UNIVERSITY OF
GEORGIA
Facilities Management Division

Environmental Health and Occupational Safety

Environmental Protection Agency

In July of 1970, the United States White House and Congress worked together to establish the Environmental Protection Agency (EPA) in response to the growing public demand for cleaner water, air, and land.

Think About It….

The University of Georgia campus is the size of a small town.

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With 1900 labs, 400 buildings, millions of square feet of parking, hundreds of vehicles, and thousands of people….

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We must be aware of our environmental impact and follow the law!

UNIVERSITY OF GEORGIA

"Typical" Campus Findings

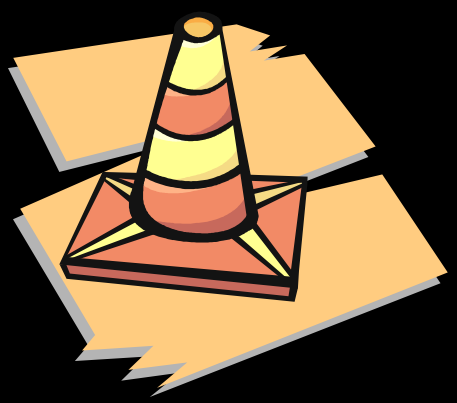
- Failure to perform a waste determination (overwhelmingly the most common violation)
  - Old chemicals in laboratories/stock rooms, plant maintenance, and art departments.
  - Storage areas in remote areas of campus
- Secondary containment & Containers not stored to prevent a release
  - Laboratory hoods with sinks where hazardous waste and chemicals are being stored
  - 55-drums in mechanical rooms with floor drains
  - Other large storage tanks (i.e. used oil, cooking grease, etc.)
- Container labeling
  - Used oil containers not properly labeled
  - Refrigerant cylinder not properly labeled
  - Laboratory chemicals
  - Other secondary containers of chemicals (i.e. spray bottles, fuel containers)
- Universal waste
  - Fluorescent tubes & batteries not stored in closed containers, not dated, or labeled
- No SPCC program (common among many campuses)
- Lack of training (multiple programs)
- Failure to obtain storm water permits for construction sites
- Failure to prevent contaminants from entering waterways of the State

Housekeeping

Good housekeeping is the first and most important step in environmental compliance.

Housekeeping Requirements

- *Clean all non-chemical spills immediately*
- *Keep materials stored when not in use*
- *Store materials appropriately – in a fire cabinet and/or in secondary containment as required*
- *Dispose of unwanted, unused, or outdated materials according to manufacturer's instructions*
- *Recyclable batteries, mercury containing devices, chemicals, and pesticides*



UGA's Green Mission

- Protect the Environment
- Dispose of chemicals and used equipment appropriately
- Be prepared for emergencies
- Be proactive in business decisions
- Use resources wisely
- Continuously monitor and improve our work practices
- Conserve energy – everyday!
- Recycle and re-use!

Universal Waste

Heavy Metal Batteries, Pesticides, Light Bulbs and Mercury Containing Electronics are all considered “Universal Waste” and should be handled as such. UGA has a comprehensive recycling program for these items.

REMEMBER – It is illegal to dispose of these items in the trash!

Clean Air Act

Combustion
- Generators
- Boilers
- Hot Water Heaters

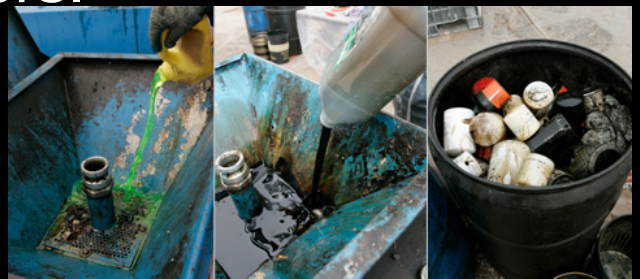
Refrigeration
- HVAC and MVAC

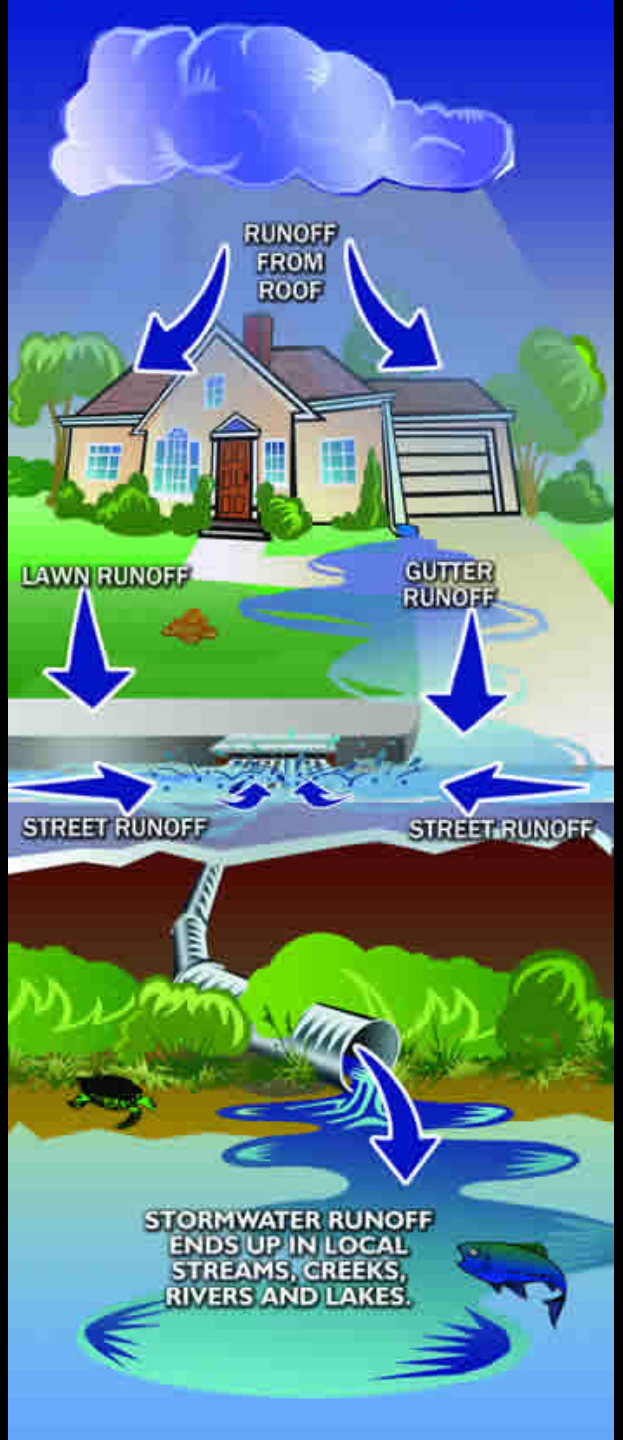
Other
- Gas dispensing
- Degreasing
- Incinerators

If you oversee any of these areas, please contact UGA's Environmental Safety Division for program requirements!

ENVIRONMENTALLY FRIENDLY AUTO TIPS

- Drive only when necessary.
  - Driving less reduces the amount of pollution your automobile generates.
  - Automobiles emit tremendous amounts of airborne pollutants, which increase acid rain; they also deposit toxic metals and petroleum byproducts into the environment.
- Regular tune-ups and inspections can help keep automotive waste and byproducts from contaminating runoff.
- Keep your tires properly inflated to save gas.
- Clean up any spilled automobile fluids.
- Recycle used oil and antifreeze by taking them to service recycling centers.





Stormwater

Storm water discharges are generated by precipitation and runoff from land, pavements, building rooftops and other surfaces. Storm water runoff accumulates pollutants such as oil and grease, chemicals, nutrients, metals, and bacteria as it travels across land. EPA controls storm water and sewer overflow discharges through its National Pollutant Discharge Elimination System (NPDES).

Prevent Contamination to Surface Water

- Never pour unwanted chemicals on the ground. Soil cannot purify most chemicals, and they may eventually contaminate runoff.
- Never store chemicals near drains.
- Never put used oil or other chemicals down storm drains or in drainage ditches. Always use silt fencing and other engineering controls to prevent erosion.

One quart of oil can contaminate up to two million gallons of drinking water!

SPCC - Spill Prevention, Control, and Countermeasure Rule

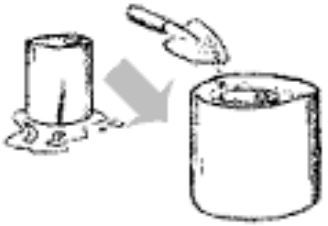
As of November 10, 2010 - Facilities must amend or prepare, and implement SPCC Plans. The focus is to contain a discharge until it can be cleaned up.

*** *Applies to all Storage Tanks, New and Used Grease Storage, 55 Gallon Drums, Transport Vehicles, Long Term Storage Areas, Transformers, Hydraulic Systems, etc.*

Spill Response

- Prepare for spills ahead of time
- Follow guidance on SDS
- Do not attempt a clean-up without proper training
- Call UGA authorities if it is beyond your level of training
- UGA safety staff will assist you, as needed

LEAKING CONTAINERS
Pack into a larger container with an absorbent material such as sand, soil or cat litter – not sawdust.



POWDER SPILL
Recover as much as possible and return it to container. Clean up and dispose of remaining, unusable portion.

SURPLUS PESTICIDES
Use the pesticide for its intended application, but avoid over-application.

RINSINGS
Use rinsings in the application, or store in the original labelled container, marked as rinsings, for later use.

LABEL accurately and **STORE** in a sealed container in a cool secure place **BEFORE DISPOSAL**

LIQUID SPILL ON SAND OR SOIL
Collect all contaminated sand or soil in a heavy-duty plastic bag or rigid container.

LIQUID SPILL ON SOLID SURFACE
Clean up splashes with rags or absorbent paper. Put contaminated cleaning materials in a heavy-duty plastic bag or rigid container.

CONTAMINATED CONTAINERS & NON-DEPLETED AEROSOLS
Treat these containers, and any contaminated packaging, as pesticide wastes. (Remember, only cleaned, i.e. at least triple-rinsed, containers, and depleted aerosols, may be disposed of in normal domestic waste collections.)

FOR MORE INFORMATION
your local council •
Environment Protection Authority •

DISPOSE OF PESTICIDE WASTES
• at a chemical collection centre
• via a licensed waste contractor

Best Management Practices for Chemicals and Spills

Hazardous Waste

Hazardous waste is waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, like cleaning fluids or pesticides, or the by-products of manufacturing processes.

REMEMBER – It is illegal to dispose of these items in the trash!

The Hazardous Waste ID process consists of four questions:

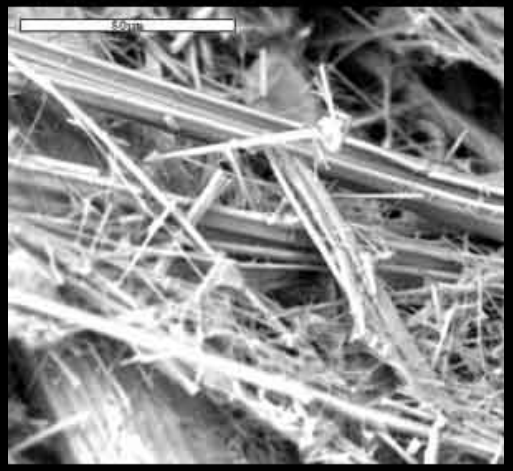
1. *Is the material a solid waste? (40 CFR Part 261.2)*
2. *Is the waste specifically excluded form RCRA? (40 CFR Part 261.4)*
3. *Is the waste a listed hazardous waste? (40 CFR Part 261.30)*
4. *Does the waste exhibit a characteristic of hazardous waste? (40 CFR Part 261.20)*

EPA "Waste"

- Out of date/expired chemicals
- Product that is no longer used
- Product that is used once every few years
- Rusted containers
- Partially full aerosol can in trash container

“Green” Chemicals

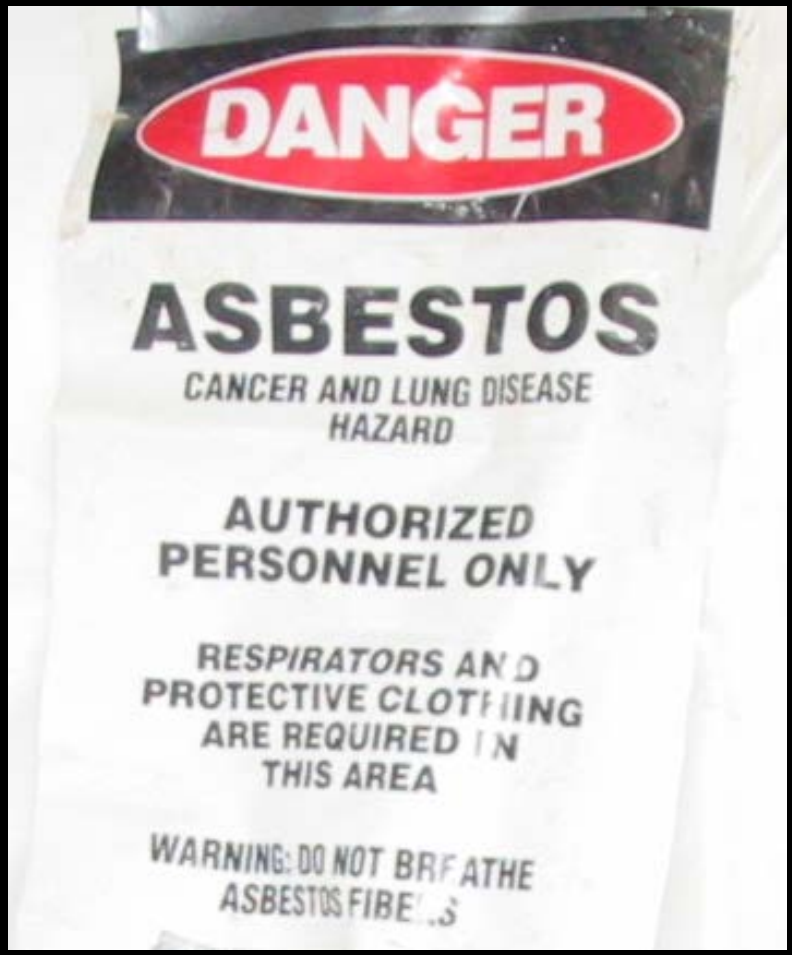
- Buy chemicals only in the amount you expect to use, and apply them only as directed. More is not better.
- Use low-phosphate or phosphate-free detergents.
- Use water-based products whenever possible.



Asbestos

Asbestos is strictly regulated by state and federal laws.

Any work that may disturb asbestos containing material (ACM) must be permitted and performed within the regulations by properly trained and certified workers ONLY.



EMERGENY MANAGEMENT

EPA regulations help ensure that facilities take steps to prevent oil spills, chemical accidents, and other emergencies, and implement planning and response requirements.

~ HOWEVER ~

You must be prepared to handle initial response to a spill or release in your own work area!

UGA ESD	(706) 542-5801
UGA PREHS	(706) 542-5561
UGA Police	(706) 542-2200

Environmental Sustainability

- Green Cleaning Program
- Recycling
- Green Products – paint, carpet, chemicals, fuels, solvents, etc.
- Energy Savings
- Water Conservation
- Green Lab Program

Fire Safety

- Know the location of your extinguishers
- Know your evacuation route
- Do not block exits
- Do not store material in mechanical rooms
- Do not block fire extinguishers
- Store flammable materials appropriately
- Smoke only in designated areas
- Obtain a hot work permit for open flame or sparks

General Safety

Safety audits also include occupational safety items such as:

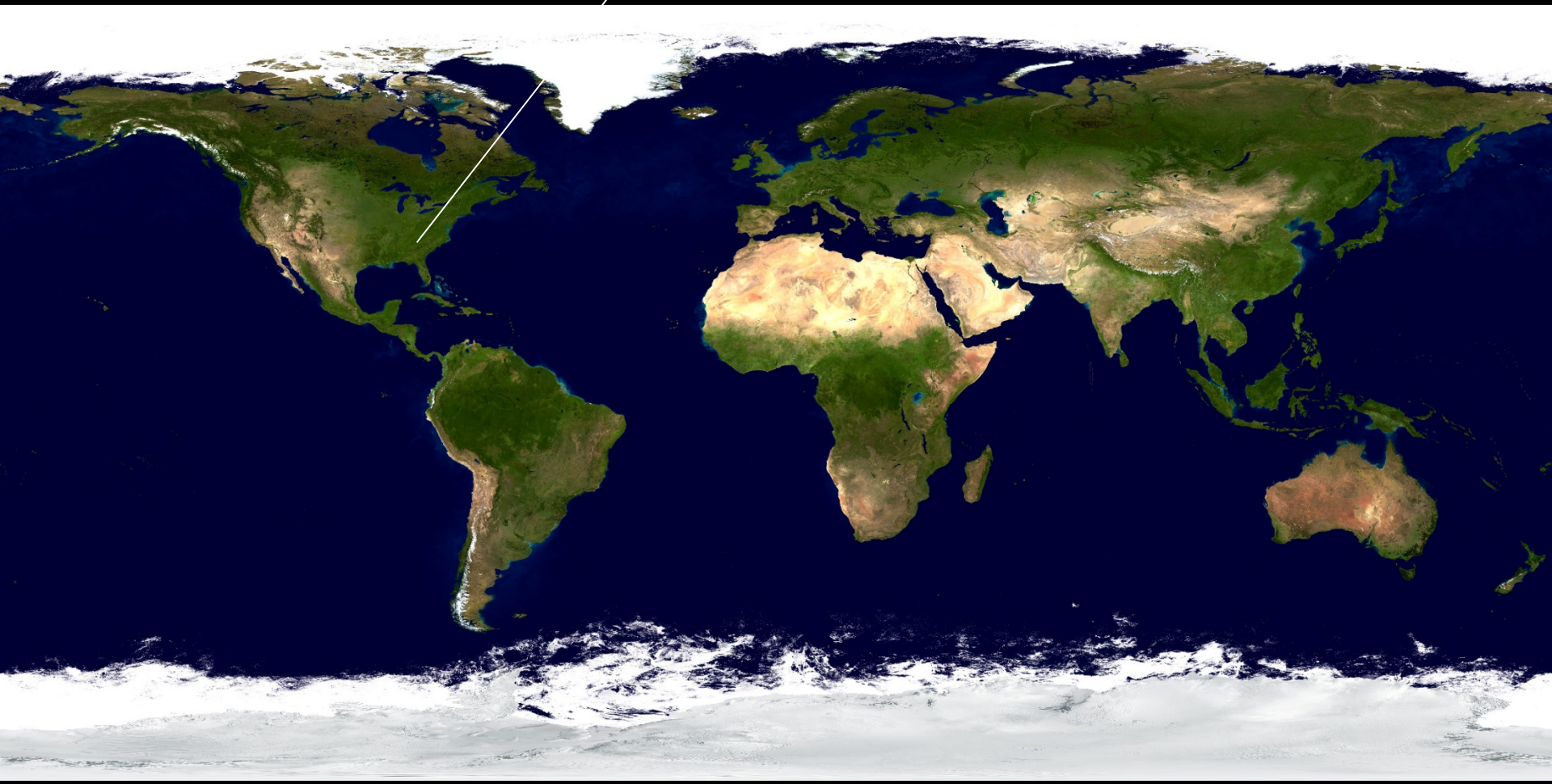
- Personal Protective Equipment (PPE)
- Fall Protection
- Respiratory Protection
- Medical Surveillance
- Lift Equipment Operation
- Right-to-Know and Safety Data Sheets (SDS)
- Electrical Safety
- Ladder Use and Elevated Work Platforms
- Lockout/Tagout (LOTO)
- Trenching, Shoring, and Excavation Safety
- Confined Space Entry
- Bloodborne Pathogens
- Other Best Management Practices

Please note…

This presentation does not comprehensively cover all UGA requirements under "Best Management Practices" or EPA Regulations. Please contact UGA's Environmental Safety Division for full program requirements

or go to:

www.epa.gov



References

US EPA Website www.epa.gov

US Green Building Counsel www.usgbc.org

US Green Seal Program www.greenseal.org

USG/BOR www.usg.edu/ehs/

UGA ESD Website www.esd.uga.edu

UGA ORS Website www.research.uga.edu/safety

UGA Recycling www.gogreen.uga.edu/recycle