



Biology and Medical Department ES&H News Letter

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NFPA Urges Grilling Fire Safety



The National Fire Protection Association (NFPA) is reminding outdoor cooks not to forget about grill fire safety as the peak months for grill fires arrive. People with gas grills should take extra precautions. In 2003-2006, gas-fueled grills were involved in 81 percent of reported home grill fires and were involved in 6,400 home fires, including structure and outside fires. The leading cause of gas grill fires was a leak or break in hoses.

Although gas grills are used approximately one-and-a-half times more often than charcoal grills, they were involved in five times as many fires. Charcoal or other solid-fueled grills were involved in 1,300, or 16 percent, of home grill fires. The leading cause of these fires was something that could burn being located too close to the grill.

In 2007, approximately 9,600 people went to hospital emergency rooms because of thermal burns caused by grills. About one-third of the burns from gas grills happened while lighting the grill. Gasoline or lighter fluid was involved in roughly one-quarter of charcoal or wood grill burns. Children under five accounted for roughly one-quarter of thermal grill burns. Most of these burns occurred when the child bumped or touched the grill.

NFPA offers the following grill safety tips:

- Use propane and charcoal grills in outdoor areas only.
- Make sure the grill is located well away from the home, deck railings and out from under eaves and overhanging branches.
- Keep children and pets away from the grill area: declare a three foot "kid-free zone" around the grill.
- Use long-handled grilling tools to give plenty of clearance from heat and flames.
- Remove grease or fat build up from the grills and in trays below the grill so it cannot ignite.
- Never leave the grill unattended.

Gas grills:

- Check the gas tank hose for leaks before using it for the first time each year by applying a light soap and water solution to the hose. If there is a propane leak, it will release bubbles. If you do find a leak and there is no flame, do the following:
 - Turn off the gas tank and grill.
 - If the leak stops, have the grill serviced by a professional before using it again.
 - If it does not stop, call the fire department.
- If you smell gas at any point while cooking, get away from the grill immediately and call the fire department.
- Use only equipment with the label of a recognized testing laboratory. Follow the manufacturer's instructions on how to set up the grill and maintain it.
- Never store propane gas tanks in buildings or garages. If you store a gas grill inside during the winter, disconnect the cylinder and leave it outside.

Charcoal grills:

- If you use a "charcoal chimney" to start charcoal for cooking, use a long match to avoid burning your fingers when lighting the paper.
- If you use starter fluid, only use charcoal starter fluid and never add charcoal fluid when coals or kindling have already been ignited.
- Never use gasoline or any other flammable liquid to get the fire going.
- Keep charcoal fluid away from children and heat sources.
- When you are finished grilling, let the coals cool completely before disposing of them in a metal container.

For more safety tips, videos, facts and figures, and audio clips, please visit www.nfpa.org/grilling.

NFPA has been a worldwide leader in providing fire, electrical, building, and life safety to the public since 1896. The mission of the international nonprofit organization is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.

Selecting the Right Gloves to Use

In November, 2009, a researcher performing a radiochemical synthesis was contaminated with a radioisotope which involved the use of the dimethyl sulfoxide (DMSO).

When the researcher noticed the liquid on his glove he notified the senior researcher assisting him. The senior researcher advised him to stop the procedure and check himself for radioactive contamination. The Radiological Control Technician (RCT) was notified and the worker remained in the immediate area until she arrived.



The researcher was surveyed and it was discovered that the radiochemical liquid had penetrated both layers of latex gloves and had contaminated his left thumb.

Researchers in this facility commonly use latex gloves for double gloving and frequent changing of the outer glove is necessary to reduce the risk of spreading radiological contamination. Latex gloves were the preferred PPE in this facility as double gloving involving other glove materials limited dexterity.

In this instance, the researcher came in contact with the radiochemical and did not immediately remove/change the outer glove. It was determined that the chemical dimethyl sulfoxide (DMSO) had enough time to permeate/break through both sets of latex gloves and contaminate his hand.

In selecting the appropriate glove, when reviewing the job requirements, the degree of dexterity required for each task must be taken into account. Tasks that require fine motor skills, such as laboratory work, may require a thinner glove material, while operations such as industrial parts cleaning may not.

Also, the length of exposure to the chemicals must be considered. Some tasks may require only splash protection or include intermittent contact, while others may involve complete immersion or continual contact with the chemicals.

It's important to remember that although the number of glove choices can be staggering, no one glove can possibly address all types of hand hazards. Gloves are never a substitute for safe work practices or proper engineering controls.

Because different glove materials resist different chemicals, no glove is suited for all chemical exposures. Today, many chemical laboratories use only disposable latex gloves. This is unfortunate, because these gloves do not always provide sufficient protection against the variety of chemicals used in a lab. In most cases, latex gloves provide nothing more than a false sense of security for employees.

Glove selection should be based only on the glove manufacturer's chemical resistance guides or recommendations. From this information, choose the glove material that is most resistant to the chemicals being used. The actual resistance of a glove material may also vary from manufacturer to manufacturer, so make sure the selection is based on the correct manufacturer's data. Most glove manufacturers provide glove selection charts for you to refer to. The following website has links to most manufacturer's Glove Compatibility Charts: www.ehs.ufl.edu/Lab/CHP/gloves.htm

"E-mail Quota" Phishing Attempt



The Tuesday, April 27, e-mail with subject line "E-Mail quotas to be enforced" was an internal test to measure how the BNL community would respond to a simulated phishing attack. The results were mixed - the bottom line is that many people identified the message as a phishing attempt, but approximately 1,100 people clicked on the link, and more than 800 of those also entered their login credentials.

Shortly after the e-mail was sent, recipients who suspected it was a phishing message reported it to the ITD Helpdesk (Ext. 5522), to security@bnl.gov, and some even stopped by the Cyber Security office. The communication within groups and between system administrators and end users was quick and effective in many areas, and we are grateful for all your efforts.

While the e-mail looked legitimate, it contained the basic indicators of a phishing attack, including:

- the From: address was not from bnl.gov, but from bnl.gov.us
- the link was to a non-BNL website with domain name of bnl.web-access-email.com

In addition, those who clicked on the link were sent to a page that looked nothing like a BNL web page and were prompted to enter their user id and password - something ITD has stressed it would never do. All the warning indicators are explained on [this page](#).

Phishing is a continuing problem for BNL. Our e-mail gateways currently block approximately 90 percent of all incoming messages because they are spam or phishing attempts. This test simulated what would happen if just one attempt got through for bulk distribution to the site. It is important to be aware of the indicators of phishing e-mails, as just one compromised machine inside BNL can be used to attack other internal systems.

If this had been a real attack and 20 percent of our staff provided their credentials to real hackers, the impact could have been quite dramatic. Last week, an individual was tricked by a phishing attack similar to this one. Within 24 hours the stolen credentials were used to gain access to the victim's e-mail account and more than 50,000 spam messages were sent out as if coming from BNL. This resulted in numerous external organizations refusing to accept e-mail from BNL, causing disruptions to communications. It can take many days before the full flow of e-mail is restored.

ITD is in the process of developing targeted training to better educate our staff on how to identify phishing attempts.

Laboratory Housekeeping

After several people were injured on site because previous work and clutter had not been properly cleaned up, in January of 2010 Brookhaven Lab began focusing on good housekeeping as a way to ensure a safer work environment.

In Bldg 490 a large cleanup project began to remove unused/antiquated equipment, debris and outdated supplies.

An example of the before and after is below:



Before

After

Keeping things clean and organized helps provide a safer laboratory. Keep drawers and cabinet doors closed and electrical cords off the floor to avoid tripping hazards. Keep aisles clear of obstacles such as boxes, chemical containers, and other storage items that might be put there even temporarily. Avoid slipping hazards by cleaning up spilled liquids promptly and keeping the floor free of stirring rods, pipette tips, stoppers, and other such items. Never block or even partially block the path to an exit or to safety equipment such as a emergency eyewash or safety shower.

Make sure that supplies and equipment on shelves provide sufficient clearance so that fire sprinkler heads operate correctly. There shall not be any storage within 18 inches of a sprinkler head. Do not put large or heavy objects on shelves above eye level.

Put ordinary wastepaper in your blue recycling bin. Needles, razor blades and other sharp items shall be disposed of in rigid, puncture-resistant sharps containers. When discarding empty boxes or recycling empty glass chemical containers bearing hazardous materials labels, the labels shall be defaced or removed before disposal.

If you have any questions on how to manage a particular waste stream, you can find information at: <http://www.bnl.gov/ewms/pollutionpreve/WasteStream/>

Important Safety Reminders

By Bob Colichio

Pedestrians

- Drivers are required to yield the right-of-way to pedestrians crossing streets in marked or unmarked crosswalks in most situations. Pedestrian need to be especially careful at intersections where the failure to yield right-of-way often occurs when drivers are turning onto another street and a pedestrian is in their path.
- When possible, cross the street at a designated crosswalk. Always stop and look left, right, and left again before crossing. If a parked vehicle is blocking the view of the street, stop at the edge line of the vehicle and look around it before entering the street.
- Increase visibility at night by carrying a flashlight when walking and by wearing retro-reflective clothing that helps to highlight body movement.
- It is much safer to walk on a sidewalk, but if you must walk in the street, walk facing traffic.



Bicyclists

- All bicyclists should wear properly fitted bicycle helmets every time they ride. A helmet is the single most effective way to prevent head injury resulting from a bicycle crash.
- Bicyclists are considered vehicle operators; they are required to obey the same rules of the road as other vehicle operators, including obeying traffic signs, signals, and lane markings. When cycling in the street, cyclists must ride in the same direction as traffic.
- Drivers of motor vehicles need to share the road with bicyclists. Be courteous – allow at least three feet clearance when passing a bicyclist on the road, look for cyclists before opening a car door or pulling out from a parking space, and yield to cyclists at intersections and as directed by signs and signals. Be especially watchful for cyclists when making turns, either left or right.
- Bicyclists should increase their visibility to drivers by wearing fluorescent or brightly colored clothing during the day, dawn, and dusk. To be noticed when riding at night, use a front light and a red reflector or flashing rear light, and use retro-reflective tape or markings on equipment or clothing.



Summer Students

It is almost that time again...for our Summer Students. So here is a little reminder –



Mentors should ensure that prior to the start of work all students have their required training completed and that they are properly trained on the task to be performed before working independently. The BNL ESH courses that they are required to complete are listed on the New Employee Orientation Form which each student receives prior to their arrival.

Any students doing laboratory research must complete all the courses and review the appropriate Experimental Safety Reviews (ESRs) and Radiation Work Permits (RWPs) and sign prior to work.

We often find that students are enthusiastic and eager to get to work. They are often intimidated and do not feel comfortable asking questions. This increases the potential for a safety issue. Please make sure to properly train the students and ensure they are qualified to do the work prior to letting them work independently and that you or a designee are readily available to answer any questions.

Students should not work with hazardous materials off hours unsupervised. Make students aware that they can call Security on extension **2238** for an escort back to their dorm room if they are concerned for their safety when leaving work in the dark.