

13.5.1 Process and Material Management

1. Purpose

This document provides guidelines, which will assist in the prevention of damage and minimize deterioration during the handling and storage of items and material, including age sensitive material ASM. These guidelines supplement the BNL Standards Based Management System ([SBMS](#)) [Material Requiring Special Handling Subject Area](#).

2. Responsibilities

This information applies to the responsible individual who determines whether non-radioactive and non-hazardous items or materials require special handling or storage

3. Prerequisites

None

4. Precautions

This document does not apply to radioactive and hazardous materials. If the items or material are hazardous or radioactive, contact, as appropriate, the C-A Work Control Managers/Coordinators, Environmental Compliance Representative, or Environmental Safety and Health Coordinator

5. Procedure

5.1 Process Management

- 5.1.1 The responsible individual shall determine when process controls are required for item(s) that are to be fabricated, manufactured, constructed, installed, reworked, repaired, maintained, or modified by C-A personnel or a supplier. Controls shall be implemented where the absence would adversely affect the environment, safety, security, health, or operations of the C-A complex or where quality/performance cannot be determined by inspection/test alone (i.e., welding, heat treating, plating, bonding, etc.), and unique, critical, major, complex or repetitive processes..
- 5.1.2 Procedures shall be prepared and maintained per [C-A OPM 1.4.1](#) and [C-A-OPM 1.4.3](#). Process controls procedures shall include as appropriate:
 - Sequence and descriptions of operations
 - Equipment requirements, including processing and monitoring equipment
 - Environmental, safety, security and health issues
 - Codes, standards or specifications as applicable, and, if none are applicable, the extent to which the criticality of the item or process requires special process controls. Items that are governed by codes,

specifications, drawings, or purchase orders that require specific methods of identification shall be identified in a manner that conforms with the requirements

- Methods and frequency of qualification/certification of equipment, personnel, or process
- Specific inspection/test points including methods and frequency and how inspection and test status will be indicated, on the item itself, or on the documentation traceable to the item.
- Criteria for acceptable performance/parameters
- Data requirements

5.2 Material Management

5.2.1 The responsible individual, when preparing drawings, specifications, procedures, procurement documentation, or work planning documentation shall determine if items or material being requisitioned, utilized or produced are susceptible to damage or deterioration (Age Sensitive Material), and if so, should consider the following (as applicable);

- Special handling, storage, cleaning, maintenance, packing, preservation or shipping instructions and/or procedures;
- Special handling tools, lifting and/or storage equipment (e.g. containers, shock absorbers, accelerometers) which are to be used to ensure safe and adequate handling of items;
- Special protective environments (e.g. inert gas atmosphere, specific humidity levels and/or temperature levels);
- Method to identify material, and the need for warning notes, labels, or tags.
- manufacturer's recommendations;
- life cycle of item

5.2.2 Upon arrival of transported items, personnel responsible for the receipt of material shall as appropriate: verify the item's identification (which may include the model, part, serial, and/or lot number) and quantity or weight; examine the shipment for damage; deliver the items to the location designated on the procurement documentation.

5.2.3 Items subject to wear-out failures or having limited calendar life (Age Sensitive Material) shall be identified and controlled in a manner that will preclude their use after the expiration of the calendar or operating life.

5.2.3.1 Wear-out failures are those failures that occur generally near the end-of-life of an item and are usually characterized by chemical or mechanical changes. These types of failures can be prevented by implementing a replacement maintenance schedule based on the known wear-out characteristic(s) of the specific item, e.g.

incandescent light bulbs, motor brushes, power tubes, vacuum windows.

C-A-OPM-9.2.3, Procedure for Chief Engineers to Certify the Conformance of Devices, describes the process for requesting certification of AGS critical devices with limited operating life

5.2.3.2 At the time of receipt of age sensitive material (ASM), a minimum of 75% of the shelf life should remain in order for the ASM to be acceptable, unless approval is obtained by the responsible individual or designee.

Staff receiving ASM ensures that the material or its accompanying paperwork contains at least one of the following: expiration date or use by date, and that the expiration date is clearly indicated on the item.

ASM shall be stored so as not to degrade the useful life of the material. When recommended by the vendor, appropriate storage conditions should be used to prolong the ASM usability. ASM found to be beyond its useful life shall be tagged and/or segregated from acceptable material, and held for disposition by authorized personnel.

6. Documentation

None

7. References

7.1 [C-A OPM 1.4.1 “Format of C-A Policies, Programs and Operating Procedures”](#).

7.2 [C-A OPM 1.4.3 “Procedure for Implementing New or Revised Permanent Procedures, or Canceling Permanent Procedures”](#).

7.3 [C-A-OPM-9.2.3, Procedure for Chief Engineers to Certify the Conformance of Devices](#)

7.4 [SBMS, Materials Requiring Special Handling \(Including Age Sensitive Material\)](#)

8. Attachments

None