Goddard Procedural Requirements (GPR)

DIRECTIVE NO.	GPR 6400.1E	**APPROVED BY Signature:**	*Original Signed By*
EFFECTIVE DATE:	08/22/2016 Revalidated	**NAME:**	Raymond J. Rubilotta
EXPIRATION DATE:	08/22/2021	**TITLE:**	Director Of Management Operations

COMPLIANCE IS MANDATORY

Responsible Office: 270/Information and Logistics Management Division

Title: Logistics Support

PREFACE

P.1 PURPOSE

This procedure describes the processes for the packaging, handling, storage, and transportation of products (including space flight hardware, components, parts and materials), and the management of materials inventories.

P.2 APPLICABILITY

a. This procedure applies to all Goddard Space Flight Center (GSFC) organizations.
b. In this directive, all document citations are assumed to be the latest version unless otherwise noted.
c. In this directive, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms "may" or "can" denote discretionary privilege or permission; "should" denotes a good practice and is recommended but not required; "will" denotes expected outcome; and "are/is" denotes descriptive material.

P.3 AUTHORITY

a. NPD 1280.1, NASA Management System Policy
b. NPD 6000.1, Transportation Management

P.4 APPLICABLE DOCUMENTS AND FORMS

a. 15 CFR Parts 730-774, Commerce and Foreign Trade – Export Administration Regulations
b. 22 CFR Parts 120-130, Foreign Relations – International Traffic in Arms Regulations
c. 49 CFR Parts 100-199, Transportation – Pipeline and Hazardous Materials Safety Administration, Department of Transportation
d. NASA Federal Acquisition Regulations (FAR) Supplement Part 1845, Government Property
e. NASA-STD-8719.9, NASA Standard for Lifting Devices and Equipment
f. NPR 1441.1, NASA Records Retention Schedules
g. NPR 4100.1, NASA Materials Inventory Management Manual

h. NPR 4200.1, NASA Equipment Management Manual
i. NPR 6000.1, Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components
j. NPR 6200.1, NASA Transportation and General Traffic Management
k. NPR 8715.3, NASA Safety Manual
l. GPR 1280.1, The GSFC Quality Manual
m. GPR 1310.1, Customer Commitments and Review
n. GPR 1860.1, Ionizing Radiation Protection
o. GPR 3410.2, Employee Competence and Quality Management System Training
p. GPR 5330.1, Work Order Authorization (WOA) Process
q. GPR 5340.2, Documentation and Control of Process Non-conformances and Customer Complaints
r. GPR 8700.1, Design Planning and Interface Management
s. GPR 8700.2, Design Development
t. GPR 8719.1, Certification and Recertification of Lifting Devices and Equipment
u. GPR 8730.6, Electrostatic Discharge (ESD) Control
v. GSFC Facilities Management Division, Standard Reference Document for Facilities
w. GSFC Form 11-54, Shipping and Mailing Request Form
x. GSFC Form 20-4, Transfer/Shipping Request

P.5 CANCELLATION

GPR 6400.1C, Logistics Support

P.6 SAFETY

Any special requirements for support or safety considerations (e.g., warning statements or notes; support equipment; personnel; facilities; or qualifications/licenses) shall be recorded on the applicable documentation requesting support (e.g., shipping request, storage request, or Work Order Authorization).

P.7 TRAINING

No overall training is required for individuals to implement this directive. However, specialized training may be required to perform certain operations (e.g., handling hazardous materials or items sensitive to electrostatic discharge).

P.8 RECORDS

Record Title	Record Custodian	Retention

GSFC Form 20-4, Transfer/Shipping Request	Center Transportation Officer (TO) for services provided by the TO; Product Manager for services not provided by the TO	For shipments of project equipment and critical products: *NRRS 8/103. For shipments of all other items: *NRRS 6/2A – Freight Files (Shipping). Destroy 6 years after the period of the account.
Storage Records (Storage Information Management System)	Center Storage Manager (SM) for services provided by the SM; Product Manager for services not provided by the SM	*NRRS 4/3A – Inventory Files/Lists. Destroy 2 years from date of list.
Supply Records	Center Supply and Equipment Management Officer (SEMO) for services provided by the SEMO; Product Manager for services not provided by the SEMO	*NRRS 4/6 – Mechanized Property and Supply Records. Destroy when 2 years old.

** NRRS – NASA Records Retention Schedules (NPR 1441.1)*

P.9 MEASUREMENT/VERIFICATION

Internal and external third party audits and evaluations shall be used to assess the effectiveness of this procedure.

PROCEDURES

1. RESPONSIBILITIES

1.1 The manager of a Project Office (or Division-level or higher office, as appropriate) is responsible for determining those individuals within their organization authorized to approve shipments.

1.2 The Information and Logistics Management Division (Code 270) is responsible for the operation of GSFC's central logistics services for GSFC products, which involve handling, storage, packaging, marking, preservation, and transportation. This responsibility is primarily accomplished through the authority of the Center Transportation Officer, the Center Supply and Equipment Management Officer, and the Center Storage Manager.

1.3 The Product Manager (PM) is responsible for the following actions, which may be delegated to the Product Design Lead (PDL):

a. Identifying requirements for the handling, storage, packaging, marking, preservation, and/or transportation of GSFC products, including schedules, and handling devices and equipment. These requirements address environmental control, special handling and storage, packaging, safety and property accountability, and are updated as necessary to address design or schedule changes and comply with the following: NASA-STD-8719.9, NPR 4100.1, NPR 4200.1, NPR 6000.1, NPR 6200.1, NPR 8715.3, GPR 1280.1, GPR 1310.1, GPR 1860.1, GPR 3410.2, GPR 5330.1, GPR 5340.2, GPR 8700.1, GPR 8700.2, GPR 8719.1, and GPR 8730.6. Customer-supplied product shall be handled, stored, packaged, marked, preserved and/or transported in accordance with customer requirements.

b. Coordinating such requirements in advance with the Center Transportation Officer (TO), the Center Supply and Equipment Management Officer (SEMO), and the Center Storage Manager (SM) to determine which logistics services should be performed by the Information and Logistics Management Division on behalf of the PM.

c. Submitting transportation requirements to the TO in accordance with Section 2 and NPR 6000.1, ensuring that adequate funds are available to pay for shipping charges, and that proper authorizations are obtained.

d. Coordinating the establishment of materials inventories with the SEMO, and maintaining and managing those inventories in accordance with NPR 4100.1.

e. Submitting storage requirements to the SM in accordance with Section 3, ensuring that adequate funds are available to pay for storage charges if commercially leased facilities are required, and that proper authorizations are obtained.

> The PM is responsible for the actions in Sections 1.3f – 1.3q except for those actions that are performed by the Information and Logistics Management Division on behalf of the PM.

f. Ensuring appropriate storage is available to meet product requirements, and establishing and maintaining appropriate processes and procedures for storage areas/stockrooms in accordance with NPR 4100.1. This includes maintaining storage areas within appropriate temperature and/or humidity ranges for the product in order to maximize preservation/shelf-life of the product and to minimize premature deterioration or needless damage to the product. The GSFC Facilities Management Division (FMD) “Standard Reference Document for Facilities” identifies the standard temperature and humidity ranges maintained for facilities (laboratories, office space, computer rooms, etc.) located on GSFC. Requirements outside the standard ranges may be coordinated with FMD.

g. Considering shelf life requirements in their storage procedures, and ensuring that no product is used unless it can be shown that it is within the manufacturer's recommended shelf life.

h. Coordinating programmatic handling requirements with responsible technical organizations.

i. Ensuring product that is sensitive to electrostatic discharge (ESD) is handled in accordance with GPR 8730.6.

j. Ensuring that appropriate processes are established for the manual handling of products.

k. Ensuring Product Handlers are properly trained, qualified, and certified, as appropriate, in accordance with GPR 3410.2.

l. Ensuring handling devices and equipment are properly certified in accordance with NASA-STD-8719.9 and GPR 8719.1.

m. Ensuring product is packaged, marked, and preserved to ensure conformance to product and customer requirements, including environmental control during shipping, handling, and storage, and complies with applicable hazardous materials requirements in accordance with 49 CFR Parts 171-180, NPR 6000.1, and NPR 6200.1.

n. Ensuring product is monitored for condition and deterioration during storage and transportation in accordance with NPR 4100.1, NPR 4200.1, NPR 6000.1, and NPR 6200.1.

o. Ensuring appropriate records of product shipping, handling, storage, and accountability are kept and maintained in accordance with NPR 4100.1, NPR 4200.1, NPR 6000.1, NPR 6200.1, GPR 5330.1, and GPR 5340.2.

p. Ensuring requirements for the handling, storage, packaging, marking, preservation, and transportation of GSFC products that involve radioactive materials are in accordance with GPR 1860.1.

q. Ensuring requirements for the handling, storage, packaging, marking, preservation, and transportation of GSFC products that involve explosives, propellants, or pyrotechnics are in accordance with NPR 8715.3.

1.4 The Product Handler is responsible for:

a. Ensuring product is accounted for, handled and stored in accordance with the references of this procedure and any such additional requirements established by the PM.

b. Ensuring handling devices and equipment are certified before use.

1.5 The Center Transportation Officer is responsible for:

a. Ensuring requirements received from the PM for the shipping, handling, storage, packaging, marking, preservation, and transportation of GSFC product, including schedules, and handling devices and equipment are evaluated and that the PM is advised regarding the results of the evaluation.

b. Ensuring for those requirements accepted from the PM, that product is packaged, marked, and preserved to ensure conformance to product and customer requirements, including environmental control during transportation, and complies with applicable regulations, policies, and procedures, including those for hazardous materials. Those regulations, policies, and procedures are identified in Section 1.3 and also include 49 CFR Parts 100-199.

c. Ensuring for those requirements accepted from the PM, that product is shipped in accordance with applicable regulations, policies, and procedures (including those for export control) and that appropriate documentation and records (e.g., GSFC Form 20-4) of product transportation are kept and maintained. Those regulations, policies, and procedures are identified in Section 1.3 and also include 15 CFR Parts 730-774, 22 CFR Parts 120-130, and 49 CFR Parts 100-199.

d. Ensuring that the Contracting Officer or Grants Officer, as appropriate, has indicated concurrence for shipment of material/equipment to contractors or consignees on grants.

1.6 The Center Supply and Equipment Management Officer is responsible for:

a. Ensuring requirements received from the PM for materials inventories and property accountability of GSFC Product are evaluated and that the PM is advised regarding the results of the evaluation.

b. Ensuring for those requirements accepted from the PM, that materials inventories are managed and property accountability maintained in accordance with applicable regulations, policies, and procedures. Those regulations, policies, and procedures are identified in Section 1.3.

1.7 The Center Storage Manager is responsible for:

a. Coordinating the development of policy and procedures governing GSFC's Inactive Equipment Storage Program, and for the functional administration and operation of that program.

b. Ensuring requirements received from the PM for storage of GSFC Product are evaluated and that the PM is advised regarding the results of the evaluation.

c. Ensuring for those requirements accepted from the PM, that product is stored in accordance with applicable regulations, policies, and procedures and that appropriate records of product storage are kept and maintained. Those regulations, policies, and procedures are identified in Section 1.3.

d. Coordinating the leasing of all off-Center commercially leased storage facilities.

2. SHIPMENT PROCESS

Government-owned property shall only be shipped for authorized purposes. Different processes are required depending on whether the items are small packages, express shipments, or require special handling (e.g., large, critical, or hazardous material shipments).

2.1 Small Packages, Express Shipments, and Non-Critical and Non-Hazardous Material Shipments

a. Shipment originators may ship small packages or express shipments containing material that is non-critical and non-hazardous through the Small Package Office (SPO). A GSFC Form 20-4, Transfer/Shipping Request, shall be used to process multiple piece shipments weighing more than 50 pounds total going to the same destination, and are processed through the Traffic Management Office (TMO).

b. Shipment originators may use a GSFC Form 11-54, Shipping and Mailing Request Form, to process small package shipments or express shipments containing material not involving controlled equipment. A GSFC Form 20-4 shall be used to process packages and shipments involving controlled equipment or which are subject to Department of State or Commerce regulations.

2.2 Large, Critical, or Hazardous Material Shipments

a. Shipment originators shall use a GSFC Form 20-4 to process shipments from GSFC of any material other than small and express packages.

b. The GSFC Form 20-4 is used for the following cases:

(1) Transferring property to/from a contractor.
(2) Shipping property out for repair and servicing.
(3) Transferring property from one contractor to another.
(4) Any shipment having an international origin or destination that is restricted under the U.S. Munitions List contained in the International Traffic in Arms Regulations (22 CFR Part 121) or commodities listed on the Commerce Control List (15 CFR Part 774). This includes hardware, technical data, and software.
(5) Any shipment of controlled equipment (i.e., equipment tagged with NASA barcode tags).
(6) Any shipment of hazardous material.
(7) Any shipment of a mission critical nature.
(8) Any shipment requiring quality assurance (QA) concurrence.
(9) Any shipment having special transportation requirements.

c. The GSFC Form 20-4 shall be submitted to the Traffic Management Office (Code 279 at Greenbelt and Code 279.W at Wallops).

2.3 Special Approvals

Contracting Officers shall review and indicate concurrence on GSFC Form 20-4 for shipments to/from contractors to ensure that the applicable provisions contained in Subpart 1845.7101-2 of the NASA FAR Supplement and applicable contract provisions are met.

a. Grants Officers shall review and indicate concurrence on GSFC Form 20-4 for shipments to consignees on grants.

b. When mandated by a project, the originating organization's QA representative shall review and indicate concurrence on GSFC Form 20-4 for shipments requiring special quality assurance reviews (e.g., shipments of flight critical hardware).

3. STORAGE PROCESS

a. Organizations with storage requirements shall submit those requirements to the SM using the Storage Information Management System (sims.gsfc.nasa.gov).

b. Organizations are billed annually for off-site storage areas leased and managed by the Information and Logistics Management Division. This will also include any charges for items stored after the normal billing cycle.

APPENDIX A: DEFINITIONS

a. **Center Transportation Officer** – Individual appointed by the Center Director to provide functional management and leadership in the administration and operation of all transportation and traffic management functions for which the Center has responsibility (see NPR 6200.1).

b. **Center Storage Manager** – Individual in the Information and Logistics Management Division (ILMD) responsible for the functional administration and operation of GSFC's Project Storage Program.

c. **Center Supply and Equipment Management Officer** – Individual appointed by the Center Director to provide functional management and leadership in the administration and operation of all supply and equipment management functions for which the Center has responsibility (see NPR 4100.1 and NPR 4200.1).

d. **Controlled Equipment** – All equipment with an acquisition cost of $5,000 or more, that has an estimated service life of 2 years or more, which will not be consumed or expended in an experiment, and selected items of equipment with an acquisition cost less than $5,000 that are designated, and identified as sensitive by the Center Supply and Equipment Management Officer (See NPR 4200.1).

e. **Handling Device or Equipment** – Handling devices and equipment include cranes, gantries, hoists, mobile cranes, forklifts, tugs, dollies, lifting slings, and hardware, including shackles, turnbuckles, eye bolts, pear rings, and other items. Handling also includes manual carrying cases or other items required to handle and protect the product.

f. **Hazardous Materials** – Material which has been determined by the U.S. Department of Transportation to be capable of posing an unreasonable risk to health, safety, or property when transported in commerce. A list of those items is contained in 49 CFR Section 172.101.

g. **Packaging, Marking, and Preservation Procedures** – Practices taken to protect and maintain the integrity of product during handling, storage, or transportation, including markings necessary to alert personnel to special requirements.

h. **Product Design Lead** – The manager or leader with overall responsibility for managing the product design activity.

i. **Product Handling** – Any activity involving handling of a product, including normal manual and mechanical handling, aligning, lifting, loading, unloading, transporting, and towing, with appropriate measures taken to ensure that the product remains undamaged and will not suffer from deterioration.

j. **Product Manager** – The individual designated as having management responsibility for a product.

k. **Property Custodian** – An individual appointed by the Division Chief (or equivalent level or higher manager) who is responsible for the controlled equipment assigned to the organization.

l. **Shelf Life Item** – Product for which a storage period is assigned to assure satisfactory performance upon re-issuance because of characteristics that may deteriorate or change during storage. A review system shall be in place to ensure that product is monitored and handled appropriately.

m. **Small Package** – Any package being shipped through the Small Package Office (SPO) weighing 50 pounds or less and up to 108 inches combined length and girth, and shippable by commercial ground or express service for domestic and international destinations.

n. **Storage** – An inactive status during which the product is subjected only to processes necessary to maintain or measure its condition. Specific controls for reasons of environment, contamination, security, or safety may be required.

o. **Storage Area/Stockroom** – A designated area used for storing product that will protect the product from damage, deterioration, and mixing. This includes holding areas for receiving, staging, inspection, shipping, and segregation. These areas may be controlled either by the Information and Logistics Management Division for the Center or by a Directorate or subordinate organization.

p. **Transportation** – The process of moving product from one location to another, including the moving of materials during production and interim storage phases and for delivery.

APPENDIX B: ACRONYMS

CFR – Code of Federal Regulations

ESD – Electrostatic Discharge

FAR – Federal Acquisitions Regulations

FMD – Facilities Management Division

GSFC – Goddard Space Flight Center

ILMD – Information and Logistics Management Division

PDL – Product Design Lead

PM – Product Manager

QA – Quality Assurance

SEMO – Supply and Equipment Management Office

SM – Storage Manager

SPO – Small Package Office

STD – Standard

TMO – Transportation Management Office

TO – Transportation Officer

WOA – Work Order Authorization

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	08/12/98	Initial Release
A	05/07/99	• Incorporated format changes to comply with GPG 1410.1. • 1.3 – Clarified the responsibilities of the PM, TO, and SEMO. • 1.3i – Added requirements for electrostatic discharge. • 1.3p and 1.3q – Added requirements for radioactive and explosive materials.
B	08/17/99	• 1.3g – Included additional information on shelf-life requirements. • 1.3i – Included process for granting waivers to ESD requirements.
C	08/05/02	• Changed directive title. • Incorporated format changes to comply with GPG 1410.1 (P.6 – Safety, P.7 – Training, and P.9 – Metrics). • P.8 – Clarified who the Record Custodians are for the various records. • P.10 – Included definitions for the following terms: Center Storage Manager, controlled equipment, hazardous materials, Product Design Lead, Product Manager, Property Custodian, and small package. • 1.1, 1.5d, and 3 – Included information on the shipment process that was previously included in a cancelled directive (GMI 6000.1). • 1.3e and 3 – Included information on the storage process that was previously included in a cancelled directive (GMI 4521.1). • 1.3i – Clarified process for granting waivers to ESD requirements and added ESD waivers as a record. • 1.7 – Included the responsibilities of the Center Storage Manager.
D	08/22/06	• General revision to update organizational names and codes. • General revision to update directive names/numbers. • General revision to clarify requirements and remove ambiguity as part of the "GSFC Internal Rules Review." • P.1 – Added "(including space flight hardware, components, parts and materials)" to purpose statement. • P.7 – Updated information concerning training. • P.8 – Updated retention information for GSFC Form 4-30 and 20-4. • P.8 and 1.3i – Deleted information concerning ESD waiver requests. ESD handling requirements are now addressed by GPR 8730.6. • P.10d – Updated controlled equipment threshold from $1,000 to $5,000. • 1.3a – Included requirements for customer-supplied product. • 1.3f – Included information concerning temperature and humidity for storage areas. • 1.3f – Included requirements for handling propellants and pyrotechnics.
	07/11/11	• Administratively extended for 1 year from original expiration date.

	04/08/13	• Administratively extended for 1 year from original expiration date.
	07/02/14	• Administratively extended for 1 year from original expiration date.
	08/10/15	• Administratively extended for 1 year from original expiration date.
E	08/22/16	Revalidated with administrative changes: • Added P.2b and P.2c. • Reduced shall statements to one per paragraph. • Removed references to obsolete storage forms (NASA Form 1602, GSFC Form 4-30, GSFC Form 20-16, GSFC Form 20-16A, GSFC Form 20-62, and GSFC Form 20-62A). • Updated title of GPR 5330.1 • Updated title of GPR 5340.2