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**NASA**  
**Procedural**  
**Requirements**

**NPR 4100.1D**  
Effective Date: July 29, 1999  
Expiration Date: July 29, 2012

**COMPLIANCE IS MANDATORY**

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## **NASA Materials Inventory Management Manual (Revalidated 2/9/06)**

**Responsible Office: Logistics Management Division**

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# Change History

## NPR 4100.1D, NASA Materials Inventory Management Manual

1	3/12/04	Administrative corrections made to reflect the reorganization of 1/15/04: Changes made throughout to reflect the NASA Headquarters Reorganization. Modifies mission statements and organization charts for Codes A and R and establishes the same for Codes D (AE), O (C+J+ADI-1+NSSC), T (from Code R), V (AO), and Z (AM) (Codes C and J have been eliminated). The Agency organization chart has been updated to reflect the new offices and administrative changes were made to the Table of Contents and Chapter 1.
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# Preface

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## P.1 Purpose

This NASA Materials Inventory Management Manual, NPR 4100.1, is issued pursuant to 42 U.S.C. 2473 (c) (1), Section 203(c) (1) of the National Aeronautics and Space Act of 1958, as amended. It implements policy contained in NPD 4100, Supply Support and Material Management Policy, and in the Federal Property Management Regulations, and sets forth performance standards and procedures governing the acquisition, management, and use of materials.

## P.2 Applicability

This NPR is applicable to NASA Headquarters and NASA Centers, including Component Facilities. This Manual is effective upon signature by the Assistant Administrator of Institutional and Corporate Management. This Manual is issued in loose leaf form and shall be revised by page changes. Comments or suggestions should be addressed to the Team Lead, Logistics Management, Code OJG, NASA Headquarters.

## P.3 Authority

- a. 42 U.S.C. 2473 (c) (1), Section 203 (c) (1) of the National Aeronautics and Space Act of 1958, as amended.
- b. 40 U.S.C. 471 et seq., the Federal Property and Administrative Act of 1949, as amended.
- c. 10 U.S.C. Chapter 145, "Cataloging and Standardization" (Department of Defense).
- d. 41 CFR Chapter 101, "Federal Property Management Regulations."
- e. Federal Acquisition Regulation (FAR) Part 45, 48 CFR Part 45, and NASA FAR Supplement Part 1845, 48 CFR Part 1845, "Government Property."
- f. FAR Part 51, 48 CFR Part 51, and NASA FAR Supplement Part 1851, 48 CFR Part 1851, "Use of Government Sources by Contractors."

## P.4 References

- a. NASA Financial Management Manual 9250, "Property Accounting."
- b. NPD 4100.1, "Supply Support and Material Management Policy."
- c. NPD 4200.1, NASA Equipment Management
- d. NPD 4300.x, NASA Personal Property Disposal Policy
- e. NPR 4200.x, NASA Equipment Management Manual
- f. NPR 4200.2B, Equipment Management Manual for Property Custodians
- g. NPR 4300.x, NASA Personal Property Disposal Procedures and Guidelines

h. 5 CFR, Part 2635, Standards of Conduct

## **P.5 Cancellation**

NPR 4100.1C, NASA Materials Inventory Management Manual

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**/s/ Jeffrey E. Sutton**  
**Assistant Administrator for Institutional**  
**and Corporate Management**

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# Chapter 1. General Provisions

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## 1.1. Purpose

This NPR establishes NASA responsibilities, procedures and requirements for the establishment, operation, and maintenance of materials inventory at NASA Centers.

## 1.2. Applicability

This NPR applies to NASA Headquarters and NASA Centers, including Component Facilities. This NPR is also intended for use pursuant to FAR Part 45 and NASA FAR Supplement Part 1845, "Government Property," when a NASA contract provides that NASA property shall be made available to an onsite contractor, with NASA retaining accountability for the property. When the provisions of this Manual conflict with the Federal Acquisition Regulation (FAR), the NASA Federal Acquisition Regulation Supplement (NFS), or international agreements and procedures governing materials in foreign countries, the provisions of the latter shall prevail.

## 1.3. Changes to Manual

This NPR shall be amended by issuing page changes from time to time to reflect new or revised policies and procedures. Changed pages shall be denoted by a change number and an asterisk in the margin by the revised material. Changes must be implemented within 60 calendar days from the date of issuance, unless otherwise prescribed in the change.

## 1.4. Deviations From This Manual

1.4.1. A deviation is considered to be any of the following:

1.4.1.1. Use of a form different from a Standard Form (SF) or NASA Form prescribed by this Manual;

1.4.1.2. Alteration of a SF or NASA Form except as authorized by this Manual; or

1.4.1.3. Any policy, procedure, method, or practice inconsistent with that prescribed in this manual.

1.4.2. Deviations from this Manual shall be authorized only when special circumstances make such deviations clearly in the best interests of the Government. Such deviations shall be approved only by the Director, Logistics Management Office at NASA Headquarters.

## 1.5. Requirements

1.5.1. NASA shall only acquire materials for mission performance.

1.5.2. Unless exempted in writing by the Director, Logistics Management Office at NASA Headquarters, or elsewhere in this NPR, all materials inventory shall be placed under continuing controls. Such controls shall be maintained and applied to accomplish the following:

- 1.5.2.1. Promote economy in the acquisition, retention, and use of material.
- 1.5.2.2. Achieve maximum use of existing materials resources.
- 1.5.2.3. Ensure the integrity of the Agency records, accounts, and reports.
- 1.5.2.4. Maximize the use of trading partner inventories (such as just-in-time) for stores stock as well as program and standby stock.
- 1.5.3. Materials shall be acquired for immediate use, for stock based on past usage history, for stock based on anticipated need, or in the case of program and standby stock, for future use to satisfy a known specific requirement.
- 1.5.4. Government-owned material shall be used only for official purposes.
- 1.5.5. Selected items designated for support of a repair program that meet the criteria of equipment may be held in the materials inventory as program stock.
- 1.5.6. Materials returned to stock shall be accounted for as inventory under the appropriate status code.
- 1.5.7. Materials shall be physically inventoried periodically and appropriate investigations and adjustments made to the records.
- 1.5.8. Materials which are no longer required for the performance of NASA programs shall be processed for redistribution or disposal.
- 1.5.9. Auditable document files and records shall be maintained to support transactions against all inventory accounts.
- 1.5.10. Duties and responsibilities for keeping accountable records and for physical custody of materials inventories, and systems thereto, shall be segregated, to the extent possible, in order to minimize opportunities for unauthorized, fraudulent, or otherwise irregular acts, and to support internal controls.
- 1.5.11. The Center materials inventory management system shall provide for compliance with the various policies governing the acquisition, storage, control, and distribution of hazardous materials.

## **1.6. Responsibilities**

### 1.6.1. Enterprise and Functional Associate Administrators.

Enterprise and Functional Associate Administrators at NASA Headquarters (or as redelegated to specific Office Directors under the Lead Center concept) are responsible for appropriate coordination, approval, and allocation of supplies within their programs in order to minimize cost and to make effective use of available resources.

### 1.6.2. Director, Logistics Management Office

The Director, Logistics Management Office at NASA Headquarters, is the functional manager for all matters pertaining to NASA materials inventory management. The Director is responsible for providing functional management, leadership, and assistance in the implementation of an effective materials inventory management program, including the following:

- 1.6.2.1. Formulating, publishing, and implementing Agencywide policies and procedures related to the establishment, maintenance, and oversight of material inventory systems.

1.6.2.2. Interfacing with other organizations, public and private, on matters relating to, or affecting, NASA material support systems and policies.

1.6.2.3. Assisting NASA Center management in the development and operation of internal control systems and ensuring their compatibility with Agency programs and policies.

1.6.2.4. Conducting assessments of materials inventory management activities.

1.6.2.5. Identifying specific data reporting requirements. Authorizing deviations from this Manual per paragraph 1.4.

1.6.3. Center Directors. Center Directors are responsible for the following:

1.6.3.1. Overseeing all NASA-owned material assets assigned to the Centers.

1.6.3.2. Approving and allocating material resources in the most effective manner.

1.6.3.3. Providing management direction and the resources necessary to accomplish the prescribed material inventory controls and accounting requirements.

1.6.3.4. Establishing and maintaining a well-defined material inventory program.

1.6.3.5. Appointing a single Supply and Equipment Management Officer (SEMO) to perform the functions and responsibilities in this manual.

1.6.3.6. Appointing an Inventory Adjustment Officer who shall be senior to, or of equivalent rank with, the SEMO.

1.6.4. Supply and Equipment Management Officer.

The SEMO is the principal official appointed by the Center Director for functional administration of supply and equipment management at the Center. The SEMO is primarily responsible for the following:

1.6.4.1. Ensuring that Center policies and procedures necessary to comply with this NPR are developed, implemented, and maintained.

1.6.4.2. Establishing, maintaining, and managing a well-defined inventory control system in accordance with this NPR and financial management regulations.

1.6.4.3. Recommending to the Center Director, in consultation with the Procurement Officer, Deputy Chief Financial Officer (Finance), Contracting Officer and Contracting Officer's Technical Representative, the operating procedures that would best serve the mission, program, and financial concerns of the Center.

1.6.4.4. Determining items to be designated for control as material inventory.

1.6.4.5. Ensuring that material inventory items are properly classified in accordance with this manual and in coordination with the Deputy Chief Financial Officer (Finance) and other Center personnel as required.

1.6.4.6. Designating storage areas and supply points which provide for the preservation and protection of material inventories.

1.6.4.7. Designating a Precious Metals and Critical Materials Monitor and Coordinator to be responsible for maintaining surveillance over the acquisition and control of precious metals.

1.6.4.8. Establishing and maintaining interface with institutional, industrial, and support contractor organizations, using and administrating material inventories and personal property.

1.6.4.9. Sharing joint responsibility with the Deputy Chief Financial Officer (Finance) for the accuracy of material fiscal reports.

1.6.4.10. Interfacing with the Deputy Chief Financial Officer (Finance) in reconciling inventory records and financial records.

1.6.4.11. Ensuring that senior Center management is kept advised of significant supply matters.

1.6.4.12. Providing the Lead, Logistics Management Team, NASA Headquarters, a copy of each Center supply support services contract or statement of work.

1.6.4.13. Designating an Activity Address Code Coordinator to be responsible for coordinating the assignment, maintenance, and surveillance of activity address codes used by NASA Centers and NASA contractors to acquire supplies from Government supply sources.

1.6.5. Inventory Adjustment Officer.

The Inventory Adjustment Officer, appointed by the Center Director, is responsible for reviewing and approving inventory adjustment reports as outlined in chapter 4, paragraph 4.7.

1.6.6. Designees.

The responsible individual may authorize a designee in writing to act on his/her behalf. The responsible individual shall retain all responsibilities that are given to a designee to execute. The designee shall ensure that feedback is provided to the responsible individual to keep the responsible individual fully and currently informed of significant actions, problems, or other matters of substance.

1.6.7. Responsibility of the Individual Employee.

Each employee is responsible for Government property as set forth in the Standards of Ethical Conduct for Employees of the Executive Branch, in 5 CFR, Part 2635.

## **1.7. Definitions**

Terms commonly used in connection with this NPR are defined in Appendix A.

# Chapter 2. Federal Catalog System

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## 2.1. Purpose

2.1.1 The Federal Catalog System (FCS), as defined in Title 41, CFR, Chapter 101, Part 101-30, was established to aid the national economy and promote greater efficiency in supply management operations throughout the Federal Government. The objective of the FCS is to provide for the exclusive use and maintenance of a uniform system whereby all items of supply at each Federal Agency, and their contractor activities, are uniformly named, described, identified, classified, numbered, assigned National Stock Numbers (NSN), and published, to aid in managing all logistical functions and operations from determination of requirements through disposal. NASA participation in the FCS permits greater efficiency in supply management operations by providing the following:

2.1.1.1. Cross servicing within NASA, and between NASA and other Government agencies; including participation in Federal Standard Requisitioning and Issue Procedure (FEDSTRIP) and, when applicable, Military Standard Requisitioning and Issue Procedure programs (MILSTRIP).

2.1.1.2. On a supply item basis, sources from which the supply item may be obtained.

2.1.1.3. Cost savings through consolidation, single item procurement, and prevention of concurrent buying and selling of the same item.

2.1.1.4. Reduction of inventories, recordkeeping, and storage space.

2.1.1.5. Maximum utilization of excess and long supply quantities throughout the Federal Government.

2.1.1.6. Statistical assistance for precise budget forecasting and financial accounting purposes.

2.1.1.7. Maximum utilization of data processing facilities because of uniformity of identification data.

2.1.1.8. Firm basis for the establishment and dissemination of standardization data.

2.1.1.9 Access to the centralized, Governmentwide technical and logistics management data of the Defense Logistics Information System (DLIS) located at the Defense Logistics Services Center (DLSC), Battle Creek, Michigan, and defined in Department of Defense 4100.39-M.

## 2.2. Applicability

2.2.1 Each NASA activity, and where applicable in accordance with paragraph 1.2, NASA onsite contractors, shall participate in the maintenance and maximum utilization of the FCS and comply with the policies, rules, principles, and procedures of the FCS.

2.2.2 NASA contractors, when authorized by their contracts under FAR Part 51 and NASA FAR Supplement Part 1851, "Use of Government Sources by Contractors," to acquire supplies or equipment from Department of Defense (DoD), Defense Logistics Agency (DLA), General Services Administration (GSA), or Federal Supply Schedule (FSS) sources, are encouraged to do so, provided such acquisition is determined to be cost effective and that the items to be acquired meet contractor requirements pertaining to suitability and delivery. Duly authorized NASA contractors electing to

acquire supplies or equipment from DLA, DoD, GSA, and/or FSS sources are required to participate in the FCS to that degree necessary to ensure the ongoing maintenance of current federal cataloging information on those items repetitively acquisitioned. However, this participation shall, at a minimum, include the registering and withdrawing of activity interest in an NSN, the deletion or revision of item identification or management data, or any other data required to ensure that the recorded data are maintained on a current basis, and the participation in Item Reduction Studies.

## 2.3. NASA Participation

2.3.1. As a civilian agency, NASA is designated as a limited participant in the DLIS, and NASA cataloging activities are data receivers of DLIS Simplified File Maintenance (SFM) outputs from DLSC. This limited participant status dictates that when NASA cataloging activities originate any required Federal cataloging action, they are submitted directly to GSA, for the performance of all cataloging functions and/or the preparation of data for submission to DLSC.

2.3.2. After converting items to the FCS, NASA cataloging activities must continue to provide for the identification and classification of personal property under their control and maintain uniform item management data that are required and suitable for interdepartmental supply activities. Therefore, NASA cataloging activities are required to take maintenance actions affecting the items contained in materials inventory that are included in the FCS. These actions may include deletion or revision of item identification or management data, or any other data required to ensure that the recorded data are maintained on a current basis.

2.3.3. NASA activities' requests for supply support, new item identification, changes to a Federal supply classification class, cancellation of an NSN, or other cataloging actions shall be submitted on an appropriate SF1303, Request for Cataloging or Supply Support Action, or DoD Form 1685, Data Exchange, to the GSA, Cataloging Division/FCMC, Washington, DC 20406. Registration and withdrawal actions must also be submitted to GSA.

2.3.4. Provisioning and other preprocurement screening actions shall be submitted directly to DLSC as defined in paragraph 2.9.

## 2.4. Major Organizational Responsibilities

The responsibilities of major organizational elements of the FCS, as relates to NASA, are as follows:

2.4.1. The DLA is responsible for the administration of cataloging policies, program procedures, and overall control of Federal cataloging for the Federal Government. The DLSC, Battle Creek, Michigan, houses the DLIS which is the centralized data base of the FCS for the Federal Government and provides, in coordination with GSA, support for civilian agencies as follows:

- a. Establishes and maintains the basic policies and procedures of the FCS, and disseminates such data in the various Federal cataloging regulations and publications.
- b. Maintains and publishes the Federal cataloging tools.
- c. Reviews and approves item identification data and assigns NSN to items new to the FCS, processed by GSA for NASA.
- d. Under the DLSC SFM program, furnishes directly to NASA activities monthly maintenance updates, monthly cumulative basic records, and/or semiannual replacement files for item identification, cataloging management, and freight classification data.

e. Reviews and processes provisioning and other preprocurement screening actions submitted directly by NASA activities.

2.4.2. The Federal Supply Service, GSA, Washington, DC, shares with DoD, the responsibility for the coordination of civilian agency cataloging participation. GSA accomplishes the following:

a. Represents all civilian agencies that participate in the FCS to ensure the integrity of the system and the compatibility of both civilian and military participation.

b. Initiates and collaborates item reduction studies with NASA to reduce, when possible, the number of items of supply and corresponding Federal item identifications.

c. Reviews cataloging requests submitted by NASA activities on SF 1303, Request for Cataloging or Supply Support Action, and screens them against central files for an existing NSN. When no NSN exists, GSA prepares the appropriate Item Identification worksheet and forwards it to DLSC for new NSN assignment.

d. Develops Names for new items, new Reference Drawings, Classification Structure changes, Federal Item, and Identification Guides.

2.4.3. NASA cataloging activities are responsible for maintaining a comprehensive FCS and program including but not limited to the following:

a. Screening new item identifications against existing file data to determine matching identifications, if any, and to prevent duplication of records.

b. Managing shelf-life items, specifically the identification, assignment, and maintenance of shelf-life codes and related data elements in the activities materials inventory system. This includes but is not limited to the following functions: providing shelf-life codes as part of provisioning, supply support, and cataloging documentation; shelf-life specification for procurement documentation such as requirements for dating and marking, environmental protection, packing, transportation, storage. Also, as a part of the process to maintain requisite levels of stock for shelf-life items, and to minimize the risk of shelf-life expiration of material, those items identified in the shelf-life program must be reviewed periodically to ensure that the assigned code is appropriate.

c. Preparing and submitting to GSA for collaboration and submission to DLSC, new cataloging actions in clear format on SF 1303, Request for Cataloging or Supply Support Action.

d. Preparing and submitting NSN adoption for line item add user (LAU) or withdrawal line item user (LDU) actions to GSA.

e. Initiating requests to GSA for the development of new item names, Federal Item Identification Guides, reference drawings, and for changes to the Federal Supply Classification structure.

f. Collaborating directly with cataloging activities of any Federal agency when there is mutual interest in a proposed change to existing catalog data.

g. Participating in collaboration and Item Reduction Studies sponsored by the DoD supply agencies and GSA for the purpose of consolidating stock and eliminating unnecessary items of supply and the accompanying identification from the FCS.

h. Performing provisioning and other preprocurement screening.

i. Maintaining current systems, local records, files, and stock catalogs, in conjunction with the item identification changes as issued by DLSC.

j. Publishing and maintaining current and comprehensive materials catalogs.

- k. Maintaining current copies of cataloging manuals, handbooks, and other cataloging products.
- l. Providing other NASA activities with a current copy of the latest material catalogs and revisions.

2.4.4. The NASA Headquarters, Logistics Management Office administers the implementation, maintenance, and utilization of the FCS NASA-wide to include the following:

- a. Providing policy, plans, requirements, and procedures to achieve full implementation and use of the FCS.
- b. Interpreting and implementing FCS concepts, rules, and procedures as they apply to NASA.
- c. Coordinating technical, procedural, and policy aspects of the FCS for NASA cataloging activities with other NASA elements, GSA, DLSC, and other Federal agencies.
- d. Where applicable, providing DoD and DLSC Federal catalog publications and management products.

## **2.5. Utilization of Federal Catalog System Products**

2.5.1. In order to adequately participate in the FCS, each NASA Federal cataloging activity shall maintain a complete suite of products in a reference library to be utilized for basic item identification research. These products shall include, but not be limited to the following:

- a. DoD Provisioning and Other Preprocurement Screening Manual, DoD 4100.38-M.
- b. Defense Logistics Information System (DLIS) Procedures Manual, DoD 4100.39-M.
- c. Master Requirements Directory (MRD).
- d. Introduction to Federal Supply Catalogs and Related Publications (C1).
- e. Cataloging Handbooks (H-Series).
- f. Descriptive and Management Data Products including, Identification List (IL), Proprietary Item Identification List (PIIL), and the Federal Item Logistics Data Record (FILDR).
- g. Master Cross Reference List (MCRL).
- h. Management Data List (MDL).
- i. Specially Tailored Publications to include Medical Catalogs and Interchangeability and Substitutability (I&S).
- j. Current manufacturers' brochures and catalogs.
- k. Federal Specifications.
- l. Military Specifications.
- m. Qualified Products Listings (QPL).
- n. Miscellaneous engineering standards and drawings.

## **2.6. Sources For Obtaining Federal Cataloging System Publications**

Sources for obtaining the FCS publications and management products outlined in paragraph 2.5 are as follows:

2.6.1. Requests from NASA activities or approved contractors who perform Agency or Center Federal cataloging operations for new requirements changes, or deletions to existing requirements, must be approved by the Center Supply and Equipment Management Officer (SEMO), and submitted in writing to: NASA Headquarters, Security, Logistics, Aircraft, and Industrial Relations Division. Agency requirements, including resources, shall be managed by that NASA Headquarters Division. In addition, each NASA activity shall revalidate and submit its requirements to NASA Headquarters annually in June.

2.6.2. Since the provisions of this NPR and other governing policies are applicable to NASA contractors performing Federal cataloging operations, applicable NASA contracts must specify that the Government shall furnish for free the publications and management products described in this NPR.

2.6.3. Other NASA activities or contractors who do not perform agency Federal cataloging operations can satisfy their cataloging publication and product requirements by direct purchase from the following recommended sources:

a. Superintendent of Documents, U.S. Government Printing Office, Washington, DC, for inquiries and orders concerning purchase of microfiche only.

b. U.S. Department of Commerce, National Technical Information Services, Springfield, VA, for inquiries and orders concerning purchase of H-Series Cataloging Handbooks, DoD 4100.39-M, DLAH 4140.3, CI Volumes, ML-C, MCRL (magnetic tape only), Freight, Medical and Qualified U.S. Contractors Access List.

c. DLSC, Battle Creek, MI., for inquiries and orders concerning onetime purchase of Identification Lists, Lumber Catalog, Medical Catalog and Federal Item Identification Guides.

## **2.7. Item Identification and Use of National Stock Numbers**

2.7.1. The most important element of the FCS is the establishment of a unique identification for an item of supply. Proper item identification is a fundamental prerequisite in the performance of all management operations. The concept of an item of supply is expressed in and fixed by a Federal Item Identification that consists of the minimum data that is adequate to clearly establish the essential characteristics of the item, give the item its unique character, make use of, and differentiate it from every other item of supply used in the Federal Government.

2.7.2. Each NASA cataloging activity shall ensure that items authorized for Federal cataloging are properly identified and maintained in the FCS, with one Federal Item Identification, and has assigned one NSN.

2.7.3. NASA activities shall follow four basic steps in the item identification process:

a. Selecting the item name. The identification data recorded and the Federal Supply Classification assigned an item are governed by the name selected for the item.

b. Item Classification. Classification is one aspect of cataloging that is the exclusive responsibility of activity catalogers.

c. Development of descriptive and/or reference data. All descriptive characteristics of the item both

physical and performance are identified.

d. When the three functions shown above are accomplished, appropriate documentation shall be prepared for submission and transmittal to GSA for the assignment of a NSN for those items meeting the FCS criteria defined in paragraph 207.

2.7.4. NSN's and approved item names shall be used, when available, in all stock catalogs complete and without change. The additional characteristic descriptions shown on the Federal Item Logistics Data Records may be used in whole or in part to the extent desired.

2.7.5. The NSN, when available, shall be the only stock number in NASA supply operations. The integrity of the NSN shall be maintained whenever it is employed in any operation or document.

2.7.6. Local stock numbers, containing the correct 4-digit Federal Supply Class and local item names, may be used until related approved NSN and approved item names have been received, at which time the local identifications shall be replaced. If approved item names are available, they must be used with local stock numbers. NASA activities should periodically screen local stock numbers in order to attempt to convert them to NSN's.

## **2.8. Determination of Items to be Cataloged**

2.8.1. All items of personal property in civilian agency systems that are subject to repetitive procurement, storage, distribution, and/or issue, whether locally purchased or centrally managed, items shall be named, described, identified, classified, and numbered or cataloged in the FCS. Federally cataloging an item should not be confused with the fact that all items of materials inventory not federally cataloged in the DLIS are subject to item identification using local stock numbers. At NASA activities, all items of material inventory with repetitive use, except as excluded in 2.8.2, below, are subject to be federally cataloged in accordance with the FCS. The term "repetitive" shall be construed to mean continual or recurring requirements for an item of supply encompassing three or more demands on a supply system within a 6-month, 180-day period of time.

2.8.2. All items of personal property in the categories listed below, with the exceptions so noted, are to be excluded from the FCS, unless circumstances exist in which it is determined that Federal item identification data shall be of value in NASA's supply management operation.

2.8.2.1. Items procured on a one-time, direct-delivery, or infrequent basis that are not subject to centralized item inventory management, reporting, or stock control.

2.8.2.2. Printed forms, charts, manuals, books, and other publications subject to central administrative or numbering controls within a NASA activity.

2.8.2.3. Capital equipment items with the exception of equipment items carried in the materials inventory.

2.8.2.4. Items of personal property on which security classification is imposed.

2.8.2.5. Items procured in a foreign market for use in overseas activities.

2.8.2.6. Space flight certified items, applicable to spacecraft, satellites, rockets, launch vehicles, and associated nonflight ground or support system items.

2.8.2.7. Obsolete military aircraft and one-of-a-kind commercial aircraft modified to support NASA missions.

## 2.9. Provisioning and Other Preprocurement Screening

2.9.1. The procedures identified in the DoD Manual, 4100.38-M, Provisioning and Other Pre-procurement Screening, are designed to provide item identification and management data as the result of screening the DLIS files; this aids in the decision processes of provisioning and preprocurement actions. Provisioning and other preprocurement screening is prescribed for items of supply being recommended or selected as support items.

2.9.2. DoD 4100.38-M implements the provisioning and preprocurement mandate of DoD Directive 4130.2, "The Federal Catalog System," and requires mandatory participation in the DLSC DLIS provisioning screening program by all bureaus and agencies of the Department of Defense, Federal civilian agencies, and contractors acting as Government agents engaging in provisioning and other preprocurement actions.

2.9.3. All NASA Centers, and authorized contractors acting for NASA, who perform provisioning and other preprocurement screening shall do so in accordance with this NPR and DoD 4100.38-M so as to accomplish the following:

- a. Limit the entry of new items into the Federal supply system.
- b. Determine support items necessary to operate and maintain end items.
- c. Prevent duplicate entry of items into the Federal supply system.
- d. Provide a data base for the continuation and accomplishment of provisioning, procurement, and cataloging functions.
- e. Utilize available stocks of items already in the supply system to meet provisioning and other logistics requirements to avoid unnecessary procurements. The scope of items to be screened by a contractor shall be as specified in the contract.

2.9.4. In lieu of submitting a request for screening directly to DLSC, NASA Centers are authorized to accomplish such screening locally, utilizing Federal Logistics Catalogs on CD-ROM (FEDLOG) .

## 2.10. General Information for Screening Requests

2.10.1. Requests for screening shall be submitted in accordance with the instructions and procedures contained in DoD 4100.38-M. NASA contractors requiring provisioning screening must obtain approval from the contracting NASA Center's SEMO. As a prerequisite of provisioning requests, each NASA Center shall comply with the requirements governing the establishment of destination code and address registration data for Center or contractors which are to use the screening services. The data shall identify and establish those activities which are authorized to submit screening requests, receive the results of the screening, and establish the media and mode for interchange of screening data. The SEMO shall furnish the contractor a destination code and the Center assigned an activity code prior to the preparation of provisioning screening requests.

2.10.2. All NASA activities and authorized contractors are required to be registered as users of the DLSC provisioning screening services and to have their requirements recorded in the DLSC Provisioning Screening Master Address Table. If a contractor's address is other than that of the NASA Center, it must be registered at DLSC. Registration for contractors shall be obtained in the manner as shown below, except the name and address of the contractor shall be used. The use of provisioning screening does not establish a contractor as a participant in the FCS. Center requests for new registrations, changes in addresses, or changes in output media requirements shall be

submitted by the SEMO to NASA adquarters Security, Logistics, Aircraft, and Industrial Relations Division. Requests shall include the following:/p>

- a. Recipient's complete mailing address.
- b. Media of output such as cards, tape, and wire.
- c. Alternate media of output.
- d. Destination code.
- e. Activity code.
- f. Authorization for Declared Excess Assets information. (Note: This authorization cannot be extended to a contractor.)
- g. Authorization for Catalog Management Data.
- h. Service Code.
- i. Communications Routing Indicator Code.

2.10.3. Those NASA Centers, currently registered at DLSC for provisioning and preprocurement screening, shall use the activity and destination codes on all submittals.

## **2.11. Preparation of New Item Identification and/or Maintenance Actions, Standard Form 1303**

2.11.1. Federal cataloging data being submitted by NASA activities to GSA for item identification action (new NSN assignment) shall be prepared on SF 1303, Request for Federal Cataloging or Supply Support Action.

2.11.2. The SF 1303 is also used for processing a variety of maintenance actions to existing Federal Item Identifications.

2.11.3. Following is a list of some, but not necessarily all, maintenance actions for which the SF 1303 may also be used:

- a. Federal Supply Class (FSC) changes.
- b. Duplicate NSN's.
- c. Change description.
- d. Change item name.
- e. Cancel or reinstate NSN.
- f. Addition of reference data, such as manufacturer's part numbers, specification reference.
- g. Add, change, delete reference number.
- h. Change type of Federal Item Identification.
- i. Upgrading a Federal Item Identification.
- j. Correction.

2.11.4. An original and one copy of each completed SF 1303 shall be forwarded to the GSA, FSS, Attention: FCMC, Washington, DC 20406. A copy shall be returned with the assigned NSN by the GSA. Activities should retain a pending copy until the action is completed.

2.11.5. In instances of erroneous or insufficient data, GSA personnel shall contact NASA cataloging personnel by telephone to obtain correct or additional information. When corrective action cannot be accomplished via telephone, the erroneous submittal shall be returned to the originating Center for further processing.

2.11.6. Error rejections, resulting from input to DLSC, shall not be returned to NASA activities but rather to GSA for corrective action.

## **2.12. Instructions for Registering or Withdrawing Activity Interest (Document Identifier Code LAU/LDU) In An NSN**

2.12.1. A NASA activity requiring registration as a user of an existing NSN must prepare and submit to GSA a Document Identifier Code LAU action.

2.12.2. A NASA activity desiring to withdraw interest from an existing NSN must prepare and submit to GSA a Document Identifier Code LDU action.

2.12.3. Registration and Withdrawal of Interest in NSN Requests shall be submitted to GSA, utilizing the media agreed upon between the GSA and the NASA Cataloging Activities.

## **2.13. Production and Content of Stores Stock Catalogs**

The data contained in a stock catalog shall generally include only items of supply which are repetitively procured, stored, and issued. NSN numbers and approved item names shall be used in stock catalogs complete and without change. Local Stock Numbers (LSN) and local item names may be used until related approved NSN and approved item names have been received. Illustrations, including diagrams and charts, may be used in a manner and location most suitable for easy comparison with corresponding descriptive data.

## **2.14. Maintenance of FCS Statistics by Cataloging Operations**

2.14.1. For management purposes, it is recommended that each NASA activity compile and maintain annual statistical data for the following processed and pending cataloging actions:

2.14.1.1. The number of items processed for provisioning and other preprocurement screening.

- a. Total annual submittals.
- b. Items matched.
- c. Items unmatched.

2.14.1.2. The number of items forwarded to GSA for addition or withdrawal processing.

- a. Total annual submittals.
- b. Approvals.
- c. Rejections.

2.14.1.3. Other maintenance actions forwarded to GSA, for example, part number actions, description changes, and items name changes.

2.14.1.4. Item Reduction Studies, Standardization Actions reviewed.

2.14.2. In order to maintain accuracy between each NASA activity's Master Catalog Record and their DLSC, DLIS record, cataloging activities must perform a comparison of data between the two records at least once a year in such a manner that the activities' entire range of FSC groups and classes are checked. The areas of difference to be recorded are as follows:

2.14.2.1. The number of NSN items used that are on the activity Master Catalog Record and not on the SFM Basic Catalog Tape Record (LAU registration action required).

2.14.2.2. The number of NSN items on the Master Catalog Record that match with items on the SFM Basic Catalog Tape Record.

2.14.2.3. The number of NSN items on the SFM Basic Catalog Tape Record, and not on the activity Master Catalog Record (LDU withdraw action required).

2.14.2.4. The number of LSN items on the NASA activity's Master Catalog Record that should be identified with National Stock Numbers (provisioning screening, LAU, or new item identification, whichever is required).

# Chapter 3. Materials Inventory Control

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## 3.1. Inventory Control Program

3.1.1. In keeping with the policy set forth in paragraph 1.5 of this NPR, NASA Centers shall establish and maintain a system to identify, document, and physically control all items held in inventories, i.e., Stores Stock, Program Stock, and Standby Stock.

3.1.2. Effective controls must be established to prevent the stockpiling of materials outside of the designated Center's materials inventory control system.

3.1.3. If an item is considered hazardous material, the decision on whether or not to stock it should be based on health, potential environmental impact, and safety policies. The costs and complexities involved in any future excess and disposal processes should also be considered.

## 3.2. Classification of Inventory

NASA materials inventories shall be classified under one of the following three codes, which define the status of the materials while under inventory control. Using activities are permitted to keep on hand a limited amount of materials for day-to-day operations. In the case of Stores Stock type items, such quantities should normally not exceed a 60-day supply. SEMO are authorized to designate and limit total quantity dollar value of user activity Stores Stock type items to not exceed \$20,000.

3.2.1. Stores Stock (Status Code 1). Material being held in inventory by the Center which is repetitively procured, stored, and issued on the basis of recurring demand.

3.2.2. Program Stock (Status Code 2). Material acquired by direct purchase or by issue from Stores Stock for a specific program or project. To be designated a Program Stock inventory, the extended dollar value of the items maintained therein shall exceed \$75,000. A Program Stock inventory shall be under appropriate Center inventory and financial accounting controls. Items not meeting the \$75,000 criteria may be maintained in a bench stock operation or under other locally determined controls.

3.2.3. Standby Stock (Status Code 3). Material held for emergencies for which there is no normal recurring demand but that must be immediately available to preclude delay, which might result in loss, damage, or destruction of Government property, danger to life or welfare of personnel, or substantial financial loss to the Government due to an interruption of operations. Standby Stock is not to be used as a repository for items declared excess from Status Codes 1 and 2, or from any other programs.

## 3.3. Inventory Type Accounts

3.3.1. Determination of the appropriate classification of material inventory items shall be based on the Federal Supply Classification Cataloging Handbook H2-1. Note that these types of accounts parallel those found in NASA Financial Management Manual 9254.6. New type accounts shall be approved by the Director, Logistics Management Office, and the Director, Financial Management Division, NASA Headquarters.

### 3.3.2. Pricing of Inventories:

3.3.2.1. Additions to inventory by purchase will be recorded in general ledger account 1200 at invoice price less trade discounts. Cash discounts, when taken, are credited to the appropriate general ledger cost account 5X10. Transportation, handling, and storage costs should be included in inventory cost when included on the purchasing document and be readily and distinctly related to the item purchased.

3.3.2.2. Additions to inventory by transfer from other NASA Centers, other Federal Agencies, or from one status code to another will be recorded in general ledger account 1200 at the price actually paid for the material. If no payment is made for the material transferred, then the material will be recorded at the lower of the net book value of the transferor or the fair market value.

3.3.2.3. Items returned to the inventory, for credit or without credit, will be recorded at the lower of the original issue price or the current issue price. Credit shall be allowed only for returns which can be identified to the appropriation and accounting classification coding (i.e., organization, program, project, or functional category) of the activity to which the original issue was made. Credit shall not be allowed for any issue made prior to the beginning of the previous fiscal year.

3.3.2.4. When inventory is replenished through procurement, return, or transfer, a redetermination will be made of the average stock record unit price based on the weighted moving average. To do this, the value of the received item will be added to the value of the total quantity on hand, and the sum will be divided by the total of the received quantity plus the quantity on hand. The result is the new unit price.

## 3.4. Materials Inventory Control System

Each NASA Center shall establish and maintain a system to control materials inventory that includes the following:

3.4.1. A single system for managing Stores Stock inventories shall be established and maintained.

3.4.2. Program Stock and/or Standby Stock inventory records shall be maintained either at individual supply points under a decentralized system or at one control location for all of the supply points as a centralized or consolidated system. Only one set of records shall be maintained. All control records shall contain adequate and current descriptive data and shall accurately reflect the status of each item.

3.4.3. The control system shall provide for the identification through record coding or through use of detail support records of equipment items designated for support of a repair program when such a program is authorized by the Center. The system shall record issues by equipment serial number or similar control and shall identify the issue location.

3.4.4. Perpetual control shall be established for all inventories controlled by automatic data processing, all high demand items in a manual system, and for critical use or security items requiring special attention.

3.4.5. Low demand items managed under a manual system may be maintained under periodic control, except for critical use or security items requiring special attention.

3.4.6. Periodic control inventories shall use a stock record card as the control document. No issue data shall be posted to this record.

3.4.7. Perpetual inventory control systems shall use individual transaction entries for each action

affecting an item. Each increase and decrease to stock levels shall be supported by an input or output document or comparable record, i.e., issue ticket, receiving report, or inventory adjustment voucher.

3.4.8. The perpetual inventory control record shall contain data showing the status of all actions affecting the item, i.e., issues, receipts, due ins, due outs, and adjustments.

### **3.5. Criteria for Classifying Stores Stock**

The basic criteria for classifying items as Stores Stock are contained in paragraph 3.2.1

3.5.1. The candidate item for stockage must fall within one of the following categories:

- a. Be physically adaptable to storage and issue.
- b. Have anticipated demand patterns making reasonably accurate forecasts of requirements possible.
- c. Have a shelf life sufficiently long enough to permit stockage without unnecessary loss.

3.5.2. Items having recurring demands but not meeting the minimum demand criteria may be carried in Stores Stock if at least one of the following applies:

- a. Advance purchase and storage is necessary because of long procurement lead time.
- b. An adequate industry distribution system does not exist that would ensure availability.
- c. Market conditions are such that an adequate supply can only be ensured through stockage.
- d. Volume purchases are necessary to secure timely delivery and advantageous price. However, the amount of the purchase should not exceed the economic retention limit for the item (see paragraph 4.6.4).

### **3.6. Criteria for Classifying Program Stock**

3.6.1. Materials meeting the criteria of paragraph 3.2.2, held by any organizational element, shall be classified as Program Stock. Inventory controls initially shall be established at the direction of the SEMO and shall include an identification of the responsible program or project manager.

3.6.2. Items may be added to Program Stock inventory when authorized in writing by a program or project manager or designee. Any items added, whether by replenishment, transfer in or turn in, shall be identified to a specific program or project.

3.6.3. Equipment items, such as line replaceable units or components of major systems or subsystems, may be classified as Program Stock when approved for rotation through a repair program or for backup replacement components. Such items shall be distinctively tagged or marked to distinguish them from other equipment items managed under NPR 4200.1, "NASA Equipment Management Manual." Once such items are no longer identified to a repair program or as backup replacement stocks, normal controls under NPR 4200.1 shall apply.

### **3.7. Criteria for Classifying Standby Stock**

Materials which are held to meet the requirements of paragraph 3.2.3 shall be classified as Standby Stock. Items shall be added to Standby Stock only upon written justification by a division chief or equivalent.

## 3.8. Physical Inventory of Materials

Each stock classification of inventory shall be physically inventoried on a cyclic or sample basis pursuant to the procedures set forth in chapter 5 of this NPR.

## 3.9. Management of Shelf-Life Materials

Following the guidance in Federal Property Management Regulations, subchapter E, Subpart 101-27.2, "Management of Shelf Life Materials," NASA Centers shall develop and implement a program to minimize loss and ensure maximum use of shelf life items prior to their deterioration. A shelf life item is any item possessing deteriorative or changeable characteristics so that a storage period must be assigned to that item to assure upon issuance that the item shall perform satisfactorily. The SEMO shall establish a program to identify such items, establish the expiration dates and control their procurement, storage, issue, and disposal.

3.9.1. Types of Shelf-Life Items. Shelf-life items are classified as nonextendible (Type I) or extendible (Type II). A Type I item has a finite nonextendible storage life after which the item is considered to be unusable. Examples of Type I items are drugs and medicines with certain characteristics. A Type II item has an assigned shelf-life storage period that may be extended after completion of inspection, test, or restorative action. Examples of Type II items are paint, ink, tape, printing ribbon, and photographic film.

3.9.2. Shelf-Life Codes. All shelf-life items shall be identified in NASA supply inventory systems by a one-digit code (alpha or numeric) that is uniformly used by all Federal agencies. Alpha codes are for nonextendible items and numeric codes are for extendible items.

3.9.2.1. The code designators for items with shelf-life periods of up to 60 months can be found in the Federal Property Management Regulations subchapter E, subpart 101-27.205.

3.9.2.2. Code 0 is used to identify items not included in the shelf-life program.

3.9.2.3. Code X is used to identify critical end-use items, military-essential items, and medical items with a shelf life greater than 60 months. A critical end-use item is any item that is essential to the preservation of life in emergencies or any item essential to the performance of a major system. NASA Centers must establish the necessary controls for these items to prevent their issuance in an unserviceable condition.

3.9.2.4. Centers may also establish controls for items with a shelf life greater than 60 months that are not identified in paragraph (3). Such controls should be established only when they are necessary for effective management of the items.

3.9.3. Procurement of Shelf-Life Items. In determining requirements of shelf-life items, the length of storage (months of supply) and appropriate contracting techniques for the particular item involved, including specification requirements, industry practices, and storage and delivery procedures, shall be considered.

3.9.4. Identification and Shipping Requirements. Manufacturers, whenever practicable, shall be required to mark the unit or container with the month and year of manufacture or production and the batch number of all shelf-life items (60 months or less) procured from other than Government supply sources. Whenever practical, suppliers shall be required to ship or deliver material within a given number of months from the date of manufacture or production. These "age on delivery" requirements should not be imposed in such a manner as to unduly restrict competition at any trade

level.

3.9.5. Packaging. To the extent feasible and economical, shelf-life materials shall be packaged in such a way to provide for minimum deterioration.

3.9.6. Controls and Inspection

3.9.6.1. Centers shall establish the necessary controls to identify shelf-life items on supply system records, and where applicable, on related storage locations, and locator records. Shelf-life items must be stored in a manner to ensure the oldest stock on hand is issued first, except where it is not feasible to do so, as in shipments to overseas activities.

3.9.6 2. Before the end of the designated shelf-life period, Type II items shall be inspected to determine whether the shelf-life period can be extended. This inspection criteria does not apply if the shelf-life item has a line item inventory value of \$300 or less, or if the cost of inspection and testing is significant in relation to the value of the item. If material is found suitable for issuance on the date of inspection, the shelf-life period should be extended for a period equal to 50 percent of the original shelf-life period, and the next reinspection date should be established accordingly. Upon reinspection, the shelf life can be extended again up to 50 percent of the original shelf life as long as the material conforms to the established criteria.

3.9.6.3. Extension of shelf-life periods, based upon inspection of the material, shall be documented.

3.9.7. Marking. When the shelf-life period of Type II material containers of bulk stocks (except critical end-use items) is extended, only the exterior packaging need indicate the date of inspection and the date material is to be reinspected. Individual units of issue not classified as having a critical end-use application are not required to be annotated or labeled as long as the supply system maintains identifiable controls to preclude issuance of unserviceable material to a user. At the time of issue or shipment, the dates of inspection and reinspection must be affixed by a label or marked by other means on each unit of issue for Type II items having a critical end-use application.

3.9.8 Inventory Analysis

3.9.8.1. Centers must periodically conduct an inventory analysis of shelf-life items to determine whether quantities on hand shall be issued within the established shelf-life period so that arrangements can be made to ensure local use or redistribution to other Centers or agencies for use. Type I shelf-life items have a definite storage life. When these items cannot be used or redistributed, they shall be disposed of according to governing procedures.

3.9.8 2. The analysis of Type II items with a shelf life of less than 60 months shall be made as follows:

<u>Shelf Life Period</u>	<u>Date of Analysis (Prior to item expiration)</u>
48 to 60 months	12 to 16 months
36 to 48 months	8 to 12 months
18 to 36 months	6 to 8 months
12 to 18 months	4 to 6 months

6 to 12 months	3 to 4 months
Up to 6 months	** No analysis required

If the analysis of Type II items indicates that the quantity on hand shall be issued within the established shelf-life period, inspection is not required. If the analysis indicates that quantities on hand shall not be issued within the shelf-life period, the items must be inspected to determine if the shelf-life period can be extended. See subparagraph 3.9.6 for requirements.

3.9.9. Utilization and Distribution of Shelf-Life Items. When specific quantities of shelf-life items shall not be used within the shelf-life period, Centers should determine if they can be returned to the supplier. Items that cannot be returned to the supplier should be reported to the Property Disposal Officer (PDO) for disposition according to NPR 4300.1, Personal Property Disposal Manual. Items reported shall reflect the appropriate disposal or supply condition code and shall be clearly marked and documented as shelf life with the appropriate shelf-life code.

## 3.10. Precious Metals

Precious metals, in any shape or form, are susceptible to theft and other unauthorized use and, therefore, require extraordinary controls from point of receipt to point of use. Procedures for recovery and disposal of precious metals are in NPR 4300, NASA Personal Property Disposal Procedures and Requirements.

### 3.10.1 Definitions.

#### 3.10.1.1. Precious metals are those listed below:

Silver Rhodium  
Gold Ruthenium  
Platinum Iridium  
Palladium Osmium

3.10.1.2. Precious metal alloys are one or more precious metals combined with other materials to form an alloyed material or substance in any shape or form for fabrication, testing, or other research purposes.

3.10.1.3. Precious metal end items are these in any shape or form, consisting solely of one or more precious metals or precious metal alloys that have been shaped or fabricated for research or testing purposes or used as an entity.

### 3.10.2. Requirements.

3.10.2.1. NASA Centers shall establish controls to prevent the stockpiling of precious metals, including alloys and end items. Precious metals (pure, alloys, and end items) shall be acquired for a specific program, project, or other work activity only, the planning of which has been approved by the Center Director.

3.10.2.2. Requests for precious metals shall be processed through the Center SEMO for acquisition from Government sources or other NASA Centers, when available, prior to procurement from commercial sources. The precious metals listed in subparagraph 3.10.1.1 above are available to all Federal agencies through the Defense Precious Metals Recovery Program at substantially lower costs than commercial sources.

3.10.2.3. Precious metals shall be maintained under documented control and accounting from the time of receipt to final disposition. Such documentation and related control records should indicate the weight of precious metals to the nearest troy ounce.

3.10.2.4. Physical inventories of precious metals on hand (held for issue or disposition) shall be conducted at least annually by someone not having possession or custody of the metals. Adjustments shall be documented and processed, using the requirements in chapter 4, paragraph 4.7. The results of inventories shall be reported, in writing, to the Center SEMO within 30 days after the inventory.

3.10.2.5. All losses, including theft of precious metals in any form or end items, shall be promptly reported to the Center Security Officer. A survey report shall be initiated by the holder of the precious metal(s) in question and processed in accordance with NPR 4200,1, NASA Equipment Management Manual.

## **3.11. Returnable Containers**

To ensure timely recovery of deposit and reduced expenditures for demurrage charges, Center SEMO's must establish and maintain current and detailed control records on returnable containers acquired by NASA directly from vendors, including containers used in providing support to on site contractors. To hold down demurrage costs, Centers should not use, to the extent possible, vendor-owned containers for long-term storage in the stock system of materials or products. Returnable containers should not be used for hazardous waste products.

### **3.11.1 General Requirements.**

Prior to exercising the option to obtain Center requirements in either returnable or non-returnable containers, the following factors shall be considered:

3.11.1.1. Administrative details involved such as bookkeeping and accounting necessary to account for returnable container items while in NASA's possession.

3.11.1.2. The advantages of procuring items in low-value, nonreturnable containers when administrative costs incurred in handling returnable containers would result in increased cost to the Government.

3.11.1.3. Possible loss or damage to the containers while in the Government's possession, thereby either precluding any possible refund or reducing the monetary return when the container is returned to the vendor for refund of deposit.

3.11.1.4. The possibility of incurring demurrage charges that may equal the cost of the container itself.

3.11.1.5. Difficulties to be encountered in ensuring that returnable containers are returned to the proper vendors for credit.

3.11.1.6. Handling and transportation costs to be incurred by NASA for the return of empty containers to the vendors.

3.11.1.7. Costs involved in ultimate disposal of nonreturnable containers.

3.11.1.8. The feasibility of acquiring and utilizing Government-owned containers.

### **3.11.2 Procedures.**

3.11.2.1. The NASA SEMO shall establish and maintain current, detailed control records.

3.11.2.2. Control records shall provide complete, accurate data of returnable container transactions from time of receipt until return to vendors.

3.11.2.3. Maintenance of detailed individual records is optional on any returnable container requiring a monetary deposit of \$25 or less when demurrage charges are not involved.

3.11.2.4. Although detailed records are optional for low-value containers, Centers should return them to appropriate vendors to ensure recovery of deposits to the greatest extent possible.

3.11.2.5. Low-value containers, such as drums, may be recorded by lot.

3.11.2.6. Containers should be tagged or otherwise identified to facilitate identification of vendor-owned containers.

3.11.2.7. An adequate suspense system shall be maintained on returnable containers to ensure that they are recovered from using organizations and returned to vendors on a timely basis.

3.11.2.8. The Deputy Chief Financial Officer (Finance) shall be provided with necessary information when containers are either received from or returned to a vendor.

3.11.2.9. When materials in returnable containers are delivered to a using organization, the recipient shall be advised in writing that the container is returnable and must be returned to the vendor as soon as it becomes empty. The recipient also shall be advised when the free loan period expires, the amount of any deposit, and the actual demurrage charges after the free loan period.

# Chapter 4. Materials Inventory Transactions

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## 4.1. Issuing Items

4.1.1. All demands against, and issues from, inventory shall be documented either through computer record update for online systems or through use of a requisitioning document or both.

4.1.2. Issues from Program Stock shall be made only to individuals authorized by the controlling program manager.

4.1.3. Issues from Standby Stock shall be made only on the authority of the official who requested that the item be placed in stock.

4.1.4. Centers shall determine the appropriate control system for ensuring that Stores Stock items are issued for official purposes. As a minimum, the system shall require the random sampling of issues on a periodic basis to verify the authorization for issue.

4.1.5. Each supply operation shall maintain a back order system for recording unfilled demands for inventory items and for filling the demand without further action on the requester's part. Center systems should include provision for issues of available stocks with no back order being established for unfilled quantities.

4.1.6. Items shall be issued in units of issue that are economically sound or easy to handle.

4.1.7 Centers may establish a system of expending certain Stores Stock line items from inventory and issuing them at no cost to requesters under simplified procedures. Items included in such a system are usually high usage office supplies, forms, and low-cost repair parts. Pre-expended items held for issue should not exceed a 30-day supply. The demand data for such items are recorded at the time the quantities are reduced from the item or asset record balance.

## 4.2. Inventory Replenishments

4.2.1. Stock replenishment shall be in accordance with FPMR requirements (41 CFR, subpart 101-27.1) and shall use Economic Order Quantity (EOQ) principles (GSA Handbook, The Economic Order Quantity Principle and Applications, NSN 7610-00-543-6765). A review point for each stocked item shall be established, using a formula that provides at least 90-percent assurance that an out-of-stock condition shall not occur. A safety stock level shall be included as an integral element of the formula to provide added assurance against out-of-stock conditions. The safety stock level is a predetermined quantity, based on EOQ months of supply, which is in addition to normal replenishment lead time and operating level requirements.

4.2.2. Each supply operation shall maintain a due in system for recording orders from external sources to satisfy back orders or to replenish stocks. Federal Property Management Regulations, part 101-26.107, lists required sources for satisfying requirements for supplies and services. Prior to submitting orders for material to external sources, Centers shall ensure that the material is not available internally.

4.2.3. To use the GSA, the Defense Logistics Agency, military departments, and other Government agencies as supply sources, Centers must follow the FPMR, Subchapter G, Subpart 101.26.2, "Federal Requisitioning System," which provides detailed ordering procedures. Before the system

can be used, an Activity Address Code (AAC) must be obtained by submitting NASA Form 1603, FEDSTRIP AAC Data. The AAC is also needed to process NASA excess material for screening and disposal. To obtain an AAC for NASA cost-reimbursement contractor activities, Centers must submit NF 1603 along with the data required by the FAR, subpart 51.1, and NASA FAR Supplement, subpart 18-51.102. The requirements associated with acquiring and controlling AAC's are listed as follows:

4.2.4. NASA Centers shall designate an AAC coordinator who shall interface with the Center contracting officer and submit all requests from Centers and contractors for assignment of, changes to, or cancellation of AAC's to NASA Headquarters Security, Logistics, and Industrial Relations Division. Normally, 30 days should be allowed for assignment and activation of AAC's.

4.2.5. The Team Lead, Logistics Management, Code OJG, NASA Headquarters, is the Agency AAC focal point and shall perform the following:

4.2.5.1. Obtain new AAC's from the GSA and transmit to GSA requests for changes, extensions, and cancellations of AAC's.

4.2.5.2. Advise the requesting Centers of new AAC assignments and provide confirming information when other actions have been accomplished.

4.2.5.3. Maintain a current, consolidated record of codes, supporting documentation, and mail, freight, and billing office addresses assigned to all NASA activities.

4.2.6. The GSA Customer Supply Centers (CSC) serve as retail outlets for selected, frequently needed, common use, expendable type items. CSC's provide a quick and easy method for activities to obtain small lot quantities of common-use GSA stocked items, such as administrative and janitorial supplies, handtools, and other industrial type items. The GSA provides a catalog showing the items stocked at the CSC's, as well as other pertinent information about the CSC operation. To use the CSC, Centers must obtain a special CSC account number and customer access codes from the GSA by submitting GSA Form 3525, "Application for Customer Supply Services." In addition to requesting account number, the form also authorizes the commitment and obligation of NASA funds for orders placed. Therefore, the form shall be signed at an appropriate level of management no lower than the SEMO or equivalent. The SEMO shall establish local procedures and controls to govern the Center's use of the CSC in conformance with GSA's prevailing rules and requirements.

4.2.7. Replenishment of stores stock

4.2.7.1. When there are no limiting factors such as space or budgetary limitations, the basic EOQ techniques shall be used. In any event, deviations from the use of prescribed EOQ tables must be approved by the Lead, Logistics Management Team, NASA Headquarters.

4.2.7.2. When there are limiting factors that preclude use of the basic EOQ technique, a modification of the technique may be made so long as it produces the fewest orders at the lowest level of inventory investment.

4.2.7.3. Requirements for implementing the EOQ principle of stock replenishments are in the GSA Handbook. The Handbook is identified under NSN 7610-00-543-6765 in the GSA Supply Catalog.

4.2.7.4. Exceptions from the EOQ table values may be made for specific items when they meet one of the following:

a. Have a shelf life less than the specified EOQ;

b. Are for standby or reserve, or involve planned requirement for a special one-time project, such as construction materials for a major building renovation;

- c. Can be acquired from excess; or
- d. Are necessary due to limits on storage space or funds.

4.2.8. Replenishments of program stock shall be made when authorized by the program or project manager. Authority to replenish program stock may be delegated in writing to the SEMO by the program or project manager. Also, when program stock items experience frequent, recurring demands, they should be replenished using the EOQ criteria.

4.2.9. Replenishments of standby stock shall be made if the responsible division chief certifies that replenishment is necessary. This may be a blanket certification given to the SEMO, subject to review at least every two years in accordance with paragraph 4.6.

### **4.3. Special Item Controls**

Certain items have unique features, qualities, or properties that require special controls. Centers shall establish special inventory controls and procedures for identification, storage, issue, and where necessary, turn in, requisition, and disposition of such items. The following are examples of types of items that warrant such controls:

- a. Medical supplies
- b. Medicinal alcohol
- c. Photographic film
- d. Hand tools
- e. Dictionaries
- f. Explosives
- g. Hazardous gases or chemicals
- h. Precious metals
- i. Radioactive materials
- j. Magnetic tapes and audio and video recording tapes
- k. Attache cases and briefcases

### **4.4. Return to Inventory**

4.4.1. Return of items to stocks shall be accepted. Centers shall determine condition, packaging, marking, and documentation criteria for items returned to stocks.

4.4.2. Credit may be granted to the returning activity for Stores and Standby Stock items that are serviceable and ready for issue. Credit shall be allowed only for returns that can be identified to the appropriation and accounting classification coding (i.e., organization, program, project or functional category) of the activity to which the original issue was made. Credit shall not be allowed for Program Stock, items of excess, items bought directly, items that cannot be returned to inventory due to poor condition or obsolescence, and issues made prior to the beginning of the previous fiscal year.

## 4.5. Adding Line Items to Inventory

### 4.5.1 Adding Line Items to Stores Stock.

4.5.1.1. Each Center shall establish and maintain a system for adding line items to Stores Stock.

4.5.1.2. Requests for stockage from Center personnel shall be used as a vehicle for adding line items to stock. Such requests must indicate enough evidence to support the qualifications for stockage under the criteria of paragraph 3.5. Requests shall be signed and approved by responsible levels of management as designated by the Center.

4.5.1.3. Center inventory management personnel shall review requests for stockage to ensure that line items having past sufficient demands or anticipated future demands warrant stockage. Items qualifying for stockage shall be forwarded to the designated authority for approval.

4.5.1.4. Approval to add qualifying line items to Stores Stock shall be granted by the SEMO or designee. Decisions not to stock qualified line items shall be documented and retained by the supply organization. The individual requesting that the line item be added to stock shall be notified of the decision to stock or not.

4.5.1.5. Stores Stock items may be expended to, maintained in, and issued from an approved bench stock operation.

### 4.5.2 Adding Line Items to Program Stock.

4.5.2.1. Line items that meet the criteria for Program Stock (see paragraph 3.2.2) shall be added only on written request of the program or project manager.

4.5.2.2. Line items added to Program Stock are to be identified to a specific program or project.

4.5.2.3. Program Stock items may be transferred to, maintained in, and issued from an approved bench stock operation.

### 4.5.3. Adding Line Items to Standby Stock.

4.5.3.1. Line items that meet the criteria for Standby Stock (see paragraph 3.2.3) shall be added to inventory only upon written request by a division chief or equivalent. The request shall be furnished to the SEMO and shall cite the justification for the items.

## 4.6. Retention of Inventory

### 4.6.1 Stores Stock.

4.6.1.1. Stores Stock items, regardless of control systems, that have been in inventory for at least 12 months shall be reviewed at least annually for retention or elimination. For items under perpetual inventory control, this review may be accomplished in conjunction with the reorder cycle or when the review point is reached.

4.6.1.2. Items shall be retained in stock only if they meet the stockage criteria of paragraph 3.6.

### 4.6.2 Program Stock.

4.6.2.1. At least once every 2 years a list of items in Program Stock shall be provided to the controlling division chief or project manager for review and documentation of need for retention.

4.6.2.2. If items are retained for a program and that program is canceled, the items shall not be held,

unless another program is identified and the continued retention is justified by a division chief or project manager.

4.6.2.3. In appropriate circumstances, such as use of leased storage space, the SEMO may levy storage charges for items retained in Program Stock.

#### 4.6.3 Standby Stock.

4.6.3.1. At least once every 2 years, a list of items in Standby Stock shall be provided to the controlling division chief or equivalent for review and indication of need for retention. The justification for retention should state the purpose for which contingency items are being held.

4.6.3.2. In appropriate circumstances, such as use of leased storage space, the SEMO may levy storage charges for items retained in Standby Stock.

4.6.4. Basic requirements for retention of inventory are contained in Federal Property Management Regulations, subchapter E, subpart 101-27.304. Within NASA, stock levels in excess of 60-months supply should not be retained. Levels over the limit should be disposed of through normal excess procedures. The SEMO may authorize beyond the 60-month period when circumstances, such as cost to reorder and cost to hold, clearly warrant such action. When levels fall below the retention limit, the reorder cycle may resume.

4.6.5 The review of the economic retention limit shall occur at the same time as the review for continued stockage. Months of supply shall be computed on the previous 12- months demand history.

4.6.6 The economic retention limit may be increased when --

- a. The item is of special manufacture and relates to an end item of equipment that is expected to be in use beyond the economic retention time limit; or
- b. Costs incident to holding an additional quantity are insignificant and obsolescence or deterioration of the item is unlikely.

4.6.7 The economic retention limit should be reduced when --

- a. The related end item of equipment is being phased out or an interchangeable item is available; or
- b. The item has limited storage life, is likely to become obsolete, or the age and condition of the item does not justify the full retention limit.

4.6.8. The reasons for any increase or decrease to the economic retention limit shall be documented.

4.6.9. Items that are marked for deletion from inventory shall be coded in the inventory control system to preclude reorder. Users shall be notified that the item is to be eliminated from stock when the on-hand balance is depleted through issue or excess. They shall be either issued to users until stock is depleted or reported to the Center Property Disposal Office for redistribution and disposal. Transferring excess items to the Property Disposal Office shall be considered as an adjustment of inventory (see paragraph 4.7.3.4.). A copy of the adjustment shall be sent by the SEMO to the Inventory Adjustment Officer, or an automated adjustment transaction will be sent, and the supporting document will be maintained by the SEMO.

4.6.10. The SEMO may hold material items on a temporary basis for a user activity. The nature of NASA operations occasionally makes it desirable to temporarily store user-owned items, in appropriate storage facilities, for a specified period of time. A using activity may request in writing that the SEMO temporarily store materials such as seasonal items, and items for a planned work or

job order, until they are actually needed. The request must state the specific time period for the temporary storage and the reason for storage. The reason should clearly state the reasons that items cannot be currently used or retained in the user's organization.

4.6.11. NASA Centers are authorized to establish and maintain Bench Stocks which consist of low-cost, repetitively used, consumption-type items located at or near points of use to ensure continuous and uninterrupted operations. Bench Stocks, by providing such items in close proximity to the user, reduce the user's need to constantly requisition repetitively required items from a central supply.

4.6.11.1. With the concurrence of the Center SEMO, a using activity may establish a Bench Stock operation identifying the specific items and the maximum and minimum quantities of the items to be maintained therein. At the discretion of local management, the SEMO may establish and operate a Bench Stock in support of a using activity.

4.6.11.2. Bench Stocks are not to be used as a repository for excess items which cannot otherwise be justified for retention in authorized stores, Program or Standby Stocks.

The specific requirement for establishing and operating a Bench Stock is as follows:

- a. The using activity and the SEMO shall jointly determine the location of Bench Stocks, and the items and the quantities of the items to be maintained in the designated Bench Stocks.
- b. For Bench Stock items drawn or pre-expended from or through Stores Stock and Program Stock inventories, the maximum quantity maintained per line item should not exceed a 60-day supply.
- c. Bench Stocks shall have records sufficient for identifying the (1) stock or part number, (2) name, (3) unit of issue, (4) unit price, (5) stock level (maximum and minimum quantities to be stocked), and (6) stock resupply point of the items maintained therein.
- d. An individual shall be designated to oversee the Bench Stock. The individual shall be responsible, at a minimum, for (1) adding items to and deleting items from the Bench Stock, (2) ensuring that the quantities of items maintained in the Bench Stock do not exceed the dollar value and usage thresholds, (3) establishing a simplified method for tracking items received in and drawn from the Bench Stock, and (4) periodically reviewing the Bench Stock to effect resupply as necessary.
- e. Controls shall be established to ensure that only authorized users draw items from the Bench Stocks.

4.6.11.3. Every effort shall be made to keep Bench Stocks within the designated usage threshold. However, there may be occasions when it is justified to exceed the threshold on a temporary and limited basis. When this occurs, the using activity shall request approval from the SEMO to temporarily exceed the threshold.

## **4.7. Adjustments to Materials Inventory**

4.7.1. NASA materials inventory records shall accurately reflect the balance of material assets on hand and must be reconcilable with financial records. When discrepancies exist between records and material assets, prompt action must be taken to correct, determine the cause, and update balances as necessary. Inventory adjustments are to be used when transaction documents have not been processed or cannot be located to account for the discrepancies.

4.7.2. Record searches to reverse incorrect transactions should be reasonably thorough but consistent with the magnitude of the error and the probability of individual neglect or misconduct. Except for

special item controls, transaction record searches are not required when the extended value of discrepancy is less than \$50. Such discrepancies may be automatically adjusted; however, the require inventory adjustment document must be processed. The automatic adjustment does not apply to special controlled items that must be fully researched regardless of value of the discrepancy. When materials inventory records are adjusted, corresponding adjustments must be made in the appropriate General Ledger Accounts, Financial Management Manual 9220, and must be funded by (losses) or credited to (gains) to appropriated monies.

4.7.3. The following transactions cause gains or losses to the Inventory General Ledger Account 1200 and shall be reported to the Center Financial Management Office.

4.7.3.1. Adjustment of discrepancies between the recorded balance and the physical count quantity of items as a result of a physical inventory (see chapter 5).

4.7.3.2. Dropping accountability of materials inventory items that are unserviceable due to damage and destruction, obsolescence and deterioration, loss, or theft.

4.7.3.3. Adjustment of record to correct operational errors that cannot be referenced to the original transaction document.

4.7.3.4. Transfer of excess materials to the PDO; delete value from Account 1200.

4.7.3.5. Return to vendors or suppliers when no other type of transaction is appropriate.

4.7.4. Adjustments from subparagraphs 4.7.3.1. through 4.7.3.5. shall be processed for approval as follows:

4.7.4.1. When the total dollar value of any one line item is \$500 or more, the adjustment report shall be certified by the SEMO or designee and approved by the Inventory Adjustment Officer (IAO). Adjustments from subparagraphs 4.7.3(4) and (5), regardless of dollar value of the quantity adjusted, may be approved by either the IAO, the SEMO, or a designee.

4.7.4.2. When the total dollar value of any one item is less than \$500, the adjustment may be certified by a designated individual and approved by the SEMO or a designee other than the certifying individual.

4.7.4.3. Approving officials should be satisfied that the adjustment is not the result of carelessness or misappropriation of property. If either condition is suspected, the official shall require a survey report. The adjustment report shall be approved subject to this action and processed for correction of the inventory records without waiting for the results of the survey action. The SEMO is responsible for initiating property survey action following the guidance in NPR 4200.1, "NASA Equipment Management Manual."

4.7.4.4. An explanation of the reasons for all adjustments, including shipments or returns to suppliers and transfers of excesses to the PDO, shall be recorded in the automated system and entered in the remarks section of the adjustment report. In the automated format, the following codes shall be used to identify the adjustments listed in subparagraph 4.7.3.

Discrepancy	Code
Physical Inventory Discrepancies	01
Damage or Destruction	02

Obsolescence or Deterioration	03
Loss	04
Theft	05
Operational Errors	07
Returns to Vendor	10
Excess Transfers to PDO	11

4.7.4.5. Copies of all adjustment reports shall be furnished to the Center Deputy Chief Financial Officer (Finance) unless waived by the Center Deputy Chief Financial Officer (Finance). Copies of inventory adjustment vouchers that delete items of inventory from Account 1200 for redistribution or disposal must be sent to the Deputy Chief Financial Officer (Finance) by the SEMO unless waived by the Center Deputy Chief Financial Officer (Finance).

# Chapter 5. Physical Inventory of Materials

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## 5.1. Requirement for Physical Inventories

Physical inventories of Center materials inventory shall be taken to determine the accuracy of the records and the adequacy of the control system.

## 5.2. Inventory Methods

5.2.1. All inventories under perpetual control shall be inventoried annually using a sampling procedure. However, once every 5 years a complete wall-to-wall inventory shall be conducted instead of the sample. This requirement may be fulfilled on a cyclical basis. Centers may schedule the wall-to-wall inventory incrementally by status code, type account code, storage facility, or any other method that ensures that every item is inventoried at least once every 5 years.

5.2.2. Centers shall perform a wall-to-wall physical inventory of all onsite stock locations, whether Stores Stock or Program Stock, when the contract for operation of that stock location expires. The purpose of this physical inventory is to ensure a reasonable level of accuracy of item records for the continuing requirement to maintain effective and efficient supply support. The SEMO may waive this requirement if the latest wall-to-wall inventory or latest wall-to-wall increment has a less than 20-percent error rate of line items and gross adjustment value. When a waiver is granted, the result of the last physical inventory shall be disclosed to the new contractor.

5.2.3. Materials acquired and stocked by contractor personnel onsite at NASA Centers, whether for Government or contractor use or both, remain accountable to the Government. The contract provides for this through the NASA FAR Supplement clause 1852.245-71 entitled, "Center-Accountable Government Property," and expressly requires the contractor to manage the materials in accordance with this manual. When physical inventories indicate that 90-percent record accuracy is not being maintained, the consequences specified by paragraph 5.5 are invoked.

5.2.4. This manual does not govern management of materials that are contractor accountable under the Federal Acquisition Regulation, either onsite at a NASA Center or offsite at a contractor location. Management of such materials is in accordance with the contractor's own Government-approved property management system under the requirements of the FAR. The SEMO does not have authority to waive the physical inventory required by the FAR at the completion of such contracts.

## 5.3. General Inventory Procedures

5.3.1. All of the items on record shall be included as part of the sample pool or shall be counted during a complete inventory. To ensure that all locations are identified and all items in the warehouse are properly recorded prior to the inventory, a location validation shall be made prior to full lot and wall-to-wall inventories. A location is not required to be validated for sample inventories and, in any event, not more than once a year.

5.3.2. Each count of a materials inventory line item shall be taken using a new count card or listing. The individual counting and the individual verifying, if a verifier is used, shall sign or initial and date the count card or listing after entering the quantity counted. The record balance shall not be

entered on a count card or listing prior to the count. When a verifier is used, a recount is not necessary. If, however, the SEMO deems that a recount is needed, it shall be taken by an individual other than the original counter or verifier. To maintain a system of checks and balances, individuals such as warehouse and storage personnel shall not be allowed to inventory materials under their custodial care and responsibility. If such a situation cannot be avoided, then the inventory count must be spot checked through random sample by an individual who does not have direct custodial responsibility.

5.3.3 The physical inventory control record shall clearly indicate the record quantity, each count quantity, whether or not the count quantity constituted an error or variance, and the resolution of differing counts.

## 5.4 Sampling Procedures

5.4.1. The sampling procedures outlined in this paragraph are designed to provide reasonable assurance that the inventory control system is adequate. In percentage terms, it provides approximately 95-percent confidence that 85 percent of the records are within the acceptable error limits.

5.4.2. Inventories under perpetual control shall be examined using a lot sampling technique. When a lot fails to pass the sample, it shall be completely counted and the records adjusted accordingly. Inventories shall be taken annually, either all at once or on a scheduled cyclic basis throughout a fiscal year. If, in the judgment of the SEMO, there is a high probability that the sample inventory shall be unacceptable, a complete lot or wall to wall inventory may be taken without first taking a sample.

5.4.3. Lots shall be reasonably uniform in size and shall be limited to one status code of inventory, unless the inventory records for all status codes are identically maintained. Each lot may comprise one or more types of accounts, from 1201-1215. Type accounts may be split to provide uniform lot sizes.

5.4.4 Sample size and error limits for varying size lots areas follow:

### SAMPLE SIZES AND ERROR LIMITS

Lot Size (Line Items)	SampleSize	Error Accept	Limit Reject
2 to 8	2	0	1
9 to 15	3	0	1
16 to 25	5	0	1
26 to 50	8	0	1
51 to 90	13	0	1
91 to 150	20	0	1
151 to 280	32	1	2
281 to 500	50	3	4
501 to 1,200	80	7	8
1,201 to 3,200	125	10	11

3,201 to 10, 000	200	21	22
10,001 to 35,000	315	21	22
35,001 to 150,000	500	21	22

5.4.5. Sample inventories are allowed a variance to determine whether the sample inventory passes or fails. The variance allowed is 10 percent in count or value. The variance is applicable to each line item but not to the sample size as a whole.

5.4.6. Samples shall be selected, using a constant interval developed from the following formula:

$$\frac{\text{Lot size}}{\text{Sample size}} = \text{Constant Interval}$$

A group of records the size of the constant interval and composed of the first records in the inventory file shall constitute the pool from which the first item in the sample is drawn at random, i.e., the first group of records in the lot that equals the constant interval. Thereafter, the constant interval shall be added to the number of the first record selected and each succeeding record number until the sample is selected. The sample size shall not deviate from the table. In order to arrive at the sample, additional items shall be selected at random from the lot if the original selection is less, or items shall be randomly deleted from the selected sample if the original selection is oversized.

5.4.7. The selected items shall be counted. Line items may be recounted to verify a count. Those that meet or exceed the variance limits of 10 percent in count or value, which are the limits for an error, shall count as a rejection. When the number of rejections equals or exceeds the reject limit in paragraph 5.4.4, the sample fails and a complete inventory of the lot shall be taken. The complete lot count must be taken within the same fiscal year as the sample.

## 5.5. Complete Lot Inventory Procedures

5.5.1. When a complete lot inventory is taken, the counts shall be compared with the record and errors noted. When either the total of errors reaches 10 percent or more of the total number of line items in the lot, or the total value of gross adjustments, plus or minus, equals or exceeds 10 percent of the value of the lot, the inventory shall be considered unacceptable.

5.5.2. When a complete lot inventory is found to be unacceptable, an analysis of the causes for the errors shall be performed and corrective action scheduled. A copy of the analysis and the schedule for corrective action shall be forwarded to the Logistics Management Division, NASA Headquarters.

## 5.6. Adjustments as a Result of Inventories

Discrepancies between the record balance and the physical balance shall be adjusted in accordance with paragraph 4.7.

## 5.7. High-Demand Item Review for Periodic Inventories

At the time of the annual physical inventory of periodic inventories, a review shall be made to determine if any items qualify for transfer from periodic inventory control to perpetual inventory control. Those items qualifying shall be transferred.



# Chapter 6. Reports and Forms

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## 6.1. Analysis of Inventories Report, NASA Form 1489

All Centers shall prepare the Analysis of Inventories Report, NASA Form 1489, in accordance with the NASA Financial Management Manual 9351. This report shall be submitted to the NASA Headquarters Financial Management Division.

## 6.2. Management Products for Inventory Systems Controlled by Automatic Data Processing

Center inventory management systems, where applicable, should generate, at minimum, the following output products:

6.2.1. Transaction register showing the history for items having activity during the system cycle or having action pending.

6.2.2. Stock replenishment analysis showing the data necessary to compute the stock position including the EOQ and the new review point.

6.2.3. Stock retention analysis showing the data needed to determine the economical retention limit or stockage criteria for an item. This product may be combined with the stock replenishment analysis and is to be published at least annually.

6.2.4. Inventory file showing all items in the stock system, their NSN, noun description, unit of issue, unit price, quantity on hand, value, quantity due in, quantity due out, 12-month demand history, and quantity in long supply. This product is an optional reference document which should be published quarterly.

6.2.5. Other products, such as due in, due out, shelf life, and warehouse location, may be generated by the Center as needed.

## 6.3. Headquarters Reporting

The Materials Inventory Management System data required on NASA Form 1324, Semi-annual Report of Personal Property Operations; NASA Form 1619, Physical Inventory of Materials Annual Report; and NASA Form 1489, Analysis of Physical Inventory Report, shall be submitted to NASA Headquarters semiannually by May 15 and annually November 15.

## 6.4. General Requirement for all Reports

All reports shall be in agreement for those elements in common. That is, when the same data appear on two or more reports, there shall be no discrepancies between the reports. This Instruction applies to NASA Headquarters and all Centers. Further, the data reported by the Centers shall include data covering component Centers and any onsite contractors for which the Center retains accountability under the Center-Accountable Government Property clause of the NASA FAR Supplement.



# Chapter 7. Functional Assessments

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Center Directors will establish oversight and evaluations of Center functions through self-assessment, ISO 9000 audits, performance metrics, or other requirements identified in collaboration with Agency-level functional/staff offices.

# Appendix A. Definition of Terms

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NOTE: For definitions related to equipment, see NPR 4200.1, NASA Equipment Management Manual; for definitions related to disposal, see NPR 4300.1, NASA Personal Property Disposal Manual.

**Activity Address Code.** A six-position code, composed of numbers, letters, or a combination of both, assigned for use on requisition documents submitted to Government supply sources, to identify the requisitioner, the consignee, and the payee.

**Backorder.** A commitment by supply made to a customer and recorded in supply records to issue at a later date an item which was not available upon initial customer demand.

**Bench Stock.** A stock of low-cost, repetitively used, consumption type supplies, and repair parts, established at or near points of consumption/use to ensure continuous and uninterrupted operations. Bench stocks are generally restricted to maintenance, repair, fabrication type activities.

**Consumption Item.** Items which are either consumed in use or which lose their original identity during use by incorporation into, or attachment upon, another item. Consumption items consist of such supplies as maintenance parts, raw materials, office or housekeeping supplies consumed in use, or other similar items.

**Demand.** A request for issue of an item. A demand may be recurring or nonrecurring.

**Direct Delivery.** The process of acquiring an item from a source of supply and issuing and charging it directly to a user.

**Economic Order Quantity (EOQ).** The amount of an item to buy which fulfills the Economic Order Quantity Principle. The EOQ is expressed in months of supply and is derived from an EOQ table.

**Economic Order Quantity Principle.** A method for determining replenishment order quantities to minimize the cost to buy an item and the cost to hold that item.

**Equipment.** An item of real or personal property in the configuration of a mechanical, electrical, or electronic apparatus or tool, normally costing in excess of \$50, which may perform a function independently or in conjunction with other equipment or components.

**Error.** A record to count discrepancies of 10 percent or more, or a dollar variance of 10 percent or more, of the extended value of an inventoried line item.

**Excess.** Classification assigned to material for which no requirement exists.

**Federal Supply Classification (FSC).** A system developed in the Federal Cataloging System for use in classifying items of supply. The structure of the FSC consists of groups subdivided into classes within each group. Each class covers a relatively homogeneous area of commodities with respect to physical or performance characteristics, or the items included are usually requisitioned or issued simultaneously.

**High Demand Item.** An item for which the EOQ is less than a 12-month supply. Applies only in a manual system.

**Inventory.** Means all material being held by a Center as Stores Stock, Program Stock, or Standby Stock, except for that material actually in process of use or consumption.

**Inventory Adjustment.** Means a transaction processed to adjust materials inventory record and any imbalances between such records and quantities in stock.

**Issue.** The process of distributing material from inventory to customer for use or consumption.

**Lead Time Demands.** The number of times an item is requested during the replenishment lead time.

**Long Supply.** Items in stock with a level exceeding the authorized stock level, including lead time and safety stock, but excluding quantities declared excess.

**Low-Demand Item.** An item for which the EOQ is a 12-month-or-more supply. This applies only in a manual system.

**Material.** As used in this NPR, it means supplies, parts, components, assemblies, and items that do not meet the criteria for controlled equipment that are held in inventory prior to issue.

**Periodic Inventory Control.** The record for each item does not provide the item's quantitative, on-hand balance except at the time of physical inventory. This applies only in a manual system.

**Perpetual Inventory Control.** The record for each item reflects every quantitative change for the item providing at any selected time in the system cycle the on-hand balance of that item.

**Personal Property.** Property of any kind including equipment, materials, and supplies, but excluding real property. Property of any kind or any interest therein, except real property acquired by NASA, including property in transit in Government conveyances or common carriers; storage for stock or disposal; undergoing maintenance, repair, modification or service test; acquired by donations or any other method.

**Physical Inventory.** The process of physically sighting and counting quantities of materials held in inventory by a Center, reconciling the count with the recorded balance, and processing the necessary documents to adjust the inventory records and the financial accounts.

**Pre-expended Material.** Pre-expended items are items expended from perpetual inventory control and made available to the user under simplified issue procedures at no direct cost.

**Program Stock.** Material acquired by direct purchase or by issue from Stores Stock for a specific program or project.

**Replenishment Lead Time.** The period between initiation of a reorder and its receipt in stock.

**Repair Part.** A part needed to return a higher assembly or component to a serviceable or operational condition.

**Returnable Container.** A returnable container is any carboy, cylinder, drum, reel, or other container which is designed to hold materials or products and which is to be returned to a vendor when the contents have been removed or consumed.

**Returns.** Turn in of unneeded materials from operating personnel for inclusion in the Center's materials inventory.

**Review Point.** The point, in units of issue, at which the usage history of an item is analyzed to determine if it should be reordered, or reorder deferred. The review point is usually the sum of lead time stock plus safety stock.

**Safety Stock.** A quantity included in the normal stockage objective to provide added assurance against stock out conditions.

Sensitive Item. An item which, due to its pilferable nature or the possibility of its being a hazard, requires a stringent degree of control. A sensitive item can be capital or non-capital equipment or materials.

Special Item. An item having such unique qualities, properties, or features as to require special physical and managerial controls.

Standby Stock. Material held to support emergencies.

Stores Stock. Material being held in inventory by the Center which is repetitively procured, stored, and issued on the basis of recurring demand.

Supply Point. Any facility or area, regardless of location, that normally functions as a point at which material is held and subsequently issued or otherwise made available for use or consumption, including warehouses, stockrooms, self service facilities, shop stores, cribs, bench stocks, and sales stores.

Survey Report. A report of administrative action taken to investigate and review the loss, damage, or destruction of Government property, to adjust the property records, to assemble pertinent facts, and to determine the extent or absence of personal responsibility for such loss, damage, or destruction.

Variance. A variance is an error between the count and the record which does not qualify in determining whether an item counted is rejected for sample inventory or for determining overall physical inventory performance accuracy for a complete lot inventory.

# Appendix B. Catalog Activity Codes

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The following activity codes are assigned by DLSC (via GSA) to each NASA Center activity to identify and associate all cataloging actions and operations related to each activity. These codes are widely published and recognized throughout all supply systems of the Federal Government.

<u>CODE</u>	<u>CENTER</u>
17	John C. Stennis Space Center (SSC)
18	Ames Research Center (ARC)
19	Langley Research Center (LaRC)
28	Goddard Space Flight Center and? Wallops Flight Facility (GSFC and WFF)
80	George C. Marshall Space Flight Center (MSFC)
86	John F. Kennedy Space Center (KSC)
92	Lyndon B. Johnson Space Center (JSC)
93	John R. Glenn Research Center (GRC)
94	Dryden Flight Research Facility (DFRF)