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Our Vision

To promote and maintain a safe and healthful environment by ensuring the highest level of environmental health and safety services for faculty, staff, students, and visitors at the University of Connecticut.



June is National Safety Month

Welcome to another edition of the Environmental Health & Safety's Newsletter.

~ Radiation Safety ~

Natural Radiation Sources

(Source: Health Physics Society)



Scientists have studied radiation for over 100 years and we know a great deal about it. Radiation is part of nature. All living creatures, from the beginning of time, have been, and are still being, exposed to radiation.

Sources of radiation can be divided into two categories:

- **Natural Background Radiation**
- **Man-Made Radiation** (See next September newsletter)

Natural Background Radiation

- Cosmic Radiation

The earth, and all living things on it, is constantly bombarded by **radiation** from outer space, similar to a steady drizzle of rain. Charged particles from the sun and stars interact with the earth's atmosphere and magnetic field to produce a shower of radiation. The amount of cosmic radiation varies in different parts of the world due to differences in elevation and to the effects of the earth's magnetic field.



- Terrestrial Radiation

Radioactive material is also found throughout nature in soil, water and vegetation. Important radioactive elements include uranium and thorium and their radioactive decay products which have been present since the earth was formed billions of years ago. Some radioactive material is ingested with food and water. Radon gas, a radioactive decay product of uranium is inhaled. The amount of terrestrial radiation varies in different parts of the world due to different concentrations of uranium and thorium in soil.

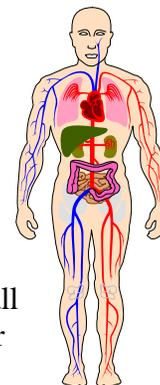


Our Mission

To provide comprehensive environmental health and safety services for the University community by developing and administering effective policies and procedures that prevent personal injuries and maintain regulatory compliance in the areas of biological, chemical, occupational, and radiation safety, thereby supporting the University's mission of teaching, research, and public service.

- **Internal Radiation**

People are exposed to radiation from radioactive material inside their bodies. Besides radon, the most important internal radioactive element is naturally occurring potassium-40 but uranium and thorium are also present. The amount of radiation from potassium-40 does not vary much from one person to another. However, exposure from radon varies significantly from place to place depending on the amount of uranium in the soil. On average in the United States radon contributes 55% of all radiation exposure from natural and man-made sources. Another 11% comes from other radioactive materials in the body.



Remember to read “**Man-Made Radiation**” in our September 2008 newsletter issue.

~ **Biological Safety** ~

The University of Connecticut Biological Safety Laboratory Audit Program is an important tool that the Biosafety section uses to:

- facilitate the risk assessment process;
- facilitate the biological agent inventory control process;
- assure that biological waste is disposed of appropriately;
- provide information to and get feedback from the University community regarding lab-safety regulations as they pertain to their day to day activities;
- identify laboratory personnel in need of Biosafety training; measure the effectiveness of the Biosafety training we provide as well as determine what information needs to be included in training to improve the Biosafety training provided;
- generate reports related to facility, work practices and safety equipment adequacy/deficiency and maintain formal audits records.

Biosafety audits of your laboratory or facility can be announced or unannounced. Whenever possible, Biosafety attempts to schedule audits, but be aware that advanced notice of audit is not a given and that there will be times when Biosafety will audit your lab/facility without prior notification.

~ **Occupational Safety** ~

Does this look familiar??



What's in it? Water? Glass Cleaner? *Bleach??* Unfortunately, what you don't know can hurt you.

EH&S Services

<http://www.ehs.uconn.edu/serv.html>

for a list of all
EH&S Services
including;

Training
schedules which
are updated on a
regular basis.

Waste Pickup and
Delivery Request
Forms

Did you know....?

- Unlabeled containers are easy to find in any department, and are an indication that there are problems with your Hazard Communication Program?
- The 3rd most frequently cited OSHA standard is the Hazard Communication Standard? (Those unlabeled containers jump out at every OSHA inspector.)
- Each department must have material safety data sheets (MSDS) for the products being used?
- Reviewing the MSDS *prior* to using the product will tell you what could happen if exposed and how to protect yourself during use, *and* happens to be **mandatory** prior to use of the product?
- The first items the OSHA inspector will ask for when they visit your site will be your Hazard Communication Program and Workplace Hazard Assessment (for selection of personal protective equipment)?
- The Workplace Hazard Assessment must be completed for every department on campus and identifies hazards and necessary personal protective equipment (PPE)?

Are your department's HazCom and PPE programs up to par? Are employees knowledgeable about the materials in use and are they using the appropriate PPE for their jobs? Now would be the time to check. The Occupational Health & Safety section of EH&S is gearing up to launch a new inspection program for non-laboratory environments (in lab settings, HazCom is covered by the Chemical Hygiene Plan). We will be looking for complete, up-to-date [Hazard Communication Programs](#) and [Workplace Hazard Assessments](#), and assessing compliance with the pertinent OSHA standards. Any questions can be directed to [Val Brangan](#) at 486-3613.

~ Chemical Safety ~

Waste Management of Batteries

Many types of waste batteries generated at the University of Connecticut are managed under the universal waste regulations set forth by the Environmental Protection Agency (EPA). The goal of these regulations was to reduce quantities of hazardous wastes in the municipal solid waste stream by making it easier for handlers to manage, dispose of, and recycle their wastes. It is important that individuals managing waste batteries on campus comply with the applicable EPA regulations depending on the type of batteries being generated.

Discharged lead acid, magnesium, mercury, nickel-cadmium, and silver oxide batteries are managed as universal wastes here at UCONN. Each of these batteries needs to be labeled with a **purple** "Universal Waste" sticker, an accumulation start date, and have the appropriate box (in this case "Universal Waste Battery") checked on the sticker.

Lithium ion batteries generated at the university are managed as hazardous wastes under the EPA's Resource Conservation & Recovery Act (RCRA). Most

lithium batteries are both water reactive and flammable solids. If not completely discharged, these batteries may react with water/moisture and can also spontaneously ignite at elevated temperatures. Therefore, each waste lithium battery needs to be labeled with a **red** “Hazardous Waste” sticker and have its full name (e.g. Lithium battery) written on the sticker or tag (no symbols or abbreviations).



Alkaline batteries are **neither regulated** by the State nor the federal government, and can be disposed of in the **normal trash**.

Environmental Health & Safety will pick-up bulk packages of alkaline batteries if the facility that generated the batteries is uncomfortable with disposing them in the regular trash. Below is a review of the proper way to dispose of various types of batteries on campus:

Battery Type	Type of Waste	Disposal
Lead-acid, Lead calcium, Magnesium, Mercury, Nickel-Cadmium, Silver-oxide, Zinc (Air)	CT Universal Waste if Recycled	Purple “Universal Waste” Sticker, DEH&S online pick-up request form
Lithium, Nickel-Iron	RCRA Hazardous Waste	Red “Hazardous Waste” Sticker, DEH&S online pick-up request form
Alkaline, Zinc-Carbon	Non-RCRA Hazardous Non-State Regulated	Regular Trash

It is also important to remember that any battery exhibiting a characteristic of a hazardous waste (e.g. a damaged/leaking lead-acid battery) is managed as hazardous waste.

Purple “Universal Waste” and **red** “Hazardous Waste” stickers are available through our online pick-up request form at [Chemical Waste Pickup/Supply Delivery Request Form](#). For further information on proper management of batteries please consult our website at [University of Connecticut Battery Management Guide](#).

Have you started a new job? Do you need to be trained? Do you need refresher training? Do you work in a lab and are not sure what you should be trained in? **EH&S** now has **on-line** registration for **Biological, Chemical, Radiation** and **Occupational** training classes. All schedules are on-line, also.



- ☞ Go to <http://www.ehs.uconn.edu/> and **click** on **Training**.
- ☞ Click Training Schedule for the appropriate section and to see which dates are scheduled
- ☞ Click [HERE](#) to register

You will need your **NET ID** to register. If you are not sure what your NET ID is, go to <https://netid.uconn.edu> and follow the prompts.

Thank you for registering for our training classes on-line. Please call 486-3613 for assistance.