with LMS-CP-7150.5, Class D Software, and to approve tailoring requests. [↑](#footnote-ref-4)
5. Individuals accepting the risk associated with the tailoring. [↑](#footnote-ref-5)
6. The Software Engineering Process Group representative from the software manager’s Directorate. [↑](#footnote-ref-6)
7. The Software Manager’s Directorate Head. [↑](#footnote-ref-7)
8. This may be the LaRC Director SMA Office, NASA HQ CE, or HQ Chief SMA (see LPR 7150.2A for approvals required). [↑](#footnote-ref-8)