

Q260: Compliance Matrix (CM) and Product Line Validation (PLV) Effective Date: 2/13/2020

The application of this Quality Clause is a result of the Aerojet Rocketdyne risk ranking of the product you are quoting or are under contract for. The requirements of this Quality Clause must be planned for and complied with unless contractually waived by Purchase Order (P.O.) direction.

Overview:

The Compliance Matrix (CM) provides detailed specific traceable compliance to all design and purchase order requirements in the sellers build documentation. It is used in conjunction with the First Article Inspection (FAI) Plan and Report but does not take place of the FAI.

The Product Line Validation (PLV) is a review of the actual seller processes performed by AR and seller representative to ensure the following:

- 1) Instructions are followed as written
- 2) All the necessary detail to consistently complete an acceptable part is included (eliminate reliance on tribal knowledge)
- 3) Manufacturing, inspection and test personnel are properly trained
- 4) Special tooling required is available and properly calibrated
- 5) Special processes and supporting procedures are in place and under control
- 6) Planned inspections and inspection equipment are appropriate based on the requirements and tolerances
- 7) Necessary test procedures and equipment are available and capable of meeting the Technical Data Package (TDP) requirements.

Details:

Compliance Matrix (CM)

The seller is expected to complete the compliance matrix prior to initiating production (using the Aerojet Rocketdyne template: [QMA-F-7.08.06.034](#)) with the following information:

- 1) An extracted list of all drawing, specification and purchase order (quality) requirements
- 2) Materials/part numbers required to make the evaluated part number
- 3) Detailed specific traceability to the documents that make and verify the extracted features including the methods used to verify compliance to the requirement.
- 4) Specific tooling required to create or validate the features
- 5) Training required to create or validate the features
- 6) All other items included on the CM template (except for the results information)

The seller shall submit the completed CM (minus results) via email to the AR buyer for review and approval

AR reviews the CM to ensure that it captures all requirements. Typical turnaround time for completing the AR review is 7 days. Incomplete or otherwise noncompliant CMs are returned to the seller for correction with a list of corrections required.

Once AR approves the CM, the seller is authorized to use it for capturing actual results.

The seller captures all actual results, verifies compliance to all requirements and sends to AR for final review/approval.

This document is an integral part of the contract (purchase order) in which referenced.
Applicable Revision: The revision in effect at the time the purchase order is placed.

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AR reviews the CM to ensure that it complies with all requirements. Typical turnaround time for completing the AR review is 7 days. Incomplete or otherwise noncompliant CMs are returned to the seller for correction with a list of corrections required.

Product Line Validation (PLV)

Based on the completed CM information, AR and the seller shall select and agree on a list of processes for detailed review at the seller's site to complete the Product Line Validation. This is intended to be a review of the actual process used on an actual AR part. Process selection will occur prior to visit to allow scheduling. A typical sample agenda for the PLV meeting is included in the Appendix.

Process witness targets include key processes, processes where results were at or near the edge of the tolerance, critical inspection points, and processes where tribal knowledge capture is key to success and any processes (or similar processes) which have caused issues on past/similar hardware.

The combined seller and AR team shall take a tour of the shop and product line areas to witness/validate the agreed upon processes. The review shall encompass all 7 features listed in the PLV Overview.

To facilitate the PLV, the seller shall provide a copy of all travelers, work instructions, inspection plans, etc. and the completed compliance matrix (anything required to produce and ensure a compliant product; should be what was used for the CM).

The PLV will include a page by page review of the seller's documentation related to performance of the selected process as well as a live witness of selected processes being performed on an actual AR part.

The seller shall provide appropriate subject matter experts (SMEs) to coordinate and provide escort for the demonstration. Seller's SME shall be capable and responsible for answering technical questions for AR representatives who will witness the process demonstrations and documentation review.

The seller shall coordinate with AR to plan and schedule the PLV so as to meet all contractual delivery dates.

The AR and seller teams review the results of the process witnessing and work instruction reviews. Notes/actions taken during any activities are discussed with the teams and formalized in the action log.

CM and PLV Closure

Action items related to the CM and PLV shall be created and tracked to closure. Completion of the CM/PLV shall result in the seller being approved for continued production, conditionally approved (pending action item closure), or disapproved/ requiring further review and action prior to continuing production.

Once AR approves the CM and PLV, "No change" (via Quality Clause AR1) is applied to the Compliance Matrix and all information/documentation/processes reviewed during and/or associated with the CM and PLV activities. The seller shall lock down all related paper & processes and only make changes authorized by AR.

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Appendix: Typical PLV Agenda

- 1) Introductions and AR kickoff
- 2) Agenda is reviewed by the team and safety, contact and working protocols agreed to
- 3) Supplier provides a site/company overview
- 4) Supplier provides an overview of the process and all instructions.
- 5) Team reviews the list of agreed upon processes which were selected for witness for awareness and incorporation into the activities
 - Witness steps to be done throughout the remainder of the review should include AR and supplier witnessing the process to validate the operator is: following the instructions, the instructions are sufficient for the process, best practices have been incorporated into the process, and any training and inspection is sufficient.
- 6) Tour of the shop and product line areas
- 7) AR and supplier review and open items from the Compliance Matrix (nonconforming dimensions, insufficient training, dimensions which were at or near the extreme of the tolerance, significant characteristics/processes)
- 8) AR and Supplier witness selected operations
- 9) Supplier to provide a copy of all travelers, work instructions, inspection plans, etc. and the completed compliance matrix (anything required to produce and ensure a compliant product; should be what was used for the compliance matrix)
- 10) AR team reviews the above information and makes a list of questions, needed clarifications, areas where best practices are not incorporated, insufficient definition of work to be performed, etc.
 - This process, while performed predominately by AR, should be supported by the appropriate counterparts on the supplier's staff. The review process should include continuous questions, answers and general discussion between AR and the supplier.
- 11) The AR and supplier teams come together to review the results of the process witnessing and work instruction reviews; Notes/actions taken during any activities are discussed with the teams and formalized in the action log
- 12) Event closure: Action items agreed to and supplier approved for production, conditionally approved (pending action item closure, or disapproved/requiring further review)
- 13) "No change" (via AR1) is applied to Compliance Matrix and associated documentation/processes