



<i>Environmental Guideline</i> <b>Hazardous Materials Use &amp; Storage</b>	
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<b>Activity Description</b>
<p>Hazardous Materials Use and Storage: This guideline provides basic instructions for the safe use and storage of hazardous chemical products or other potentially dangerous materials at your facility and on your worksite, indoors or out.</p> <p>A hazardous material is any gas, liquid, or solid the exposure to which may cause harm to people, other living organisms, property, or the environment.</p> <p>Hazardous materials may be <a href="#">flammable</a>, <a href="#">explosive</a>, <a href="#">toxic</a>, reactive, <a href="#">corrosive</a>, radioactive, <a href="#">biohazardous</a>, an <a href="#">asphyxiant</a> (causes suffocation), a <a href="#">pathogen</a>, an <a href="#">allergen</a>, or may have other characteristics that render it hazardous in specific circumstances..</p> <p>Hazardous materials used in City processes may include, but are not limited to the following:</p> <ul style="list-style-type: none"><li>• detergents</li><li>• acidic and alkaline cleaners</li><li>• oil-based cleaners</li><li>• polishes and mark removers</li><li>• automotive and equipment parts cleaners</li><li>• solvents and degreasers</li><li>• electrical and electronic parts cleaning and drying liquids and sprays</li><li>• electrolytes, paints, sealants, penetrants, coatings and adhesives, lubricants, aerosol can propellants</li><li>• all welding, brazing and soldering materials and gases</li><li>• dry powdered minerals</li><li>• radioactive source material</li><li>• algacides, herbicides, insecticides, rodent baits, disinfectants</li><li>• all refined and highly refined petroleum products (including the vapors, fumes, and dusts, liberated in the use of these materials</li><li>• residual substances left on rags, detritus, or in wash water</li><li>• spent and waste products that contained hazardous ingredients</li></ul>

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***Other General Information:***

The selection, storage and use of chemical products is everyone’s business. It is not solely the responsibility of the end-user. Your employer is responsible for your safety and the safety of other employees while on the job. The City is also responsible for the care and management of its properties, and the safety of the public who use or access its services. The Fire Department is responsible for their own safety and your safety should they have to rescue you as a result of injury or fire involving hazardous chemicals. Lastly, though you may never experience an accident or injury involving hazardous materials, improper use and management can lead to costly clean-up, disposal or remediation actions.

Consequently, hazardous materials use and storage is regulated at a variety of levels:

- your management, in the form of policies, procedures, and work instructions
- the City, in the form of executive orders and policies
- local authorities including the Fire Department
- state and federal agencies.

Consult this guideline, related work instructions, practices established by your agency, the Environmental Guideline on Environmentally Preferable Purchasing and Greenprint Denver Prohibited Chemicals Policy before buying, stocking or using hazardous materials in your work. Consult the Department of Environmental Health (DEH) if you need help determining if a specific product or process includes constituents or ingredients that could result in exposure to hazardous materials.

***Potential Environmental Risks***

The following concerns are associated with this activity:

- Contaminating your workplace
- Making yourself sick immediately and/or creating the potential for long-term exposure risks
- Causing conditions in the workplace that expose others to potential health risks
- Necessitating a building evacuation
- Causing a fire or making a fire difficult to extinguish
- Contaminating the environment
- Causing a spill or accidental release that is difficult and expensive to clean-up.

Potential consequences from performing the activity incorrectly:

- Personal injury, injury to co-workers or members of the public, contamination of local eco-systems, property damage, and environmental pollution
- Legal orders and penalties for violation of local, state and federal laws, civil and criminal proceedings, litigation and financial and other legal penalties.
- Job loss and significant disruption to delivery of services to the public.

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### **Critical Operating Requirements**

#### **A. General Requirements**

##### **Prohibited Activities**

- Do not purchase and use unauthorized products or products containing banned substances. When in doubt, consult with DEH.
- Do not purchase or keep in inventory more hazardous chemical products than you will consume in 6 to 9 months.
- Do not purchase a year's supply or more of hazardous products, though there may be cost incentives to do so.
- Never store hazardous materials above shoulder height, or where they could spill or fall on someone.
- Do not store hazardous materials on unstable surfaces or insecure cabinetry or shelving.
- Do not stack anything heavy on top of containers of hazardous materials.
- Never store combustible or flammable materials near sources of heat, sparks or flames
- Store hazardous materials in well ventilated areas
- Do not store hazardous materials close to (usually within 6 feet of) other bulk products with which they are known to react, even though they are fully contained and safe within their respective packaging.
- Do not store hazardous materials where they could come in contact with incompatible materials.
- Do not store hazardous materials in the way of doors and exits.
- Do not transfer hazardous materials out of their manufacturer supplied container into any other container without first determining if the secondary container is compatible with the specific material and strong enough to hold it.
- Do not transfer hazardous materials out of their original container into any other container without first correctly labeling the secondary container.
- Do not leave open any containers of hazardous materials.
- Do not use a product until you have learned about what hazards it may present, how to use it safely, and how to handle any wastes created in its use.
- Do not mix any commercial chemical products unless they are specifically designed to be mixed or combined with other specified materials, including water.
- Do not use hazardous products without adequate ventilation or air exchange
- Do not use hazardous materials without the minimum personal protective equipment, or PPE (gloves, goggles, etc.) specified by the manufacturer and required by your employer or established work practices.
- Do not discard hazardous materials in the trash or otherwise mix them with normal municipal solid waste. When in doubt about proper disposition of materials, consult with DEH.
- Do not discharge hazardous materials into any drain unless specifically authorized.
- Do not sweep or wash hazardous materials into the sewer system or waterway, or on to any soils.
- Do not allow soil, water, or other media contaminated by spillage of hazardous materials to be left in place so as to cause further contamination or harm; clean-up and contain the contaminated media as soon as possible.

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### **Critical Operating Requirements**

#### **A. General Requirements**

##### **General Considerations**

- This Environmental Guideline is provided for guidance only and does not supersede any specific work instructions or safety instructions from the manufacturer.
- Check with your purchasing agent and be sure to observe all purchasing restrictions, Greenprint Denver policy, and Executive Orders.
- Each person specifying for purchase or using a hazardous material is responsible for understanding how the material must be managed and stored and if there are any specific rules or procedures that need to be followed.
- Report leaking, wet, badly stained, or deteriorated hazardous materials packaging to your superiors, and act quickly to stop or prevent leaks, clean-up spills, and replace damaged containers; contact DEH for help.
- Hazardous chemical products often have an expiration date indicated by the manufacturer, so purchase and stock only the amount of product you can use-up within that time frame.
- Think carefully before buying in bulk any hazardous chemical products needed for a unique or non-routine use or special project to minimize the possibility of having large amounts of unused product at the end of the project.
- Store combustible and flammable materials in excess of 5 gallons in steel cabinets or outbuildings designed to minimize risk of fire.
- Each person using a hazardous material must first read and understand any safety instruction particular to the material and its chemical and physical characteristics.
- Material Safety Data Sheets (MSDSs), product specification sheets, and other literature provided by suppliers often contain valuable information on the chemical make-up and physical hazards of the material and how it is used safely.
- Be sure to obtain and make available to all workers MSDSs for all chemical products used in your work place. Outdated MSDSs should be removed and saved in a separate file and replaced with updated MSDSs.
- Some hazardous materials may be incompatible with other materials, products or wastes, or the container in which they are placed. Avoid creating hazards caused by placing incompatible materials in contact with each other.
- Activities involving the use of hazardous materials (including painting, cleaning, etc.) are likely to generate wastes with similar hazards.
- Pesticide labels are the law regarding application, storage, empty container and waste disposal; obey all pesticide label instructions.
- Check with the DEH to determine how the disposal of specific hazardous materials and derived wastes must be managed.
- Environmental Guidelines for Hazardous Waste Management, Universal Waste Management, Pesticide Management, Asbestos and PCBs Management, Oil and Petroleum Management may provide more specific information.

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**Training Requirements**

- Workers using hazardous materials may require basic safety training in using the material and appropriate PPE according to City or Agency policy. Check with your safety manager.
- Workers who receive, dispense and manage petroleum products in bulk may require training in spill prevention, control and response.
- Workers using radioactive source materials must receive radiation safety and hazardous materials awareness training per state and federal law
- Workers transporting or shipping U.S. Department of Transportation (DOT) regulated hazardous materials are required to receive transport related training per state and federal law.
- Workers and supervisors who generate, manage, or regularly encounter wastes derived from hazardous materials on the job, may need specific training in hazardous waste management per state and federal law.
- Workers dispensing, mixing or applying certain pesticides are required to have special training and licensing, or work only under direct supervision of a licensed applicator.

**Storage & Material Handling Requirements**

- Be prepared for leaks or spills, keep spill absorbents on hand that are appropriate for the types of hazardous materials you store and use.
- Maintain working certified fire extinguishers where any combustible or flammable materials are stored or used.
- Maintain legible labels and markings on all containers and packages.
- Provide secondary spill and leak containment for all bulk containers of petroleum products and other hazardous liquids.
- Do not store any hazardous materials outdoors unless they are protected from the weather and given secondary containment to minimize the potential for accidental spills or releases to the environment.

B. Planning Requirements

*Responsible: <responsible party>*

B1. Check with your purchasing agent and review Greenprint Denver policy before purchasing chemical products that may be hazardous to determine if there are any prohibitions or restrictions.

B2. Procure and make ready spill response materials wherever you store and use a hazardous material.

B3. Have appropriate PPE on hand and ready to use and wear before opening and using a package of a hazardous material.

C. Critical Tasks

*Responsible: <responsible party>*

C1. Research and learn about the specific chemical and physical characteristics of the products you want, identify their hazards, and prepare for their safe handling and storage before you purchase, store and use them.

C2. Read and make sure you understand all safety and use instructions provided by the manufacturer before opening and using a package of a hazardous material.

C3. Don and wear the PPE recommended by the manufacturer and required by your agency's Safety Officer before opening a hazardous material package and before using the product.

D. Emergency Response

*Responsible: <responsible party>*

D1. If a spill occurs, refer to Environmental Guideline Spill Response.

- **Call 311 immediately (during normal business hours) or at 303-206-0001 after**

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<b>D. Emergency Response</b>	<i>Responsible: &lt;responsible party&gt;</i>
<b>normal business hours for all spills.</b>	
D2. If a spill of a hazardous material occurs, act immediately to contain it both to minimize property damage and prevent an imminent risk to human health and the environment.	
D3. If a hazardous material container is found to be leaking as a result of damage or deterioration, act immediately to re-package the hazardous material in a proper container that is compatible with the material and resistant to the external environment in which it is stored. Do this yourself only if you can do so safely with appropriate protective equipment; otherwise contact DEH for assistance.	
D4. Consult the emergency response plan, spill response, or contingency plan specific to your facility for the exact actions to take and people to notify in the event of a spill or release of hazardous materials.	
D5. Collect and containerize all hazardous material and contaminated media derived from a spill and evaluate the material for correct labeling, storage, and disposal.	

<b>E. Inspection &amp; Maintenance Requirements</b>	<i>Responsible: &lt;responsible party&gt;</i>
E1. Keep an on-going log of what hazardous materials you store and use at your facility. The log should document the quantity and storage location of each hazardous material. Information from this log must be provided to the Fire Department annually.	
E2. Inspect your facility or work place regularly, at least once a month, to determine if hazardous materials are being stored and used safely, and containers are in good condition.	

<b>Expected Records / Outputs</b>	
<u>Record / Output</u>	<u>Instructions</u>
<ul style="list-style-type: none"> <li>• ILog of hazardous materials quantities and storage locations.</li> <li>• Annual Hazardous Materials Inventory System (HMIS) report for the local Fire Department</li> <li>• Current MSDSs for all hazardous materials stored or used at the facility.</li> <li>• Archives of MSDSs for all hazardous materials formerly stored or used at the facility.</li> <li>• Training Records for all employees who are required be trained. .</li> </ul>	

<b>References</b>	
<u>Phone Numbers</u>	
<ul style="list-style-type: none"> <li>• <b>311 (for Spill Reporting during normal business hours)</b>.....<b>3-1-1</b></li> <li>• DEH DEQ Emergency Response (after normal business hours)..... (303) 206-0001</li> <li>• Paul Bedard (DEH EQ Facility Compliance Program Administrator) ..... (720) 865-5473</li> </ul>	

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## **References**

### Guidance Materials (list not limited to the following)

- MSDSs
- DOT Labeling and Placarding Guidance
- SPCC Plan

### Training Materials (list not limited to the following)

- Operating procedures training (On-the-Job)
- Operator site specific training materials for handling hazardous materials and wastes

### Related Environmental Guidelines (list not limited to the following)

- Spill Response
- General Waste Management

### Applicable Regulations (list not limited to the following)

- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for Storm Water Discharges
- 6 CCR 1007-3, Part 261 State RCRA Regulations
- Greenprint Denver
- CCoD Ordinances and Executive Orders
- Denver Wastewater Management Division Rules & Regulations
- Metro Wastewater Reclamation District Rules & Regulations

### Other Documents

- Compliance Bulletins
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