MSR CHECKLIST

1. Identification: -
2. TITLE: FUNCTIONAL CONFIGURATION AUDIT Checklist
3. DESCRIPTION and intended use

The objective of a Functional Configuration Audit (FCA) for an item is to demonstrate that the item's actual performance complies with all elements of its specification. An FCA can be applicable to the Mission System and its Configuration Items and the Support System and its components (noting that some Support System Components may have their own Configuration Items), as defined under the Contract.

As part of the FCA for an item, the configuration status of the item needs to be established such that that all Verification activities have been conducted on a known final baseline or one that can adequately trace to the final baseline. Test and other data shall be reviewed to Verify that the item performs as required by its functional / allocated configuration identification. Any problems, test failures, deviations or waivers need to be identified to ensure that they have been addressed and any necessary regression testing conducted.

An FCA for a complex Configuration Item may be conducted progressively throughout the Configuration Item's development, subject to Approval by the Commonwealth Representative. Such an approach will culminate at the completion of the qualification testing of the Configuration Item with a review of all discrepancies at the final FCA.

The FCA is to be conducted on that configuration of the item which is representative (prototype or preproduction) of the configuration to be released for:

production of the operational inventory quantities, when more than one article is to be produced; or

Acceptance, when only a single article is to be produced.

When a prototype or preproduction article is not produced, the FCA is to be conducted on the first production article. For cases where Configuration Item qualification can only be determined through integrated system testing, FCAs for such Configuration Items will not be considered complete until completion of the integrated testing.

This MSR Checklist sets out the Commonwealth’s requirements and minimum expectations for the conduct of a FCA.

1. INTER-RELATIONSHIPS

The FCA shall be conducted in accordance with the Approved System Review Plan (SRP), and shall be consistent with the following data items, where these data items are required under the Contract:

Systems Engineering Management Plan (SEMP);

Configuration Management Plan (CMP);

Integrated Support Plan (ISP); and

Verification and Validation Plan (V&VP).

Note: The Status column in the following three tables indicates whether or not the associated Checklist items are able to be tailored by the Contractor in its SRP, based on the following definitions:

1. Mandatory items are not to be tailored;
2. Highly Desirable items should not be tailored, but may be tailored depending upon the specifics of the Contract and the Contractor’s internal processes; and
3. Optional items may be tailored, based upon the specifics of the Contract and the Contractor’s internal processes.

Notwithstanding the Status assigned to each Checklist item, the items are to be included in the SRP if they are applicable.

1. Review Entry Criteria

| Item | Entry Criteria | Status |
| --- | --- | --- |
|  | 1. All data items required to be delivered before, and linked to, the FCA have been delivered and the Commonwealth Representative considers the data items to be suitable for the purposes of conducting FCA. | 1. Mandatory |
|  | 1. The Commonwealth Representative has Approved the item baseline in accordance with the Contract. | 1. Mandatory |
|  | 1. The Contractor has provided the Commonwealth Representative with clear identification of the item to be audited, including nomenclature, specification identification number and Configuration Item number, if applicable. | 1. Mandatory |
|  | 1. The Contractor has provided the Commonwealth Representative with a current listing of all deviations/waivers against the item, either requested of, or Approved by the Commonwealth Representative. | 1. Mandatory |
|  | 1. The Contractor has provided the Commonwealth Representative with the status of the Verification program with respect to the item. | 1. Mandatory |
|  | 1. The allocation of system requirements to the item has been established and is traceable from the system requirement to the item and from the item requirement back to system requirements. | 1. Mandatory |
|  | 1. The Contractor has provided the Commonwealth Representative with the draft Product Specification for the item. | 1. Mandatory |
|  | 1. Action items from any previous reviews affecting FCA have been successfully addressed or actions plans agreed with the Commonwealth Representative. | 1. Mandatory |

1. Review Checklist

| Item | Checklist Item | Status |
| --- | --- | --- |
|  | 1. Were all entry criteria satisfied before starting FCA? | 1. Mandatory |
|  | 1. Has the impact of Approved and pending CCPs been assessed? | 1. Mandatory |
|  | 1. Have all Commonwealth Representative review comments against data items been adequately addressed? | 1. Mandatory |
|  | 1. Have all deviations / waiver for the item been Approved by the Commonwealth Representative? | 1. Mandatory |
|  | 1. Have the Hazard Log contents and their classification been reviewed by the relevant safety authority and Approved by the Commonwealth Representative? | 1. Mandatory |
|  | 1. Has each requirement of the item’s functional baseline / specification been Verified by the agreed method? | 1. Mandatory |
|  | 1. Were all tests required to be conducted as part of AV&V witnessed by the Commonwealth Representative or a delegated representative? | 1. Mandatory |
|  | 1. Where Verification is by inspection or analysis, has adequate inspection or analysis been performed and are the results sufficient to ensure that the item conforms to the specification? | 1. Mandatory |
|  | 1. Were all models or simulations used as part of the Verification for the item Validated with respect to their assumptions and required fidelity? | 1. Mandatory |
|  | 1. Is the current physical configuration of the item the same as that which was Verified? 2. If not, have adequate regression tests and/or other activities been conducted? | 1. Mandatory |
|  | 1. Have drawings been selectively sampled to ensure that test data essential to manufacturing is included on, or furnished with, the drawings. | 1. Mandatory |
|  | 1. Where any items have failed to pass quality assurance test provisions, have these failures been analysed as to the cause of failure? | 1. Highly Desirable |
|  | 1. Were appropriate corrections made to both the item and associated engineering data before the item was subjected to re-qualification? | 1. Mandatory |

1. Review Exit Criteria

| Item | Exit Criteria | Status |
| --- | --- | --- |
|  | 1. All checklist items have been addressed to the satisfaction of the Contractor and the Commonwealth Representative. | 1. Mandatory |
|  | 1. The test procedures, reports and data used by the FCA team have been made a matter of record in the FCA minutes. | 1. Mandatory |
|  | 1. All major problem and risk areas have been identified and resolved and, for minor problems and risks, corrective action plans have been recorded and agreed by the Commonwealth Representative. | 1. Mandatory |
|  | 1. All risks identified during the course of FCA have been documented and analysed. | 1. Mandatory |
|  | 1. The risks with proceeding to the next phase are acceptable to the Commonwealth Representative. | 1. Mandatory |
|  | 1. All major action items have been closed. | 1. Mandatory |
|  | 1. All minor action items have been documented and assigned with agreed closure dates. | 1. Mandatory |
|  | 1. Review Minutes have been prepared, Approved, and distributed in accordance with the Contract. | 1. Mandatory |