

EHS Lab Chatter

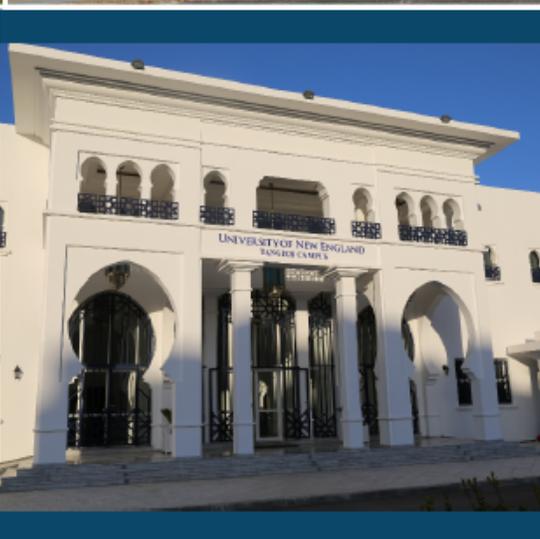


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Safety Spotlight

Lab Inspection Results:

Areas to Improve Lab Safety

By Jessica Tyre



In Fall 2018 EHS adopted a new electronic platform for conducting and recording laboratory inspections. This program has allowed us to pull data out of our inspections and track certain metrics. We were able to compile a list of areas that UNE labs could improve on in the future in regards to lab safety. Please review the list below and make sure that your lab is compliant in the following areas:

1. Eyewash stations must be run and inspected weekly. Inspections must be documented with inspector's initials and the date.
2. Fridges and freezers need to have EHS Contact Cards with two contacts and primary contents/hazards listed.
3. PI or designee should be present for EHS Lab Safety Inspection.
4. Bench tops must be orderly and organized. Glassware cannot be allowed to accumulate in sink areas.
5. There must be two current contacts on EHS Emergency Contact Cards with at least one cell phone number.
6. Extension cords and/or multiple power strips cannot be used as permanent wiring.
7. Chemicals must be included in the UNE chemical inventory system and have UNE chemical inventory bar codes.
8. Fume hoods cannot have stored chemicals and/or equipment in them.
9. All labs must have a step stool available in the lab area to dissuade individuals from standing on furniture.
10. Doors to labs cannot be open or propped and must be closed to hallways.

These are just a few items that we can improve upon as an institution. In EHS we strive to help labs achieve compliance and are always a resource that can be utilized if a lab is unsure about a safety concern. Please do not hesitate to reach out if you have any questions or need assistance. We recommend doing your own laboratory inspections internally on a more regular basis in between the semi-annual EHS inspections. Some labs find this to be a helpful method for being proactive with safety.

The UNE Safety Manual and UNE Chemical Hygiene Plan are also useful resource documents if you have specific questions on UNE safety policies and procedures. You can find these documents on the UNE EHS web page: <https://www.une.edu/campus/ehs>.

Safety Manual Update

The UNE Safety Manual is a document that outlines all of the university's policies and procedures when it comes to environmental health and safety. There is a broad spectrum of topics covered such as: general safety, facilities safety, lab safety, ergonomics, tool safety, personal protective equipment, hearing conservation, respiratory protection, and much more. The 2019 revision of the UNE Safety Manual contains the following policy additions:

- UV Light Policy (found in Lab Safety section)
- Rooftop Access Policy (found in Facilities section)

This new revision of the manual is available on the UNE EHS website and can be referenced at any time. We recommend that employees review the manual upon hire and whenever there are additions or changes. You will also notice that the manual is formatted a little differently. If you ever have any questions regarding the policies and procedures contained in this manual, please feel free to contact any EHS staff member. Many of the annual online trainings that employees take are based on the policies in the safety manual. We hope that you will utilize this valuable resource in a continuing effort to stay safe and healthy in your workplace.

UNE EHS website:

<https://www.une.edu/campus/ehs>

SAFETY ALERT!!!

Proper use of Relocatable Power Taps (Powers Strips) in

Office and Laboratory Settings

Relocatable Power Taps (RPTs), also known as strip plugs, power strips, etc., are designed for use with low current equipment such as computers and their associated hardware components, low power usage components.

The National Fire Protection Agency (NFPA), and Occupational Safety & Health Administration (OSHA) allow the use of power strips for low current use, as long as they are installed and used in accordance with instructions from the manufacturer and included in the listing or labeling on the device from a certified source, such as Underwriter Laboratories (UL).

UL pointed out that placing several 2 amp loads on the power strip would also represent a hazard. The wire used in the strip to connect the outlets to the input is undersized for such usage, which may result in the wire overheating leading to insulation failure, arcing, and possible fire.

Power strips are not designed to handle high current loads. Using a power strip with appliances or other high current loads is a violation of the OSHA requirement for proper usage. Examples of high current load devices are coffee pots, microwave ovens, toasters, hot plates, space heaters and refrigerators. High current equipment must be plugged directly into wall outlets.

Space heater and hot plate use are prohibited on UNE property as these present an exceptional risk for fire related incidents.

Transporting Hazardous Materials on Campus: Inter & Intra Building

By Peter Nagle

Occasionally hazardous materials need to be moved between labs or buildings on campus. This means using corridors, elevators and public access ways to transport chemicals on campus. To transport them safely, certain precautions must be taken beforehand to minimize the possibility of a spill of and exposure to hazardous materials in a high profile area.

Hazardous materials include chemical, biological, and physical materials which present a risk to people or property from their inherent nature. Materials presenting a physical hazard are primarily comprised of compressed gas cylinders that have contents under pressure or extreme temperatures.

Secondary containment

When transporting hazardous materials through public spaces it is critical that secondary containment is provided for the material to prevent spills or exposures. Examples of secondary containers include trays, pails, coolers, etc. All secondary containment must meet the following criteria:

- Easily cleaned
- Break proof or shatter proof
- Able to hold liquids that could potentially leak out of primary containers

Utilize carts when possible to reduce the chances of dropping material. With the exception of compressed gas cylinders, cart use does not negate the requirement of a secondary container.

Moving the materials

The following requirements apply to the movement of hazardous materials:

- Secondary containment is required
- Never leave materials unattended
- Gloved hands are not to contact any surface outside of the lab. Secondary containers should be decontaminated by laboratory personnel as necessary prior to movement to pre-empt the need for gloves.
- Prior to moving material choose a route that minimizes risk to others

Biohazardous waste

- Transport biohazardous waste in double red bags held in rigid, closed, leak-proof containers
- Label outer container as bio-hazardous waste

Biohazardous material

- Package material in a closed, leak-proof container
- Material must be cushioned with an absorbent material to prevent breakage and can absorb liquid in case there is breakage
- Have the lab contact information on outside of container

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transporting continued...

Chemicals

- If carrying the material, use a pail or bottle carrier to provide “bump protection” and contain any potential spills
- If transporting multiple containers, then use a **sturdy lab cart with a lip** capable of containing the bottles

Compressed and liquefied gas

When transporting compressed gas cylinders:

- Cylinder must be chained to a gas cylinder hand cart
- Always secure the valve cover cap before moving
- Never roll a cylinder
- Never leave gas cylinders unattended



If you have any questions you can always contact EHS staff.



Use secondary containment and a cart with a solid lip around the edge!



Why Laboratory Inspections and Compliance Go Hand-in Hand

By Ronnie Souza

Laboratories at colleges and universities contain numerous chemical, biological and physical hazards that, when stored or handled incorrectly, can lead to significant injury, illness and even death. Prevention of laboratory accidents requires training, great care and constant vigilance by laboratory workers.

Measures to protect against laboratory accidents include safety training and enforcement of laboratory safety policies, safety review of experimental designs, and the use of personal protective equipment.

Laboratory Safety inspections, conducted once each semester, are scheduled and led by UNE EHS department Staff. By providing scheduled lab inspections, EHS staff are able to provide hands-on training throughout the inspection process, providing answers to questions that lab workers may have in regards to regulations and UNE policies affecting the laboratory environment.

OSHA Regulations Applicable to UNE Labs

- 1910.1030 - OSHA Blood-borne Pathogens standard promulgated in 1991.
- 1910.1200 - Hazard Communication
- 1910.1405 - Occupational Exposure to Hazardous Chemicals in Laboratories
- 1910.132 - Personal Protective Equipment
- 1910.133 - Eye and Face Protection
- 1910.134 - Respiratory Protection
- 1910.138 - Hand Protection
- 1910.1048 - Formaldehyde Standard
- 1910.1096 - Ionizing Radiation Standard
- 1910.145 - Accident Prevention Signs & Tags

OSHA Standards Most Cited for Violations in Labs 01/01/2011 – 05/01/2018

- 29 CFR 1910.1030 - Blood-borne Pathogens
- 29 CFR 1910.1200 - Hazard Communication
- 29 CFR 1910.1450 - Occupational Exposure to Hazardous Chemicals in Laboratories
- 29 CFR 1910.134 - Respiratory Protection
- 29 CFR 1910.1048 - Formaldehyde
- 29 CFR 1910.132 - PPE - General Requirements
- 29 CFR 1910.133 - PPE - Eye and Face Protection
- 29 CFR 1910.338 - PPE - Hand Protection



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Requirements for Finding and Keeping the Best Candidates for Your Lab

An organization can accomplish only what the individuals within the organization contribute

By Scott Hanton | October 08, 2018

People are the most important aspect of any organization or business. The organization can accomplish only what the individuals within the organization contribute. As a laboratory leader, it is vital for us to sponsor and develop a strong sense of community in our staff. Developing a strong sense of community begins with the recruiting and hiring processes. To contribute positively to our community, we are looking for candidates who can bring the following attributes to the organization: maturity, personal accountability, intrinsic motivation¹, an interest in collaboration, critical thinking², safety consciousness, a willingness to give³, and leadership⁴. Our recruiting and hiring philosophy is to hire attitude and train skill.⁵

Recruiting process

Today, there are multiple paths to finding qualified candidates. It is no longer enough to simply post an open position on the company website and expect the candidates to find us. We try to use a multifaceted recruiting approach that includes: company career website, referrals from current employees, social media, such as LinkedIn, local professional societies, internet job boards, leadership team's personal networks, and professional recruiters.

As we search for candidates, we are actively seeking the following characteristics: technical excellence, critical thinking, communication skills, creativity, flexibility, teamwork⁶ and leadership⁷. Of these, technical excellence is the easiest to find and the easiest to evaluate. However, we want to consider all candidates who demonstrate at least the minimum technical skill required for the position. Additional technical skill is largely irrelevant.⁸ The other characteristics will drive the hiring decision.

Candidates who can demonstrate the following characteristics during interviews and other interactions will usually be the most successful candidates: emotional maturity, passion⁹, energy, and a giving attitude.

Resume review is a critical skill for all hiring managers. In some cases, so many candidates apply for a position that many resumes need to be rapidly and effectively screened. In other cases, few candidates are available, and patient scrutiny of the existing resumes is required. In any situation, clear decisiveness is required in resume review. When we screen resumes, we are looking for leadership and innovation indicators, and we are cautious about time gaps, lists, and errors.

Once the best resumes percolate to the top, we conduct brief telephone interviews to further evaluate the candidates. For a typical open position, we are screening 50 to 100 resumes to pick five to 10 candidates to call with the goal of inviting three candidates for in-person interviews. Phone-screen interviews typically take 15 to 30 minutes and focus on the details of the resume. Telephone interviews require careful listening. Successful candidates are those with whom we wish more conversation.

Interview process

Ideally, we want three candidates for in-person interviews. Our interview teams are effective at comparing candidates with each other and differentiating between their opportunities and challenges. It is often difficult to interview a single candidate for a position, for it is hard to avoid comparing a single candidate with our ideal candidate. The primary reason to interview candidates is to seek one who fits the position. Fit is both with the job that needs to be done and with the rest of the current team. Evaluating technical skills is a secondary portion of the interview. That should have been accomplished during the telephone interview. The first step of the interview process is selecting a 360-degree interview team. The 360-degree team includes interviewers from staff above, equal to, and below the open position in the organizational hierarchy. Since community is so important, we want to obtain a clear view of how the candidate interacts with staff at all levels of the organization.

Poor candidates will work hard to impress leaders but not treat lower-level staff well. Our desire is to screen out these candidates.

Our approach to in-person interviewing is to focus on behavior-based questions. Here are examples of our typical interview questions:

- Tell me about a time you had conflict with a co-worker and how you resolved it.
- Tell me about a time you faced a priority issue and how you solved it.
- Tell me about a time you made an important mistake and how you communicated it.
- What are you most proud of?
- What personal attributes make you the best person for this position?

While the stock market states that previous performance is not an indicator of future performance for any specific stock, the opposite is true for people; past performance is an excellent indicator of future performance. We want to create scenario questions that probe past actions and behaviors and predict how those actions and behaviors will work in our environment. We probe attitudes about safety, quality, teamwork, and communication.

Once the formal interviews are complete, we start to make decisions. We convene the interview team and obtain feedback from each member. It is important to hear each interview team member and explore any issues discovered during the interviews. Our strategy is for any leaders on the interview team to express their opinions last so we receive unbiased feedback from the team.

Once we have candidates we are interested in hiring, we look for any additional information we can find to prevent any unpleasant surprises later. This is a good time to check in with the personal references provided. Typical questions for references include information about personality, behavior, and areas for improvement.

Once a first-choice candidate is selected, it is time for the offer process. It is also time to remind the candidate of all the positive reasons for him or her to accept the imminent offer. We will start notifying all the candidates in whom we are no longer interested. We will, however, hold off notifying other good candidates until we have an accepted offer from the first-choice candidate.

Onboarding

There is only one chance to make a first impression. Planning the onboarding of a new employee is critical. It is important to meet the expectations of the new employee with respect to readiness, desire to have him or her aboard, and commitment to his or her early success. Our onboarding process has four phases: 1) before the first day, 2) the first day, 3) the first week and 4) the first month. There are many details that need to be taken care of before the new candidate even arrives for the first day. Preparation for his or her arrival is critical. It is important to work with the supervisor to establish a clear "roles and responsibilities" document establishing the new role.¹⁰ It is also important to establish expectations with the supervisor about the milestones that are expected to indicate whether the new employee is progressing as needed. Key deliverables before the first day include: 30-, 60-, and 90-day goals, computer, workstation/desk, nameplate, office supplies, personal safety protective equipment, and identification of a mentor.

On the first day, we want to introduce the new person to our community and ensure he or she can find vital things such as coffee and restrooms. Here is a typical day-one checklist: introductions to everyone in the organization, lunch with the supervisor, tour of the facility, safety indoctrination, check that computer and network ID work, meet the mentor, get company ID, and start safety training.

During the first week, the goal is to complete safety training and start introducing the new staff member to the science conducted in the lab.

Here is a typical week-one checklist: complete safety training, do ethics training, complete general quality SOPs, begin lab-specific SOPs, understand expectations (review roles and responsibilities, review 30-, 60-, and 90-day objectives, review annual objectives), begin introduction to internal work processes (such as timesheets), and provide introduction to the company.

Over the course of the first month, the goal is to complete initial lab training and have the new person start to contribute in the laboratory. Here is a typical month-one checklist: complete initial lab-specific training, start making contributions to the lab work, build working relationships with other lab members, be introduced to how the business works, be introduced to key customers/clients, obtain feedback from supervisor on 30-day objectives, identify further training needs, and have lunch with managers

Retention of new employees rests largely on five things: 1.) Integrating them into the work community¹¹ 2.) Providing them with the tools and knowledge they need (technical, safety, quality), 3.) Engaging them with appropriate technical challenges, 4.) Enabling them to have real job satisfaction¹² 5.) Providing them the connections needed to ask questions, obtain more information, and grow in their role¹³

Summary

Recruiting and hiring is a process that must be owned by the managers/leaders of the organization. Ensuring the right people come into the organization is a high-priority activity. Setting up a process for careful selection of the right people is a key responsibility of managers. Utilizing all the talents of the organization and following a behavior-based process can enable high-quality hiring decisions. Once the right candidates are selected, managers can drive a detailed onboarding process that makes a good first impression and ensures that the new member of the team is guided and encouraged to be successful.

References

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5. First, Break All the Rules, Marcus Buckingham and Curt Coffman, Simon & Schuster, New York, 1999
6. How to Be a Positive Leader, edited by Jane Dutton and Gretchen Spreitzer, Berrett-Koehler, San Francisco, 2014
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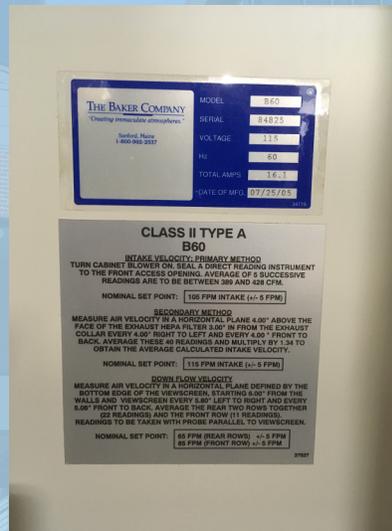
UNE Chemical Sharing Program

The UNE Chemical Sharing Program is a great way to reduce hazardous waste, reduces costs for your department, and have a positive environmental impact on campus. If you have any commonly used lab chemicals or lab equipment that you are thinking of disposing, please contact EHS so they can be listed in the next issues of EHS Lab Chatter as available for the UNE Chemical Sharing Program.

Available now:

Class II Type A Biosafety Cabinet Floor mount Model B60

(located in Facilities Warehouse) dimensions are 76" W x 80" H x 32" D



ChemGuard General Purpose Fume Hood Bench mount Model FH-6

(located at Saco Barn) dimensions are 72" W x 58" H x 32" D



****Please make sure that your space can accommodate the equipment and that any hookups needed are in place or can be put in place reasonably and safely before claiming the equipment.****

Contact EHS if interested in the above equipment.