

MATERIAL HANDLING, STORAGE, AND DISPOSAL	Identifier: PRD-2016
	Revision: 3
	Page: 1 of 8

Subcontractors	Program Requirements Document	For Additional Info: http://EDMS	Effective Date: 06/02/03
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Manual: Subcontractor Requirements

Change Number: 99733

1. PURPOSE

This document provides requirements for the safe handling, storage, and disposal of materials and requirements to protect workers from hazards and facilities from damage while performing these activities. This document highlights requirements referenced in the Source [Documents](#) section, as well as [BBWI](#) requirements. Any applicable regulatory or [BBWI](#) requirements must be followed, with the most stringent requirement being met.

2. APPLICABILITY

This document applies to all subcontractors who handle, store, or dispose of materials at the INEEL, as specified in their contract with [BBWI](#). Stricter requirements may be imposed by subcontractors upon their employees or subtier contractors. The requirements of this document must be followed by subcontractors; however, the means of implementation may vary as determined by the subcontractor.

3. REQUIREMENTS

3.1 Training

- 3.1.1 Training shall be provided to all persons engaged in manual lifting operations, as applicable for their job descriptions.
- 3.1.2 Training for hoisting and rigging operations shall comply with chapter 15 of the DOE Hoisting and Rigging Standard, DOE-STD-1090
- 3.1.3 Training shall include the safe and proper manual and mechanical lifting techniques and procedures to be used, including the following procedures.
 - A. PRD-2020, Heavy Industrial Vehicles and [the DOE Hoisting and Rigging Standard, DOE-STD-1090, Chapter 15, sections 15.3.2 and 15.5.3 “Forklift Trucks”](#), if those vehicles will be used
 - B. Training on how to use all available mechanical aids safely, properly, and in accordance with manufacturers' instructions, shall be initially completed before an employee uses the aids, and shall be repeated as needed to maintain proficiency.
- 3.1.4 Training for vehicle use shall comply with PRD-2019, Motor Vehicle Safety.

MATERIAL HANDLING, STORAGE, AND DISPOSAL

Identifier: PRD-2016

Revision: 3

Page: 2 of 8

3.2 General Safe Work Practices

- 3.2.1 Hoisting and rigging performed as part of material handling shall be performed in accordance with applicable requirements of the DOE Hoisting and Rigging Standard, DOE-STD-1090.
- 3.2.2 Work involving manual lifting or handling shall be evaluated for difficulty due to handling frequency, size, awkwardness, bulk, or weight to determine if mechanical lifting or a coworkers assistance is needed.
- 3.2.3 Employees shall not lift, and shall not be allowed to lift, any material that the employee may not be physically capable of lifting because of a physical condition or other physical limitation.
- 3.2.4 Good housekeeping practices shall be observed.
- 3.2.5 Sharp projections in the [workspace](#) shall be eliminated or guarded.

3.3 Material Handling

- 3.3.1 The following requirements shall be used as applicable for the work being performed:
 - 3.3.1.1 Fork trucks, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines shall be used in accordance with [the DOE Hoisting and Rigging Standard, DOE-STD-1090, Chapter 15](#).
 - 3.3.1.2 Flammable and combustible liquids shall be stored and handled in accordance with PRD-2201, Flammable and Combustible Liquids Storage and
 - 3.3.1.3 Compressed gas shall be handled and stored in accordance with PRD-2009, Compressed Gases.
 - 3.3.1.4 Subcontractors shall ensure that mechanical handling equipment is available and properly used by employees whenever feasible.
- 3.3.2 The following additional precautions shall be taken when lifting materials manually:
 - 3.3.2.1 Use proper lifting techniques such as:

MATERIAL HANDLING, STORAGE, AND DISPOSAL

Identifier: PRD-2016

Revision: 3

Page: 3 of 8

- obtaining a firm footing by keeping feet shoulder-width apart for a stable base and ensuring footing is safe to prevent slipping;
- bending knees (avoid bending at the waist);
- keeping the load close to the body; and
- moving your feet instead of twisting the back while lifting.

3.3.2.2 Ensure adequate [workspace](#) free from clutter and obstacles is available when moving materials.

3.3.2.3 Ensure that employees do not lift more than the recommended weight of 50 pounds.

3.3.2.4 Adequate [workspace](#) shall be available to allow proper positioning and movement without undue strain.

3.3.2.5 Loads shall be lifted smoothly by bending at the knees and using the leg muscles to lift, holding the load close to the body.

3.3.2.6 Twisting and lifting simultaneously should be avoided when possible.

3.3.3 The following safety precautions shall be observed when loading and unloading vehicles:

3.3.3.1 Brakes shall be set and wheels shall be chocked while trucks, trailers, and rail cars are being boarded with powered industrial trucks.

3.3.3.2 As a minimum, the parking brake shall be set when loading or unloading light delivery trucks.

3.3.3.3 Brakes shall be set and wheels shall be chocked while loading or unloading delivery vehicles on steep grades and when using handling equipment that could cause the vehicle to shift.

3.3.3.4 When a difference in road or working levels exists, ramps, blocking, or grading shall be used to ensure the safe movement of vehicles between the two levels.

3.4 Material Storage

3.4.1 Materials shall not be stored in a manner that could create a hazard.

MATERIAL HANDLING, STORAGE, AND DISPOSAL

Identifier: PRD-2016

Revision: 3

Page: 4 of 8

- 3.4.2 Storage areas shall be kept free from accumulations of materials that constitute hazards from tripping, fire, explosion, or pest harborage.
- 3.4.3 A minimum lighting level of 5 foot-candles shall be maintained in storage areas.
- 3.4.4 Maximum safe loads for floors shall not be exceeded.
- 3.4.5 Access to materials shall be kept clear and free from undue risks to workers or property.
- 3.4.6 Employees shall not climb shelves, bins, pallets, or similar equipment.
- 3.4.7 Precautions shall be taken against unauthorized access, with pilferage, injury, fire, and property damage all being considered.
- 3.4.8 Items requiring protection from light and other forms of radiation shall be stored in a shielded location.
- 3.4.9 Protection against freezing shall be provided if freezing could damage the materials or containers.
- 3.4.10 Outside storage shall comply with the following requirements:
- 3.4.10.1 Outside storage shall conform to the requirements of NFPA 231, General Storage.
 - 3.4.10.2 It is permissible to cover materials subject to weather damage with noncombustible protective sheeting or other means
 - 3.4.10.3 Vegetation shall be controlled when necessary to protect materials stored outside.
- 3.4.11 Postings shall comply with the following requirements:
- 3.4.11.1 Signs shall be provided to warn of clearance limits.
 - 3.4.11.2 Maximum safe load limits for floors (permanent or temporary) within buildings and structures, in pounds per square foot, shall be conspicuously posted or painted on the floor except for floors or slabs on grade.
- 3.4.12 Shelves shall comply with the following requirements:
- 3.4.12.1 Shelving shall be secured to the floor or securely fastened to prevent falling or tipping.

MATERIAL HANDLING, STORAGE, AND DISPOSAL

Identifier: PRD-2016

Revision: 3

Page: 5 of 8

3.4.12.2 To prevent items from falling, shelves shall be lipped as deemed necessary.

3.4.12.3 Shelving dimensions shall be as specified by NFPA 231 C, Rack Storage of Materials.

3.4.12.4 Where personnel access to heavy, large, or awkward materials on shelves more than 5 feet off the floor is required, walkways, rolling safety ladders, non-slip step stools, or mechanical equipment shall be provided.

3.4.13 Stacked Items shall comply with the following requirements:

3.4.13.1 Stacked items and those on pallets shall be stored only as high as stability is ensured and required clearances shall be maintained from structural members and sprinklers. Normally, storage shall not exceed 12 feet in height, with some forms of plastic limited to a 6-foot storage height.

3.4.13.2 All materials that are stored in tiers (including items such as bags, containers, and bundles) shall be stacked, racked, blocked, interlocked, limited in height, or otherwise secured so that they are stable and secure from sliding, falling, or collapse.

3.4.13.3 All materials that are stacked or piled shall be stable, with no foreseeable risk of falling or toppling. Surfaces shall be reasonably level and free from risk to foot and vehicle travel.

3.4.13.4 Material stored inside buildings under construction shall not be placed within 6 feet of any hoist way or inside floor openings, nor within 10 feet of an exterior wall that does not extend above the top of the material stored.

3.4.14 Construction materials shall be stored in accordance with the following requirements:

3.4.14.1 Bagged materials, such as cement, shall be stacked by stepping back the layers and cross-keying the bags at least every 10 bags high.

3.4.14.2 Brick stacks shall be not more than 7 feet high.

3.4.14.3 When a loose brick stack reaches a height of 4 feet, it shall be tapered back 2 inches for every foot of height above the 4-foot level.

MATERIAL HANDLING, STORAGE, AND DISPOSAL

Identifier: PRD-2016

Revision: 3

Page: 6 of 8

- 3.4.14.4 When masonry blocks are stacked higher than 6 feet, the stack shall be tapered back one-half block per tier above the 6-foot level.
- 3.4.14.5 Structural steel, poles, pipes, bar stock, and other cylindrical materials, unless racked, shall be stacked and blocked to prevent spreading or tilting.
- 3.4.14.6 Lumber shall be stacked on level and solidly supported sills so it is stable and self-supporting.
- 3.4.14.7 Lumber piles shall not exceed 20 feet in height if mechanically handled or 16 feet in height if manually handled.
- 3.4.14.8 Used lumber shall have all nails withdrawn before stacking.

3.5 Clearances

- 3.5.1 The following safe clearances shall be maintained when materials are handled and stored:
 - 3.5.1.1 Vertical clearances of at least 36 inches shall be maintained from overhead sprinkler heads and in conformance with NFPA 13 , NFPA 231 and CFR 1926.151(d)(5).
 - 3.5.1.2 Sufficient clearances shall be maintained from fire doors, extinguishers, fire alarm cabinets, manual fire alarms, sprinkler valves, and risers to permit access for operation and testing
 - 3.5.1.3 Three-foot clearance shall be maintained from heating devices and flues, unless a lesser distance is permitted by the Underwriters Laboratories, Inc., or another recognized testing laboratory (clearance from ducts in accordance with NFPA 91)
 - 3.5.1.4 At least 1-foot clearance shall be maintained, both horizontally and vertically, from lights and light fixtures.

3.6 Disposal

- 3.6.1 Subcontractors shall contact the **BBWI Point of Contact** (POC; see def.) for guidance on disposal of the following materials.
 - A. reusable personal property
 - B. recyclable materials
 - C. sanitary waste
 - D. hazardous waste
 - E. low-level waste

MATERIAL HANDLING, STORAGE, AND DISPOSAL

Identifier: PRD-2016

Revision: 3

Page: 7 of 8

- F. mixed low-level waste
- G. fluid with radioactive/hazardous contamination
- H. transuranic waste
- I. mixed transuranic waste
- J. high-level waste.

4. DEFINITIONS

See Glossary (LST-27) for definitions of the following terms:

Point of Contact

5. REFERENCES**5.1 Source Documents**

29 CFR 1910.30, Other Working Surfaces

29 CFR 1910.176, Handling Materials X General

29 CFR 1910.178, Powered Industrial Trucks

29 CFR 1910.179, Overhead and Gantry Cranes

29 CFR 1910.180, Crawler Locomotive and Truck Cranes

29 CFR 1910.1200, Hazard Communication

29 CFR 1926.250, General Requirements for Storage

29 CFR 1926.56, Illumination

DOE-STD-1090, DOE Hoisting and Rigging Standard

NFPA 13, Standard for the Installation of Sprinkler Systems

NFPA 30, Flammable and Combustible Liquid Code

NFPA 91, Standard for Exhaust Systems for Air Conveying of Materials

NFPA 101, Life and Safety Code

NFPA 231, General Storage

NFPA 231C, Rack Storage of Materials

MATERIAL HANDLING, STORAGE, AND DISPOSAL	Identifier: PRD-2016
	Revision: 3
	Page: 8 of 8

5.2 Related Requirements

The following documents may also contain requirements that apply to this activity:

PRD-2019, Motor Vehicle Safety

PRD-4006, Management of Unknown Materials

PRD-4007, INEEL Recycling Procedure

PRD-4022, Shipping General Commodities

6. APPENDICES

None