Transportation Security Administration

Configuration Management Qualification Data Package (QDP) Review

For
Acquisition Program Management

Version C

October 4, 2018

CHANGE HISTORY PAGE

The following table records changes to the Configuration Management Plan.

DATE	REVISION	PREPARED BY	COMMENTS/TYPE OF CHANGE
May 21 2018	A	J. Evans	Initial
July 30 2018	B	J. Evans	Minor Revisions
October 4 2018	C	J.Evans	Admin correction

TABLE OF CONTENTS

Change History Page ***2***

Table of Contents ***3***

1.0 PURPOSE ***4***

2.0 Scope ***4***

3.0 References ***4***

4.0 Responsibilities ***4***

5.0 Configuration Managment Documentation ***5***

5.1 Master Configuration Items List (MCIL) 5

5.2 Drawing Tree 5

5.3 Bill of Materials (BOM) or Parts Lists 6

5.3.1 Parts Lists 6

5.4 Source Control Documentation (SCD) 6

5.4.1 Engineering Drawings 7

5.4.2 Product Specification Sheets 7

5.4.3 Software Release Notes 7

6.0 Procedure ***7***

6.1 Initial Review 7

6.1.1 Step 1 7

6.1.2 Step 2 7

6.1.3 Step 3 8

6.2 Acceptance and Rejection 8

6.2.1 Acceptance 8

6.2.2 Rejection 8

7.0 Communication ***8***

7.1 Acceptance or Rejection Communication 8

7.2 Program of Records Responsibilities 8

8.0 Acronyms ***9***

1.0 PURPOSE

This document defines the procedures for Configuration Management review of Qualification Data Packages (QDP) and subsequent recommendations to the program of record for Transportation Security Equipment (TSE). This procedure links to configuration identification in the basic configuration management process. The purpose of this review is to determine if artifacts provided by the Original Equipment Manufacturer (OEM) as required through the program of records Qualification Management Plan (QMP) and or subsequent bailment will permit establishing and or maintaining the developmental baseline. The establishment of the systems baseline is the conclusion of a successful Physical Configuration Audit (PCA).

2.0 SCOPE

This procedure applies to the configuration management review of data packages whether for qualification testing or demonstration purposes. It is the formal review of the Original Equipment Manufacturer (OEM) submitted documentation used to substantiate the systems design that conforms to system requirements to be demonstrated or evaluated.

3.0 REFERENCES

MIL-STD-973, Military Standard Configuration Management, Notice 3, 13 January 1995

OSC Test and Evaluation Guidebook (Version 2.0, March 28, 2011)

OSC Configuration Audit Procedure, (Version C, August 07, 2013)

OSC Configuration Control Board Procedure, (Version C, June 30, 2015)

OSC CM Guidance, (Version 2, 2015)

4.0 RESPONSIBILITIES

- **Test and Evaluation Division (TED) Test Infrastructure and Operations Manager**
  This individual is responsible for establishing CM guidance consistent with DHS and TSA policy.

- **Logistics Management Specialist**
  As the CCB chairperson, the Acquisition Program Management (APM) Logistics Management Specialist is responsible for coordinating CCB activities and acting as the signatory for the disposition of each CR provided by the CCB. At the recommendation of the CCB, the Logistics Management Specialist signs and provides the official disposition on CRs that do not impact contract cost or scope.

- **Configuration Management Specialist**
  This individual is responsible for establishing and maintaining the configuration baselines used during the developmental process, as is the case for formal Qualification Data Packages (QDP) and data packages submitted for demonstrations. The CM Specialist will provide a recommendation to approve or reject QDPs and other data packages, facilitate developmental change requests, distribute to stakeholders, act as the developmental configuration control board chairman, and provide final disposition for all changes

- **APM Program Manager**
  This Program Manager or designee is responsible for providing formal guidance and overall government acceptance of OEM submitted QDP or data packages.

5.0 CONFIGURATION MANAGMENT DOCUMENTATION

The purpose of the following documentation provides the government with the level of substantiation necessary to establish the systems configuration baseline for any qualification testing, study or demonstration. The complete list is provided below. These documents are the lowest common denominator for managing information. In addition, the documentation submitted is used for impact assessments and determining the magnitude of change the OEM proposes through the APM formal change request process. The need for the following documentation encompasses both systems in developmental testing or in a production based environment. These collective documents will validate the "as-built" System under Test (SUT) is representative of the "as-designed / as-documented" system.

Configuration Management Documentation List

MASTER CONFIGURATION ITEMS LIST (MCIL)
DRAWING TREE / FAMILY TREE
BILL OF MATERIALS or PARTS LIST
ENGINEERING DRAWINGS
SOFTWARE RELEASE NOTES
PRODUCT SPECIFICATION SHEETS

5.1 Master Configuration Items List (MCIL)

The OEM suggested MCIL, which was initially established during the System certification stage, is the basis for establishing the developmental baseline (DPBL). Through the course of the data package review this MCIL may be expanded as a result of program specific requirements. This expansion is a direct result to conforming to the Functional Requirements Documentation (FRD). The expansion of the MCIL is achieve through a configuration identification activity which will involve the OEM. The format of the OEM suggested MCIL is not government directed but the necessary elements are directed. The elements are as follows:

- Part name (recommend using official nomenclature)
- Part number
- Part revision
- Drawing number (sufficient high level drawings are requested to show each CI)
- Quantity
- Make / Buy. If Buy, provide manufacturer (third-party) and their part number
  - This information may have been provided in the OEM provided BOM
- Primary function description of the CI

5.2 Drawing Tree

The drawing tree is the result of linking both engineering drawing and part lists. This document represents how materials, components, sub-assemblies come together to form

the end-product. This is necessary especially when OEMs provide manufacturing Bill of Materials (MBOM). MBOMs do not depict the level in which each end-item rolls into its higher assembly, but depicts how the materials, components, sub-assemblies are built / assembled. The drawing tree provides TSA the capability to visualize the physical system hierarchy of the as-designed system. In addition to visualization this document expedites the governments review cycle.

5.3 Bill of Materials (BOM) or Parts Lists

There are several Bill of Material (BOM) representations often generated by OEMs. A BOM is necessary as it ensures TSA proper CM is and has been established and maintained on the equipment. The preferred BOM is a multi-level BOM also referred herein after as the indentured BOM. TSA requests an indentured BOM to a 5th level for any qualification testing event. This type of BOM is the best as it provides TSA with the ability to expedite reviews, validate and properly link corresponding documentation requested by TSA in OEM submitted data packages, and it highlights the systems configuration at a single-point and time for testing or demonstrations. Each BOM itself needs to a revision and effective date to show it is controlled by the OEM. The BOM format is constrained by the OEM's Enterprise Resource Planning (ERP) and or Manufacturing Resource Planning Tool so the format should not be government directed but the necessary elements are directed. The elements are as follows:

1. Nomenclature for each CI (official part name used in vendor's internal drawings and BOMs)
2. Part number (P/N) of each CI (official P/N used in vendor's internal BOMs and product labels)
3. Current approved Revision level of each CI
4. Quantity for each CI
5. When a component is a buy from the OEM the BOM may provide manufacturer (third-party) and their part number

5.3.1 Parts Lists

Parts lists are often more appropriate in lieu of a Bill of Materials. The parts list is used to identify the parent-to-child relationship between the systems physical items and should reflect a part number assuring its control. These parts lists are specific to the physical item listed as a critical item. Like the BOM the format is not government directed but contain the following elements.

1. Nomenclature
2. Part number and Revision (if applicable)
3. Quantity
4. Unit of Measure (UOM)

5.4 Source Control Documentation (SCD)

Beyond the MCIL, BOM and Drawing tree; the three types of source control documents are required to valid the physical item against the design documentation are— Engineering Drawings, components specification sheets, and software release notes. These documents provide government assurance the as-delivered physical item(s) is representative of the as-designed system.

5.4.1 Engineering Drawings

The engineering drawing will be in English, Standard UOM, and demonstrate version control. These drawings are used to define the designed configuration items (CI) physical geometry, composition and may contain component specifications.

5.4.2 Product Specification Sheets

For Commercial-of-the-shelf (COTS) products we would expect to receive the 3rd party specifications and any subsequent modifications performed by the OEM. The example would be computers and Graphics Processing Units (GPU) cards. For hardware products that were designed by a third party per OEM requirements we would expect to receive specification sheet(s) that identify the attributes and characteristics of that product and assurance the document used to substantiate the product is in under configuration control. Any end-product that contains a Material Safety Data Sheets (MSDS) as part of that physical items hierarchy should also be provided to substantiate the end-product. Some examples for this would be—coolant, Lead Curtains.

5.4.3 Software Release Notes

The release notes should contain revision history, introduction, new features / enhancements, bug fixes, corrections, known issues, documentation references, special considerations required, hardware and software compatibility. The release notes introduction should contain information on what type of release it is—major, minor or patching. If testing or integration is an aspect of the software release notes, then that should be linked in the documentation references

6.0 PROCEDURE

6.1 Initial Review

The initial review consists of identifying, validating and verification of the data package documentation provided by the OEMs.

6.1.1 Step 1

The first step is identifying if all applicable documentation has been provided. The documentation types are listed in Section 5 of this procedure. That the documentation types have been provided and that they represent the as as-designed systems TSA will be demonstrating and or evaluating. The reviewer will note any discrepancy found during this step.

6.1.2 Step 2

The next step is validating that each document provided contains the elements listed in Section 5 of this procedure and that there is enough substantial information that will permit proper document. The reviewer will note any discrepancy found during this step.

6.1.3 Step 3

The third step is verifying that each document proper links to each other through part number and or rev linkages. The purpose of this step is to ensure that the source control documentation for each Configuration Item properly links to the drawing tree and that the drawing tree links to the Bill of Materials or parts lists and with the MCIL. The reviewer will note any discrepancy found during this step.

6.2 Acceptance and Rejection

6.2.1 Acceptance

If the data package provided permits APM CM to establish a developmental baseline and conduct the follow-on Physical Configuration Audit, then this recommendation is provided to the Program of Record. This means that all documentation provided is clear, concise, valid and results in no discrepancies noted then the data package is accepted by configuration management. This recommendation of acceptance is provided to the program of record. However, this does not mean it is accepted by the program. The data package final acceptance is contingent on the communication from the Program of Record.

6.2.2 Rejection

If the documentation provided by the OEM results in discrepancies noted that would not permit APM CM to establish a baseline for demonstration or for Qualification Testing, then a recommendation for corrective actions is provided to the Program of Record. The rejection is a result of discrepancies noted during the data package review. Example of discrepancies are -- unacceptable source control documentation that does not adhere to the documentation listed in Section 3 and or conform to the documentation elements listed in in Section 5 of this procedure.

7.0 COMMUNICATION

7.1 Acceptance or Rejection Communication

During the data package review any discrepancies are noted and a Memorandum For Record (MFR) is provided to the Program of Record. In this memorandum all discrepancies are noted and recommended corrective actions are provided. If no discrepancies are noted, then the data package acceptance correspondence is provided to the Program of Record that there is adequate documentation that properly link and that a Physical Configuration Audit can be conducted.

7.2 Program of Records Responsibilities

It is the responsibility of APM CM to provide APM CM's data package acceptance correspondence or the Memorandum For Record (MFR) rejection to the program of record within the program established suspense date. The program is responsible for communicating the results of the APM CM review and any corrective actions that may be required.

8.0 ACRONYMS

APM	Acquisition Program Management
CAP	Configuration Audit Plan
CCB	Configuration Control Board
CDRL	Contract Data Requirements List
CI	Configuration Item
CM	Configuration Management
CMP	Configuration Management Plan
CO	Contracting Officer
COTS	Commercial Off-the-shelf product
COR	Contracting Officer's Representative
CR	Change Request
CSA	Configuration Status Accounting
CSAR	Configuration Status Accounting Report
DEP	Development Deviation (TSL only)
DHS	Department of Homeland Security
DID	Data Item Description
ECP	Engineering Change Proposal
ERB	Engineering Review Board
FCA	Functional Configuration Audit
FAT&E	First Article Test and Evaluation
ILS	Integrated Logistics Support
IPT	Integrated Product Team
MCIL	Master Configuration Item List
MFR	Memorandum For Record
MOTS	Modified Off-the-Shelf product
NARA	National Archives and Records Administration
OEM	Original Equipment Manufacturer
OT&E	Operational Test and Evaluation
QT	Qualification Testing
PBL	Product Baseline
PCA	Physical Configuration Audit
PMO	Program Management Office
RFD	Request for Deviation
RFP	Request for Proposal
RFW	Request for Waiver
SOW	Statement of Work
SSI	Security Sensitive Information
TDP	Technical Data Package
TI&O	Test Infrastructure and Operations
TSA	Transportation Security Administration
TSE	Transportation Security Equipment
TSIF	Transportation Security Integration Facility

TSL	Transportation Security Laboratory
UOM	Units of Measure