# Maverick Safety Matters

Environmental Health & Safety FALL 2011


E H & S


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## Decorating with Fire & Life Safety in Mind

*By Melissa Jones, Fire Marshal*

As the holidays approach, it is a good time to review the University's policies regarding decorations in offices. The following **"Guidelines for Decorative Displays"** ensures that UT Arlington remains in compliance with fire and life safety codes and maintains a safe environment for everyone.

### GENERAL

- **Under no circumstances shall the following be blocked:**

| | |
|---|---|
| Exits | Lighting (overhead or lamp) |
| Stairways | Fire extinguishers |
| Doorways | Fire alarm pull stations |
| Exit signs | Fire sprinkler system |
| Smoke detectors | |

- or any area providing normal egress.
- Fire protection equipment shall be visible and convenient at all times. This shall include extinguishers, alarm boxes, fire alarm strobes, etc.
- Event sponsors shall review decoration plans with EH&S at least two weeks prior to the event.

### TREES

- The use of natural cut holiday trees is prohibited inside all University buildings.
- The use of artificial trees is permissible in all University buildings. Artificial trees must be labeled "noncombustible", "flame retardant", "fire resistant", or "resistive to burning" by the manufacturer.
- Trees used indoors must be less than six feet tall and may not extend higher than one foot from the ceiling.
- Keep trees away from heat sources such as radiators, air vents, large appliances, lights (overhead or lamps), etc.
- Turn decorative lights off and unplug whenever the area is unattended.
- All Christmas decorations should be removed prior to the University closing for the holidays.

### DECORATIONS

- Do not hang decorations from sprinkler piping, sprinkler heads, any fire suppression system, heaters, radiators, or electrical outlets.
- All decorations such as garland, artificial trees, wreaths, tinsel, and streamers MUST BE labeled as "fire-proof", "fire-resistant", or "flame-proof" by the manufacturer.
- No decorations are permitted within stairwells, lobbies, or elevators. Electrical cords and electrical decorative lighting should not be placed in corridors or stairwells, impede egress, or cause a tripping hazard.
- Holiday decorations are not to be hung from the ceiling, ductwork, or suspended from overhang pipes.
- Laboratories and/or shop areas should not contain decorative displays or holiday decorations.
- Do not run decorative lights or place decorations on the floor across any aisles or corridors.

- Streamers or other handmade decorations are not permitted in doorways or exit stairwells.
- Door decorations should not exceed more than one-half the surface of the door on either side.
- Decorations may not cover more than 20 percent of the wall area, unless fire proofed in an approved manner, and shall not be placed within six feet (6'0") of any fire safety device or equipment (e.g. smoke detector, sprinkler head, pull station, alarm and strobe light, exit sign, fire extinguisher, etc.)
- Candles and other sources of open flame are not permitted inside University buildings.

**The following items are prohibited:**

| | |
|---|---|
| Hay or straw (baled or loose) | Dry moss |
| Corn stalks or shucks | Dry leaves |
| Wood shavings or wood bark | Bamboo |
| Tumbleweed | Saw dust |
| Paper streamers | Plastic pellets |
| Plastic sheeting | Loose cotton |
| Flammable powders and liquids | |

*See Guidelines on page 2 . . .*

# Guidelines for Decorative Displays

**Prohibited items (cont.):**
-Cedar trees (including cuttings, sprigs, or branches)
-Confetti (in large quantities)

### ELECTRIC LIGHTS

- Use hooks or clips specially designed for handling light strings instead of nails, staples, or thumb-tacks.
- All holiday lighting should bear a "UL" testing lab seal of approval or Factory Mutual (FM) rating.
- Electric lights or electrically operated ornaments shall not be used on metal trees, which could induce electric shock.
- Carefully inspect any electrical decorations and/or lights for pinched, frayed, or exposed metal parts.
- Dispose of all defective electrical equipment immediately.
- Avoid laying electrical wires on floor surfaces to avoid incidents of electric shock.
- Do not connect more than three strands of light sets together.
- Do not plug cords and lights into an overloaded circuit.

## Promoting Fire Prevention

Fire Prevention Week was established to commemorate the Great Chicago Fire of 1871, and is the longest running public health and safety observance on record. In 1920, President Woodrow Wilson issued the first National Fire Prevention Day proclamation, and since 1922, Fire Prevention Week has been observed on the Sunday through Saturday period in which October 9 falls.

***Test your knowledge by taking the FIRE PREVENTION QUIZ:***

**1. What is the leading item first ignited in a cooking fire?**
a. Clothing
b. Food
c. Paper Product
d. Pot Holder

**2. Where do most home fires start?**
a. Basement
b. Bedroom
c. Kitchen
d. Living/Family Room

**3. Home fires peak between what time period?**
a. Midnight—3:00
b. 3:00—6:00
c. 5:00—8:00
d. 8:00—11:00

**4. All smoke alarms should be replaced every __.**
a. 15 years
b. 10 years
c. 5 years
d. 1 year

**5. For the best protection, all smoke alarms should be interconnected. Why?**
a. So you don't need to change the batteries
b. So you only need to test one
c. So you know they are working properly
d. So that when one sounds, they all sound

**6. If the smoke alarm sounds, you should do what?**
a. Call the fire department and then leave the home
b. Get outside and then call the fire department
c. Remove the battery
d. Wait for the fire department to arrive

**7. Smoke alarms should be installed _____ .**
a. On every level of the home, inside each bedroom and outside each sleeping area
b. On every level of the home, outside each sleeping area, and in the kitchen
c. On the levels of the home where people sleep
d. On every level of the home and inside each bedroom

**8. A home fire escape drill should be practiced at least how often?**
a. Once a month
b. Twice a month
c. Once a year
d. Twice a year

**9. If you have home fire sprinklers in your home and there is a fire, _____ .**
a. Only the sprinkler closest to the fire will go off
b. Only the sprinkler near the door(s) leading outside will go off
c. All sprinklers in the home will go off
d. All sprinklers in the home will go off and continue releasing water until the fire department turns them off

**10. Working smoke alarms; a home fire escape plan; and home fire sprinklers _____ .**
a. Will protect your family from fire
b. Are the focus of 2011 Fire Prevention Week
c. Are important parts of a home fire safety plan
d. All of the above

***Answer Key:***

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | B | 3. | C | 5. | D | 7. | A | 9. | A |
| 2. | C | 4. | B | 6. | B | 8. | D | 10. | D |


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# Refrigeration & Storage of Flammable Materials

Flammable chemicals that require refrigeration must be stored in a refrigerator that is designed for the safe storage of flammables. A flammable liquid is defined by the fire code as having a flash point of less than 100°F (38°C).

The storage of flammable materials in household refrigerators or laboratory refrigerators that are not designed for flammable storage is unsafe due to the potential for vaporization and ignition of chemicals resulting from a spark generated by electrical contacts inside the refrigerator.

There are three types of refrigerators that may be found in a laboratory:

### *Ordinary Household Refrigerator/Freezers*

Household refrigerators have internal components such as thermostats, relays, and switches that can create a spark that is capable of igniting vapors generated from flammable liquids stored inside. Household refrigerators & freezers are commonly found in laboratories due to their low cost.

**Flammable materials must <u>never</u> be stored in a household refrigerator.**

Figure 1: Examples of labels for Ordinary Household Refrigerators in the Lab


### *Flammable Storage Refrigerator/Freezers*

Flammable storage refrigerators *(**Figure 2**)* are approved for storage of flammable chemicals by the safety certifying organization Underwriters Laboratories (UL).

Flammable storage refrigerators have no electrical sparking devices, relays, switches, or thermostats that could ignite flammable vapors inside the cabinet. Flammable storage refrigerators may incorporate design features such as thresholds, self-closing doors, magnetic door gaskets, and special inner shell materials that control or limit the damage if a reaction occurs within the storage compartment. A label stating "Flammable Materials Refrigerator: Keep Fire Away" should be in place to identify such refrigerators.

Flammable storage refrigerators **cannot** be placed in a room containing explosive vapors, but chemicals that exude explosive vapors can be safely stored inside them. These refrigerators are also called lab-safe, fire-safe, explosion-safe or explosion-protected refrigerators. These refrigerators are more costly than household refrigerators but they must be purchased if flammable materials are to be stored in the refrigerator.


Label on a Lab-Safe Refrigerator

Figure 2: Flammable Storage Refrigerator

### *Explosion Proof Refrigerator/Freezer*

Explosion proof refrigerators ***(Figure 3)*** are rated UL explosion proof and are similar in design to the flammable storage units, but also have all operating components sealed against entrance of explosive vapors. Electrical junction boxes are also sealed after connections are made. These units are approved for storage of volatile materials in areas with explosive atmospheres and are the most costly of all types.

This type of refrigerator is only required when storing flammable materials in an area with an explosive atmosphere, such as a solvent dispensing room.

Explosion proof refrigerators require special hazardous-location wiring rather than simple cord-and-plug connections. Please contact the EH&S Hazardous Materials Section, 272-2185, if you feel you have a need for an explosion proof refrigerator.

Figure 3: Explosion Proof Refrigerator

The purchase of Refrigerators/Freezers for the Storage of Flammable Materials is the responsibility of the Principal Investigator and/or research group. Please contact EH&S at 272-2185 if you have any questions or need assistance.


Label on an Explosion Proof Refrigerator

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***UT Arlington Environmental Health & Safety Office***

# Science, Safety, and Security – Finding the Answers Together

The U.S. Government has developed a new website entitled "S3: Science, Safety, and Security" to address biosafety, biosecurity, biocontainment, and biorisk management. The goal of the web site is to promote transparency and broader awareness about the evolving nature of biological agents that can be hazardous, and how to handle and use these agents safely and securely. The resources provided on the website include information for laboratory personnel who work with potentially hazardous biological agents, their supervisors, the management personnel of the institutions in which they work, policymakers, and the public. The S3: Science, Safety and Security website will be updated and expanded to include more U.S. Government resources and information.

One of the resource sections in the S3 website is "Frequently Asked Questions, or FAQs". Since the fields of biosecurity, biosafety, biocontainment, and biorisk management are complex and interrelated, the FAQs section is very helpful in getting accurate information quickly and easily. The FAQs are divided into general topics and are designed to help answer basic questions about:

- Biosafety and Biocontainment
- Biosecurity
- Laws and Treaties

One FAQ in the Biosafety and Biocontainment area explains the meaning of **"a culture of safety and responsibility in the laboratory."** The explanation below emphasizes the role of UT Arlington faculty, staff, and students **to make our university not only a nationally recognized research university, but also a safe one**!

"A culture of safety and responsibility in the laboratory helps ensure safe, responsible behaviors and practices. Individual and organizational attitudes about safety and responsibility will influence all aspects of laboratory practice, including the willingness to report concerns, response to incidents, and communication of risk. Every organization should strive to develop a culture of safety and responsibility that is open and non-punitive, encourages questions, and is willing to be self-critical. Persons and organizations must be committed to safety and responsibility, be aware of risks, behave in ways that enhance safety, and be adaptable. Scientists understand that laboratory practices should be refined as observations are made, hypotheses tested, findings published, and technical progress achieved. As laboratory workers gain more knowledge about how to recognize and control biohazards, the level of risk that is considered acceptable should become smaller, with the goal of moving continuously to eliminate or reduce risk to the lowest reasonably achievable level.

Laboratory workers have the responsibility to report concerns to management and the right to express concerns without fear of reprisal. Similarly, management has the responsibility to address concerns that are raised. A continuous process of biohazard recognition, risk assessment, and biohazard mitigation practices ensures that management and laboratory workers are aware of risks and work together to maintain the highest standard of safety and responsibility."

## Notary Public Available

EH&S has a notary public in our office whose services are available at no charge to UT Arlington faculty and staff. Please contact Grace Sauce at ext. 2-2185 if you need to have a document notarized.

## EH&S TRAINING COURSES

**The following training courses are available online through the Research Profiles system at *www.uta.edu/ra/real/loginscreen* :**

| | | |
|---|---|---|
| **Hazard Communication Training** | **Radiation Awareness Training** | **Lockout/Tagout** |
| **Bloodborne Pathogens Training** | **Laser Safety Training** | **Confined Space** |

**Defensive Driving Course (DDC)** This course must be completed every 3 years to remain an authorized driver of UTA vehicles. DPS driving record checks must be renewed annually.

**15-Passenger Van Training:** Take the online course first. A behind-the-wheel driving test is also required and will be conducted at 2:00 p.m. on the dates below. Call ext. 2-2185 to register ahead of time (maximum class size is 8). Meet at the EH&S office, 500 Summit Ave. Drivers must have already taken the Defensive Driving Course and have a current driving record check to attend.

**Nov. 17** (Thurs.) **Dec. 6** (Tues.) **Jan. 18** (Wed.) **Feb. 15** (Wed.) **March 21** (Wed.)

**Call us at ext. 2-2185 to schedule other required training available through our office:**

| | | |
|---|---|---|
| **Radioactive Material/Laser User** | **BioSafety Level II** | **Lift Truck** |
| **Shipping Infectious Materials** | **Hot Work Safety** | **Respirator** |

**Fire Extinguisher Training** will be provided for groups by request. Please call 2-2185 to schedule.

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