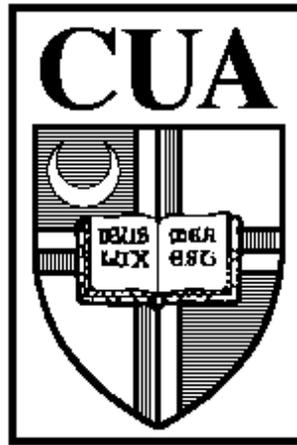


The Catholic University of America



CONTRACTOR SAFETY GUIDE

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General Requirements

This guide is issued to all contractors and persons performing work on facilities or property at The Catholic University of America (CUA). Its purpose is to highlight safety requirements in certain areas of work. It is not intended to be comprehensive nor deal with all situations that may be encountered.

It is the contractor's responsibility to ensure the safety of contractor employees, conduct the work in an environmentally sound manner, and provide for the protection of others who may come near the work activity. The contractor must follow all federal, state, and District of Columbia laws, regulations and CUA requirements. In case of uncertainty, the contractor must discuss the situation with CUA's project manager prior to proceeding with the work. Regulatory references are available for review at CUA's Department of Environmental Health & Safety [(202) 319-6112].

To protect workers and pedestrians, contractors are responsible for installing barricades to delineate the boundaries of work areas. Signs must be posted to warn people of dangers and to identify protective equipment required while in the work zone.

Contractors must certify that their employees have been trained in all regulatory requirements pertaining to the work to be performed. Employees must wear personal protective equipment whenever job hazards warrant it or whenever CUA has determined that it is required due to the hazards in the work area (e.g., safety goggles in a lab or hearing protection in a mechanical room). The contractor must instruct employees to promptly report all injuries and unsafe conditions to their supervisors. Report serious injuries to the Office of Public Safety on (202) 319-5111.

Contractors working inside CUA buildings must have ID badges prominently displayed on their clothing. These badges are available at the Office of Public Safety in Leahy Hall.

The Catholic University of America is an affirmative action/equal opportunity institution. During the performance of this contract, the contractor and any subcontractors agree to be bound by all applicable laws and regulations governing equal employment opportunity.

Contractors will not permit possession or use of any alcohol, whether lawful or not, on the University's property. The contractor will notify CUA in writing within five days of any drug related or alcohol-related accident or criminal offense on University property.

Smoking inside buildings on campus is prohibited.

In the event of any emergency, contact the Office of Public Safety on (202) 319-5111.

Asbestos

Asbestos-containing material (ACM) is any material that contains more than 1% asbestos. The following are examples of products that may be ACM's: floor tiles; floor backing, construction mastics; thermal insulation applied to pipes, fittings, boilers, tanks, ducts, or other interior structural components; materials that have been sprayed - or troweled - onto surfaces, such as acoustical plaster on ceiling and fire-proofing on structural members; textured paints/coatings; cement pipe, wallboard or siding; ceiling tiles or lay-in panels; packing materials; high-temperature gaskets.

The contractor must: (a) provide only trained/certified asbestos workers who will be equipped with necessary personal protective equipment; (b) supply any other equipment needed to protect the workers and others from overexposure to asbestos; (c) provide required caution signs and labels; and (d) contain and package the removed asbestos and other waste materials generated so that it does not contaminate the environment and to facilitate proper disposal.

PRIOR TO BEGINNING WORK involving asbestos, **DO THE FOLLOWING:**

- X Notify authorities as required by regulation and obtain needed approvals or permits
- X Provide two copies of the permits/approvals to CUA's project manager
- X Submit evidence that each employee on the job has received necessary training, including respirator training when respirators are to be worn
- X Submit a detailed, job-specific work plan to be used in the removal and demolition of ACM's for review by CUA's Environmental Health & Safety department. Include work procedures, safety precautions and personal protective equipment to be worn. Where applicable, include a sketch of the location, size and details of asbestos control areas; location, layout and details of change rooms; layout and location of waste container pass-out airlock; location of local exhaust equipment; air monitoring to be performed; description of wetting agents or removal encapsulates to be used (MSDS's); and waste disposal plan.

Industrial hygiene services required as part of the work, such as airborne asbestos monitoring, must be conducted by or under the direction of a person certified as an industrial hygienist (CIH) by the American Board of Industrial Hygiene. Laboratory testing must be performed by a laboratory participating in the AIHA Proficiency Analytical Testing (PAT) Program.

Clearly and accurately identify the waste generated that is being removed from campus.

PROVIDE ALL ASBESTOS WASTE MANIFESTS TO THE PROJECT MANAGER FOR SIGNATURE, so that a CUA representative may sign as the generator. Do not sign the manifest on the behalf of CUA as the generator.

REFERENCES: 29 CFR 1910.1001; 29 CFR 1926.1101; 49 CFR 171-172; 40 CFR 61, Subparts A & M; District of Columbia Municipal Regulations (DCMR) Title 20, Chapter 8.

Blasting and the Use of Explosives



SUBMIT PLANS FOR USE OF EXPLOSIVES to CUA's Environmental Health & Safety department **FOR** review and **APPROVAL** prior to their use.

Only persons qualified by training and authorized to do so may handle and use explosives. To ensure safety, use every reasonable precaution, including, but not limited to, visual and audible warning signals, signs, flags, or barricades. Also take precautions to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous electricity.

Account for all explosives at all times. Report missing explosives to the Office of Public Safety on 202-319-5111 as soon as the loss is discovered.

REFERENCES: 29 CFR 1910.109 and 29 CFR 1926 Subpart U.

Burning, Welding, Cutting and Other Use of Open Flame



Prior to beginning work, institute a “**Hot Work Permit**” system for any temporary operation that involves open flames or produces heat and/or sparks. This includes but is not limited to: brazing, cutting, grinding, soldering, thawing pipe, and torch-applied roofing.

Survey the surrounding work area (a minimum of 35 ft [11 m]) and remove combustible material or protect it from sparks and open flame. Provide and keep an appropriate fire extinguisher close to the operation. When the person doing the work cannot also act as a fire watch, assign an additional person to do this.

The person doing the work or the fire watch must be trained on how to prevent fires, how to operate the fire extinguisher, and the appropriate actions to take in the event of a fire. Report all fires to CUA Public Safety on 202-319-5111.

Provide and install welding screens or shields whenever it is possible for people nearby the work area to be exposed, in order to prevent flash burns.

Block off any duct openings and cover or fill any openings in exposed walls, the floor, and the ceiling with noncombustible material.

Shield combustible flooring with wet sand, fire retardant tarpaulins, or sheet metal. Provide a fire retardant covering under hot work where hot work will occur at a height.

If work is to be done inside an occupied building, plan the work so as to minimize occupants' exposure to fumes. Ventilate the work area to the outside if possible. Close and or seal doors and access ways to nearby rooms, particularly air distribution rooms, if fumes may enter these rooms. Work with the project manager to inform the occupants of the building that the work is to take place and that odors may be present.

Read the section regarding Gas Cylinders in this guide for additional guidance.

REFERENCES: 29 CFR 1910.251-256; 29 CFR 1926 Subpart J and the International Fire Code 2012 Chapters 26 and 30

Chemicals

Chemicals may be solids, liquids, or gases and include acids, bases, solvents, oils, lubricants, oxidizers, polymers, resins, coatings, cleaners, paints, strippers, adhesives, mastics, pesticides, herbicides, rodenticides, compressed gases, etc. It is important for both contractor and CUA employees to understand the hazards of chemicals to which they may be exposed and to comply with the regulatory requirements for hazard communication.

 **PRIOR TO BEGINNING WORK, SUPPLY MATERIAL SAFETY DATA SHEETS (MSDS's)** to CUA's project manager or to the Environmental Health & Safety department for chemicals to be used during contract work. It is preferable that you provide the MSDS's as part of your bid package to avoid delays during the actual work. Excluded from this requirement are latex paints and common household soaps, detergents, and cleaners.

All chemical containers must be labeled. If a manufacturer's label is removed or obscured, or if a chemical is transferred to another container, place the chemical name and its hazard on the container.

Ensure that chemicals are handled so as to prevent their release to the environment. Provide necessary personal protective equipment for your employees and ensure adequate ventilation. When using chemicals indoors, provide additional mechanical ventilation if harmful vapors, mists or dusts are generated or if strong odors will result from the work.

Report all chemical spills to the Public Safety Office on (202) 319-5111. You are responsible for immediate containment and clean up of all spills, and disposal of spilled material.

Store chemicals you bring on CUA property in a clean, dry, well-ventilated area away from heat or direct sunlight. Store incompatible chemicals in separate storage areas. When storing flammables indoors, place them in flammable storage cabinets. Keep flammable's away from any ignition sources. Do not store more chemicals than you expect to need for the job. Remove chemicals no longer required on the job site from CUA property.

Properly package, label, manifest, placard, transport and dispose chemical waste. No chemical is to be disposed on CUA property, including soil, water, drains, sinks, or sewers.

If you are disposing chemicals belonging to CUA as part of the job, accurately identify the chemical waste. **PROVIDE ALL HAZARDOUS WASTE MANIFESTS TO THE PROJECT MANAGER**, so that a CUA representative may sign as the generator.

Your employees have a right to know the hazards of CUA chemicals present in areas in which they are working. To obtain MSDS's and other information, contact the CUA project manager or the Environmental Health & Safety department. Your employees must comply with all hazard-warning signs and wear protective equipment required in any area they enter.

REFERENCES: 29 CFR 1910.106, 1200; 29 CFR 1926.59; 40 CFR 260-270, 761; 49 CFR 106-180; District of Columbia Municipal Regulations (DCMR) Title 20, Chapter 40.

Confined Spaces

Confined spaces have limited or restricted means of entry or exit, are large enough for a person to enter and work, and are not designed for continuous occupancy. Examples include tanks, bins, sewers, in-ground vaults, boilers, tunnels, pits, manholes, and similar areas.

If a confined space contains or has the potential for containing a hazardous atmosphere, may engulf an individual, is shaped such that an individual may be entrapped, or contains any other serious safety or health hazard, then the confined space is a **permit-required space**. If a confined space is free of atmospheric, safety, and health hazards, then the confined space is a **non-permit space**.

When entering into permit-required confined spaces, you must: (a) control entry with a permit program; (b) use trained and qualified supervisors, attendants, and entrants; (c) supply and use necessary monitoring and safety protective equipment; and (d) have provisions for rescue if it becomes necessary.

 **WHEN BIDDING FOR WORK THAT INVOLVES OR MAY INVOLVE ENTRY INTO A CONFINED SPACE, PROVIDE A COPY OF YOUR CONFINED SPACE PROGRAM** as part of your bid package.

 **PROVIDE COPIES OF ALL CONFINED SPACE ENTRY PERMITS** generated during a job to CUA's project manager or the Environmental Health & Safety department (EH&S). Also brief the project manager or EH&S on any unusual conditions encountered during the entry.

REFERENCES: 29 CFR 1910.146, 29 CFR 1910.269(e).

Electrical Safety

Locate all power lines before doing any digging. In work areas where the exact location of underground power lines cannot be determined, make sure that employees using hand-digging tools (jack-hammers, bars, etc.) wear necessary protective apparel.

Have an assured-equipment grounding conductor program for electrical equipment and installations used to provide electric power and light at a job site. Designate one or more competent persons to implement the program, and **MAKE AVAILABLE AT CUA'S REQUEST A COPY OF YOUR WRITTEN PROGRAM AND RECORDS OF TESTS** required by the standard.

Use lockout/tagout when any person is exposed to contact with parts of fixed electric equipment or circuits that have been de-energized. When work is necessary on energized equipment, use only persons trained to do this kind of work.

Do not run cable and power supply cords across aisles or corridors, creating a tripping hazard. Hang cords overhead where possible to reduce traffic cutting or fraying the cords.

REFERENCES: 29 CFR 1910.269; 29 CFR 1926, Subpart K, and the National Electrical Code NFPA 70E

Excavations and Trenches

An excavation is any man-made cut, cavity, trench or depression in an earth surface that is formed by earth removal. Because of the dangers associated with excavations it is important to plan for: (a) protecting employees; (b) use of support systems, sloping and benching systems, and other systems of protection against cave-ins; (c) means of access to and egress from excavations; and (d) personnel exposure to vehicular traffic, falling loads, hazardous atmospheres, water accumulation, and unstable structures in and adjacent to excavations.

Conduct no excavation or trench work, until the existence and location of underground pipes, electrical conductors, etc., have been determined. Inspect excavations daily. If there is evidence of possible cave-ins or slides, stop all work in the excavation until necessary safeguards are taken.

Install guards/barricades at a safe distance on all sides of excavations to prevent people working above or passers-by from falling in. Place warning lights near excavations at night.

Where pedestrians are to cross an open excavation, the installed walkway must be sturdy and free of trip hazards, slippery surfaces, splinters, nails, or protrusions, which may cause injury. Construct bridges for vehicular traffic to withstand twice the load of the heaviest vehicles anticipated.

Backfill excavations as soon as practical after work is completed and all associated equipment are removed.

REFERENCE: 29 CFR 1926, Subpart P.

Fall Protection

Fall protection may be needed in work involving ramps, runways, and other walkways; excavations; hoists; holes; form work and reinforcing steel; leading edges; unprotected sides and edges; overhand bricklaying and related activities; roofing; pre-cast concrete erection; wall openings; scaffolds; ladders; and other walking/working surfaces. Protect employees working 6 feet (1.8 meters) or more above a lower level and those who may fall into dangerous equipment. Typical fall protection systems include controlled access zones, guardrails, fences, covers, safety nets, and personal fall arrests.

For work conducted for CUA in which fall hazards are present, use employees trained on how to recognize and minimize fall hazards and how to properly use fall protection systems and equipment. **MAKE DOCUMENTATION OF TRAINING AVAILABLE** to CUA upon request.

REFERENCE: 29 CFR 1926 Subpart M.

Gas Cylinders

Secure compressed gas cylinders (rope, chain, etc.) in an upright position at all times, except when they are actually being hoisted or moved. Keep valve protection caps in place when moving or transporting cylinders, or when they are being stored and not in use.

Keep cylinders at a safe distance or shield them from welding or cutting operations. Do not put them in a location where they can contact an electrical circuit. If a leak develops in a cylinder, immediately bring it to a safe location. If a leak cannot be stopped right away, contact the Office of Public Safety on (202) 319-5111.

Remove cylinders from inside buildings at the end of each workday. Remove them from CUA property when they are no longer needed.

 **PROVIDE MSDS's** to the department of Environmental Health & Safety before beginning work and preferably as part of the bid package, if other than common gases (e.g., oxygen, acetylene, argon, and nitrogen) are to be used during a job. Label cylinders to identify their contents.

REFERENCE: CFR 1910.101-105 and the International Fire Code 2012 Chapter 30

Hoists and Cranes

Designate a competent person who will inspect all machinery and equipment prior to each use, and during use, to make sure it is in safe operating condition. Repair deficiencies and replace defective parts before continued use. Install barricades to prevent injury to employees or passers-by.

Do not exceed safe working loads. Take precautions to prevent physical contact with power lines either by maintaining adequate distance, use of insulating barriers, or de-energizing of power lines, as appropriate.

Properly anchor equipment and do not use CUA's roofs or walls for a supporting brace.

REFERENCE: 29 CFR 1926, Subpart N.

Lasers

Only qualified and trained people must be assigned to install, adjust, and operate laser equipment.

 **PRIOR TO OPERATION OF THE EQUIPMENT, PROVIDE CUA PROOF OF QUALIFICATION** of the operator.

 **BEFORE DOING ANY WORK AT CUA WITH LASERS, SUBMIT A WORK PLAN** to the Environmental Health & Safety department for review by the Radiation Safety Officer. The work plan must include a description of the work, where it will be conducted, the type of laser to be used and its energy output, safety precautions to be taken to protect personnel and property from exposure, and descriptions of barricades, signs, warnings, etc., to be used.

REFERENCE: 29 CFR 1926.54.

Lead-Based Paint

Any construction or renovation work that will cause dusting, flaking, chipping or peeling of paint requires an analysis of the paint to determine if it is lead-based. This determination is to be done by CUA or an agent of CUA before beginning the work. If the paint in the construction/renovation area was previously analyzed for lead content, the analysis does not need to be repeated, and the work may proceed based on the existing information.

 **PRIOR TO BEGINNING LEAD-BASED PAINT ABATEMENT** (removal, encapsulation, enclosure), **DO THE FOLLOWING:**

- X Notify authorities as required by regulation and obtain needed approvals or permits
- X Provide two copies of the permits/approvals to CUA's project manager
- X Submit evidence that you are certified to do lead-based paint abatement and that each employee to be on the job has received necessary training, including respirator training when respirators are to be worn
- X Submit a detailed, job-specific work plan to the Environmental Health & Safety department. Include work procedures, equipment/materials to be used, safety precautions to be taken, personal protective equipment to be worn, and how waste will be collected/stored/disposed. Where applicable, include air monitoring to be performed and MSDS's of stripping agents to be used.

Provide only trained workers who will be equipped with necessary personal protective equipment and any other equipment needed to protect themselves others from overexposure to lead. Contain the removed lead-based paint so that it does not contaminate the environment and to facilitate proper disposal.

Industrial hygiene services required as part of the work, such as airborne monitoring, must be conducted by or under the direction of a person certified as an industrial hygienist (CIH) by the American Board of Industrial Hygiene. Laboratory testing must be performed by a laboratory participating in the AIHA Proficiency Analytical Testing (PAT) Program.

Dispose of all waste materials generated as a result of the construction/renovation in compliance with all applicable federal, state and local laws, regulations and codes. Remove lead-based paint only to the extent necessary to prevent loose paint from being dislodged during construction or renovation activity, unless specifically dictated by the terms of the contract.

 Clearly and accurately identify the lead-containing waste generated that is being removed from campus. **PROVIDE ALL HAZARDOUS WASTE MANIFESTS TO THE PROJECT MANAGER FOR SIGNATURE**, so that a CUA representative may sign as the generator. Do not sign the manifest on the behalf of CUA as the generator.

REFERENCES: 29 CFR 1926.62; 40 CFR 260-268; District of Columbia's Lead-Based Paint Abatement and Control Act of 1996 (D. C. Act 11-438).

Lockout/Tagout

A lockout is a method of keeping equipment from being set in motion and endangering workers. In lockouts, a disconnect switch, circuit breaker, valve, or other energy-isolating mechanism is put in the safe or off position; a device is often placed over the energy -isolating mechanism to hold it in the safe position; and a lock is attached so that the equipment can't be energized. In a tagout, the energy-isolating device is placed in the safe position and a written warning is attached to it.

You must use lockout and/or tagout when working on equipment, devices, or systems that may release energy. Supply all lockout/tagout locks and tags to be used by your employees.

Since it is possible that CUA and your lockouts/tagouts may be used at the same times and/or in the same areas, both parties must comply with each other's lockouts/tagouts.

REFERENCES: 29 CFR 1910.147; 29 CFR 1926.417; and 29 CFR 1926.702 and the National Electrical Code NFPA 70E

Overhead Work

Do not perform overhead work under any circumstances in places where people or vehicles are present or where they may enter during the course of the work. This is to prevent the possibility of an object falling and hitting a person or vehicle.

Barricade and mark areas affected by overhead work to keep people and vehicles out of the area and warn them of the hazard. Do not leave tools, materials, and equipment unattended on ladders, scaffolds, or platforms when there is a chance that the items may fall or be dislodged.

REFERENCES: 29 CFR 1926, Subpart G, Subpart L.

Polychlorinated Biphenyls (PCBs)



BEFORE STARTING WORK that involves handling and/or disposing of PCBs or PCB-containing items, **SUBMIT TWO COPIES OF YOUR PROCEDURE FOR HANDLING, PACKAGING, SHIPPING, AND DISPOSING PCBs.**

Clearly and accurately identify and mark all PCB items and containers with PCBs prior to removal from the campus. Ensure that the manifest is properly completed and signed. **PROVIDE ALL**



HAZARDOUS WASTE MANIFESTS TO THE PROJECT MANAGER FOR SIGNATURE, so that a CUA representative may sign as the generator. Do not sign the manifest on the behalf of CUA as the generator.

Dispose PCBs and PCB items only in an approved incinerator or chemical waste landfill.

REFERENCES: 40 CFR 761.40, 60, 208.

Radioactive Materials or Equipment Generating Radiation - Ionizing Radiation

Ionizing radiation includes alpha rays, beta rays, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other atomic particles.

Only competent persons, specially trained in the proper and safe operation of such equipment, must perform any activity, which involves the use of radioactive materials or equipment generating radioactivity (e.g., x-ray machines). When using such licensed material or equipment, only persons actually licensed, or certified by the Nuclear Regulatory Commission (NRC) or an agreement state, are to perform such work.



BEFORE DOING ANY WORK AT CUA WITH IONIZING RADIATION, SUBMIT A WORK

PLAN to the Environmental Health & Safety department for review by the Radiation Safety Officer. The work plan must include: (a) a description of the work and operating/emergency procedures; (b) where it will be conducted; (c) the source strength and/or equipment to be used; (d) latest license and calibration certification; (e) steps to be taken to protect personnel and property from exposure; (f) leak test results (where applicable); and (f) descriptions of barricades, signs, warnings, to be used.

REFERENCES: 10 CFR Part 20.

Spill Prevention, Containment, and Reporting

A spill is a release of oil or chemical to the environment, including but not limited to floors, containment dikes, sidewalks, roads, ground surfaces, basements, floor drains, storm drains, and streams. Generally, all spills over 25 gallons must be reported to appropriate agencies. A spill of any amount is also reportable if it causes a sheen upon or discolors a surface water body or enters a storm drain or floor drain.

Contractors must provide spill prevention control. Oil storage tanks brought onto CUA property must have secondary containment, such as earthen berms, metal pans, and cinder blocks. Submit details on the tank, its content, secondary containment features, and spill response plans to the University and maintain the information during the entire period that tanks are present at the facility.



If an oil or chemical spill occurs:

1. Extinguish ignition sources and isolate incompatible or reactive substances.
2. Attempt to stop or contain the spill at the source without endangering yourself and others. Prevent discharge of materials to environmental receptors, including drains, sumps, soil, etc. by isolating them.
3. Collect, store, and dispose of waste materials in compliance with EPA and District of Columbia regulations.
4. For spills/releases greater than 25 gallons or which enter into drains/streams, immediately contact Public Safety on 202-319-6112 and the CUA Project Manager.
5. CUA's department of Environmental Health & Safety (EH&S) will coordinate all reporting to outside agencies.

REFERENCE: 40 CFR Part 112 and the International Fire Code Chapters 27, 30, 32 and 34