



## INSIDE

Winter 2015

Lessons Learned Program	1	Tools for Employees	4
Gym Germs	2	Lessons Learned	5
Office Safety: Power Strip Usage	3	STOP Program Impact	6
Identifying Counterfeit Electrical Products	3	Protective Eyewear	7
Safety Contest	4	Sustainable PPPL	8
Personnel Update - J. Plagge	4		

## Revamped Lessons Learned Program to Provide Lab-Wide Benefits

By Neil Gerrish & Jerry Levine

The U.S. Department of Energy’s Lessons Learned program is designed to share information such as accidents and injuries, equipment failure, and best practices. This information is disseminated through a reporting system that extends throughout the entire DOE complex. There has recently been an initiative to reinvigorate and expand the Laboratory’s Lessons Learned Program, which is documented in PPPL Policy P-083.

The program currently covers environmental, occupational safety and health as well as security information. These are used to help identify potential hazards, defective equipment, and solutions other organizations have found to solve potential problems. When we identify items that could directly affect operations or work at PPPL, those items are sent to the appropriate individuals to review and possibly distribute. In some cases, we assign action items that are tracked by staff in PPPL’s QA Division. An internal audit and a DOE review at the Lab last year resulted in several recommendations for improvement. One of the most notable recommendations was to expand the lessons learned program to cover a broader cross section of the Laboratory’s activities and departments. Expansion of this program can greatly benefit

areas such as maintenance, research, engineering, quality assurance, IT, and procurement, to name a few. A variety of information can and will be shared throughout the Lab.

It is critical that we capture not just what has been learned at other facilities, but lessons learned at PPPL as well. Incidents such as audit findings and some details involving accidents and injuries can be shared to help increase awareness. Some of this information may help others to avoid similar adverse events, and can help improve project processes. Documenting what we have learned in all areas of the Laboratory can be beneficial to PPPL and throughout the DOE complex.

Many departments already have mechanisms in place to receive information about a variety of operations. Expanding this program will help streamline these mechanisms in order to effectively distribute important information throughout PPPL and other DOE Labs. This may involve assigning action items to ensure that information is shared or tasks are completed. This will be an effective way to help ourselves and others in the future. ■

# Gym Germs: Don't Get More than a Workout

By Dorothy Strauss

**M**ost people go to the gym to improve their health but doing so can put you at risk for picking up a host of infections. Equipment used in quick succession such as free weights, weight machines, and cardio equipment, is particularly prone to being germ-ridden. The Clinical Journal of Sport Medicine found traces of rhinovirus, which causes the common cold, on 63 percent of machines even after they had been disinfected. The study found weight equipment was more contaminated than aerobic equipment. Still, you're better off working out than not, so what can you do to protect yourself?

## BRING YOUR OWN SUPPLIES

Bring your own water to avoid bacteria lurking on public water fountains. Wash your water bottle after every use. Avoid those with straws or pull-up spouts, or find a bottle with a pull-up spout that you can open with your mouth instead of your hands.

Bring your own mat (yoga, etc.) and don't share it. Wipe it down with disinfectant wipes or spray such as Lysol after use and let it air dry.

Bring your own towels – one for mopping up sweat and another for laying on benches and machines, making sure that the same side faces the equipment with each use.

Use a vinyl or plastic gym bag; germs won't stick to those materials as much as others. Clean the inside with disinfectant wipes or spray. Throw the gym bag in the wash at least once a week and put it through the dryer.

## AT THE GYM

Cover cuts and scrapes with Band-Aids. Don't shave at the gym or right before going. Even tiny abrasions can allow germs to enter your system. Staphylococcus aureus, also known as a staph infection, generally leads to rashes, pimples, boils, and other relatively minor skin irritations. However, MRSA (methicillin-resistant Staphylococcus aureus) is a type of staph bacteria that resists certain antibiotics. It is characterized by a painful red spot or bump, and can be much more serious.

Wipe down machines before and after use. Don't forget the lever used to change the weight stack! According to the Centers for Disease Control and Prevention (CDC), the norovirus, which causes acute gastroenteritis, can live on surfaces for days or even weeks. Klebsiella, which can cause pneumonia and meningitis, is also spread through contact with infected surfaces.

Wash your hands before and after your workout. Use hand sanitizer too.

Don't touch your face. The CDC says influenza viruses can live on hard surfaces for two to eight hours.

Bicycle seats and mats, especially those made of foam, should be wiped down and allowed to air dry before use.

Wipe down remote controls. If you're using your cell phone or iPad, wipe that down as well.

Avoid areas with poor ventilation. An air-tight gym is a breeding ground for airborne illnesses, including colds and influenza.

Stay at least six feet away from anyone who's coughing or sneezing.

## POST-WORKOUT

Wear flip-flops or shower shoes in the shower, sauna, and locker room. These warm, moist areas are often home to human papillomavirus (HPV) that can cause, among other things, plantar warts as well as candida, which is responsible for ringworm and athlete's foot.

If you must shower at the gym, use antimicrobial soap.

Don't sit on locker room benches unclothed.

Keep your shoes stored separately from your clothes in your gym bag. Keep your clean clothes separate from your used workout clothes. Better still, use two gym bags, one exclusively for clean clothes, the other for your shoes and sweaty garments.

Wash your hands again! ■

## Focus on Office Safety:

### Proper Use of Surge Protector Multi-Outlet Power Strips

By Glenn Anderson

Surge protector multi-outlet power strips can be used for providing power to various office equipment such as printers, computers, pencil sharpeners, and the like. However, these power strips should not be used to feed heavy loads such as coffee makers, toasters, microwave ovens, heaters, or refrigerators. In general, no single load in excess of 750 watts can be connected to any multi-outlet strip. Power strips must be plugged into a wall receptacle. Daisy-chaining of strips is not

allowed. You also should not plug them into extension cords! Of course, power strips should never be used outdoors or in wet areas. Take a moment to check the cord use in your office. Power strips should be replaced every ten years or sooner if damaged. For questions or to ensure a safe configuration, please contact Glenn Anderson, electrical safety specialist, at x3740. ■

## Don't Get Burned by Counterfeit Household Electrical Appliances

By Glenn Anderson

**Look for and inspect the mark:** Avoid electrical products if they are missing a mark from a recognized certification organization such as UL, CSA, or Intertek. Examine the mark closely to ensure it matches similar certification marks on other products.

**Be cautious of inferior packaging:** Counterfeit packaging is often poorly designed or has only partial illustrations. Misspellings and unclear printing on products and labels may also indicate a fake product. Check for a discrepancy between the contents of the product package and its description, as well as missing product information or package enclosures.

**Look for a recognized name:** A product that doesn't include a brand identifier or trademark may be a counterfeit. Brand-name companies want you to know whose product you're buying. Also look for missing return addresses or company contact information.

**Beware of huge bargains:** If the pricing seems too good to be true, it probably is.

**Buy solid products:** Check the "look and feel" of goods - fake products are often too light and too flimsy.

**Know your retailer:** If in doubt, buy only from reputable, well-known stores with clearly stated return policies. ■

UNDERWRITERS  
LABORATORY



INTERTEK



CANADIAN  
STANDARDS



### Report Safety Concerns, Questions, Ideas

Notify your supervisor (or HR if chain-of-command is a concern)

[SOS Box](#) - can be anonymous if you prefer. If you include your name, we will respond to you directly as well as on the website.

[Safety@pppl.gov](mailto:Safety@pppl.gov)

[Director's Suggestion Box](#)

FOR SAFETY DIVISION-SPECIFIC CONCERNS, PLEASE CONTACT:

Industrial Hygiene, Industrial / Construction Safety, Ergonomic Evaluations, Chemical Approvals - x2533 (Bill Slavin), x2531 (Neil Gerrish), or x2832 (Julia Toth)

Laser Safety / Scaffolding Review - x2533 (Bill Slavin)

Electrical Safety - x3740 (Glenn Anderson)

## Safety Contest

**Solve the cryptogram.** 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, March 20. Safety Division members are not eligible. ■

**TIDLMNGDTG THDDIJ LMDN H AXHTG EKGWGM D JI WGYJ MD YHLGJB.**

**- FMWSMX**

**D=N**

**Congratulations to Michael Yavor, who won the June ESH&S Newsletter Safety Contest!**

## Personnel Update

Officer James “Jim” Plagge started his career in Emergency Services as a volunteer firefighter for the Chatsworth Fire Department in Woodland Township in 1996. He held every line officer position and received his Emergency Medical Technician (EMT) certification in 2008. Shortly after, Officer Plagge became the Woodland Township Fire and EMS chief. After extensive training, he was hired as a Humane Law Enforcement Officer for the Burlington County SPCA in 2010. Officer Plagge currently works as an EMT for the Moorestown First Aid Squad, where he is an assistant chief as well as an EMT for the Mansfield Township Ambulance Corps. The ESH&S Department extends a warm welcome to our new Emergency Services Officer, James Plagge. ■



## Need a Jump?

If you experience car trouble while on site, help is close at hand. A vehicle repair kit for employee use is available in the Communications Center. It contains jumper cables, a general tool kit, a jeweler’s screwdriver kit, a multimeter, an air compressor, safety glasses, and other items that might return you to road-readiness. The kit also has a list of phone numbers for AAA as well as a local gas station and locksmith. ■

# Lessons Learned – Doors and Drawers Present Foot Hazards

By Jerry Levine (Based on DOE Lessons Learned Database)

## LESSONS LEARNED STATEMENT:

A recent injury event at another DOE Laboratory highlighted the fact that hazards we accept tend to become hazards we ignore until we experience an undesired outcome.

## DISCUSSION:

While approaching an access control booth inside a building, an employee executed most of his routine for opening this particular door by changing the locations of his hand-carried items and removing his badge from its holder.

The part he forgot was making sure his feet were outside the door's swing path. When he pulled the door open, the door's bottom edge caught the top of his soft-toed shoe. The soft upper part of his shoe provided almost no protection from the impact, and the impact partially removed a toenail without damaging the shoe.

## ANALYSIS:

This employee was familiar with the environment and with this door, and its safe operation. Prior to this event, he had regularly used the door without incident over the past several years, including shortly before this event.

As most people do when performing tasks like this, the employee relied upon position-movement sensation (proprioception) to keep himself outside the door's swing path. During such tasks, details like the proximity of a foot to a swinging door typically are not observed as long as the act is successfully performed. The hazard, risk, and any need for adjustment become apparent only after an undesired result is experienced.

A larger than normal door-to-floor gap was identified as a contributor to this injury. A short (approximately four-inch-long) ramp up from the lobby floor to the access control booth's threshold places the bottom edge of this door slightly more than two inches above the lobby floor that people stand on while opening the door. If the lobby floor were at the same elevation as the top of the ramp, there would be a more-typical door-to-floor gap and the door probably would have hit the shoe's sole or just above it. This likely would have resulted in a less serious injury or none at all.

Additional observations made it apparent that this hazard is not unique to this location. Other doors, especially external doors with thresholds, and even some office doors, were found to have similarly gaps.

The bottom drawers of some cabinets present a similar hazard because the gap is much smaller than on other cabinets. Users of such cabinets need to be especially aware of this configuration because the user has to stand directly in front of the cabinet (in the line of fire) while opening its drawers. Maintaining balance while bending over to grasp the handle on the bottom drawer typically requires the user to place one foot inside the distance the drawer needs to be opened.

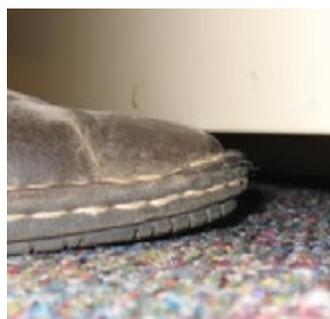
## RECOMMENDATIONS:

Be aware that task and situational awareness are necessary to complete even the most mundane activities safely.

- Taking a moment to stop and think before acting can renew your awareness of hazards that are being ignored as a result of successful repeating the task.
- Observing yourself or others involved in routine activities can reveal how close you or they are to a potentially dangerous result and identify preventive measures that will prevent that result. ■



The door-to-floor gap is slightly greater than two inches at this booth door



The bottom drawer of a cabinet with a small drawer-to-floor gap.

# STOP Program Participants Impact Safety

By Dorothy Strauss

**P**articipants in the STOP program have a direct impact on safety in a variety of ways. They prevent injuries, clarify expectations, improve work conditions, encourage safe performance, and strengthen our already-robust safety culture. Read on for a few recent examples of how STOP program participants make a difference at PPPL.

## POTENTIAL FALL AVOIDED / WORKER ENGAGEMENT INCREASED

A worker was seen standing with one foot on a ladder and the other on a strut. The worker indicated he was having difficulty reaching the work area so he and the observer moved the ladder into other positions. When that still didn't give him access, the worker came up with the solution of reaching the work area from above rather than below. Had this observation not occurred, it's likely the risky behavior would have continued.

## LACK OF KNOWLEDGE ADDRESSED

An observer conducting a STOP observation noted the job hazard analyses (JHAs) for various shops remained unchanged over several years. A conversation revealed that there was confusion among the workers about whether or not JHAs had to be renewed after a certain period of time. 'Lack of knowledge' is one of the main reasons given for unsafe actions and this observation helped to combat that problem. By conducting an observation and speaking with the workers, this problem was addressed and the workers learned that JHAs must be reviewed annually.

## OFFICE HAZARD MITIGATED

A supervisor encountered an employee attempting to reload a heavy duty stapler. It was clear the employee

was having trouble and did not know how to properly load the staples. The supervisor demonstrated how to load the stapler and explained how the employee's actions could endanger himself or others. They verified the unit's safe operation and the employee thanked the supervisor for showing him how to use this piece of office equipment.

## POTENTIAL CUT AVOIDED / PPE PROBLEM SOLVED

A worker was assembling metal hardware without wearing gloves, even though gloves were available for moving the completed piece. The worker told the observer that he found it difficult to manipulate small pieces of hardware while wearing the gloves that were available. The observer offered different gloves that allowed better tactility as well as protecting against cuts and abrasions.

The STOP program offers more value than simply "fixing" things. In some cases, as in the following situations, the observed situations were already safe but a STOP observation led to ideas for further improvement.

## GOOD IDEAS GENERATED

An observer conducting an observation at Booth 6 saw an officer assisting visitors. While a high-visibility vest was not required for that task, the observer realized that on days when many visitors might come to PPPL for planned events, wearing a high-visibility vest might be a best practice, and reinforce the importance of safety to guests before they even enter the site.

An observer saw equipment stored in a locked cage and noted that the equipment was properly labeled regarding its ownership and use. The observer

## 3 Ways to Submit STOP Program Data

### Google form:

[stopcard.pppl.gov](http://stopcard.pppl.gov) – access it from your phone; it is not behind the firewall

### Online form:

<http://www-local.pppl.gov/esh/STOPcheck.html>

### Paper cards:

available at various points around the Laboratory

STOP program data allows us to react to trends proactively. You don't need to find a violation to have an impact. In fact, two-thirds of observations report no findings. Reinforce these safe actions!



spoke with the responsible party about posting a CLASP sign in case emergency access to the cage is ever needed. The other person initially thought the labels were sufficient but they agreed that a CLASP sign would indeed be appropriate. This observation improved upon already-positive actions and, through the discussion with the responsible party, encouraged consideration of possible future events.

Reinforcing safe behaviors is just as important as correcting unsafe behaviors. Consistent, positive reinforcement promotes the continuation of safe work and impresses upon those observed that safety is important, even if the observed task is routine. A few words can have a lasting impact.

### **WORKERS RESPOND!**

A supervisor observed an employee working safely in an office. The supervisor noted the office had been cleaned up. Boxes on the floor had been removed and no longer posed a potential tripping hazard. The observer commended the employee on cleaning up the office and noted that the office is “safer” now

without the boxes and papers all over the place. The employee smiled and was grateful for the supervisor’s attention to her effort.

An observer watched subcontract employees conducting ground water sampling. The workers were aware of hazards, followed safety procedures, and were wearing appropriate PPE. While not unsafe, the work involved frequent bending and lifting. A discussion ensued regarding safe lifting techniques and possible ways for the employees to adjust their work areas to minimize the need for bending and lifting. The workers agreed to try some of the ideas they discussed and thanked the observer for his concern. The employees were thanked for working safely and considering ways to make their work safer.

PPPL is in the fortunate position of having a strong safety culture. Participating in the STOP program is one way to sustain that culture. STOP observations help solve real problems, mitigate potential injuries, and achieve positive effects. Training is available to everyone. Contact Dorothy Strauss if you would like to be part of the next training session. ■

---

## **Don’t Be Blind to Protective Eyewear**

**By Neil Gerrish**

**T**he human eye is perhaps one of the most sensitive organs in the human body. A single speck of dust is enough to cause pain and irritation. “Each day about 2,000 U.S. workers have a job-related injury that requires medical attention,” according to the National Institute for Occupational Safety and Health (NIOSH). The organization found that approximately 90 percent of those injuries could be prevented by wearing the proper eye protection. Everyone knows that eye protection prevents injury and that it is required for certain tasks. But you should also ask yourself whether you are wearing the proper type of eye protection for the hazard. Many injuries have occurred even though workers were wearing safety glasses.

It is important to realize that even small amounts of “non- hazardous” chemicals could cause injury. Wearing safety glasses is not enough protection. Liquid chemicals can easily splash behind safety glasses. In this case chemical goggles that seal to your face are more appropriate. When selecting eyewear

it is important to apply the proper type of protection to the hazard at hand. Some 94 percent of injuries to workers wearing eye protection resulted from objects or chemicals going around or under protective devices worn, according to the Bureau of Labor Statistics. This is why it is absolutely critical to choose the proper equipment. It is also critical to understand that hazards can change during the course of a job. When choosing the proper eyewear evaluate the following:

- The circumstances of exposure (What am I doing?)
- The mechanism of possible injury (How am I doing it?)
- Other protective equipment required (Hard hats, hearing protection, face shields)
- Personal vision needs

Eye injuries can cause long lasting or permanent vision damage. Always analyze the type of work for the hazards and adapt your PPE to the task. Reanalyze the situation if the circumstances change. ■



# Sustainable



## EPEAT, ENERGY STAR Electronics

### Tablet, Slate, and 2-in-1 Notebooks

The U.S. Department of Energy (DOE) requires purchasing environmentally preferred products (EPP) to promote federal environmental stewardship. The DOE requires 95 percent of all electronics purchased meet ENERGYSTAR and EPEAT criteria. These purchasing practices are critical to the PPPL Environmental Management System's (EMS) efforts to reduce our environmental impacts per Executive Order 13514.

New EPEAT guidelines have been added, including two-in-one notebook products, slates, and tablets. Two-in-one notebooks include those that resemble a traditional laptop with a manufacturer-included detachable display that can serve as an independent slate/tablet. Beginning in FY 2015, PPPL and other federal sites are required to procure, track, and report on all EPEAT electronics above and in the following categories:

#### IMAGING EQUIPMENT

- Printer
- Copier
- Multifunction Device (MFD)
- Fax Machine
- Scanner
- Digital Duplicator
- Mailing Machine



#### TELEVISIONS

#### COMPUTERS & DISPLAYS

- Desktops
- Notebooks/Laptops
- 2-in-1 Notebooks
- Displays (Monitors)
- Workstations
- Integrated Desktop Computers
- Thin Clients
- Slate/Tablets
- Servers (Energy Star Only)

Are you buying one of these products? Check the [EPEAT Registry](#) for products for EPEAT Gold, Silver & Bronze and [ENERGY STAR](#) for servers. Please ensure sustainable purchases for all items above when requesting, purchasing & procuring PPPL items. Please see [Environmental Services Green Purchasing Webpage](#) for guidance on other products.

Can't find an EPEAT, Energy Star or Sustainable product alternative? Contact Environmental Services @ x2599, [Lmeyer@pppl.gov](mailto:Lmeyer@pppl.gov) or [PPPL's Environmental Services webpage](https://sites.google.com/a/pppl.gov/environmental-services) (<https://sites.google.com/a/pppl.gov/environmental-services>).



This newsletter is issued by the U.S. Department of Energy's Princeton Plasma Physics Laboratory; under Contract No. DE-AC02-76CH03073. Correspondence and requests to reprint material should be directed to Head, ESH&S Office, P.O. Box 451, Princeton, NJ 08543. Interoffice correspondence should be addressed to Jerry Levine (MS-1, fax 609-243-3375, telephone 609-243-3439; or email to [jlevine@pppl.gov](mailto:jlevine@pppl.gov)).



Layout Design and Graphics: Kyle Palmer, PPPL Communications  
Princeton Plasma Physics Laboratory is a U.S. Dept. of Energy National Laboratory



U.S. DEPARTMENT OF ENERGY