Emergency Procedures

- **Minor spills**
  - Less than 100 microcuries
    - Notify everyone in the room
    - Clear the room of all unnecessary personnel
    - Confine spill
      - Liquids: Drop absorbent paper or chemical e.g., calcium bentonite)
      - Solids: Dampen thoroughly, taking care not to spread contamination. Use water unless a chemical reaction would release air contaminants.
      - Use NO Count to clean up spill area.
    - Notify lab supervisor
    - Notify Public Safety at 3-2712/4000
Emergency Procedures

- **Major spills**
  - More than 100 microcuries outside a hood
    - Evacuate the room shutting doors on way out
    - Notify lab supervisor
    - Notify RSO. Phone: 273-3445 or cell: 230-6315
    - Post the laboratory door with a sign: KEEP OUT
    - Assemble those persons present in the lab near the entrance to the lab
    - Wait for assistance.
Regulations, Security & Records

- **Academic Iowa Radioactive Materials License.**
  The University of Northern Iowa’s Academic Iowa Radioactive Materials License is provided by the Iowa Department of Health and Human Services: Bureau of Radiological Health

- Any action that jeopardizes this license, jeopardizes the permission of all individuals to use sources of ionizing radiation at UNI.

Contact the RSO at 273-3445 to view other radiation notices, regulations, licenses, and license conditions.
Inspections and Audits

- **Bureau of Radiological Health Inspections**
  - IDPH performs unannounced annual inspections to make sure that State regulations and University license conditions and policies are being met.

- **Radiation Safety Officer Audits**
  - UNI’s RSO periodically audits radiation user compliance.
  - Exposure rates and contamination levels are checked to ensure they are kept as low as is reasonably achievable.
You have the right to report any safety concerns or violations.

- Reporting Concerns or Violations
  - If you have a concern or suspect that a radiation safety violation has occurred please contact your supervisor.
  - If adequate corrective action is not taken, notify Gordon Krueger, UNI Radiation Safety Officer, at 273-3445.
  - If the violation is still not resolved, contact IDPH at 515-281-3478 or 515-281-3231.
  - IDPH regulations prohibit discrimination against individuals who report radiation safety concerns or violations.
Notice to Employees
Regulations, Security & Records

- **Amending Authorized Use**
  - File an amendment to UNI’s radiation license with IDPH whenever changes occur in an existing user’s authorization.
  - To maintain compliance, authorized users must file an amendment form with the Radiation Safety Officer (273-3445).
  - Examples of changes include:
    - Adding or deleting personnel
    - Changes in use areas
    - Changes in shipping or on-hand limits
    - Changes in radionuclide type, chemical form, and/or methodology

Click here to access amendment forms
Regulations, Security & Records

- Possession, use and disposal is strict and may I say again STRICT regulatory controls.
  - Governed primarily by the Nuclear Regulatory Commission.
  - Iowa an agreement state in which the Iowa Department of Regulatory Commission or IDPH assumes control of the radioactive materials within their borders
  - Issues licenses
    - Broadscopes
      - Facility sets limits
    - Research and Development, Laboratory, and Industrial Use of Small Quantities of By-Product Material Regulatory Guide
      - Facility limited to a specific amount of material
    - Radiation Producing Devices
  - Perform inspection of Radiation Programs across the state.
Radiation Safety Manual

- Establishes regulatory hierarchy
  - Comprised of Radiation Safety Committee, Radiation Safety Officer and Authorized User
- Establishes Radiation Controls
  - Purchase, usage, storage, and disposal of radiation material
  - Ensure Radiation Producing devices compliant with current regulations and training requirements.
- Establishes ALARA Program
Regulations, Security & Records

- Requires Radiation Safety Manual (cont’d)
  - Training Program
    - Radiation Safety Officer, Authorized Users and researchers and employees
  - Establishes Assessment Program
    - Requires annual audit of all Laboratories where radiation source materials are used
Radioactive Material Inventory Management

- Keep proper documentation of radioactive usage to:
  - Ensure the security of materials
  - Monitor material usage
  - Maintain accurate waste disposal records

- Make sure records are updated and available for audits when necessary.

- Record activity in units of millicuries.
Regulations, Security & Records

- **Radioactive Material Inventory Management**
  - X-ray Equipment and Scanning Electron Microscopes
    - Permitted through the state
    - Required to be inspected annually
    - Records of Inspections must be kept for at least 3 years
  - Sealed Sources
    - Checked every 6 months for leakage unless exempt
    - Must be less than 0.005 μCi of removable activity
  - Exempt Source Material
    - IAC 641Chapter 39 Appendix B
Security of Radioactive Materials

All unused radioactive materials should be located in a lockable device such as a cabinet or refrigerator.

Lock the room where radioactive materials are stored when unattended to prevent unauthorized access or removal.
Know the purpose of anyone who enters your lab area or visits.

- Identify all visitors.
- Determine why they are visiting your lab.
- Inform visitors of all lab hazards and any special requirements for your lab area.
Regulations, Security & Records

- **Records**
  - Inventories, after use surveys and drain disposals collected every 6 months.
  - Leak tests and assessment results

- **Security**
  - All unused radioactive material should be in lockable refrigerator or cabinet
  - Lock room where radioactive materials are stored when unattended.
  - Unsecured material must never be left unattended