

# Active Shooter Preparedness:

## *What you can do to prevent violence and how to react should it occur*

By the Site Protection Division

The recent shooting at the Sandy Hook Elementary School in Newtown, Conn., is a shocking reminder of the dangers that we face from an active shooter. These are extremely violent events because an active shooter will typically continue to cause casualties until police arrive to stop it. Active shootings can occur anywhere people congregate such as public events, malls, theaters, schools, and businesses. Such incidents are rare but it is important to be prepared.

Two years ago, we had a very successful “active shooter” exercise at PPPL in which staff effectively “locked down” for about 20 minutes. The Plainsboro Police responded very quickly and several other law enforcement agencies including the FBI, the Middlesex County Prosecutor’s Office, and the Public Safety Department from main campus, assisted in various capacities. The PPPL Emergency Response Organization and Emergency Services Unit personnel were also effective and professional.

However, we need to be continually vigilant because active shooters have an immediate advantage in that they have typically planned the attack for some time and have the element of surprise. They are also very motivated to cause havoc and will usually continue their attack until police arrive and end it.

### Potential Warning Signs

The FBI has indicated that, in many cases, warning signs manifest themselves before the violence. These can include someone who has experienced a life-altering event at work or at home (such as being fired), and then begins to act out in anger, frustration, and alienation. These actions may include committing acts of vandalism, showing disrespect for supervision and the organization, displaying a hypersensitivity to criticism, sudden outbursts of anger, making ominous or specific threats, obsessing over others, and demonstrating a fascination with weaponry. In addition to verbal comments, notes, letters, journal en-

*All staff members have a responsibility to report any threatening or violent behavior at work to their supervisor, their supervisor’s manager, the Office of Human Resources or the Site Protection Division, regardless of whether that behavior is exhibited by an individual who is a member of the Princeton community or a visitor to the Laboratory.*

tries, and postings to social networks may provide warning signs of potential violence.

Victims of domestic, workplace, or other violence may also exhibit warning signs. These signs could include a change in job performance, frequent and unplanned use of leave time, disruptive phone calls and visits from a former partner, being a victim of vandalism and threats, uncharacteristic moodiness or depression, excessive makeup and/or wearing clothing not suitable for the season, and unexplained bruises or injuries.

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# Active Shooter Preparedness

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If you suspect someone may be planning violent activities or may be a victim of violence, you must tell someone! (But use caution and be discrete as these are highly volatile situations.)

## Resources for Assistance

If you have a personal relationship with the person exhibiting such behavior, you might contact a friend, relative, or other person trusted by the victim (including clergy), or you might report your concerns to the authorities. If the person is injured, you should make sure they are treated by a doctor. (Be aware that healthcare professionals in New Jersey are required to report certain kinds of injuries to the authorities including injuries that may be indicative of domestic abuse).

Princeton University maintains a University Workplace Violence Assessment Team (WVAT) that is responsible for reviewing, investigating, and evaluating incidents involving threats, threatening behavior and/or acts of violence in the workplace. Princeton University has also contracted with Carebridge Corporation, which offers various employee assistance programs, including confidential counseling sessions. Carebridge and the WVAT may serve as resources to supervisors and employees in dealing with situations involving violence. **If you feel violence is imminent, call the police!**

## Assessing Your Surroundings

It is equally important that you use situational awareness (or vigilance) to help prepare you for emergency action. For example, when entering a building, store, restaurant, office, etc., take a moment to scan and observe your surroundings, objects, and people in your sphere. Identify the entrances and exits to the area. Take an “inventory” of your resources, the resources around you, and consider how you might use them. Identify any people who could help. “Walk through” what you would do and where you would go in an emergency. Situational awareness can prepare us for the swift, decisive action that would be needed in a violent situation.

## If a Violent Situation Takes Place

If an active shooter or other violent event should occur, there are three basic tactics one can utilize: Evacuate the area, lockdown in a secure place, and/or confront the attacker.

## If an active shooter is in or near your building and you cannot safely exit the building

1. Take cover or, if it is safe to do so, get out of the area

as quickly as possible. Move away from the noise while alerting others in the area to move as well.

2. Call 911 (or 3333 if at PPPL). Provide as much information as possible to the dispatcher. Wait for instructions on what to do.

## If an active shooter is in or near your building and you cannot safely exit the building

1. Move to a room that can be locked as quickly as possible, and lock the doors and windows. Turn off all the lights. Get everyone on the floor so no one can be seen from the outside.
2. One person should call 911 (or 3333 if at PPPL) and tell the dispatcher what is taking place and where. Inform him/her of your location and remain in place until the police or a campus administrator whom you know gives the “all clear.” Keep the dispatcher on the line if feasible so they can hear and learn about what is happening. Plan for a possible escape or, if that is not possible, a confrontation.
3. Identify resources and items that could be used for self-defense if needed such as a letter opener or scissors. Formulate a plan with others in the room.
4. DO NOT open the door unless you are sure it is the police or emergency response personnel.

## If an active shooter enters your office or classroom

1. Pre-planning and teamwork will improve your chances of survival. Do whatever you can to protect yourself and others. You may try to run, negotiate, create a diversion, or overpower the shooter. These are all high-risk activities but must be weighed given the gravity of the situation confronting you and others.

The police are trained to arrive and move quickly to suppress the shooter. DO NOT STOP OR INTERFERE with the police if you encounter them. Keep your hands up and tell them what you know including descriptions of the assailant, the number of assailants, locations, etc. Keep moving away from the crime scene as directed.

If this kind of emergency occurred at PPPL, we would utilize alarms, EVES announcements, etc., to inform personnel of what actions to take. Additional information may be found at [http://www.dhs.gov/xlibrary/assets/active\\_shooter\\_booklet.pdf](http://www.dhs.gov/xlibrary/assets/active_shooter_booklet.pdf) ■

## When is Hearing Protection Required?

By Marissa Schaefer

Continued exposure to loud noise can cause noise-induced hearing loss (NIHL). Unlike other occupational injuries, NIHL causes no pain or visible damage and is unnoticeable in its earliest stages. It gradually gets worse with each over-exposure to loud noise and generally takes years to diagnose. NIHL is PERMANENT and 100 percent PREVENTABLE! Without the proper knowledge and action, employees working in high noise areas or performing high noise activities could be at risk for developing NIHL.

Anyone working in high noise areas without wearing hearing protection could get NIHL. Some examples of high noise areas at PPPL are the C- and D-Site diesel generators, the D-Site MER and Mezzanine, and the Boiler Room. High noise areas are posted with signs, such as the one shown here, warning employees of hazardous noise levels. Remember to always wear hearing protection when you're working in posted high noise areas.

You must wear hearing protection when performing loud activities to avoid a hearing loss. Some examples of high noise activities are grinding, plasma cutting, and concrete core drilling. How do you know

when a work activity is so loud it could affect your hearing? Here is a good rule of thumb: if

you must shout to be understood over the background noise when standing about one arm-length away from somebody, the background noise is hazardous and you should wear hearing protection. You can also contact an Industrial Hygienist (IH), who can measure the noise level of the activity and determine if hearing protection is needed.

The more times you're exposed to loud noise, the higher your risk for developing NIHL. Wearing hearing protection in high noise areas and while performing high noise activities helps prevent the development of this occupational injury. For more information or training on this subject, please contact Marissa Schaefer via email at [mschaefer@pppl.gov](mailto:mschaefer@pppl.gov) or by phone at ext. 2832. ■



**Hearing protection is required when...**

- Working in high noise areas
- Performing high noise activities

## Reducing the Hazards of Shoveling Snow

While shoveling snow can be good exercise, it can also be dangerous for optimistic shovelers who take on more than they can handle. The National Safety Council offers the following tips to help you get a handle on safe shoveling:

- Individuals over the age of 40, or those who are relatively inactive, should be especially careful when shoveling.
- If you have a history of heart trouble, do not shovel without a doctor's permission.
- Do not shovel after eating or while smoking.
- Take it slow! Shoveling (like lifting weights) can raise your heart rate and blood pressure dramatically, so pace yourself. Be sure to stretch out and warm up before you start.
- Shovel only fresh snow. Freshly fallen, powdery snow is easier to shovel than heavy wet or packed-down snow.
- Push the snow as you shovel. It's easier on your back than lifting the snow out of the way.
- Don't pick up too much at once. Use a small shovel or fill only one-fourth or one-half of a large one.
- Lift with your legs bent, not your back. Keep your back straight. By bending and "sitting" into the movement,

you'll keep your spine upright and put less stress on your back. Your shoulders, torso, and thighs can do the work for you.

- Do not work to the point of exhaustion. If you run out of breath, take a break. If you feel tightness in your chest, stop immediately.
- Dress warmly. Remember that extremities, such as the nose, ears, hands, and feet, need extra attention during winter's cold. Wear a turtleneck sweater, cap, scarf, face protection, mittens, wool socks, and waterproof boots. ■

### Keep Your Footing in Icy Conditions

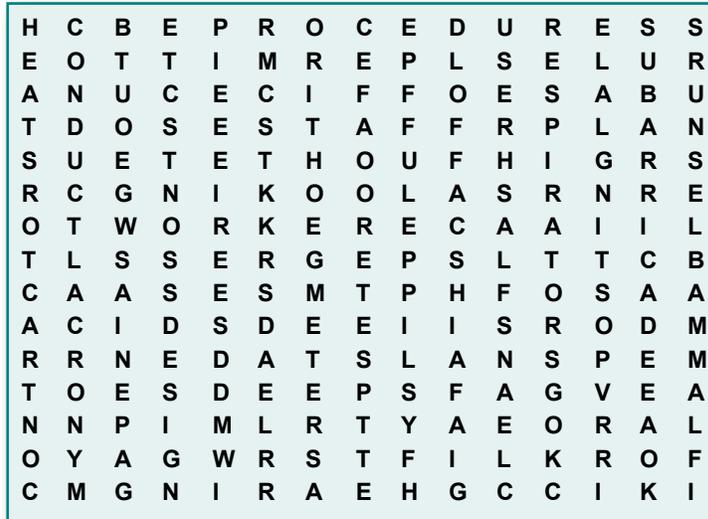
Icy weather is upon us. In addition to wearing supportive, slip-resistant shoes and choosing clear walkways to walk on, remember these tips when navigating treacherous terrain:

- Keep your head up
- Keep your shoulders over your ankles
- Take half steps
- Walk flat-footed (not heel-to-toe)

Remember, if you do have a fall, report any injuries to the OMO and slick or icy spots to Facilities.



# S·A·F·E·T·Y C·O·N·T·E·S·T



Find the words below. They may go in any direction.

**ACIDS, ACRONYM, ARMS, BARRICADE, BASE, CLASSES, CLEAN, CONDUCT, CONTRACTORS, DESIGN, DOSE, EGRESS, FLAMMABLES, FLASH, FORKLIFTS, GLOVE, HEARING, HEAT, HOUSE-KEEPING, LADDER, LEAD, LIFT, LOOKING, METER, NEPA, OFFICE, ORAL, PERMIT, PLAN, POSTING, PROCEDURES, PROTECT, RESPIRATORS, RULES, SCAFFOLD, SHOES, SLIP, SPEED, STAFF, WORKER.**

The remaining letters form a message:

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The names of all entrants who correctly solve the puzzle will be entered into a drawing for a \$20 gift certificate to the PPPL Plasma Hutch! Submit the message to [dstrauss@pppl.gov](mailto:dstrauss@pppl.gov) by Friday, Feb. 22nd. Safety Division members are not eligible.

**CONGRATULATIONS TO JOANNE SAVINO, WHO WON THE OCTOBER 2012 ESH&S NEWSLETTER SAFETY CONTEST!**

## Focus on Fire Safety: Portable Heaters

An estimated 900 portable heater fires in homes are reported to U.S. fire departments each year and cause an estimated 70 deaths, 150 injuries, and \$53 million in property loss. Only 2 percent of heating fires in homes involve portable heaters. However, portable heaters are involved in 45 percent of all fatal heating fires in homes!

You can prevent a portable heater fire in your home this winter by following a few fire safety steps:

- Turn heaters off when you go to bed or leave the room.
- Keep anything that can burn, such as bedding, clothing, and curtains, at least three feet away.
- Only use portable heaters from a recognized testing laboratory and with an automatic shut-off so that if they tip over, they shut off.
- Plug portable heaters directly into outlets and never into an extension cord or power strip.

Learn more about portable heaters and fire safety at [www.usfa.fema.gov/heating/](http://www.usfa.fema.gov/heating/) ■

*From the US Fire Administration and FEMA*



# Personal Protection: Not Just for on the Job But at Home as Well

By Samantha Burrows

In any type of manufacturing or construction work environment, the practice of wearing personal protective equipment (PPE) typically becomes second nature. Whether it is out of fear of being reprimanded by a supervisor or the fear of losing a functional body part, workers in such environments know that PPE is a must! However, once the work day is done and people go home, the idea of PPE often becomes a distant memory. People simply forget or just don't think about it. Or maybe they don't care as much about wearing such equipment at home because there is no one to see their unsafe work practices and say something about it. After all, home sweet home offers a sense of safety and security.

Whatever the case, accidents don't just happen on the job. In fact, numerous accidents, many of which can be fatal, occur in the home. The simple practice of utilizing PPE while at home could do a great deal to avoid such accidents.

There are a few fundamental things that you can do to ensure you stay safe at home. It may seem arduous or unnecessary but such practices could mean the difference between ending up in the emergency room and enjoying an evening with family and friends at the end of a work-around-the-house kind of day!

## Here are some of the more common PPE used at home:

**Gloves** — There are numerous options when it comes to protecting your hands around the home. Neo-



prene, nitrile, vinyl or synthetic gloves are good for handling chemicals because they are impermeable and allow full dexterity. Leather gloves are recommended for heavy lifting or working with sharp objects, while knit gloves with a waterproof coating are good for gardening activities.

**Safety glasses** — Eye protection is particularly important when working in the yard, doing woodworking, or working on automotive equipment. Safety glasses or goggles should be used for these tasks. Goggles are suitable for people who wear prescription lenses.

**Dust masks** — These are important for respiratory safety and are especially handy when working in high dust areas (both indoor and outdoor) and when performing woodworking. These are also helpful in minimizing respiratory irritation when using spray chemicals and are a good choice for people plagued by allergies. N-95 dust masks are a safe choice for typical at-home use.

**Ear muffs (or plugs)** — Incorporating hearing protection into at-home activities can do a great deal for reducing the risk of premature hearing loss. There may not be a noticeable difference in hearing immediately after excessively loud activities, but one's hearing diminishes over time. Whether you're using large power tools or farm equipment, or you're a parent who finds yourself in the unfortunate situation of having bought your child a drum set for Christmas, using hearing protection is highly recommended.

Don't forget to incorporate the 'safety first' mentality while completing your various tasks even when you're at home. All the above PPE can be found in basically any home center store and are available at minimal cost. Incorporating safe practices at home will not only keep you safe and fully functional but will also ensure you're available to fully enjoy family and friends for years to come. ■



# Do Wall-Mounted Fire Extinguishers Pose a Risk for Injury?

By the Site Protection Division

Someone expressed a concern recently regarding fire extinguishers that are stored in enclosures off the ground (see photo). The concern is that if someone were to pick up a wall-mounted extinguisher to fight a fire, he or she would risk getting injured while lifting the heavy extinguisher from the wall position. (Standard size extinguishers can weigh anywhere from 30 to 40 pounds, depending on the type (dry chemical, water, CO<sub>2</sub>). Smaller extinguishers typically weigh five to ten pounds.)

In response, PPPL held a Fire Extinguisher Safety Risk Assessment with the PPPL Fire Protection Engineer, the ESU Subject Matter Expert, Site Protection Division staff, and ESH&S staff. PPPL employees should be aware of the following points:

- There are several technical reasons why certain fire extinguishers are full-sized, instead of the smaller size.
- Lifting extinguishers from the ground may not provide any advantage over lifting them from the wall box.
- Some full-sized extinguishers are placed in the wall boxes simply because the wall boxes are already there.
- No fire extinguisher, whether it's on the floor, wall-mounted, or elsewhere should be lifted or used if an individual has any health or safety concerns about doing so. Only people who feel confident using them should do so in a fire situation.
- In the event of an actual emergency occurring nearby an individual who cannot lift the extinguisher, he or



she should call ext. 3333, pull the alarm, notify others in the area, and evacuate the building.

- Site Protection periodically provides classroom and practical training on how to use fire extinguishers. If you are interested in attending an upcoming session, please contact Sue Hill ([shill@pppl.gov](mailto:shill@pppl.gov)).

Site Protection staff would be happy to discuss these concerns further. ■

## NEW!!! High Static Magnetic Field Training

By Marissa Schaefer

The TFTR Test Cell Basement has a new addition called the PTOLEMY Lab. The PTOLEMY experiment is a collaborative effort between Princeton University and PPPL. The experiment uses high static electromagnetic fields to contain particles in a small volume. Superconducting magnets, like the ones found in MRIs, produce these high magnetic fields (2 Tesla/20,000 Gauss and above).

PPPL has created training on the hazards and controls of high magnetic fields and the training is required for anyone working on the PTOLEMY experiment or in high magnetic fields.

For training, please contact Marissa Schaefer via e-mail at [mschaefer@pppl.gov](mailto:mschaefer@pppl.gov) or by phone at ext. 2832.

# Lessons Learned – Golf Cart Tips over after Hitting Cinderblock at Another DOE Facility

By Jerry Levine (Based on DOE Lessons Learned Database)

## Lessons Learned Statement:

When doing routine tasks, remain aware and focused on the task at hand and on changing conditions to help prevent accidents. An operator was driving a golf cart along a familiar path and did not recognize that a cinderblock had been repositioned on a candlestick holding a boundary rope to prevent it from blowing over in the wind. The golf cart struck the cinderblock, tipped over, and pinned the operator's leg and foot to the ground.

## Discussion:

On August 15, 2012, an operator was driving a golf cart to his workplace. The operator had completed the required training for driving a golf cart and had traveled along that particular pathway several times before. The operator was attempting to make a right hand turn when the rear tire of the passenger side of the golf cart struck a cinderblock that had been moved to the outside of the candlestick next to the roadway. The cinderblock was being used to help hold a candlestick that was part of a boundary for a breathing air trailer. When the tire struck the cinderblock, the golf cart rocked first to the driver's side and then to the passenger's side of the cart and then tipped over completely, pinning the operator's leg and foot to the ground. It took the effort of the driver and another operator, who was close by at the time, to lift the cart up and free the leg and foot of the driver.

After the two operators righted the cart, they proceeded to call their supervisor. The operator was taken to the Central Facilities Area for a medical evaluation. An X-ray showed that the operator did not suffer any broken bones.

## Analysis:

The incident occurred due to the operator not being aware of a change in condition and not focusing on the task at hand. The placement of the cinderblocks was not what the operator was expecting. Also, the cinderblock may have been placed too close to traffic paths.

## Actions:

1. The operator received medical attention.
2. Notifications were made.
3. The cinderblocks were moved away from traffic areas.
4. Operators will review the golf cart safety training course to reiterate the importance of following procedure when operating a golf cart and to remember the importance of paying attention to changing conditions.

For us at PPPL, any questions on safety training requirements for operating club cars or gators should be directed to Sue Hill at x2227 or [shill@pppl.gov](mailto:shill@pppl.gov). ■

## Lost and Found

Site Protection maintains a safe for lost and found articles. Contact the Communications Center at Ext. 2536 to report lost or missing personal items. Found items may be brought to the Communications Center in LSB-131.

During the past year, many items were "found" and remain unclaimed, including several pieces of jewelry, bank/gift cards, a navigation device, a personal music device, several sets of keys, and several pairs of glasses. If you believe any of these items may be yours, please contact the Communications Center to identify and claim your item. Any cash that remains unclaimed is typically donated to the United Way at the end of the year.

Questions regarding Lost and Found may be directed to the Site Protection Division at ext. 3208. ■



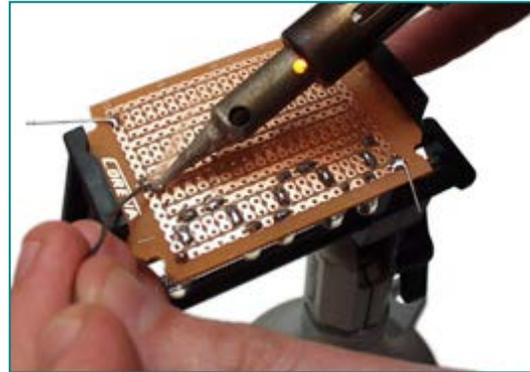


## LEAD SOLDERING WASTE DISPOSAL

**L**ead-containing solder is used widely at PPPL. Lead (Pb) has a low melting point and is inexpensive, making it a popular choice for solder. Lead is often mixed with other metals, such as tin (Sn), that also have low melting temperatures, to make solder. Solder commonly used at PPPL is typically 60 percent tin and 40 percent lead (60/40) or 63/37 Sn/Pb. For environmental reasons lead-free solders are becoming widely used. However, most lead-free solders melt at higher temperatures, making it more difficult to create reliable joints with them.

Lead soldering waste, including used solder sponges and contaminated rags, is considered hazardous waste because of the lead content. The U.S. Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP) dictate the requirements for the disposal of this type of waste. PPPL's Environmental Services Division (ESD) oversees the proper disposal of lead solder waste. Proper management of lead waste prevents lead from ending up in landfills where it can leach into the environment and reduces the amount of lead exposure in the workplace.

Occasional soldering activities that take place in well ventilated areas or have additional local exhaust ventilation usually do not pose an occupational hazard to the employee. However, it is prudent to implement safe work practices regardless of the frequency and duration of soldering. Questions about soldering safety should be addressed to Industrial Hygiene personnel at x2533.



### How do I handle Lead Solder Waste properly?

If you use lead solder, please contact ESD so we can assess your disposal needs and provide you with proper disposal containers. For this, or any other hazardous waste issue, please contact Maria Pueyo (X2213), Mark Swanek (X3391), or Rick Horner (X3201).

ESD will provide Laboratory personnel who work with lead solder a labeled container specifically for lead solder waste. These containers must also be managed according to USEPA and NJDEP regulations. Please ensure compliance with the following guidelines if you are issued a waste container for lead solder waste:

- The waste container must be located in close proximity to the soldering location.
- Only one lead solder waste container is allowed at each soldering location.
- The waste container must be properly labeled with the words "Hazardous Waste" and its contents. ESD will provide containers that are already labeled.
- The waste container lid must be kept tightly closed except when adding or removing waste from the container.
- When a container is full, complete a hazardous waste identification tag (HWID Tag). You may obtain these in the stock room or by contacting ESD at the above extensions.
- Request the pickup of your full containers by contacting ESD at x3380. ■



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