Section 3.01 Materials Handling, Storage, and Disposal

1. Scope

This section sets forth the program requirements for safe materials handling including storage for construction materials and hazardous materials. This section applies to all Bureau of Reclamation employees within all facilities owned, controlled, and occupied by Reclamation.

2. General Requirements

a. Storage

Storage of materials shall not create a hazard. Ensure materials stored in tiers are blocked, interlocked, and limited in height so they are stable and secure against falling, sliding, or collapse. Store all materials on pallets to discourage rodent infestation, and immediately clean up spills and leaks that create rodent habitat. When using slings to hoist bagged materials, lumber, bricks, masonry blocks, and similar loosely stacked materials, ensure the slings have been inspected prior to use and the materials and loads are fully secured against falling by straps, sideboards, nets, or other suitable devices. See Reclamation Safety and Health Standard (RSHS) Section 3.02, Slings and Rigging Hardware, and RSHS Section 3.03, Permanently Installed (Fixed) Cranes and RSHS Section 3.04, Mobile Cranes for additional information on rigging and hoisting operations.

b. Worker Safety

Workers shall be observed annually during manual material handling tasks to evaluate the following ergonomic risk factors. Evaluation methods include, but are not limited to, National Institute of Occupational Safety and Health (NIOSH) Lifting Equation, Rapid Upper Limb Assessment (RULA), and Rapid Entire Body Assessment (REBA).

- Exerting excessive force while lifting heavy objects, pushing or pulling heavy loads, manually pouring materials, or maintaining control of equipment or tools.
- Performing the same motion(s) continually and/or frequently for an extended period.
- Working in awkward postures or holding a specific posture for long periods of time, such as repeatedly lifting above shoulder level, kneeling/squatting, or twisting while lifting.
- Absorbing vibration in the whole body or hand/arm from power tools such as portable grinders, sanders, and chainsaws.

c. Lifting

Mechanical handling aids must be used when lifting materials heavier than 50 pounds or awkwardly shaped items that are impractical for one person to lift themselves. If mechanical handling aids are not feasible, then get help from additional workers before lifting such heavy or awkward items.

d. Equipment

Ensure that equipment is working properly to make it easier to use. Workers should not suffer bodily discomfort from performing job tasks or using equipment. Such discomfort may be observed in workers via bodily signs, such as shaking of the arms or hands or rolling of the shoulders, or via personal mitigation efforts, such as bringing wrist braces or back belts into work.

3. Responsibilities

a. Regional Safety Managers

- Shall provide regional oversight and assistance to implement program for safe material handling, storage, and disposal compliance within their region.

b. Regional/Area Office Program Coordinators

- Shall annually observe workers in coordination with the first-line supervisor and/or the industrial hygienist or other appropriate safety professional to evaluate ergonomic risk factors as outlined in RSHS Section 3.01.2.b, Worker Safety.

c. Area Office Managers

- Shall ensure all affected employees are trained on and comply with this program.
- Shall provide necessary resources to implement and maintain the procedures in this program.
- Shall select the program coordinator.

d. First-Line Supervisors

- Shall periodically observe their employees to ensure the requirements of this section are met.
- Shall coordinate training for their employees before they are exposed to job hazards and ensure all relevant training is provided for materials present in the workplace.
- Shall update the job hazard analysis (JHA) when hazardous materials, heavy items, and equipment are introduced to the workplace.
- Shall ensure employees are trained in the use of required or provided personal protective equipment (PPE).
- Shall provide employees with appropriate PPE for the level of hazards they may be exposed to.

e. People Doing the Work

- Shall participate in required training programs, including but not limited to training on hazard communication and mobile equipment used to handle materials.
- Shall apply general safety principles, such as proper work practice, inspection and controls in their work.
- Shall maintain general housekeeping.

- Shall use PPE that is adequate to protect against identified workplace hazards.
- Shall perform material handling operations and operate materials handling equipment safely to prevent injury or damage.
- Shall immediately report any unsafe material handling, storage, or disposal to their supervisor.

4. Training Requirements

a. Initial

Hazard communication training is required for all employees that use, handle, store, and dispose of hazardous materials. Relevant training shall be provided for the materials any incidental employee who may be exposed to or will handle, store, or dispose of hazardous materials is also required. Hazard communication training is required for employees who order or purchase hazardous materials.

b. Injury Prevention Training

Employees shall receive injury prevention training that covers the following:

- risks of improper lifting,
- physical warning signals when the body is manually lifting or carrying materials improperly,
- use of mechanical moving equipment to avoid unnecessary physical stress or strains,
- use of lifting aids, and
- PPE.

c. Recordkeeping

Training records shall be maintained in the Department of the Interior's system of tracking training.

5. Hazard Identification, Assessment, and Safety Measures

a. Requirements

Workers who handle, store, or dispose of materials must observe the following:

- inspect materials for slivers, nails, or other protruding objects, jagged or sharp edges, burrs, and rough or slippery surfaces,
- maintain firm grip on objects,
- keep fingers away from pinch points,
- when handling lumber, pipe, or other long objects, keep hands away from the ends to prevent pinching,
- wipe off greasy, wet, slippery, or dirty objects before trying to handle or store them, and
- keep hands free of oil and grease.

b. Medical and First Aid

Adequate first aid shall be readily available. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eye and body shall be provided within the work area for immediate use.

6. Personal Protective Equipment

Workers who handle, store, or dispose of materials must follow instructions for protective clothing and respiratory protection. Use gloves as specified in RSHS Section 1.07, Personal Protective Equipment, and safety data sheets (SDS). Skin protection including washing facilities, protective gloves, hand cream, chemical barrier cream, or similar protection shall be identified in the JHAs.

7. Safe Practices

a. Flammable Liquids

Unless otherwise defined, terms used throughout this section relating to flammable liquids have the same meaning as in the flammable liquids code established in National Fire Protection Association (NFPA) 30, Flammable and Combustible Liquids Code, and 29 CFR 1910.106. Flammable liquids are classified as shown in Table 3.01-1.

TABLE 3.01-1: Categories of Flammable Liquids

Category	Flash Point	Boiling Point
Category 1	Below 73.4°F (23°C)	Below 95°F (35°C)
Category 2	Below 73.4°F (23°C)	Above 95°F (35°C)
Category 3	At or above 73.4°F (23°C) and at or below 140°F (60°C)	-
Category 4	Above 140°F (60°C) and at or below 199.4°F (93°C)	-

- Toxicity of Flammable Liquids. Most flammable liquids are highly toxic. Use them only after determining the toxic characteristics to ensure that the appropriate safety and health requirements in RSHS 2.06, Health Hazard Assessments, are followed.
- Category 1 Flammable Liquids
    - Restricted Use. Because of the extreme explosion hazards posed by Category 1 liquids, SDSs must be reviewed for required storage, dispensing, and use procedures prior to purchasing Category 1 liquids. The following shall be reviewed: the name of the Category 1 flammable liquid, a description of the liquid and its characteristics, a detailed description of its intended uses, the SDS, and an

explanation of the safety and health precautions that must be taken to ensure safe handling and storage. This requirement does not apply to small quantities of aerosol starter fluid used for engines.

- Substitute Product. Whenever possible, use a less hazardous product.
- Controlled Use. A competent person must supervise storing, dispensing, and using Category 1 liquids, including design of the storage and dispensing system.

- Tanks and Containers. Use only closed tanks and containers designed to store, handle, and dispense flammable liquids. Store and use flammable liquids in the original shipping containers, provided they meet the specifications shown in Table 3.01-2.

Table 3.01-2: Maximum Allowable Size of Containers and Portable Tanks for Flammable Liquids

Container Type	Category 1	Category 2	Category 3	Category 4
Glass or approved plastic	1 pint	1 quart	1 gallon	1 gallon
Metal (other than approved DOT drums)	1 gallon	5 gallons	5 gallons	5 gallons
Safety cans	2 gallons	5 gallons	5 gallons	5 gallons
Metal drums (DOT specification)	60 gallons	60 gallons	60 gallons	60 gallons
Approved portable tanks	660 gallons	660 gallons	660 gallons	660 gallons

- Safety Cans. When dispensing flammable liquids from storage containers, dispense them into approved, properly labeled safety containers. At industrial sites, an approved container holds no more than 5 gallons, has a spring closing lid and spout cover, and is designed to safely relieve internal pressure when subject to fire or heat. At construction sites, an approved container is a safety can or other Department of Transportation (DOT) approved container of 5 gallons or less.
- Exceptions. Highly viscous (i.e., extremely hard to pour) liquids may be stored and handled in the original container regardless of size.
- Flammable Liquid Storage Cabinets. The design and construction of flammable liquids storage cabinets shall meet the requirements of Occupational and Health Administration (OSHA) 29 CFR 1910.106, Flammable Liquids.

b. Storing Flammable Liquid

- Indoor Storage. Do not store flammable liquids indoors, except under the following conditions.

- Incidental Storage. The quantity of liquid that may be located outside of a separated indoor storage room or storage cabinet in a building or in any one fire area of a building shall not exceed: 25 gallons of Category 1 flammable liquids in containers, 120 gallons of Category 2, 3, or 4 flammable liquids in containers, and 660 gallons of Category 2, 3, or 4 flammable liquids in a single portable tank.
- Storage Limits. Store no more than 60 gallons of Category 1, 2, or 3 flammable liquids nor more than 120 gallons of Category 4 flammable liquids in a storage cabinet. Locate no more than three such cabinets in a single fire area.
- Separated Indoor Storage Rooms. Larger quantities of flammable liquids may be stored in separated indoor storage rooms when such design, construction, and storage meet the requirements of 29 CFR 1910.106 and NFPA 30.
- Required Fire Extinguishers. Place at least one 2-A:40-B:C fire extinguisher inside the room between 10 and 30 feet away from the stored material or cabinet. Also place at least one 2-A:40-B:C fire extinguisher outside of but not more than 10 feet from the door opening into an inside liquid storage area.

- Outdoor Storage. Do not store flammable liquids outdoors, except under the following conditions.

  - Approved Containers. Store flammable liquids above ground in approved containers with a capacity of no more than 60 gallons. Such containers are subject to the following restrictions:

    - The total capacity of any one group of containers stored together must not exceed 1,100 gallons,
    - Each group of containers must be at least 5 feet apart, and each group must be at least 20 feet away from any building or other combustible items, and
    - Each group of containers must be adjacent to an access way at least 12 feet wide to facilitate the use of firefighting equipment.

  - Approved Portable Tanks. Store flammable liquids above ground in approved portable tanks with a capacity no more than 660 gallons. Such portable tanks are subject to the following requirements:

    - groups of two or more tanks with a combined capacity of more than 2,200 gallons must be surrounded by a clearance area of at least 5 feet,
    - portable tanks must be at least 20 feet away from any building or other combustible items,
    - portable storage tanks must be equipped with emergency venting and other devices, as required by 29 CFR 1910.106 and NFPA 30,
    - each portable tank must be adjacent to an access way at least 12 feet wide to facilitate the use of firefighting equipment, and

        - place at least one portable fire extinguisher rated no less than 2-A:40-B:C between 25 and 75 feet away from each portable tank or group of tanks.

    - Spill Containment. The storage area shall be graded in a manner to divert possible spills away from buildings or other exposures or shall be surrounded by a curb at least 6 inches high. When curbs are used, provisions shall be made for draining of accumulations of ground or rainwater or spills of flammable liquids. Drains shall terminate at a safe location and shall be accessible to operation under fire conditions.

- Outdoor Permanent Tanks. Store flammable liquids above ground in approved permanent tanks installed in accordance with 29 CFR 1910.106 and NFPA 30.

c. Handling and Dispensing Flammable Liquids

- Dispensing Areas. Dispensing areas must be separate from storage areas if more than 5 gallons of flammable liquids will be transferred. Dispensing areas must be separated from other operations by at least 25 feet or by a partition with a minimum 1-hour fire rating and must use drainage or an equally effective method to contain spills.
- Ventilation. Dispensing areas must provide adequate natural or mechanical ventilation to keep the concentrations of flammable vapor below 10 percent of the lower explosive limit.
- Grounding and Bonding. When transferring flammable liquids from one container to another, electrically ground and bond all containers and transfer systems. All dispensing systems must be electrically grounded and bonded.
- Dispensing. Flammable liquids must be withdrawn from or transferred into vessels, containers, or tanks according to the following requirements:

    - always transfer through a closed piping system,
    - always transfer from a safety can by means of a device drawing through the top,
    - always transfer from containers or tanks by gravity or self-closing valve pump,
    - always use approved dispensing devices and nozzles,
    - always protect the dispensing unit against collision damage, and
    - never transfer by injecting pressurized air into a tank or container.

- Lighting and Electrical Equipment. Use only hazardous location classified electrical lighting to illuminate areas where flammable liquids are handled or dispensed or where flammable vapor may be present. Wiring and all electrical equipment must meet hazardous location classification of Class I, Division 1 or 2 as required by NFPA 70, National Electrical Code.
- Flame and Ignition. Do not permit open flames, smoking, or other sources of ignition within at least 50 feet of areas where flammable liquids are dispensed or used. Approved “No Smoking” signs must be posted in such areas.

- Leakage or Spillage. Leaking and spilled flammable liquids must be cleaned up promptly and disposed of safely.
- Self-Closing Oily Waste Cans. Self-closing oily waste cans shall be provided in all areas where employees use or dispense flammable liquids.

d. Handling Liquified Petroleum Gas (LPG)

Store, handle, install, and use LPG in accordance with NFPA 58, Liquefied Petroleum Gas Code and 29 CFR 1910.110, Storage and Handling of Liquefied Petroleum Gas. Cylinders must meet DOT specifications published in 49 CFR 178, Specifications for Packagings.

- Hazardous Locations. Do not use LPG containers and equipment in unventilated spaces, below grade in pits or trenches, below deck on watercraft, or in confined space.
- Tubing. Use only tubing or piping approved for use in LPG systems. Do not use aluminum or polyvinyl piping or tubing.
- Hoses. Use only hoses labeled “LP-gas” or “LPG.” Hoses must have a minimum working pressure of 250 pounds per square inch.
- Valves and Accessories. Valves (including shutoff valves), fittings, and accessories connected directly to an LPG container must have a minimum working gauge pressure of 250 pounds per square inch and be designed for LPG.
- Shutoff Valves. Connections to an LPG container (except safety relief connections, liquid level gauging devices, and unplugged openings) must have a shutoff valve located as close to the container as practicable. Shutoff valves must not be located between the safety relief device and the container.
- Safety Relief Valves. Equip each LPG container with one or more approved safety relief valves. Valves must allow free venting to the outside air, and the discharge must be at least 5 feet away from any building opening. The regulator safety relief valve (vent opening) shall be located not less than 5 feet from any potential source of ignition, opening into any sealed combustion chamber appliance, and be less than 5 feet from any mechanical ventilation air intake. Regulators are mechanical devices and are subject to wear and tear.
- Dispensing
    - Portable Containers. Fill portable containers from storage containers outside and at least 50 feet away from the nearest building.
    - Motor Vehicles. Fill fuel containers on motor vehicles from storage containers at least 10 feet away from masonry-walled buildings and at least 25 feet away from any other type of building or structure.
    - Refueling. Shut down equipment using LPG during refueling.
- Storage of Cylinders and Containers. Store LPG containers and cylinders that are not in use outside of buildings or structures and away from the nearest building or combustible material storage. Minimum safe distances are listed in Table 3.01-3.

TALBE 3.01-3 Minimum Safe Storage Distance of Liquified Petroleum Gas

Water capacity per container	Containers Underground	Containers Above Ground	Between above-ground Containers
Less than 125 gallons[1]	10 feet	none	none
125-250 gallons	10 feet	10 feet	None
251-500 gallons	10 feet	10 feet	3 feet
501-2,000 gallons	25 feet[2]	25 feet[3]	3 feet
2,001-30,000 gallons	50 feet	50 feet	5 feet
30,001-70,000 gallons	50 feet	75 feet[3]	-
70,001-90,000 gallons	50 feet	100 feet[3]	-

- Fire Protection. Place at least one portable fire extinguisher rated not less than 2-A:40-B:C between 25 feet and 75 feet away from the container in all LPG storage locations.

e. Refueling Vehicles and Equipment

Ensure that the design and installation of tanks and equipment used to refuel vehicles or equipment comply with provisions of one of the following: nationally recognized testing laboratories or approval of the government authority having jurisdiction.

- Dispensing Stations. Mount dispensing devices (except those attached to containers) on a concrete platform elevated at least 5 inches above grade. Use guardrails or posts to protect the dispensing device from collision with motor vehicles.
- Dispensing Hose. Dispense flammable liquids using only approved hose. The hose must include an automatic self-closing valve or nozzle system to protect hose from damage.
- Electrical Equipment. Ensure that electrical wiring, pumps, and other equipment meet the requirements of NFPA designation Class I of NFPA 70, National Electrical Code.
- Shutoff During Refueling. During refueling, shut down vehicles or equipment that use gasoline, LPG, or any other flammable liquid fuels.

[1] If the aggregate water capacity of a multi-container installation at a consumer site is 501 gallons or greater, the minimum distance shall comply with the appropriate portion of this table, applying the aggregate capacity rather than the capacity per container. If more than one installation is made, each installation shall be separated from another installation by at least 25 feet. Do not apply the MINIMUM DISTANCE BETWEEN ABOVE-GROUND CONTAINERS to such installations.

[2] The above distance requirements may be reduced to not less than 10 feet for a single container of 1,200 gallons water capacity or less, providing such a container is at least 25 feet from any other LP-Gas container of more than 125 gallons water capacity.

[3] ¼ of sum diameters of adjacent containers.

- Smoking. Post “No Smoking within 50 feet” signs on all mobile refueling equipment and within established refueling areas.
- Emergency Shutoff Switch. Ensure that an emergency shutoff switch is located within 50 feet of the fuel dispensing equipment. Conspicuous signs must be posted to identify the switch location.
- Fire Protection. Place one or more listed fire extinguishers with a minimum classification of 2-A:40-B:C in each refueling area. Fire extinguishers must be within 100 feet of each pump, dispenser, underground fill pipe opening, and lubrication or service room.

f. Handling Asphalt and Tar Products

Employees who handle or work with asphalt and tar products must complete a JHA that includes exposure determinations. SDSs must be available and all instructions to store, handle, and apply materials must be followed.

- Confined Spaces. Employees who handle or work in an enclosed or confined area where tar, asphalt, enamel, or similar materials are heated or applied must follow the requirements of RSHS 1.12, Confined Spaces.
- Heating Kettles. Kettles for heating asphalt or tar must meet and be used in accordance with the following requirements:

    - asphalt or tar kettles must not be left unattended when in use,
    - kettles must be used on a firm, level base and must be protected from overturning,
    - kettles must have effective lids or hoods,
    - kettles must have an operable temperature indicator and limiting device to ensure that asphalt or tar remains at no less than 50°F below the flashpoint,
    - kettles must not be used in confined or unventilated spaces nor within or on enclosed buildings and structures, and
    - place a fire extinguisher rated no less than 2-A:40-B:C wherever heating devices or heating kettles are in use.

- Handling. Provide adequate unobstructed runways or access ways for employees handling hot materials. Hot materials must not be carried up or down ladders. Suitable hoisting devices must be provided.
- Thinners. Do not use gasoline or similar volatile liquids as thinners.
- Hand Spraying. Persons applying hot tar or asphalt must not work under the hose supplying the material to the spray nozzle. Use flexible metallic hoses fitted with insulated handles for hand spraying operations.
- Housekeeping. Keep distributors, hoses, and related equipment reasonably free of asphalt and tar accumulations.

g. Storing and Handling Paints, Varnishes, and Thinners

Storing and handling paints, varnishes, or thinners requires attention to flammability characteristics.

- Storage. Store and dispense paints, varnishes, lacquers, thinners, and other volatile paints or coatings according to their flammability characteristics as stated within SDS. Containers shall be tightly closed when not in use. Store no more than a 1-day supply in buildings under construction.
- Ventilation. Adequate natural or mechanical ventilation shall be provided to maintain the concentration of flammable vapor at or below 10 percent of the lower flammable limit where paints or coatings are dispensed and/or applied.
- Spray Painting. Do not allow smoking, open flames, exposed heating elements, or other sources of ignition where flammable sprays paints and/or coatings are used. Spray painting booths and equipment must comply with NFPA 30, Flammable and Combustible Liquids Code.
- Electrostatic Paint Spraying
    - Electrical Safety. Locate transformers, power packs, control apparatus, other electrical portions of the equipment, and the equipment's connection to the power supply outside the spray area.
    - Grounding and Bonding. Ground and bond the handle of the spray gun with a conductive device to ensure the gun and the operator are at the same ground potential.

h. Storing Materials in an Open Yard

Storing materials in an open yard requires attention to combustible material, access, power lines, and fire protection.

- Combustible Materials. Stack combustible materials securely. Stacks or piles must be no more than 16-feet high. Store combustible material at least 10 feet away from a building or structure. Do not store materials where they may block egress or emergency equipment.
- Access. Driveways between and around combustible storage piles must be at least 15 feet wide. Keep them free from accumulations of materials or rubbish. Use a map grid system of 50 by 150 feet when planning driveways in open-yard storage areas for combustible materials.
- Fire Protection. Place portable fire extinguishers rated 2-A:40-B:C at accessible marked locations in the yard so that the nearest extinguisher is no more than 50 feet away from a Class B hazard or 75 feet away from a Class A hazard.

i. Storing Materials Indoors

Storing materials indoors requires attention to access, fire prevention and protection, floor loading, and overhead hazards. Buildings under construction require special precautions.

- Access. Place or store materials so they do not interfere with access ways, doorways, electrical panels, fire extinguishers, or hoist ways. Do not obstruct access ways or exits with accumulations of scrap or materials. Aisles must be wide enough to accommodate forklifts or firefighting equipment.
- Fire Prevention. When storing, handling, and piling materials, consider the materials' fire characteristics. Store noncompatible materials that may create a fire hazard at least 25 feet apart or separate them with a barrier with a fire rating of at least 1hour. Pile material to minimize internal spread of fire and to provide convenient access for firefighting. Emergency fire equipment must be readily accessible and in good working order as referenced in RSHS 1.09, Fire Prevention and Protection.
- Fire Doors. Maintain at least a 24-inch clearance around the travel path of fire doors.
- Sprinklers. Maintain at least an 18-inch clearance between stored materials and sprinkler heads.
- Heating Appliances. Maintain the clearance shown on approved labels or a 3-foot clearance, whichever is larger, between stored materials and unit heaters, radiant space heaters, duct furnaces, and flues.
- Floor Loading. Clearly post load limits in all storage areas. Floors and slabs on grades must never bear a storage load.
- Buildings Under Construction. Materials stored inside buildings under construction must be at least 6 feet away from any hoist way or inside floor openings and at least 10 feet away from any exterior wall that does not extend above the top of the stored material.

j. Stacking Bagged Materials

Stack bagged materials by stepping back the layers and cross keying the bags at least every 10 bags high unless restrained by walls or partitions of adequate strength to prevent tipping of bagged materials.

k. Storing Materials in Bulk

Ensure entry to bulk storage locations, such as silos, hoppers, tanks, or bins (which may be classified as confined spaces), complies with OSHA requirements, RSHS 1.12, Confined Spaces, and local operating procedures.

l. Lumber Storage

Stack lumber on level and solid supported sills so that stacks are stable. Do not pile lumber more than 16 feet high.

m. Bricks and Masonry Blocks

Stack bricks and masonry blocks on level and solid surfaces.

- Bricks. Stack bricks no more than 7 feet high. Offset loose brick stacks at least 2 inches for every foot of height above 4 feet. Stack packaged bricks no more than three units high.
- Masonry Blocks. Offset masonry blocks one-half block per tier above 6 feet.

n. Cement and Lime

Because of fire hazard, unslaked lime shall be stored in a dry area separated from other materials.

o. Handling and Storing Reinforcing, Sheet, and Structural Steel

Stack steel to prevent sliding, rolling, spreading, or falling. Use sleeves when handling steel by a crane or forklift to aid in safe rigging.

p. Handling and Storing Pipe, Conduit, and Cylindrical Materials

- Stacking. Place pipe, conduit bar stock, and other cylindrical materials in racks or stack and block them on a firm, level surface to prevent spreading, rolling, or falling. Use either a pyramidal or battened stack. Offset battened stacks at least one unit per tier and securely wedge them on both sides of the stack.
- Removal. Remove round stock (e.g., wood poles, pipes, and conduit) from a stack by their ends.
- Unloading. Unload carriers in such a way that employees are not exposed to the unsecured load.
- Taglines. Use taglines when working with round stocks.

q. Storing Sand, Gravel, and Crushed Stone

Locate stockpiles in a way that provides safe access for withdrawing material. Material or vertical faces must not overhang. Store materials against walls or partitions only in an amount that will not endanger the stability of the wall or partition.

r. Housekeeping

Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary. Storage of material shall not create a hazard. Bags, containers, bundles, etc., stored in tiers shall be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse in accordance with 29 CFR 1910.176, Materials Handling and Storage.

- Use of Mechanical Equipment. Where mechanical handling equipment is used, enough safe clearances shall be allowed for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard. Permanent aisles and passageways shall be appropriately marked.

- Waste Disposal. Collect, store, and remove hazardous waste and combustible waste products at the end of each workday or work shift. Use noncombustible containers to dispose of waste and rubbish. Equip noncombustible containers with fitted or self-closing covers. Immediately remove and dispose of flammable liquid spills. Place scrap lumber in containers and do not accumulate such lumber in work areas. Remove or bend protruding nails that are not placed directly in containers for removal. Waste may not be buried on site or on federal land.
- Separation of Materials and Waste. Use the SDS to determine appropriate storage and separation of all materials and identify and label material containers. The following materials must be separated:

    - combustible materials such as paper, wood, and natural-fiber fabrics,
    - oily flammable materials, such as saturated or solvent rags,
    - hazardous waste,
    - corrosive and caustic materials, such as batteries,
    - reactive materials that may self-decompose or self-ignite because of heat or a chemical friction reaction,
    - radioactive materials, and
    - toxic materials that may be fatal if inhaled or absorbed through the skin.

- Outdoor Housekeeping. Keep areas adjacent to facilities free from rubbish, waste, and dry, overgrown vegetation. Place combustible waste materials that are stored outdoors while awaiting disposal at least 20 feet away from facilities.
- Storage at Height. Store loose or light materials on roofs or unenclosed heights only if they are safely tied down or secured.
- Sacks and Bags. Remove empty bags that contained cement, lime, or other dust-producing materials from the work area at least daily.
- Excavated Material. When possible, keep roads and walkways clear of excavated materials. When circumstance does not allow this, adequately mark or barricade these areas and provide other access.
- Dropping Material. Do not drop or throw material and debris more than 6 feet. Dropping material more than 6 feet may be allowed with the following specific conditions.

    - Enclosing the Area. The area through which material is dropped must be completely enclosed, with barricades at least 6 feet back from the projected edge of the opening or level above. Signs warning of the hazards must be posted at each level.
    - Chutes. Chutes must be installed to provide protection for persons below. Chutes for debris and scrap must be enclosed for their entire length. Openings for inserting and releasing materials must be equipped with covers and enclosures.

⚠ RSHS Appendix A: Definitions

RSHS Appendix A (Definitions) is available to print at:
https://www.usbr.gov/safety/rshs/index.html.

⚠ RSHS Appendix B: Additional References and Citations

RSHS Appendix B (Additional References and Citations) is available to print at:
https://www.usbr.gov/safety/rshs/index.html.