PPPL ES&H Newsletter

INSIDE

Spring 2016

Understanding Workers' Compensation Can Alleviate the Stress of a Workplace Injury

By Julia Toth

Sometimes employees may hesitate to report an injury to avoid paperwork, unwanted attention, or, avoid the consequence perceived as the least desirable: having to navigate a workers' compensation claim. However, you might not realize that workers' compensation is an employee benefit, not an added burden. It is in your interest to report any and all injuries and understanding the workers' compensation process can alleviate the stress of managing a workplace injury.

WHAT IS IT?

Workers' compensation, or "workers' comp," is an insurance policy that benefits employees who become hurt on the job or contract an illness as a result of their work. If you become injured or ill from your job, you file a claim for compensation through a workers' comp insurance company. This enables all necessary medical care to be covered by the University. The current workers' comp insurance company for PPPL is the PMA Insurance Group.

WHAT ARE THE BENEFITS?

The benefits of workers' comp include paid medical care (doctors' visits, X-rays, diagnostic testing, prescriptions, surgical procedures, and hospital stays), wage benefits, permanent disability, or death benefits. Each state varies regarding covered benefits. If you are curious about New Jersey coverage you can visit the following website for additional information: http://lwd.dol.state.nj.us/labor/wc/wc_index.html.

ARE YOU ELIGIBLE?

To be eligible for medical treatment under PPPL's workers' comp benefits, you must fulfill the following requirements: You must be a PPPL employee, you must have been injured at work or as a result of your job-related duties, you must be under the care of the OMO, and the claims administrator (PMA Insurance Group) must determine that your claim is actually work-related. Additional information regarding disability pay, end of benefits, or wage replacement, can be found here.

THE PROCESS

It is important for you to notify the OMO and your supervisor as soon as possible after you are injured at work. This will assist with the workers' comp process. (Even if you assume the injury is minor, you should still report it in case symptoms worsen later.) If you are approved for workers' comp, you will be notified by Jennifer Leggett, Benefits Specialist in HR. Employees are also welcome to call Jennifer at x2220 with any issues so she can expedite a resolution.

If you are not sure if an injury is work-related, you can still go to the OMO for an evaluation. No injury is too minor to report to the OMO. If, after further evaluation, it is determined that the injury is not work-related, you will be referred to your own health care provider. Failure to report workplace injuries to the OMO could result in workers' comp not covering the expenses. In addition, if your personal medical insurance provider suspects that the injury is work-related, it will not cover the expenses either, resulting in potentially significant out-of-pocket medical costs to you.

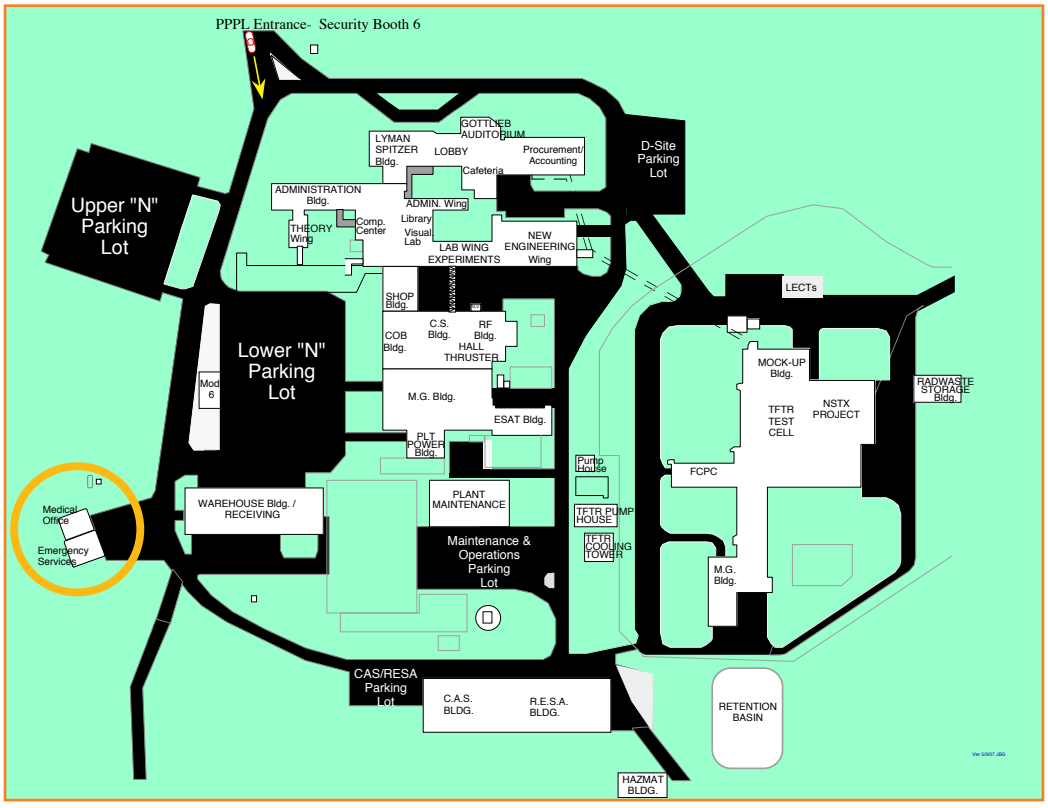
If your claim is approved, the PMA Insurance Group suggests maintaining contact with your supervisor and the OMO throughout your care. This will keep everyone up to date regarding your progress. Not only should your claims adjuster contact you with updates, but you should also contact the adjuster with updates. To further support a smooth transition back to work, let your claims adjuster, supervisor, and OMO know when your doctor has discharged you.

The Princeton University Office of Risk Management has reported a consensus of contentment for users of our current workers' comp system. This system offers employees various doctor choices and enables a change of doctor if you are unsatisfied. The goal of this program is to make sure employees recover and can return to work fully able to perform their duties. The workers' comp process can seem intimidating to some, but it's a process put in place to help workers.

REPORT NEAR MISSES

Sometimes incidents occur, but no injuries result. This is referred to as a near miss. If you are involved in or witness an incident in which injuries were not sustained, contact the Safety Division (safety@pppl.gov) or use the SOS Box to report important information so future incidents can be avoided. You are not obligated to report to the OMO if you or others were not injured during a near miss.

If you have any questions regarding an injury, please contact the OMO at x3200. The OMO is open 8 a.m. to 2 p.m. Monday through Friday.



Proper Handling of Nitrogen and Dewars Critical to Safety

By Neil Gerrish

The use of nitrogen dewars is very common here at PPPL. As such, it's important to know that nitrogen is extremely cold, and can cause burns. Very small amounts of liquid can vaporize into large volumes of gas, presenting an asphyxiation hazard. Safety precautions must be followed at all times to prevent injuries and damage to equipment. Anyone who handles or plans to handle this material must be properly trained. "Compressed gases and cryogenic liquids" training is available through Human Resources.

Prior to handling liquid nitrogen, always don proper personal protective equipment (PPE). Protect your eyes and face with goggles and a face shield. Use insulated gloves to protect your hands. Gloves should be loose fitting so that they can be thrown off quickly if liquid splashes on them. Avoid any contact between unprotected skin and objects cooled by liquid nitrogen and avoid breathing cryogenic liquid vapors in any quantity.

You can handle nitrogen only once you are trained and wearing appropriate PPE. Dewars allow for safe storage and transport but must be moved carefully. Dewars should only be transported with proper handling equipment, usually hand trucks specifically designed for safe lifting and conveyance. Never attempt to lift or roll a dewar. Dewars are very heavy and attempting to move one without the proper equipment can cause damage or injury and could potentially release the material. Improper use and rough handling of containers increase your chances of an incident occurring. In some cases, safe movement may require two people. Always wear safety shoes while handling these containers. Sneakers or any type of open-toed shoes are not proper foot protection.

Nitrogen dewar

Filling of dewars must be completed in designated areas and only into approved low-temperature containers. These containers are designed to withstand rapid and extreme changes in temperature. They should be filled slowly to minimize thermal shock on the container as it cools rapidly. Never use open pail-type containers or unapproved dewars. Never block vents as a build-up of pressure can occur, resulting in bursting or damage to the container. Inspect dewars periodically to ensure that a build-up of ice or frost does not interfere with the vent


Cart approved for nitrogen dewar transport

A release of large volumes of nitrogen can displace oxygen and create an asphyxiation hazard. Never ride an elevator with a dewar for this reason. Transferring nitrogen between containers, leaking valves, and tank venting can all lead to an oxygen-deficient atmosphere. Nitrogen-holding containers should be stored only in well-ventilated areas. If ventilation is limited or not available in storage areas, oxygen monitoring is required. If you have any concerns or questions, contact the Safety Division so that the area can be evaluated. Additional information can be found in Chapter 3, Cryogenic Safety, of the Safety Manual.

Don't let nitrogen's frequent use here allow you to become complacent about its hazards. Remain focused when using or transporting nitrogen. If conditions change, immediately stop and reevaluate the hazards. Training, proper PPE, and careful handling of nitrogen-holding containers are all critical to your safety. ■

Safety Contest

The first picture below shows an office environment with several safety and ergonomic hazards. The second photo shows the same office with these hazards removed. Identify the improvements (be specific!). Submit your answer to dstrauss@pppl.gov by Friday, April 29. The names of all entrants who correctly identify the mitigated hazards will be entered into a drawing for a $20 gift certificate to the PPPL Plasma Hutch. Safety Division members are not eligible.

Congratulations to Irving Zatz, who won the fall 2015 ES&H Newsletter contest!

Before

After

New Website Eases Search of Lessons Learned

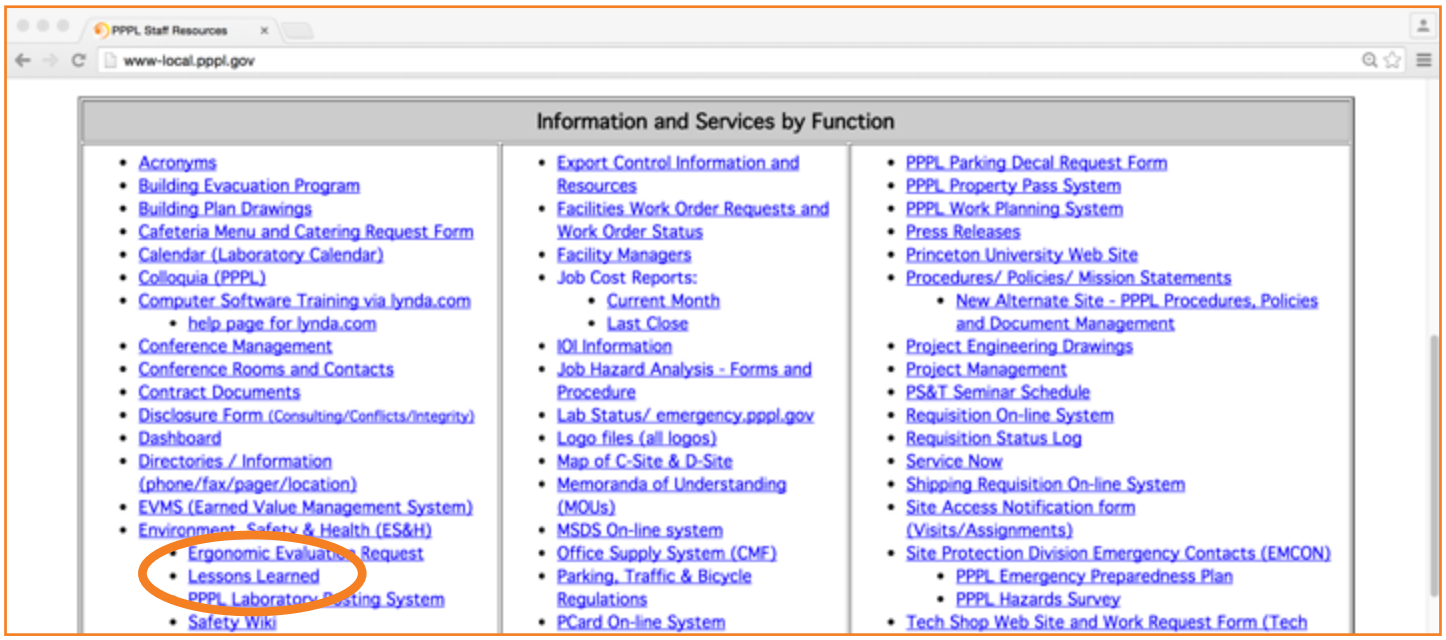
By Neil Gerrish

Lessons learned are collected and disseminated throughout the Department of Energy (DOE) complex to raise awareness and prevent similar incidents and injuries. A new website has been launched at PPPL to make accessing both internal and external lessons learned quicker and easier.

Users may access the website at http://fmp-srv/fmi/webd#LessonsLearned. Links are also available on the PPPL Employee Services homepage in the 'Information and Services by Function' block (look for "Lessons Learned" under Environment, Safety, & Health (ES&H)) and from the ES&H homepage under Quick Links. Once you have accessed the website, a login window will appear. You must select 'guest account' as your PPPL credentials will not work. You will then be directed to the lessons learned database homepage where you can perform a quick find, an advanced search, or browse all records. A quick find allows users to search the entire database for any reports that have been distributed by the DOE or included by PPPL. An advanced search allows users to select and search by keywords, work functions, or between a set of dates.

All records within the database contain a brief description of the incident but you can also download the entire DOE lessons learned document, including graphics, for additional detail. This database will be a useful tool not only for those seeking job-specific information but also for those discussing safety at staff meetings or planning a small group safety meeting.

Questions about the lessons learned database can be directed to Neil Gerrish (x2531). ■

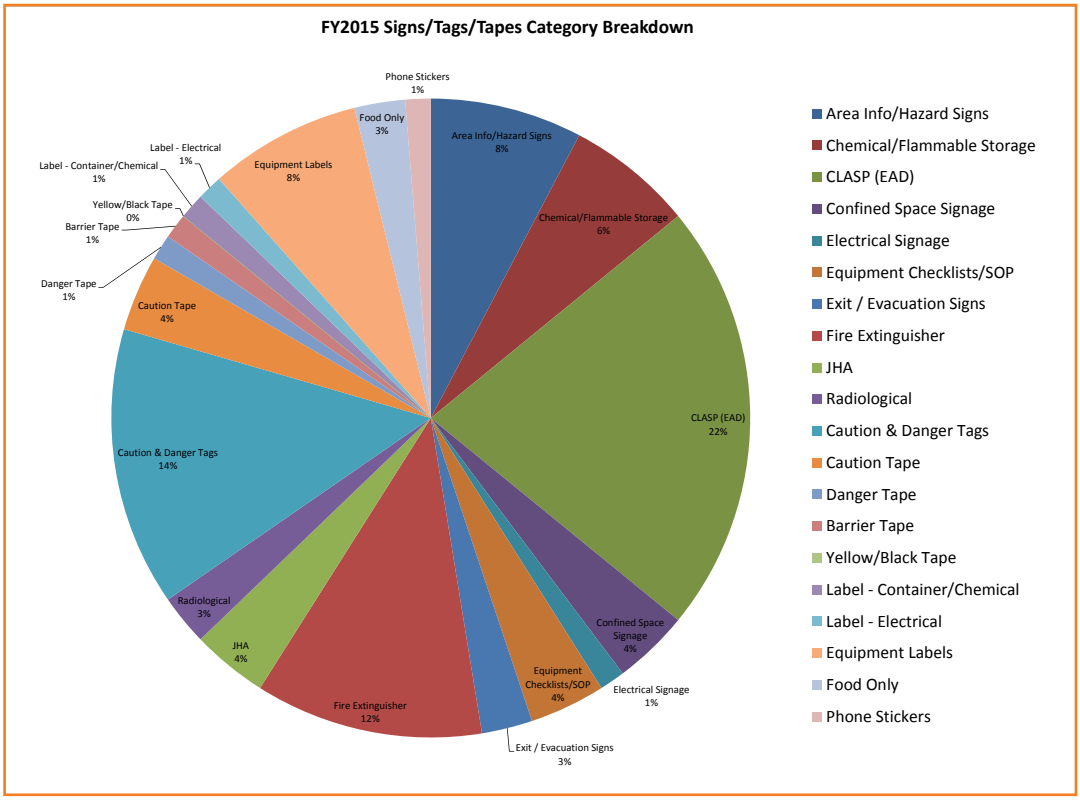


Walk-Throughs Identify Signs/Tags/Tapes as Area for Improvement

By Dorothy Strauss

Twice a month, members of the ES&H Department, area managers, senior managers, DOE representatives, and others perform management safety walk-throughs (MSWs) of areas of the Laboratory. Findings are assigned to responsible parties and tracked by the ES&H Department to completion. For fiscal year 2015, issues related to signs, tags, and tapes comprised 22 percent of all findings. Of that 22 percent, almost a quarter (22 percent) was related to insufficiencies in Comprehensive Laboratory Assessment and Signage Program (CLASP) signs, 14 percent involved caution and danger tags, and 12 percent involved fire extinguisher signs.

CLASP signs are displayed on buildings, areas, or rooms with occupational hazards. They alert personnel and visitors to the specific hazards and requirements located in each area as well as whom to contact for authorization to enter or use the area. These postings do not replace the required Danger or Caution signs or signs for specific hazards. Typically, issues with these signs involve out-of-date contacts or inaccurate hazard information. Those who need to create new or update existing CLASP signs can do so at http://eshis-labpostings.pppl.gov/.



The majority of issues (73 percent) with Caution and Danger tags involved electrical work. Correct application of these tags is critical to clearly communicating the underlying hazard. While both warn of potential personal injury, Danger tags (and red locks) are to be used only for lockout/tagout (LOTO) of energy-isolating devices whenever maintenance, servicing, or modifications are done on machines, systems, or equipment (see Procedure ESH-016). Caution tags (and any accompanying locks) indicate the status of systems, components, or equipment that are not being worked on but require restrictions or limitations, or will experience an abnormal condition where violating the tag may result in injury to personnel or damage to equipment (see Procedure ESH-001).

Fire extinguisher signs should accurately depict extinguisher locations. If a new extinguisher is mounted, a sign should be placed indicating its location. Likewise, if an extinguisher is moved to a new location or removed from service, its sign should be relocated or removed as well. Please contact the Site Protection Division regarding these signs.

Don't wait for the next MSW to consider the postings in your area! Missing, misplaced, inaccurate, or unnecessary safety signs should be reported to your Area Coordinator or to the ES&H Department (safety@pppl.gov). For more information, please refer to ESH-002. ■

Ensure Proper Posting!

With the abundance of signs posted around the Lab, it's important not to obscure safety information. It is also important to maintain a neat and professional environment for ourselves and our many guests and visitors.

You can help!

- Do not post anything on doors where CLASP or other hazard signs are posted.
- Ensure signs are current. Update signs as needed.
- Remove postings that are no longer valid!
- Utilize common-use bulletin boards for publicizing social events, etc.

Lessons Learned

By Jerry Levine (Based on DOE Lessons Learned Database)

1. LID CLOSER FAILURE RESULTS IN INJURY AT ANOTHER DOE LAB

LESSONS LEARNED STATEMENT:

A failed piston closer on an incubator lid at another DOE laboratory resulted in an injury on Dec. 16, 2015. The two piston closers on the incubator hold the lid (approximately 40 pounds) open and slow its closing. This lessons learned highlights the importance of timely reporting of safety component failures to line management, immediately starting the repair/replacement process, and identifying and implementing alternative controls to prevent a recurring incident.

DISCUSSION:

A researcher was holding the lid on an incubator shaker with his right hand and reaching into the incubator with his left hand. While lowering the lid to close, one of the spring piston closers that allow controlled descent of the lid failed. The lid fell and came down on the worker's left hand, fifth finger (pinkie), resulting in a broken finger (tip), torn nail, and tissue damage requiring surgical repair. Following the injury, line management recognized the hazard, implemented alternative controls (using a second person to control the lid), and expedited the delivery of the replacement part. The incubator was repaired within two working days of the incident.

The defective hinge had been identified earlier. About a week before the incident, an email was sent to the research group communicating that one of the closers was failing (as evidenced by a fluid leak visible on the rim of the incubator near the piston closer), and that it would be replaced. No one believed that the closer would completely fail so quickly, so the incubator continued to be used. In hindsight, the closer failed more quickly than anticipated, and the other workable closer alone could no longer hold the incubator lid up. The closer failure was not reported to line management.

ANALYSIS:

Integrated Safety Management (ISM) would have prevented this injury when the closer failure was first noticed by identifying alternate controls or taking the incubator out of service until the closer could be replaced. Controls to mitigate the identified hazard and risk of injury were implemented in response to the injury. Users were notified to use a two-person team to raise and lower the incubator lid only after the incident.

This type of incident had occurred in recent years at this DOE facility in a different lab with a centrifuge lid. Several laboratory instruments use a spring piston closer. This type of hinge can fail and has a finite safe service life.

RECOMMENDATIONS:

To prevent another recurring incident:

1. Regular inspection of laboratory instruments equipped with this type of hinge is necessary (identification of hazards).
    a. A formal inspection schedule is the best mechanism to assure that equipment is in safe working condition.
    b. Assigning a responsible person to conduct such inspection is warranted (line management accountability for safety).
2. Line management should assure that laboratory users know to whom they should report equipment problems and what action should be taken if an equipment problem is identified (controls to mitigate hazard).

If you see an equipment or facility safety issue at PPPL, please report it as soon as possible to your supervisor, the Online Work Request System (https://ifacilities.princeton.edu/WebMaintPPPL/NoCAS/login.aspx) and/or to the SOS Box (http://www-local.pppl.gov/ihs/ESH_Report.html).

2. WORKER AT ANOTHER DOE LAB SUSTAINS FRACTURE OF BIG LEFT TOE

LESSONS LEARNED STATEMENT:

Industry recognizes a "change in elevation" on walking working surfaces as a known safety hazard. Appropriate regulations and controls are in place for stairs, walkways, and elevated work platforms. Additionally, the DOE lab where this incident occurred has established its own requirements for similar situations within service floors and industrial areas. Specifically, elevated concrete curb-like berms

and raised concrete pads for components in service floors are required to be painted bright yellow or with yellow and black stripes to prevent trips and falls.

DISCUSSION:

On Sept. 23, 2015, an employee at another DOE lab tripped on a riser to a platform leading to a sound booth while in an auditorium. The employee stubbed and subsequently sustained a non-simple fracture to the employee's left big toe on the riser. As a result, the employee fell forward, striking the right side of his or her face on an open door.

Measurements were taken of the riser and the attached landing platform in the auditorium. Safety engineers evaluated the measurements and submitted repair designs to their lab's facilities team for consideration to rectify the current configuration. Compensatory actions included posting "Caution" signs on the wall and stanchion leading to the elevated landing platform, and applying yellow and black striped adhesive tape on the edge of the platform to indicate the change in elevation.

ANALYSIS:

Causal analysis identified the following cause: Error in equipment or material selection - The carpeting installed on the landing platform matched the carpeting on the floor of the auditorium. Furthermore, no other materials of differentiating color were installed to indicate the change in elevation. The platform and

floor below blended in with each other and were difficult to notice. Although aesthetically pleasing, a visual cue on changes in elevation assists perception of that change, thus minimizing the risk of people miss-stepping while stepping onto the platform.

RECOMMENDATIONS:

The following corrective actions were identified:

1. Modify the existing raised platform to the sound booth in that area to create safer egress and ingress.
2. Create and submit a lessons learned report based on this incident. ■

Changes to STOP Program Participation Requirements Approved

By Dorothy Strauss

The ES&H Executive Board recently approved changes to the amount of participation required of supervisors in the Safety Training Observation Program (STOP). These changes were driven by the necessity to observe fieldwork, to increase meaningful participation in the program, and agreement with the PPPL Advisory Committee's recommendation that office supervisors be removed from the STOP program.

These changes, which went into effect April 1, include:

- Observations by office supervisors will no longer be required.
- Department heads will be required to complete at least one observation every six months.
- Department heads have determined which of their staff supervise field work and have established participation frequencies for those individuals.
- Previous trainees not captured in the above will be considered volunteers.

Volunteers are encouraged to participate as frequently as they can. Additional information for current participants will be forthcoming. ■

When should you replace your HARDHAT?

RECOMMENDATIONS

MANUFACTURERS (NORTH, MSA, 3M, ETC.) RECOMMEND THE FOLLOWING:

- ✓Replace the hardhat suspension once a year.
- ✓Replace the shell at least every 5 years.
- ✓DO NOT mismatch manufacturer parts.
- ✓ALWAYS replace the hardhat after it has withstood impact or penetration.
- ✓A hardhat's service life starts when it is placed in service. This date should be recorded in the helmet.

Hardhats don't last forever!

- ✓Visually inspect your hard hat every time you go to put it on by looking for gouges, cracks or excessive scratches. Make sure the suspension is still in good shape.
- ✓Clean the shell of your hard hat (with warm water & mild soap) once a month to remove oil, grease, chemicals and sweat. Never use chemicals or solvents to clean your hard hat.
- ✓Never paint your hard hat or glue anything to the shell. This may reduce the durability of your hard hat.
- ✓Don't store your hard hat in direct sunlight or in excessive heat as this will reduce the life of your hard hat, and may cause the suspension to fail prematurely.

Personnel Updates - Ify Iwuoha

A new construction safety engineer has been hired to support the IOI and related projects. His name is Ifeanyi (Ify) Iwuoha and he has been working as a consultant for more than 15 years in construction safety, most of it related to the New York City Metropolitan Transportation Authority (MTA) bridge and tunnel projects. He brings extensive experience in working with construction contractors and overseeing control of a variety of hazards to PPPL and will help us maintain positive safety control for the many forthcoming types of construction. His principle duty will be to work with the IOI project team and subcontractors

to ensure that construction activities are performed safely, and that all of PPPL, OSHA and DOE requirements are followed. Ify has already been valuable in overseeing the concrete demolition of the C-Site MG supports in preparation for refurbishment of that building as part of the IOI project. In addition to the IOI work (LSB East Wing addition modernization, C-Site MG Building and RESA Building repurposing, and Mod VI demolition), he will be involved in the Engineering Wing remodel, asbestos removal in the C-Site MG, cable installation in the 138 kV switchyard, and more. Please welcome Ify to the PPPL family.

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

FOR ENVIRONMENTAL OR WASTE MANAGEMENT CONCERNS, PLEASE CONTACT:

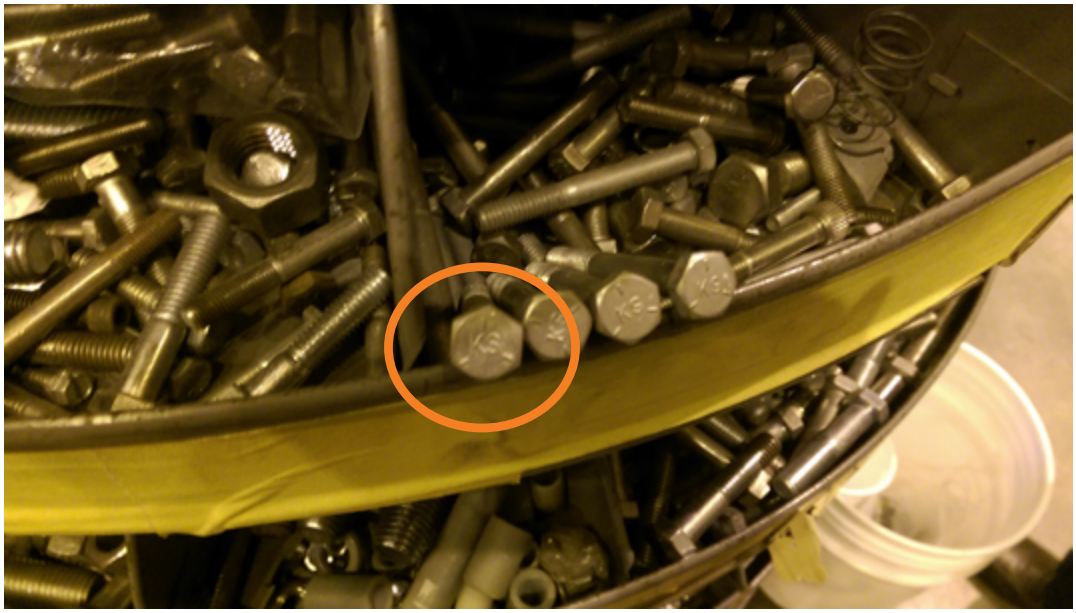
Spills should be reported to ESU at x3333
Spill Prevention: Maria Pueyo (x2213)
Hazardous/Chemical Waste: Maria Pueyo (x2213)
Radioactive Waste: Keith Rule (x2329)
Recycling: Margaret King (x3652) (Scrap metal and electronics are processed by Material Services.)
Environmental Permits: Virginia Finley (x2746)
Green Purchasing: Leanna Meyer (x2599)

The Success of PPPL's Suspect/ Counterfeit Items Program Depends on All of Us

By Adolfo Amaya

PPPL's "suspect parts" policy (P-041) states that each one of us and our subcontractors must be vigilant in detecting and reporting suspect items. In support of the suspect/counterfeit items (S/CI) policy, and in order to prevent receipt and utilization of S/CI items, PPPL has implemented measures for detection, control, reporting, and disposition of S/CIs.

One such measure is the S/CI Committee, a multi-function team consisting of members representing Quality Assurance, Engineering & Infrastructure,



Procurement, Facilities & Site Services, ES&H, and Site Protection. It is responsible for the oversight of the S/CI program, including reviewing the efficiency and effectiveness of PPPL's S/CI safeguards. Recently, the Committee and the Quality organization conducted a gap analysis between our S/CI procedures and the requirements spelled out in DOE 414.1D. Results from the review were generally positive. Procedures supporting procurement, receiving, installation, and maintenance have been implemented. While this is good news, the team also identified opportunities for improvement in our S/CI documentation and the need to conduct surveillance audits or inspections of "stores" and to participate in Management Safety Walk-Throughs (MSWs).

The QA team participated in a recent MSW and found fasteners identified on the DOE headmark list as well as used high-strength (HS) fasteners. ***NOTE: PPPL Procedure QA-020 prohibits reuse of HS fasteners in applications that require HS fasteners.*** A non-conformance report was issued to investigate this incident and implement appropriate corrective actions. This is a perfect example of the necessity to remain diligent in identifying and reporting S/CI items. All fasteners identified on the DOE headmark list should be treated as defective without any further testing. The list is noted in QA-020.

The QA team and the S/CI Committee ask for your involvement in and support of the S/CI program. Please contact the QA Department by email at pqa@pppl.gov or by phone at ext. 2203 or 3516 with questions or to report any potential S/CI items.

Additional information such as awareness training, S/CI reports, procurement restrictions, resources, and other supportive information can be found on the S/CI webpage. Thank you!

Online NEPAs Coming Soon!

The ES&H Department is working to make NEPA access easier for you! A searchable database is being created so you'll be able to search existing NEPAs by name, NEPA number, or keyword. You'll be able to view or download the documents. More information coming soon!

Coming in April!

The next quarterly safety culture survey will be conducted in late April. If you receive an invitation to participate this quarter, please take 5-10 minutes to complete the survey! Your feedback directs effort and resources to improve safety at PPPL. Thank you!

Freshwater Wetlands – No Longer Just a Swamp

If you've ever looked around the PPPL grounds and saw the woods surrounding the site, you might be surprised to find that these are not just any woodlands (unless you have read the sign on the right!). To the east and south, these woodlands are growing in wetlands. You may think of wetlands as being only open meadows or marshes with grasses and scrubs but in fact, many native trees such as sycamore, maple, oak, beech, sweet gum, and others, thrive in wet soils.

Why are wetlands important? Some answers can be found on the New Jersey Department of Environmental Protection's Division of Land Use Regulation "Overview of Freshwater Wetlands" web page http://www.nj.gov/dep/landuse/fww/fww_main.html, which states:

Previously misunderstood as wastelands, wetlands are now being recognized for their vital ecological and socioeconomic contributions. Wetlands contribute to the social, economic, and environmental health of our nation in many ways:

- *Wetlands protect drinking water by filtering out chemicals, pollutants, and sediments that would otherwise clog and contaminate our waters.*
- *Wetlands soak up runoff from heavy rains and snow melts, providing natural flood control. Wetlands release stored flood waters to streams during droughts.*
- *Wetlands provide critical habitats for a major portion of the State's fish and wildlife, including endangered, commercial, and recreational species.*
- *Wetlands provide high-quality open space for recreation and tourism.*

Many of these values were not widely appreciated until the 1970s and 1980s. By then, more than half of the nation's wetlands were destroyed.

What defines wetlands? From an ecological and regulatory view, three factors specified by the U.S. Fish and Wildlife Service must be present:

1. Hydrology or the degree of flooding or soil saturation,
2. Wetland vegetation or hydrophytes, and
3. Hydric soils.

The source of wetlands water may be rain, snowmelt, surface water runoff or rising up from ground water. Lists of wetland vegetation are used to help identify areas where there are wetlands. Hydric soils are identified using the U.S. Department of Agriculture's manual, "Hydric Soils of the United States 1985."

Here at PPPL, wetlands areas were delineated in compliance with Executive Order 11990, "Protection of Wetlands," and federal and state environmental regulations that limit disturbance and prohibit the destruction of wetlands without a permit and/or mitigation measures. Prior to enactment of these regulations, development in wetlands destroyed many acres in New Jersey.

The New Jersey Freshwater Wetlands Protection Act Rules identify what activities are allowed or prohibited in the wetlands or in the adjacent 50-foot transition zone (the buffer area between the wetlands and non-wetlands). Basically, any disturbances of soil or vegetation aside from property maintenance (i.e. trimming and mowing), are allowed only by first obtaining a permit or waiver from NJDEP. For a complete list of allowed and prohibited activities for the transition area or wetlands, go to https://sites.google.com/a/pppl.gov/environmental-services/environmental-compliance/wetlands.

You can also contact Virginia Finley (x2746) or Leanna Meyer (x2599) of the Environmental Services Division if you have questions about activities in or near PPPL's wetlands. ■

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