

ENVIRONMENTAL HEALTH & SAFETY/RISK MANAGEMENT Contractor Management (including Sub-Contractors)

Contractors have the responsibility to ensure the health and safety of their workers and that their work activities do not affect the health and safety of University employees, students or visitors. The University expects that contractors manage any risk to health and safety associated with their working practices at the University of Dayton in accordance with local, state and federal environmental and occupational safety regulations.

Contractors are required to have a complete health and safety program, which should be made available to University representatives upon request. In addition to the contractor's health and safety program, the following University of Dayton policies and procedures must be reviewed and implemented:

POLICY AND PROCEDURES FOR HAZARDOUS MATERIALS:

While undergoing renovation or demolition, it is likely that hazardous materials will be encountered and potentially disturbed. Hazardous materials are highly regulated by multiple government agencies including the Environmental Protection Agency, the Department of Transportation, the Occupational Safety and Health Administration, as well as local and state regulatory agencies such as the Ohio Department of Health and the Regional Air Pollution Control Agency. The University is considered the generator and owner of these materials from "cradle to grave". Hazardous materials include: asbestos, lead, ballasts containing PCBs, mercury, fluorescent light bulbs containing mercury vapor, etc. The Contractor must review the attached policy and procedures for handling and disposing of hazardous materials and share this information with their supervisors and crew members working at the University, including subcontractors.

HAZARDOUS MATERIALS PROCEDURE:

CONTRACTOR NOTIFICATIONS:

- A. In the event a Contractor encounters materials on the project site reasonably believed to be asbestos-containing, polychlorinated biphenyl (PCB), or other hazardous materials which have not been rendered harmless, the Contractor shall immediately stop work in the affected area and report the condition to the UD Project Manager and EHS/RM.
- B. The Contractor shall take all necessary precautions to protect Contractor's employees, Subcontractors, vendors, students, visitors and University employees and shall not disturb asbestos-containing materials at any time.

HAZARDOUS MATERIALS HANDLING AND DISPOSAL:

- C. Hazardous Waste – General:

1. The Contractor shall make every effort to minimize the amount of hazardous waste generated from construction activities. Owner reserves the right to require substitution of products that generate hazardous waste, e.g., paint stripper, degreasers, etc. with products of lesser toxicity. The Contractor must maintain MSDS's for all chemicals brought onto University property, and shall provide them to the EHS/RM when requested.
 2. Unless otherwise specified, all hazardous waste generated at the project site shall be disposed of through EHS/RM.
- D. Hazardous and Flammable Material Storage: All hazardous or flammable chemicals, liquids, or gases brought onto the project site shall be used and stored in approved containers conforming to applicable federal, state and local regulations. The Contractor is responsible for securing permits, if applicable, for the temporary storage of hazardous materials on the project site. Hazardous materials shall be used and stored in a manner that will prevent their accidental release. Liquid hazardous materials, including fuel stored in stationary tanks, shall have a secondary containment equal to 110% of the liquid volume.
- E. Hazardous Material Spill Clean-up: The Contractor shall ensure that spills of hazardous materials brought onto the project site or included in Contractor's Work are contained and cleaned up immediately and that all necessary means and materials are maintained at the work site to accomplish this task. The Contractor shall notify the EHS/RM of a hazardous material spill to arrange for removal of hazardous waste generated as a result of spill remediation activities. The Contractor shall be required to provide additional remediation of soils or other porous surfaces found by Owner to be contaminated as a result of hazardous material spills.
- F. Asbestos:
1. Prior to the start of the project's construction phase, EHS/RM shall conduct an asbestos survey of all accessible/visual building areas scheduled for renovation or demolition and generate a report that contains an inventory of suspected or confirmed asbestos-containing materials (ACMs).
 2. ACMs that will be impacted (disturbed) by the renovation or demolition process shall be removed prior to, or concurrently with, other construction activities. No one shall remove, repair, disturb, or handle any asbestos-containing materials except EHS/RM and an approved asbestos abatement contractor. All asbestos abatement activities shall be monitored by EHS/RM in accordance with the Standard Operating Procedure.
 3. The Contractor may encounter hidden ACMs during demolition activities (e.g., insulated pipe risers inside wall cavities). If the Contractor observes

assumed or suspect ACM, or if the Contractor inadvertently damages or disturbs ACM or suspected ACM, the Contractor shall notify the EHS/RM immediately.

G. Polychlorinated Biphenyls (PCBs):

1. Fluorescent Light Ballasts: All fluorescent light fixture ballasts manufactured prior to 1978 are presumed to contain PCBs and shall be disposed of as hazardous waste or recycled. Ballasts manufactured after January 1, 1978 and specifically labeled "No PCBs" may be recycled or disposed of as non-hazardous construction debris. All ballasts that do not contain a "No PCBs" label shall be removed by the Contractor from light fixtures, segregated from other construction debris and recycled through the EHS/RM.
2. Insulating Oils: Insulating oils associated with high voltage equipment may contain PCBs. Equipment containing PCB insulating oils shall be decontaminated prior to demolition. Recovered oil containing PCB shall be recycled through EHS/RM.

H. Mercury:

1. Fluorescent and High Intensity Discharge (H.I.D.) Lamps: Fluorescent lamps (light tubes) and H.I.D. lamps contain mercury. The Contractor shall remove lamps scheduled for demolition from their fixtures unbroken and recycle through EHS/RM. Contractor may contact EHS/RM for collection.
2. Thermostats and Fire Alarm Pull Stations: Thermostats and fire alarm pull stations may contain mercury switches. The Contractor shall remove all mercury-containing thermostats and fire alarm pull stations (if containing mercury) scheduled for demolition intact and recycle through EHS/RM.
3. Laboratory Sink P-Traps: Laboratory sink p-traps may contain mercury contamination as a result of thermometer breakage. The Contractor shall contact EHS/RM prior to the disturbance of any drain lines.

I. Lead:

1. Paint or Other Surface Coatings:
 - a. Unless otherwise determined by approved testing methods, all paints and other surface coatings, e.g., varnish, shellac, stain, lacquer, etc., are presumed to contain some amount of lead.
 - b. The Contractor shall take all necessary precautions to protect the Contractor's employees, Subcontractors, students, visitors, and University employees from exposure to lead-containing dust. The

Contractor shall comply with the OSHA lead standard for the construction industry, which applies to any construction activity which may release lead dust or fumes including, but not limited to, manual scraping, manual sanding, heat gun applications, power tool cleaning, rivet busting, abrasive blasting, welding, cutting, or torch burning of lead-containing coatings.

- c. All Work related to lead is included in the Contractor's scope. Owner is not responsible for lead-related Work and will not approve change orders for expenses incurred as a result of the Contractor's omissions.
 - d. Owner shall provide existing lead analysis data of surface coatings where available. However, these data are not intended to be, and do not represent, an evaluation of all potential lead-containing coatings at the work site. The Contractor is solely responsible for determining lead content for OSHA compliance purposes.
 - e. Construction debris coated with lead-containing paint that is generated during demolition activities is not considered to be hazardous waste unless the paint has been intentionally separated from its substrate through chemical stripping or other means.
 - f. If Work requires stripping, abrasive blasting, or other means of paint removal, the Contractor shall submit to EHS/RM, for review and approval, a Work Plan that includes a description of the paint removal method, MSDSs for all chemical stripping agents, and a description of the control measures that will be used to protect the Contractor's employees, other individuals in the vicinity of the Work, and the environment.
 - g. The Contractor shall clean sheet plastic, protective clothing, respirator cartridges, etc. and discard as non-hazardous waste where feasible.
2. Power Washing: The Contractor shall protect soil and storm drains from paint chip debris during power washing of building exterior surfaces. All paint chips are presumed to contain lead and shall be collected and disposed of as hazardous waste through EHS/RM. The Contractor shall be responsible for all costs associated with remediation of soils found to be contaminated with lead-containing paint chips resulting from power washing activities.
3. Elemental Lead: Elemental lead products such as plumbing components, lead brick, counterweights, and sheet goods (e.g., roof flashing, X-ray shielding, drain pans, etc.) may be encountered during demolition. The Contractor shall remove elemental lead that falls within the demolition scope and dispose of through EHS/RM.

J. Mechanical System Fluids:

1. All fluids associated with mechanical systems scheduled for demolition or retrofit shall be recycled. The Contractor shall arrange for recycling of petroleum-containing fluids such as hydraulic fluids, lubricating oils, and non-PCB-containing insulating oils through EHS/RM.
2. Refrigerants shall be removed from equipment and managed through EHS/RM. Venting of refrigerant to the atmosphere shall be prevented. All refrigerant removed must be reclaimed, recovered, or recycled in accordance with 40 CFR 82.150-166 and Appendices.

K. Laboratory Chemical, Radiological, and Biohazardous Materials:

1. The University's laboratory decommissioning protocols require removal of all chemical, radioactive, and biohazardous materials and wastes and cleaning of potentially contaminated surfaces such as counter tops, equipment and fume hoods prior to transfer of laboratory areas to the Contractor. Facilities that have housed radioactive material, or that contain materials activated by radiation beams, shall be surveyed AND decommissioned by EHS/RM prior to release to the Contractor.
2. If the Contractor encounters potentially hazardous materials such as abandoned chemical reagents, containers or equipment with radioactive labels, biohazard (red) disposal containers or syringes, contact EHS/RM immediately.

L. Miscellaneous Hazardous Materials:

1. If the Contractor encounters potentially hazardous materials or waste on the project site not addressed in other sections of these procedures such as abandoned paint containers, pesticides, compressed gas cylinders, etc., contact EHS/RM and arrange for disposal.
2. If Contractor encounters any unusual odors or colors (staining) during drilling or excavation of soils, contact EHS/RM immediately.

POLICY AND PROCEDURES FOR HOT WORK PERMITS

A Hot Work Permit will be issued for any temporary operations which involve open flames and/or compressed gases/supplied fuel. These operations include, but are not limited to: brazing, cutting, grinding, soldering, thawing pipe, torch applied roofing, and welding.

RECEIVING A HOT WORK PERMIT

1. A University or Contractor employee performing work requiring a Hot Work Permit, must secure the permit from Environmental Health & Safety/Risk Management (EHS/RM) located in College Park Center before any work is to begin. All brazing, cutting, grinding, soldering, thawing of pipes, torch applied roofing, and welding that requires an open flame and/or compressed gases and/or supplied fuel that is a temporary operation

requires a hot work permit. Only those operations done in a permanent work site are exempt from the permit requirement. Permanent work sites must be approved by EHS/RM.

2. Upon receiving a Hot Work Permit, work cannot begin until the work site has been inspected by the contractor. The contractor must sign the permit verifying that the area has been examined and the precautions are checked on the Required Precautions Checklist of the Permit to prevent a fire. All applicable safety precautions on the permit checklist must be followed at all times during the hot work operation.
3. Persons doing Hot Work must indicate on the permit a start time. The permit must be posted at the work site for the duration of the Hot Work operation. After the Hot Work operation is complete, the permit must be returned to EHS/RM to indicate the job is complete. The contractor performing the work will check the work site approximately 4 hours after the work is completed for any hot spots or potential fire hazards from the work.
4. Long term jobs (of more than one day) may have a permit issued for the entire work schedule. EHS/RM will daily check the work site to ensure the safety of the Hot Work. If the work extends beyond the initial completion date, another Hot Work Permit must be secured for the additional work time.

Any additional, corrections, or suggestions to this policy may be submitted to EHS/RM for consideration. Any clarifications or questions about this policy can be directed to EHS/RM at 229-4503.

POLICY AND PROCEDURES FOR RED TAG PERMITS

A Red Tag Permit will be issued when fire protection equipment must be taken out of service. The purpose of the permit system is to supervise and authorize the shutting down of fire protection equipment and for the impairment of any fire suppression system and to emphasize to all that careful planning is essential to help safeguard property.

RED TAG PERMIT

1. A University or Contracted employee performing work requiring a Red Tag Permit, must secure the permit from Environmental Health & Safety/Risk Management (EHS/RM) located in College Park Center before any work is to begin.
2. Upon receiving a Red Tag Permit, work cannot begin until the work site has been inspected by the contractor. The contractor must complete the entire permit and sign the permit verifying the precautions are checked on the Precautions Taken checklist. All applicable safety precautions on the permit checklist must be followed at all times during the work on the fire protection equipment.

3. The permit must be posted at the work site for the duration of the operation. After the operation is complete, the permit must be returned to EHS/RM to indicate the job is complete.
4. Long term jobs (of more than one day) may have a permit issued for the entire work schedule. If the work extends beyond the initial completion date, another Red Tag Permit must be secured for the additional work time. EHS/RM must be notified daily at 229-4503 each time the system is shut down and restored so that the property insurer is notified per their requirements.

Before the impairment:

- Plan the impairment for when the facility is not operating, when possible.
- Have everything ready before impairing fire protection equipment, i.e. pipe plugs, repair parts, personnel, etc.
- Plan for temporary protection such as extra extinguishers, charged hose lines and temporary sprinkler protection if necessary.
- Notify Environmental Health & Safety/Risk Management at the College Park Center or at 229-4503 for a Red Tag Permit. Contractor must also notify Public Safety prior to shutdown at 229-2121.
- If the sprinkler system is restorable, either in whole or in part, assign someone to restore the system promptly in the event of a fire.
- Continue work until fire protection is restored.

During the Impairment:

- Shut down hazardous processes
- Restrict Smoking
- Restrict cutting and welding
- Have someone to patrol area where protection is out of service.

After the Impairment:

- Make certain fire protection equipment is placed back in automatic service.
- If sprinkler protection was impaired, conduct a 2 inch drain test at the sprinkler riser.
- For sprinkler control valves, return lock in the wide open position.
- Reset alarm system.
- Notify EHS/RM and public safety the work is complete and the system has been restored.
- Complete the Red Tag permit and return to EHS/RM.

Any additional, corrections, or suggestions to this policy may be submitted to EHS/RM for consideration. Any clarifications or questions about this policy can be directed to EHS/RM at 229-4503.