The Infrastructure and Operational Improvements (IOI) Project has provided us the opportunity to clean up the Lab and remove the storage trailers at PPPL. Staff in every department will have to make tough choices regarding what is retained and what is excessed, scrapped, or disposed of. This is a good time to review the process specifying how property can be excessed, sold, scrapped, or stored in the warehouse.

Among the factors considered a reasonable basis for retaining and storing items are:

- Tagged or bar-coded equipment that must be processed in accordance with Department of Energy and PPPL requirements, policies, and procedures (may be excessed later)
- Spare and renewal parts for existing PPPL experiments
- Special equipment in serviceable condition (e.g., rigging fixtures) for existing experiments
- Serviceable equipment needed for emergency response (e.g., spill response material)
- Serviceable equipment used for site and facility maintenance

A truckload of material removed from the fourth floor of the RF Bldg. heads to the warehouse for disposition. (Photo credit: S. DePasquale)
Subject to approval and acceptance by PPPL’s Material Services Division (MSD) head, some equipment and materials (i.e., commodities) in the storage trailers and buildings may be retained and stored for future use depending upon the condition, value, or procurement lead time. An expected need must be demonstrated by identifying a specific requirement or providing evidence of an ongoing need.

To start the disposition, excess, or storage process, the first question to ask is whether or not the item meets a demonstrated need or provides unique research capability. We have several options available if there is a justifiable reason to retain the item. The item can be transferred for internal re-use, it can be placed in temporary storage (for fewer than 90 days), it can be stored as “equipment held for future projects,” or it can be entered into “common use” inventory. Any item that is sent to the warehouse for storage must have a Storage Request Form completed before delivery. Contact the staff in the Material Services Division for instructions regarding the form. It is available on the Material Services website. Storage items must be properly packed for warehouse storage. Any item transferred to another area for re-use requires completion of a Transfers and Excess Form. Contact the Property Office for help with this form, also available on the MSD website.

After a decision has been made to excess items, contact the Property Office for guidance before removing the items. In many cases a Transfers and Excess Form is required. The Property Office has several options available to route items through the excess process. If the cost of processing exceeds the potential value, items could go directly to disposition through the Property Office after a HazMat review. Some items may require dismantling before recycling or disposal. Items that are serviceable, safe, or repairable may go through the DOE and Federal Excess Property Screening. The screening process can take 21 days or more depending upon the type of equipment. Some items will go to the school donation programs either through the Computers for Learning (CFL) or Lab Equipment Donation Program (LEDP). Other items may be transferred to another DOE site or federal agency. Equipment that passes unclaimed through the federal screening can go through a state surplus

Consider this flowchart as you determine the disposition of items.
property screening. If the item is still unclaimed, GSA may direct it to a public sale screening. This can add another 35 to 40 days to the process. If items are not sold after the public screening, they may be directed to the disposal or recycling process. The disposition process can take 60 days or more for some items. Departments are encouraged to help by starting early and contacting the Material Services Property Office for assistance and guidance (see below).

There are also some handling concerns for equipment entering the excess or storage process. Many of the items have been packed in cabinets or placed on shelving in a way that makes it more likely for them to be dislodged. Please make sure to safely move items out of the way before starting. This is especially a concern in storage trailers that have many items stacked on top of one another. Another concern is anything that will require HazMat review before processing. In most cases, this should be completed before the item is moved out of its current location. The Safety Data Sheet should be located and included in the documents sent to Environmental Services and the Property Office.

All PPPL employees and subcontractors are asked to make sure only trash is placed in the garbage dumpsters. All electronics being disposed should go to the warehouse as excess, and scrap metal must be placed in the appropriate recycling container. Please contact Material Services for assistance throughout this project.

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**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
Director's Suggestion Box

MATERIAL SERVICES DIVISION CONTACTS:

Excess Property Recycling & Disposal & Pick-ups: Kyron Jones (x3326)
Offsite Shipments & Export Control: Jason Wohlberg (x3572)
Receiving In-Bound Equipment, Materials & Supplies:
Margaret Carpe (x3568)
Mail & Package Distribution & Receiving: Jose Rodriguez (x2532)
Furniture/Warehouse Services/Storage and Distribution & Receiving: Pattie Potts (x2328)

Fleet Management/Dispatch and Mobile Equipment Repairs: Adam Salmon (x2716)
Office Supplies/Safety Shoes/Stockroom, Supplies & Contracts, & Spares Operations: Jim Conover (x3573) or Marisol Ovalles (x2714)
Property Administration/U.S. Government Personal Property Tracking and Control: Shanda Carmichael (x2567)
Property Loans and Collaborations (domestic and international): Fran Cargill (x3396)

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**Silica Training Now Available**

By Neil Gerrish

The Occupational Safety and Health Administration (OSHA) has issued a final ruling to curb pulmonary diseases caused by worker exposure to respirable crystalline silica. In response to this, PPPL's Safety Division has developed a new training module now available on the Human Resource's Training page: http://hr.pppl.gov/OnlineTrainingList.html.

This training is required for any worker who cuts, grinds, drills, or performs construction tasks that could lead to an exposure to silica. The training takes approximately 20 minutes to complete and must be retaken every three years. Questions regarding the training can be directed to Neil Gerrish or Michael Gonzalez.
Observe Barricade Tape

By Jerry Levine

Please remember that danger and caution barricade tapes and chains are used to alert us to temporary, immediate, or potential hazards. They should never be crossed, unless you have been granted access by an authorized employee (e.g., because you were part of a pre-job brief for the area and are protected from the hazards).

More information can be found in PPPL procedure ESH-002 (http://bp.pppl.gov/procedures/esh002.pdf) and on the SafetyWiki (http://safetywiki.pppl.wikispaces.net/Barricade+Tape).

External Lessons Learned – Employee Badge Caught in Document Shredder

By Jerry Levine (Based on DOE Lessons Learned Database)

SUMMARY:
Situational awareness while working around office equipment is essential to ensure a safe work environment is maintained. All potential hazards must be considered prior to performing any task.

DISCUSSION:
At another DOE site, an employee accidentally energized a shredder machine while attempting to plug in a desk fan. The employee’s badge was inside the point of operation of the shredder, which started up and began to pull the badge and employee into the machine. The lanyard used by the employee was designed to break away should anything catch the badge before any injury to the employee can occur. In this case the lanyard did separate, thereby preventing injury to the employee. The badge and badge holder had to be replaced.

ANALYSIS:
The employee had recently received the shredder in the office to replace a smaller shredder that had controls in a different location on the shredder unit. While reaching by the shredder to plug in another electrical
device, the employee’s arm or hand brushed the switch of the new machine. The badge of the employee was in the point of operation of the shredder and began to run, damaging the badge. The employee reflexively pulled back from the machine when the breakaway feature of the lanyard separated, releasing the employee from the badge and preventing injury.

Even though the employee is normally very situationally aware, the new machine with controls located in a significantly different position created a potential unsafe condition. The controls on the new machine were located on the opposite side of the point of operation from where the old machine controls were located. Reaching near the older machine, the employee’s hand or arm would not have come within 10 inches of the control. The controls on the new machine were very close to the outlet into which the employee was attempting to plug another device.

**RECOMMENDATIONS:**
- Be aware of your situation at all times around all office machines and their point of operation.
- Always wear lanyards that are capable of breaking away should they get caught on machinery, ladders, doors, handles, etc.

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**External Lessons Learned - Avoiding Vehicle Accidents**

By Neil Gerrish

One of the most hazardous activities that everyone engages in is operating a vehicle. Numerous incidents over the past year have been reported to the Occurrence Reporting and Processing System (ORPS), used by the Department of Energy. The ORPS system is a clearinghouse that allows the DOE to track and trend generic occurrences and analyze them to provide operational improvements.

Incidents occurred as a result of inattention, operator violations, and fatigue. In several instances at DOE facilities, workers exited vehicles and left them in gear. In one report, the driver parked the vehicle and then exited it to talk to a coworker. He did not turn it off or ensure that it was taken out of gear. The unattended vehicle struck a building. In a similar incident, a service driver parked a truck and forgot to place the transmission in ‘park.’ He entered a building to obtain a signature on some paperwork and, when he returned, found the vehicle had rolled approximately 30 feet due to a slight grade. Though minor or no damage was reported in these circumstances, the incidental costs as well as the loss of a vehicle due to repair could have been avoided.

At the Idaho National Laboratory (INL) an ambulance collided with a firetruck. The firetruck was the lead vehicle and had slowed due to wildlife in the road. The driver of the ambulance did not realize that the lead vehicle slowed down and ran into the back of the engine. No injuries were reported and all occupants were wearing seatbelts but both vehicles were taken out of service for an extended period of time to repair the damage.

In a separate incident at INL, a worker was driving his personal automobile in a parking lot when he was blinded by sun glare and hit two pedestrians. Both pedestrians saw the vehicle enter the parking lot and assumed the driver had seen them. The driver was traveling approximately 10 miles per hour and immediately stopped after he realized what happened. Both pedestrians were seen by medical personnel and were fortunate not to be injured.

Traveling at night poses a slew of additional concerns. Working multiple shifts or long hours can compound the hazards and those who do so should always acknowledge their limitations. A worker at the Nevada National Security Site was injured in an accident when he fell asleep at the wheel. Extreme fatigue was attributed to long work hours and a multi-hour commute.

These incidents show the potential consequences of distractions and the importance of proper operation. It is crucial to pay attention to the road and always be aware of pedestrians, obstacles, vehicles slowing, and properly shutting down a vehicle.
Be Aware of Specific Requirements for Sling Protectors

By Neil Gerrish and Michael Viola

All personnel who do or could get involved with any type of crane or other lifting operation should be aware that new guidance from the Department of Energy regarding sling protectors will be forthcoming due to a number of accidents that have been caused by cut slings. This guidance states that “synthetic slings shall be protected at abrasion points and points of contact that have the potential for cutting or otherwise damaging the sling. Currently only SlingMAX’s CornerMax and Ashley Sling’s ‘High Performance Edge Lifter’ products comply with the new guidance on the required rating for the load.

Workers are asked to review all sling storage areas and determine what cut protectors best suit their needs. They should provide their supervisors with a list of load-rated protectors if necessary. Cut fire hoses or any other secondhand materials will not protect slings from the excessive force applied during a lift. These may only be used to soften and protect equipment from sling contact. They may not be used to protect the sling itself.

There are other products that may be suitable for protecting slings against exposure damage other than cuts and only qualified persons must select these devices.

Anyone with any questions, please contact Lift Manager Michael Viola at extension 3655.

Locate the Stepstool in Your Area (Or Buy One if Needed)

By Bill Slavin

A comment made frequently in the CY16 safety culture surveys was that workers do not know whether or not a stepstool is located in their office area. The STOP program tells us that one of our most common reasons for risky behavior is “convenience over safety.” If you need to reach something at a height, do you know where to find a stepstool . . . or do you reach for a chair because it is convenient?

If you do know where a stepstool is located, make sure others know as well. Be sure to put it back in the same location after using it so that others can find it quickly, and avoid the chance that someone will take a risk because he or she cannot find the right equipment.

If there is not a stepstool in your area, talk to your PCard holder or cost center manager and get one. They are inexpensive and could save someone from a serious injury caused by climbing on something that is not designed for it. There are no special rules or requirements for purchasing stepstools, but be sure to get one that is sturdy. Check the weight restrictions in the item description, as some of the lightweight stepstools may not support all the workers in your area. Once you get the stool, let everyone know that it is available and where it will be kept so that everyone can “safely reach new heights.”
Safety Contest

Identify the safety-related item in the close-up photo below. The names of all entrants who correctly identify the item will be entered into a drawing for a $20 gift certificate to the PPPL Plasma Hutch. Submit your entry to dstrauss@pppl.gov by Friday, April 21. Safety Division members are not eligible.

Congratulations to Atiba Brereton, who won the fall 2016 ES&H Newsletter contest!

Quarterly SOS Box Contest

Everyone who submits a valid actionable safety post (specific enough to fix, with the submitter’s name included) between January and March 2017 (and April-June, July-September, October-December) to ES&H via the SOS Box will be entered into a drawing for a chance to win a $20 gift certificate to the Plasma Hutch!

Congratulations to Renee Sullivan, who won the SOS Box contest last quarter!
Resources Abound for Small Group Safety Meetings

By Bill Slavin

Everybody at the Lab should have the opportunity to participate in small group safety meetings throughout the year. This is a chance for employees to learn about safety issues and lessons learned that may apply to them, and for employees to discuss concerns they may have about their work. The Safety Division recommends a minimum of quarterly or semi-annual meetings for office workers and quarterly, monthly, or more frequent meetings for field workers. They can be held as part of a regular staff meeting or as a stand-alone discussion.

There are a large number of resources available that make it easy to find topics or materials to discuss at these meetings:

- Start with the SafetyWiki. Any of the topics found here can be used for a safety discussion. There is also a SafetyWiki page on Small Group Safety Meetings that covers much of this article.
- The Safety Champions Committee has assembled a library of short videos that make for excellent safety discussions. (My personal favorite is “Safety at Work.”)
- Check out past Safety Notes of the Month. They are short and cover important topics at PPPL.
- The ES&H Newsletter is also a great source for current, PPPL-specific topics. They are published quarterly, and they are guaranteed to have enough information that pertains to you for possible discussion topics.
- The Safety Review Committee has put together a presentation on Corridor Conduct and has contributed information for many of the topics on the SafetyWiki for small group safety meetings such as “Signs.”
- There are a number of brochures created by the Safety Division that can also be printed and used. One of the most useful of these is the “New Employee Brochure” that covers some basic topics regarding the safety program, including Integrated Safety Management, Stop Work Authority, and Barricade Tape. This is important information that can be refreshed even with long-term employees.
- Last, but not least, the Safety Division personnel are here to help. If you would like us to assist you in finding topics, lessons learned issues that may apply to your group, or want us to lead or participate in a discussion, please contact us at safety@pppl.gov.

Dispatch Vehicles Available for Employee Travel Needs

By Rick Rainey

The Transportation Office in the Material Services Division provides PPPL employees with access to government-owned motor vehicles for their work. The Laboratory has two motor pool dispatch vehicles – one sedan and one minivan – available for use by PPPL employees when required for official Laboratory purposes. A valid state motor vehicle operator’s license is required to use the dispatch vehicles. After receiving trip authorization, vehicle reservation requests are made through the Transportation Office (email vehicle-dispatch@pppl.gov).

After reserving a vehicle, employees need to visit the Transportation Office located in the warehouse (MCSB #104) on the day of departure to pick up the
keys and complete the sign-out documents. Office hours are 7:30 a.m. to 4 p.m., Monday through Friday. The operator is required to get a brief overview of the vehicle to become familiar with the controls and should learn how to use the government-issued WEX card for fuel purchases.

Each vehicle is equipped with an emergency roadside kit and is maintained in accordance with GSA preventative maintenance schedules. Emergency repair work should rarely be needed. In the event of a vehicle breakdown, operators should contact PPPL’s Transportation Office at 609-243-2716 or -3572. During non-business hours, call the number on the WEX card, 1-866-939-4472 or 1-866-400-0411. These numbers are located in the Fleet Services Card User Guide provided with each vehicle. If an employee is involved in an accident while using a dispatch vehicle, the employee should follow the instructions in the Motor Vehicle Accident Reporting Kit located in the glove box.

When the trip is completed, the employee must return the vehicle to the Transportation Office. Remember to keep all receipts and return them with the vehicle keys. Also notify the office of any issues with the vehicle. There is a key return box located next to the entrance door on the north side of the warehouse for after-hours returns. If you have any questions regarding dispatch vehicle use, contact Adam Salmon at extension 2716 or asalmon@pppl.gov.

Next Safety Culture Survey Coming in April!

If you receive an invitation to participate in the safety culture survey in April, please take a few moments to share your input. Survey feedback is used to determine where to focus our resources to improve the Laboratory’s safety. Thank you!

PPPL ES&H Newsletter
LLNL Identifies Lanyard Hazards

By Neil Gerrish

Lawrence Livermore National Laboratory recently submitted a lessons learned report identifying hazards associated with identification badge lanyards. Tests were conducted on three separate LLNL lanyards. These tests found that less than 10 pounds of force caused the lanyard to break away. When the slide as pictured at left was placed between the breakaway and the weight, the lanyard was able to support 60 pounds of weight without breaking. Even when the weight was dropped at a height of 2 inches the device did not operate. A 60-pound force is enough to pull a surprised worker into a piece of equipment. Since a lanyard is worn around the neck, being caught can cause significant injury.

Since PPPL employees, contractors, and students must conspicuously display their badges at all times, this report serves as an important reminder that certain precautions should be taken when wearing a lanyard. Your lanyard:
- Must have a breakaway device that separates when minimal pressure is applied.
- Should not be altered in such a way that the breakaway device is defeated. (i.e. tied in a knot)
- Should be removed when operating machinery, ascending or descending ladders, or working at heights. This will reduce the chance of it catching on anything and causing injury.
- Can be replaced by Site Protection if necessary.

What the STOP Program Is and How It Works

By Dorothy Strauss

The safety culture survey results from 2016 suggest an incomplete understanding of the STOP program’s methods and aims. The STOP program is predicated on the belief that humans create unsafe work conditions (rather than unsafe work conditions coming into being spontaneously). It is designed to minimize hazards by observing worker behavior, reinforcing observed positive safety behavior, and correcting any observed unsafe behavior. This is achieved via simple observation (watching work as it is conducted) and conversation (relaying to the worker(s) what, specifically, was done well and what, if anything, could be done more safely). Determining the reason behind any unsafe behaviors is critical. One principle of the STOP program is that workers do not engage in unsafe behavior to court injury but because there is a barrier to working safely. Through conversation with the observer, the barrier (lack of storage, ill-fitting PPE, ineffective training, incomplete knowledge of rules, unattainable tools, etc.) can be identified and removed. Once the conversation is over, the observer, away from the observed worker(s), fills out a STOP card and submits it to the ES&H Department. The worker(s) are not identified by name, title, or even gender, if possible, even if safe behavior was observed. The cards are looked at in aggregate to identify behavior trends across the Laboratory. If, for example, multiple cards are received that indicate there is confusion regarding a particular procedure or that a particular piece of equipment is hard to obtain or difficult for workers to use, this indicates a problem that PPPL should rectify on a more global scale. Results are achieved through consistent application of the program’s methods of observation and conversation to reinforce or redirect worker behavior. Training is available to everyone. Please contact Dorothy Strauss for more information.
Chemicals and Ergonomic Issues

By Bill Slavin

The first two hazards on the JHA checklist will be covered in this article, but first a reminder that the JHA form and procedure ESH-004 have recently been updated to revision 7. Make sure you are using the most current version.

Chemicals: Chemicals may be found in many forms and present many hazards. The three main forms of chemicals are solid, liquid, or gas. Common solids include sheet stock metals, welding rods, grinding wheels, fiberglass insulation, and lead bricks or solder. Common liquids include degreasers, spray paint, lubricants, RTV (caulk), and cleaners. Common gases include nitrogen, helium, sulfur hexafluoride, and oxygen. Hazards vary from substance to substance and from manufacturer to manufacturer but can be flammable, toxic, corrosive, and explosive. Always refer to the label on the container and the Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) for information on the hazards and proper controls. Eye and skin protection is typically required, but be sure that the gloves to be worn are protective against the chemical being used. Whenever possible consider using lower-hazard chemicals; in many instances, a non-hazardous or less hazardous alternative exists. Users of chemicals are required to take the PPPL Hazard Communication Training available from Human Resources. Consult with the Safety Division if questions arise regarding the safe use of chemicals or refer to the SafetyWiki for more information.

Ergonomic Issues: Ergonomics is the interaction of humans with the work environment. For practical purposes, ergonomics involves how well the tool or job is suited for a human to perform it. Excessive stress on the body will cause injury and must be avoided. Ergonomic stresses and injuries occur in both office and field types of work. Common issues include:

Manual lifting: While there is a maximum lifting limit of 50 pounds, that weight will likely still be too heavy for many people and would only apply between the knuckles and the shoulders. Lifting from the floor or over the shoulders drastically reduces the amount of weight a person can lift. Repetitive lifting of lighter weights can have the same or even more harmful effects than a single heavy lift. Twisting or lifting loads further away from the body can also increase the risk dramatically. Utilize lifting aids such as winches, forklifts, hand trucks, or another person to reduce the stress on the body.

Repetitive Motion: Continuous or frequently repeated motions of the body cause injuries called “cumulative trauma disorders (CTDs)” or musculoskeletal disorders (MSDs). One of the most common of these is carpal tunnel syndrome. To use carpal tunnel syndrome as an example, repeated flexing of the wrist and fingers causes swelling around the nerve passageway in the wrist (the carpal tunnel). This swelling can cause pain and numbness in the fingers. Similar injuries can occur with other portions of the body (such as “tennis elbow” or muscle and back sprains). Use well-designed tools, take frequent rest breaks, mix up the tasks, perform stretching exercises, and plan the work to avoid these injuries.

Body Position and Stress: The human body is very flexible, but when forced into unnatural positions for long periods of time, injuries can occur. Working in cramped spaces, using poor posture, sitting in an uncomfortable chair, and maintaining a single position for a long time can cause this type of injury. Try to position the work to better fit the relaxed position of the body. Construct platforms to access hard-to-reach areas rather than working with arms overhead. Rest and stretch to break up static postures.

Contact Safety for evaluations of workspaces and jobs that may create ergonomic concerns or check out the SafetyWiki for more information.