

	Quality System Procedure Inspection and Test	Doc ID - QA2 Rev. 0
		DOCUMENT OWNER Quality System Manager

Inspection and Test

1.0 PURPOSE

This procedure establishes the responsibilities and steps for conducting inspections and/or tests to determine the conformance of the product to specified requirements.

2.0 SCOPE

This procedure applies to all in-process and final product such as reports, software and other deliverables for all types and sizes of Projects.

This procedure applies to all types of COTS or custom materials such as hardware and maintenance items used within the end product or as an end product itself (MT3 Receiving, Inspection and Storage)

This procedure applies to all personnel who perform inspections or review inspection results.

3.0 RELATED DOCUMENTATION

Number	Title
HR1	Competency and Training
MT2	Operations
MT3	Receiving, Inspection and Storage
QA1	Control of Nonconforming Product
	Project Plan
	Work Instructions
	Drawings
	Specifications

4.0 RESPONSIBILITIES

The **Program Manager (PM)** is responsible for establishing the criteria for inspection, assigning personnel to perform material, and product inspection to assure conformance to requirements and resolving Non Conformances (NC).

Personnel assigned to inspection are responsible for using the proper equipment (as applicable), performing the inspections as prescribed, recording results, maintaining product identification and inspection status and reporting NCs to the PM.

5.0 PROCEDURE

See Flowchart Section 10.0

TERMS and DEFINITIONS

Commercial Off-the-Shelf (COTS) – material/software that can be purchased as a standard available product

Nonconformance (NC) – A departure from the requirements in the specification or other approved product description

Product – the end result of any process that is a deliverable to the customer - may be hardware, software, service

5.1 Personnel Qualifications

Inspection activities that affect product acceptance will be performed by qualified personnel as demonstrated by records of *Competency and Training* (HR1).

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5.2 Select Equipment as Applicable

5.2.1 Calibration Status

If inspection requires equipment, control of that equipment will be established by the Program Manager in a documented procedure. Only equipment with valid calibration status will be used for material and product acceptance. Any equipment found un-calibrated or out of calibration is to be marked as out of service and reported to the Program Manager for immediate handling. This includes validation records for any software that is used to monitor and measure product requirements such as checksum or spreadsheet algorithms, simulations, etc.

5.2.2 Equipment Accuracy

If the method requires equipment, the accuracy should be four (4X) times more accurate than the feature inspected plus its tolerance; 4:1 ratio.

5.3 Establish Inspection Criteria

5.3.1 Inspection Methods

Inspection personnel will utilize procedures, Project Plan, Project-specific work instructions, drawings, specifications, certifications, and other pertinent reference documents to establish the methods and criteria for material and product acceptance or rejection. As needed, these documents will define where in the process the inspection occurs, by what means inspection is accomplished i.e., type of equipment, set-up, visual, physical or dimensional inspection, test parameters, special environmental conditions, comparative references and the format for capturing the measurement results.

5.3.2 Sampling

In general, all material or product is 100% inspected. If sampling is required, the Program Manager will establish and document the sampling plan.

5.3.3 Frequency

Inspection frequency is determined by the nature of the material or product. If the product occurs within a continuous stream or is repetitive in occurrence, it may require checking at intervals to ensure consistent compliance. For example, for proposals there is a number of Quality Assurance reviews conducted prior to release of the final proposal to the customer. If the material or product is discrete, a single inspection may be adequate to ensure desired compliance to the requirements; i.e. the final proposal format review.

5.4 Maintain Identification

5.4.1 Product Identification

Product identification, as is appropriate for the type of product, will be maintained during all inspection operations; for service activities this may be check sheets, logs, task order numbers, employee ID; for reports this may be revision/draft level, approval status; for hardware this may be supplier name, description, serial number, lot number, etc.

5.5 Inspect Product

5.5.1 Results

Product should be handled or services conducted to avoid damage or compromise during the inspection process. Results should be recorded on the appropriate document or media. When specified in the documentation or by the PM, actual measurement or test data will be recorded.

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5.5.2 Inspection Status

The inspection status; Accept/Reject, Pass/Fail will be clearly known for the material or product. Indication of status will be dependent on the nature of the product. It can be on the product, on documentation with the product, on tags, reports, within code, or as segregated by location.

5.5.3 Handling Nonconformance

If inspection requirements are not met, segregate or identify the product so that it cannot be used and handle according to *Control of Nonconforming Product* (QA1). Contact the PM for disposition.

6.0 RECORDS

These are the records/artifacts (outputs) that are produced as a result of performing this process. A controlled document is a procedure, plan, etc. that is subject to revision. A controlled record is an artifact that is discrete; test results. The process owner(s) is responsible for ensuring that these records are collected and stored as defined in the Master Record List per *Control of Records* (QS3).

Record ID	Type		Where Stored
	Controlled Document (CD)	Controlled Record (CR)	
Inspection results		X	Program Manager files
NCR Log	X		Program Manager files

7.0 MONITORING AND MEASURING

These are the ways in which this process is evaluated for effectiveness and/or efficiency; the ability to produce what is expected with the resources that are allocated. The personnel listed below are responsible for ensuring that these metrics are met and reported to the Management Representative for Management Review.

Methods Used/Person Responsible	Metrics	Target
Work plan/PM	Actual charges vs. budget	<1%

8.0 QMS REFERENCE

The elements of the Standard to which this procedure refers are listed below.

Element	Process
7.5.1	Control of Production and Service Provision
7.5.3	Identification and Traceability
7.6	Control of Monitoring and Measuring Equipment
8.2.4	Monitoring and Measurement of Product

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9.0 REVISION HISTORY

REV	Description of Change	Approved by	Effective Date
0	New Issue	QEMC	

10.0 FLOWCHART

