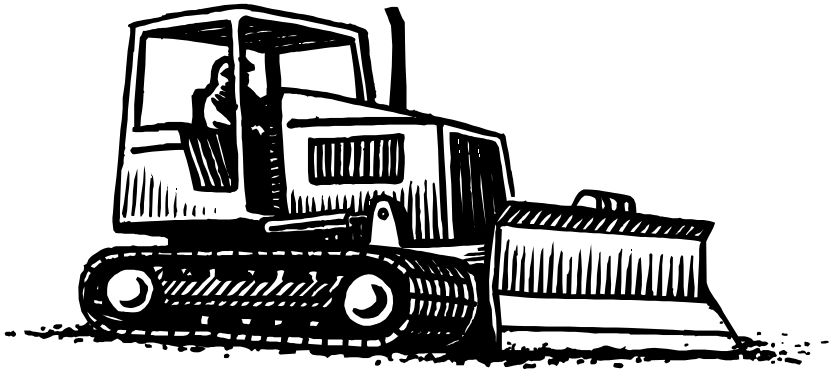
Contractor Safety Handbook



A Safer You is a Safer UK

TELEPHONE NUMBERS

Emergency Number
911

Non-Emergency Numbers	
Environmental Health and Safety **web site: http://ehs.uky.edu**	**257-1376**
Biosafety Liaison with IBC (infectious agents/rDNA), training & auditing, biosafety cabinets, NIH guidelines and federal/state biosafety laws & regulations	**257-1049**
Environmental Management Hazardous waste management, spills and releases, hazardous materials, DOT/IATA, underground tanks, PCBs, site remediation, property audits, radon, lead, asbestos	**323-6280**
Occupational Health and Safety Lab safety, fume hoods, OSHA, respirators, ergonomics, accident investigation, indoor air quality, bloodborne pathogens, chemical safety, lockout-tagout, hot work, noise, confined space	**257-3827**
Radiation Safety Radioactive material, authorization, badges, waste pickup, meter calibration, training, X-ray machines, laser	**323-6777**
University Fire Marshal Emergency planning, fire prevention, fire suppression systems, life safety, plan review/approval, code compliance	**257-6326**

Other Safety Personnel			
Hospital Safety Officer	**323-5734**	**PPD Safety Officer**	**257-9377**

Introduction

The University of Kentucky is committed to being a leader in safety and health. That not only includes UK's faculty, staff, and students but visitors on our campus, including contractors. The guidelines in this handbook are designed to help contractors be aware of UK's safety requirements and complete their projects with minimum impact on members of the UK community.

Construction is continuous on campus as UK improves the facilities it now occupies, and new facilities are always being planned and built. Construction can be a dangerous job, as reported by the Bureau of Labor Statistics 1180 fatalities occurred nationally in 2005 on construction sites. In an attempt to reduce the number of fatalities on construction sites, Kentucky Occupational Safety and Health (KY OSH) has developed the Construction Partnership Program (CPP). This partnership is a voluntary arrangement between KY OSH and construction companies. UK encourages this program and will assist in forming such a partnership. To find out more information please contact KY OSH Education and Training division at 502-564-3070 extension 451.

1.0 GENERAL SAFETY CONSIDERATIONS

1.1 Fencing

Perimeter fencing that blocks sidewalks must include signs directing pedestrians to a safe walkway. Primary signs can be on the perimeter fence but additional signs may be necessary to inform pedestrians of sidewalk closers that allow for safe crossing at a crosswalk.

1.2 Housekeeping

All corridors and exit doors must be kept clear at all times. In addition all external exit ways, walks, and drives must be kept free from debris, material, tools, and vehicles. Please refer to UK Fire Marshal's Corridor Use Policy (http://ehs.uky.edu/fire/corridor.html).

1.3 Training

Contractors are responsible for all training of their employees. In some instances, UK site specific training may be required. If this is needed or there are questions, consult with the UK representative assigned to oversee the project and the necessary arrangements will be made.

1.4 Smoke Detectors and Fire Alarms

The contractor shall protect all smoke detectors in work areas to prevent false alarms. The contractor will be responsible for any false alarm caused by dust created in their work areas or dust traveling beyond inadequate protection barriers. If there is a need for an existing or newly installed fire alarm system or parts of that system to be serviced, turned off, or disconnected, prior approval must be obtained from UK Capital Project Management Department (CPMD) or other project manager. They will make the proper internal notifications. The contractor must follow the procedures outlined for utility outages and any documented charges incurred by the responding fire department due to a false alarm shall be paid for by the contractor. As soon as all work is completed, notification must be given to the owner by way of the project manager. All protected smoke detectors will be uncovered and tested prior to final payment to the contractor.

A temporary system shall be provided when a fire alarm, detection or suppression system is impaired. Contractors shall provide daily reports indicating the superintendent has walked through the project at the end of each work period to satisfy himself there are no present conditions that may result in an accidental fire. Portable fire extinguishers shall be on site during this time. The contractor is responsible for inspecting and testing any temporary systems on a monthly basis.

2.0 OCCUPATIONAL HEALTH & SAFETY

2.1 Hazard Communication

Contractors shall have and follow their own hazard communication plan. When contractors are working in occupied spaces and may potentially be exposed to UK hazards, the project manager shall contact UK Environmental Health and Safety (EHS). UK EHS will make a hazard determination. This information will then be communicated to the contractor through the project manager.

2.2 Hazardous Materials

The contractor shall not leave chemicals on site unless prior approval has been given. If hazardous chemicals are left on site, they shall be secured and have adequate secondary containment. Written information shall be given to UK so any safety information can be communicated to affected employees as necessary.

2.3 Compressed Gas Cylinders

Compressed gas cylinders are considered hazardous materials. The contractor is expected to follow standard industry best practices that are outlined in Compressed Gas Cylinder Association Pamphlets. Those guidelines include but are not restricted to the following:

- Valve caps should always be in place when cylinders are being transported, stored or not in use.
- Cylinders must be secured by acceptable means, i.e. chain, strap, or rigid retaining bar.
- Transport while secured on carts designed for such purposes
- Keep cylinders away from welding operations, extreme temperatures, and electrical circuits.

2.4 Hot Work-Welding, Cutting and Brazing

Contractors working in occupied buildings must obtain formal approval prior to performing hot work. Hot work is defined as any operation involving open flames or producing heat and/or sparks. This includes but is not limited to: brazing, cutting, grinding, soldering, and thawing pipe, torch-applied roofing, and cad welding. Contractors working will receive a copy of the UK hot work permit and related procedures at the preconstruction conference.

2.5 Ladder Safety

Always follow the manufacturer's guidelines for use of ladders. The area under and around the ladder shall be secured to ensure no falling objects strike passersby. Ladders shall not be left unattended in occupied buildings. Each contractor should be following a ladder safety program.

2.6 Cranes and Material Hoist Operations

Contractors shall provide appropriate barriers around cranes and material hoists to protect pedestrian and vehicular traffic around the operating area. When cranes are operating and moving, flag men shall be provided by the contractor and utilized to prevent pedestrian and vehicular traffic from crossing paths with the crane load.

2.7 Hazardous Energy Control

Contractors are expected to follow their own Hazardous Energy Control (HEC) program. If in the course of a project any UK employees will be in harms way from locked out equipment, the UK program will be used. Contractors will supply the equipment such as a hasp that will accommodate multiple locks.

2.8 Excavation

Prior to starting any excavation project the contractor must notify the UK project manager so contact with local utilities such as sewer, cable, gas, telecommunications, electric, and water can be made. The contractor shall discuss the proposed work and ask to establish the location of the utility underground

installations. Contractors shall also provide guardrails or other appropriate barriers for any open excavation to protect pedestrians and vehicular traffic. Discuss sidewalk closures with project manager. Signs shall be posted at nearest crosswalk to the closure.

2.9 Tools

The Contractor shall be responsible for the following items:

- Maintain power tools in a safe working condition
- Designed safety features such as guards and interlocks shall NOT be removed or defeated.
- Tools shall be tied off when in use above personnel or other dangerous equipment.
- Tools powered by gasoline or powder-actuated shall not be used inside occupied university buildings unless prior permission given by EH&S and safeguards put in place to reduce exposure to building occupants.

2.10 Permit Required Confined Space

Contractors are responsible for their own confined space entry procedures and training as required by 29 CFR 1910.146 and 1926.21(b)(6). All equipment required to provide a safe entry, rescue, and to limit access to only authorized personnel shall be provided by the contractor.

2.11 Scaffolding

Scaffolding shall be in compliance with 29 CFR 1926 (subpart L) and/or 1910.28. The contractor shall employ a competent person who will approve the initial scaffolding plan, initial set up and provide periodic inspection.

3.0 ENVIRONMENTAL CONSIDERATIONS

3.1 Hazardous Waste Management

The Contractor must provide University of Kentucky with a list of actual and potential hazardous wastes to be generated during

the project. Hazardous waste generated by the contractor as part of its work is the responsibility of the contactor. Contractors must ensure that their hazardous waste is properly identified, stored, transported and disposed of in accordance with all applicable local, state and federal laws.

For projects where temporary on-site storage is necessary, the contractor must ensure, at a minimum, proper labeling of containers and tanks, adequate secondary containment, segregation of incompatible material and documentation of weekly inspection of the storage areas, Contractors must maintain and adequate emergency plan and spill equipment to address spills, fire, etc. In addition, all hazardous waste containers shall be constructed of a material that is compatible with the waste, in sound condition, and kept securely closed at all times.

Each project should be evaluated for the potential presence of the following hazardous materials or other environmental concerns. It is important to allow sufficient time for Environmental Health & Safety personnel to conduct surveys and schedule abatement or removal of the hazardous materials.

3.2 Asbestos-Containing Materials (ACM)

- Project Manager should have Environmental Health and Safety Environmental Management (EHS/EM) survey ALL projects for the presence of ACM
- Project Manager must provide survey results to Contractor
- Abatement should be completed prior to project
- ACM in the project area (but not part of the project) must not be damaged or disturbed at any time

Regulatory notification required for demolition projects even if no asbestos is present (contact EHS/EM for assistance)

3.3 Lead-Based Paint

- Testing should be requested from EHS/EM for any project that would disturb painted surfaces and before ALL demolition projects

- Project Manager must provide testing results to Contractor
- Contractor must provide notification to occupants of housing units prior to ANY project that would disturb a painted surface
- Contact EHS/EM prior to any project that involves paint removal
- Contact EHS for lead packaging and disposal instructions.

3.4 Fluorescent Light Ballasts

- Ballasts must be removed from light fixtures that are to be disposed (ballasts labeled “No PCBs” need not be removed)
- Ballasts should be placed into open top DOT-approved 30- or 55-gallon steel drums, labeled with the standard EPA PCB label, and kept in a secure location
- An EHS/EM contractor may be available to remove ballasts
- Report leaking ballasts to EHS/EM immediately
- Contact EHS/EM for removal of the ballasts

3.5 Fluorescent Light Bulbs

- Used fluorescent bulbs must not be disposed of as regular trash or construction debris
- Used bulbs should be placed into cardboard boxes designed specifically for them
- Contact EHS/EM for handling instructions for “green cap” light bulbs
- Boxed bulbs must be sealed and labeled in accordance with EHS/EM guidelines
- Broken bulbs must also be handled in accordance with EHS/EM guidelines
- An EHS/EM contractor may be available to remove the bulbs

Contact EHS/EM for removal information

3.6 Hazardous Waste and Chemicals

- Project Manager should request a walk-through from EHS/EM prior to the project, particularly for projects in laboratories or medical areas
- If the initial walk-through was conducted while the project area was occupied, a second inspection should be scheduled after the area is vacated

Coordinate disposal of any hazardous, special, or regulated waste from a project with EHS

3.7 Radioactive Materials

- Project Manager should request a walk-through from EHS/Radiation Safety (RS) prior to any project in a laboratory or medical area in which radioactive materials were used or stored
- EHS/RS should be advised of other project locations so that an evaluation of the potential presence of radioactive materials can be made (a visit may not be necessary)

Note: some exit signs may contain radioactive materials

3.8 Laboratory Fume Hoods & Exhaust Ductwork

- Work involving fume hoods should be cleared by EHS/EM and EHS/RS
- Fume hoods should not be moved or otherwise disturbed without prior approval

Fume hood exhaust ductwork should be assessed before work begins.

3.9 Mercury Switches or Thermostats

- Mercury switches or thermostats should be removed (without breaking the mercury bulb) and placed into a sealed, leak proof container
- An EHS/EM contractor or PPD may be able to assist with these tasks
- Report broken mercury switches to EHS/EM immediately

Contact EHS/EM for disposal of the mercury items

3.10 Oil-Filled Equipment

- Project Manager should contact EHS/EM to have oil-filled electrical equipment tested for PCBs prior to its removal (PCB items must be handled by special contractors)
- Combustible materials must not be stored within 5 meters (16 feet) of any PCB electrical transformer (contact EHS if such transformers are in the project area)
- Contractor must recover oil from elevators, hydraulic lifts, or other oil-filled equipment prior to removal or building demolition (when equipment is left in place)
- Recovered oil must be stored in sealed, leak proof containers

Contact EHS/EM for disposal of recovered oil

3.11 Chillers and Air Conditioning Units

- Freon must be removed and properly captured prior to or during the repair or removal of chillers, air conditioners, or other equipment that contains CFCs (certified technicians – Contractor or PPD -- must be used for this task)

The Physical Plant Division should be given the opportunity to recover the Freon or take possession of Freon recovered by others

3.12 Laboratory Piping

- Project Manager should consult EHS/Occupational Heath and Safety (OHS) and EHS/EM prior to any project that would disturb laboratory and medical area waste piping
- EHS/RS should also be consulted for laboratories or other areas in which radioactive materials were stored or used

3.13 Pressurized Gas Cylinders

- Pressurized gas cylinders shall be removed from the project area by the occupants or other qualified personnel prior to the start of a project
- Cylinders that cannot be removed must be secured in place and protected from damage
- Contact EHS/EM if pressurized cylinders are to be disposed

3.14 Fire Extinguishers

- UK-owned fire extinguishers must not be removed from the project area
- If the Contractor uses a fire extinguisher on site, contact EHS/FM immediately
- Project Manager should notify EHS/Fire Marshal (FM) at the conclusion of a project so that the fire extinguishers can be inspected for condition and pressure

3.15 Batteries

- All batteries (including emergency lighting battery packs) should be removed from the project area prior to demolition. Contact EHS/EM for disposal

Contact EHS/EM immediately if leaking batteries are discovered

3.16 PCBs

It is the policy of the University of Kentucky that PCB containing equipment will be treated by Consultants, Contractors, and the University in a manner that conforms to the intent of all applicable laws and regulations (primarily 40 CFR Part 761). The following procedures shall be followed by the Contractor and Subcontractors while present on a University Project or other property:

(1) Only authorized, trained personnel may inspect, repair, or maintain PCB transformers.
(2) No combustible materials may be stored within a PCB transformer room or within five meters of a PCB transformer. Such materials include, but are not limited to, paints, solvents, plastic, paper, and wood.
(3) The Contractor shall not use rooms containing PCB transformers for storage rooms, staging areas, job site offices or break rooms.

All PCB transformers at the University of Kentucky are identified by a PCB label as defined in federal regulations. If the Contractor should have a question as to the location of a PCB transformer, it should contact the Project Manager. (Ref-00020S05)

3.17 Spill Prevention

The University of Kentucky is subject to federal, state, and local oil pollution prevention and groundwater protection standards. In order to comply with those standards, UK must ensure that contractors and subcontractors working on UK property also comply.

Any work at UK involving the storage (in drums, tanks, or other containers) or use of motor oil, motor fuels, fuel oil, lubricants, hydraulic fluids, waste oil, or any combination of oil with other substances must follow the following procedures:

(1) The UK Project Manager must be informed prior to bringing drums, tanks, or other containers of oil to UK property. The type of oil involved and specific information about the storage containers (number, size, type, and proposed location) must be included in the notification. Vehicle fuel tanks need not be listed, but portable fuel or oil containers carried in trucks should be included.

(2) Contractors and/or subcontractors must prepare spill contingency plans that not only outline how contractor personnel will respond to spills but what steps will be taken to prevent such spills in the first place. These plans must be submitted to the Project Manager prior to the material being brought to UK.

(3) All drum storage areas and above ground storage tanks must be equipped with secondary containment such as dikes, berms, basins, curbs, or retaining walls. Wherever feasible, covers should be provided for such areas. Double-wall tanks are acceptable, provided that the tanks are also equipped with spill and overfill prevention equipment.

(4) A spill kit including, but not limited to, booms, pads, and other absorbent materials, should be kept on site at all times.

(5) Any spill, overfill, or other release greater than **one gallon** must be reported immediately to the project manager and UK Police (257-1616, emergency – 911). Spills smaller than one gallon may be reported up to 24 hours after the event, provided that cleanup measures are implemented immediately.

(6) Disposal of any spilled product, cleanup materials, or contaminated soil must be coordinated through UK Environmental Management (323-6280).(Ref-00020S06)

3.18 Storm Water

Any construction activity, including grading, clearing, excavation, or other earth moving process may require an NPDES storm water permit for construction under the NPDES Storm Water Program. In Kentucky, that program is implemented by the Kentucky Division of Water:

KPDES Branch
Division of Water
Frankfort Office Park
14 Reilly Road
Frankfort, KY 40601
Phone: (502) 564-3410

Information can also be obtained from the U.S. EPA Office of Wastewater Management:

(202) 260-5816
http://www.epa.gov/owm/sw/

Phase I of EPA's storm water regulations require operators of construction activity disturbing 5 acres or more of land to apply for an NPDES storm water permit. "Disturbance" refers to exposed soil resulting from clearing, grading, or excavating performed during road building, construction, or demolition.

For the purposes of this regulation, an "operator" is the party or parties that have operational control of the project plans and specifications *OR* day-to-day operational control of the affected construction activities.

Under the Phase II rule, operators of construction activities disturbing equal to or greater than one acre and less than five acres of land are subject to NPDES permitting requirements.

Under the Phase I and Phase II rules, operators may be required to implement erosion and sediment control practices, control waste, develop storm water pollution prevention plans, conduct regular inspections, or include other Best Management Practices to control water pollution. Construction sites covered by these rules are also subject to inspection by state officials.

4.0 FIRE & LIFE SAFETY

4.1 Emergency Procedures

The establishment of well thought out emergency plans is one of the cornerstones of an effective safety program. Evaluating potential emergency situations, developing emergency procedures, and conducting practice exercises can help save lives.

When the fire alarm sounds: Immediately evacuate the building using the exit stairs and meet in your pre-designated area. Only open doors that are cool enough to touch and crawl through smoky areas. Signal for help at a window if all exit ways are impassable. Assist physically impaired persons to stairwell and inform emergency personnel of situation. Never re-enter the building until fire officials give approval.

If you discover a fire - **RACE**: **R**escue anyone in immediate danger without putting yourself in danger or entering unfamiliar area or areas filled with smoke. **A**ctivate the fire alarm system and call 911 as soon as possible to report. **C**onfine the fire by closing doors as you leave the building. **E**vacuate the building and report the situation to arriving fire or police officials. Extinguishing a fire is not required but may be attempted by trained individuals. The policy can be reviewed at http://ehs.uky.edu/fire/evacuation.html.

Corridor use policy: The Kentucky Building Code and National Fire Protection's Life Safety Code require that exit corridors and stairwells are kept clear and unobstructed for emergency egress. Corridors can not be used to store equipment without written authorization from the UK FM. The entire policy can be reviewed at http://ehs.uky.edu/fire/corridor.html.

4.2 Reporting Campus Fires & the Michael Minger Act

In 1998, the Michael Minger Act was passed by the Kentucky General Assembly. This law was written because of a fatal fire at Murray State University. This act requires that all "fires or threats of fire" at state colleges and universities be reported immediately to the State Fire Marshal.

UK police are automatically notified of any incident on campus that involves a fire alarm or the fire department. There are three situations or THREATS OF FIRE in which individuals, faculty, staff or student, must ensure UK Police (257-1616) are notified immediately.

- Small fires on campus that are extinguished with or without a fire extinguisher and that do not involve a fire alarm or the fire department must be reported to UK Police. For example, a beaker of alcohol that ignites in a laboratory hood, a small trash can fire, a burnt bag of popcorn in a microwave, or a mulch fire around a shrub must be reported.

- All threats of fire on campus, whether heard or observed, must be reported to UK Police.

- For properties located off-campus, the official in charge of the property is responsible for reporting all fires, false alarms and threats of fires to UK Police.

After being notified, UK Police will report these incidents to the State Fire Marshal. To review additional fire prevention and/or life safety policies go to http://ehs.uky.edu/fire/.

The campus emergency number is 911.

Use this number when you are in classroom, research, clinical, utility and administrative buildings, residence halls, fraternities and sororities, Bluegrass Community and Technical College, and sports facilities. University Hospital and some remote facilities have developed site-specific emergency first aid capabilities and procedures.

When contacting the 911 dispatcher in any emergency:

- Give your name.
- Tell the dispatcher specifically what the emergency is.
- Give the exact location, such as the building name, the room number, the street location, and any helpful directions to quickly locate the area.
- Describe the severity of the accident.
- Stay on the line until released by the dispatcher.
- Follow-up by completing any paperwork that has been described in this handbook.

4.3 Accident Reporting

Contractors are responsible for maintaining their own OSHA 300 logs. Any incidents that require OSHA notification such as a fatality or hospitalization should also be reported to the UK Project Manager.

UK Environmental Health and Safety Departments

This section contains a brief description of UK EHS departments and programs. It is intended to give an overview of the services they provide to the University of Kentucky community. Individuals from these disciplines have reviewed all construction projects being performed on campus and provided input. If you need assistance in any of these areas, contact your project manager with questions.

Biological Safety (257-1049)

This department is responsible for programs concerning the safe use of infectious agents and recombinant DNA at UK. This includes training, auditing, and consulting with researchers and laboratory personnel concerning compliance with the Federal and state laws and regulations in these areas. The Biological Safety Officer is the liaison between the researchers and the Institutional Biosafety Committee, which reviews protocols dealing with infectious agents and/or recombinant DNA.

Environmental Management (323-6280)

This department has primary responsibility for management of UK's hazardous waste, including waste pickups and central waste storage. This unit handles hazardous materials spills and releases, biohazard wastes, chemical recycling and provides assistance for shipping hazardous materials. It also focuses on environmental compliance and activities that could affect the quality of air, soil, drinking water or groundwater. This unit handles asbestos testing and abatement, underground storage tanks (USTs), lead, radon, polychlorinated biphenyls (PCBs), air and water quality, environmental site assessment, and contaminated site remediation.

Occupational Health and Safety (257-3827)

This department is responsible for all OSHA-related programs, such as respiratory protection, hearing conservation, bloodborne

pathogens, hazard communication, laboratory safety, and many others. The department also conducts fume hood inspections, indoor air quality investigations, and accident investigations, and assists units with general safety procedures, such as ladder safety, chemical storage safety, electrical safety, and construction safety.

Radiation Safety (323-6777)

This department is responsible for all aspects of radiation use at UK. The radiation protection program includes radioactive materials user authorization, film badges and bioassays, survey meter calibration, radiation safety training, radioactive waste handling, and purchasing of radioactive materials. The unit is also responsible for x-ray and laser safety programs.

University Fire Marshal (257-6326)

This department handles fire prevention and training, fire suppression systems, fire extinguisher inspection and maintenance, life safety audits, emergency evacuation planning, and building code compliance. The University Fire Marshal has the delegated authority for plan review and approval of in-house construction and renovation projects (i.e., non-capital projects costing less than $400,000). All in-house renovations must be approved by the Fire Marshal's office prior to beginning construction.

NOTES