

8.25 Material Handling: Equipment and Procedures

1. Purpose

This procedure provides instructions for inventory, inspection, and use of material handling equipment in accordance with [BNL ES&H Standard 1.6.0](#).

2. Responsibilities

- 2.1 The line supervisors are responsible for providing an inventory of material handling equipment to C-A Safety Engineering Office (ESHQ Division).
- 2.2 The line supervisors are responsible for ensuring that all employees, contractors, and contract labor using material handling equipment in their areas are properly trained and qualified for the equipment they handle. Training is provided by the BNL Training Office. The C-A contact for critical lifts is the F&ES Section Head.
- 2.3 The C-A Safety Engineering Office (ESHQ Division) is responsible for ensuring that required inspections have been performed.

3. Prerequisites

- 3.1 Personnel performing frequent (daily) inspections of rigging accessories shall have a valid Safety Awareness Certificate (SAC) Card, which is given upon successful completion of Overhead Crane Training, Q-010.
- 3.2 Personnel operating overhead cranes shall have valid Overhead Crane Training, Q-010 and Q-010A.
- 3.3 Personnel operating forklifts shall have valid Forklift Training, Q-001, and Q-001A.
- 3.4 Personnel performing annual inspections of material handling equipment shall have valid Basic Rigging Skills Training, GST-155.

4. Precautions

Hardhats shall be worn by all personnel involved in material handling with cranes, hoists, or forklifts, and by personnel in areas where there is constant Overhead Crane operation.

5. Procedure

- 5.1 Cranes, Forklifts, Hoists, and other Heavy Equipment

- 5.1.1 The Plant Engineering Crane Inspector (PECI) maintains a database inventory of all forklifts, cranes, hoists and heavy equipment. If any equipment is found without a PECI inspection tag, the line supervisor shall notify MMC and the C-A Safety Engineering Office (ESHQ Division) of the deficiency.
 - 5.1.2 Line supervisors, or the C-A Safety Engineering Representative (ESHQ Division), shall ensure annual inspection by the PECI. Verification of inspection will be done during the Tier I Safety Inspection.
 - 5.1.3 Line supervisors shall ensure that a daily inspection checklist is attached to, or found in the vicinity of all lifting equipment, that personnel are trained in the use of the equipment, and that a daily inspection is performed, whenever the Lifting Equipment is scheduled for use.
 - 5.1.4 All new equipment shall be inspected by the PECI prior to first use.
 - 5.1.5 Critical lifts, as defined in the [SBMS Subject Area on Lifting Safely](#), shall follow the reviews and approvals required by that subject area. The C-A F&ES Section Head shall be consulted for all critical lifts.
 - 5.1.6 Control Zones (Danger Zones) shall be set up around or under any area where material handling is being performed. This may be accomplished by physical barriers, or by stationing personnel adjacent to the area to warn personnel of the hazard.
- 5.2 Below-The-Hook Lifting Equipment
- 5.2.1 All lifting accessories require a frequent inspection. This inspection shall be done daily, or before each use if used less frequently. If any equipment is found to be unsafe it shall be taken out of service.
 - 5.2.2 Line supervisors shall provide an inventory of all below-the-hook material handling equipment (lifting fixtures, devices, and slings,) to the C-A Safety Engineering Office (ESHQ Division), annually, using [C-A-OPM-ATT 8.25.b](#). Slings and lifting fixtures/devices require unique identifiers.
 - 5.2.3 For equipment that is in service, the C-A Safety Engineering Office (ESHQ Division) shall ensure that all below-the-hook material handling equipment undergoes a more rigorous annual inspection, and the inspection is documented on [C-A-OPM-ATT 8.25.b](#). Shackles and eyebolts shall be inspected annually, but are exempt from documentation.
 - 5.2.4 Hooks on lifting equipment, and slings, require annual non-destructive testing, which shall be performed by the PECI.

- 5.2.5 For equipment not in service, the annual inspection is not required, but the equipment must have the annual inspection before being put into service. Equipment not in service shall be tagged.

6. Documentation

- 6.1 All periodic (annual) inspections performed by the C-A Department shall be documented on [C-A-OPM-ATT 8.25.b](#). The documentation shall be maintained by the C-A Safety Engineering Office (ESHQ Division).
- 6.2 The Lifting Equipment Daily Inspection Checklist shall be maintained by the responsible Line Supervisor.

7. References

- 7.1 [ES&H Standard 1.6.0, Material Handling Equipment & Procedures.](#)
- 7.2 [ES&H Standard 1.6.1, Material Handling: Operator Training and Qualifications.](#)
- 7.3 DOE Hoisting and Rigging Manual.
- 7.4 [SBMS Lifting Safely Subject Area.](#)

8. Attachments

- 8.1 [C-A OPM 8.25.b, "Below-the-Hook Lifting Equipment/Rigging Accessories Inventory"](#)