REVISION HISTORY			
REV	**Description of Change**	**Author**	**Effective Date**
0	Initial Release	S. Kurasaki	5/27/98
1	Clarifications based on 7/98 DNV Audit and 6/98 Internal Audit (see DCR 98-021). Major rewrite.	M. Hines	9/16/98
2	Administrative change (DCR 98-050)	R. Serrano	12/18/98

REFERENCE DOCUMENTS	
Document Number	**Document Title**
53.ARC.0000	Ames Research Center Quality Manual, Section 4.10
53.ARC.0013	Control of Nonconforming Product
53.ARC.0016	Quality Records

Documents referenced in this procedure are applicable to the extent specified herein.
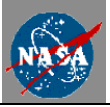
1. Purpose

This procedure establishes the requirements for the development of procedures and work instructions that verify that the materials and products of Ames Research Center (ARC) meet the specified requirements.

2. Scope

This procedure applies to organizations that perform receiving inspection of incoming materials, in-process and final inspections, and testing of final products supplied in accordance with the ARC Quality System.

3. Definitions and Acronyms

3.1 Inspection and Test Records — Records demonstrating whether the product has passed or failed the inspection and/or tests according to defined acceptance criteria

3.2 Inspection and Testing — Act of measuring, examining, or testing one or more characteristics of an entity and comparing the results with specified requirements

Centerwide System Level Procedure

ISO 9001 - Ames Research Center

Document #:

53.ARC.0010

Rev.:

2

Title:

Inspection and Testing

Page #:

2 of 4

3.3	Inspection Authority	Individuals or functions designated to review the results of all specified inspections and testing and to approve the product for final release to the customer
3.4	Material	Hardware, software media, raw materials, or sub-assemblies that will be incorporated into or used in the development or testing of ARC products
3.5	Product	Systems, hardware, software, data (including research results), and/or processed material resulting from ARC activities or processes
3.6	Responsible Manager	Person having the responsibility and authority to accomplish/implement a specific activity or process (includes organizational line managers, project managers, etc.)
3.7	Urgent Use	Act of releasing items or products for use prior to completion of all required receiving and in-process inspections, testing, and records

4. Flowchart

There is no flowchart required for this document.

5. Responsibilities

5.1 **Responsible Manager** shall:

? ensure the development and documentation of an appropriate inspection and testing program sufficient to verify that the final product meets the specified requirements, and

? designate an Inspection Authority responsible for the release of product.

5.2 **Testing and Inspection Staff** shall:

? coordinate and perform inspection and testing activities as required by the approved procedures or work instructions covering their functions, and

? document nonconformances found in accordance with 53.ARC.0013.

5.3 **Inspection Authority** shall:

? review the results of all specified inspections and testing and approve the product for final release to the customer.

6. Procedure

6.1 General Requirements

This section specifies the requirements for the development of all inspection and

	Centerwide System Level Procedure	Document #:	Rev.:
NASA	ISO 9001 - Ames Research Center	**53.ARC.0010**	**2**

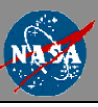| Title: **Inspection and Testing**	Page #: **3 of 4**

testing procedures.

6.1.1 The Responsible Manager shall review the product requirements, as specified in the customer agreement and any other appropriate documentation, when defining the inspection and testing methodology. Test procedures shall be detailed to the extent necessary to ensure that the final product meets specified requirements.

6.1.2 The Responsible Manager shall ensure that documented procedures are developed to perform these inspection and testing requirements. The procedures can be defined in the customer agreement, or the design and development plan, or the Program and Project Plan, and/or work instructions.

6.1.3 The Responsible Manager shall ensure that documented procedures handle nonconformances in accordance with 53.ARC.0013.

6.1.4 The Responsible Manager shall ensure that all inspection and test procedures specify records to be generated. These records shall clearly indicate for each procedure whether the product has passed or failed.

6.2 Receiving Inspection and Testing Requirements

In addition to the General Requirements, the Responsible Manager shall ensure:

6.2.1 That the procedures specify that no incoming materials can be used or processed until the completion of the specified receiving inspection and testing. If the incoming material must be released for Urgent Use, the procedures shall call for it to be positively identified and the Quality Record of this action documented in accordance with 53.ARC.0016, and

6.2.2 That the requirements for receiving inspection procedures take into consideration any recorded testing, inspections, or other controls that exist at the vendor's or contractor's premises that demonstrate conformance to requirements.

6.3 In-Process Inspection and Testing

In addition to the General Requirements, the Responsible Manager shall ensure:

6.3.1 That the in-process testing procedures are performed at appropriate intervals,

6.3.2 That procedures ensure all product is held until the required inspection and tests have been completed and all inspection and testing reports are received if applicable, and

6.3.3 That the procedures for exceptions to in-process testing procedures

	Centerwide System Level Procedure	Document #:	Rev.:
NASA	ISO 9001 - Ames Research Center	**53.ARC.0010**	**2**

Title:	Page #:
Inspection and Testing	**4 of 4**

being performed at appropriate intervals, (i.e. release for Urgent Use) are fully documented. Release for urgent use shall not preclude the completion of all inspection and test procedures. The procedures shall call for all products to be positively identified and the Quality Records of this action documented in accordance with 53.ARC.0016.

6.4 Final Inspection and Testing

In addition to the General Requirements, the Responsible Manager shall ensure:

6.4.1 That the procedures are in place to verify that all applicable final inspection and testing is performed, all associated data and documentation have been completed, the product conforms to the finished product requirements, all nonconformances are properly dispositioned before releasing the finished product, and all product failing any inspection or tests shall be controlled in accordance with 53.ARC.0013, and

6.4.2 That the Inspection Authority approves the final product for release to the customer. This Release of Product Record, including the identification of the Inspection Authority, is a Quality Record and shall be generated and stored in accordance with 53.ARC.0016.

7. Metrics

There are no metrics required for this document.

8. Quality Records

The following Quality Records shall be generated and managed in accordance with 53.ARC.0016.

Required Record	Custodian
Urgent Use Record	Responsible Manager
Release of Product Record	Responsible Manager

9. Form(s)

There are no forms required for this document.