

POLICY NAME: CONTRACTOR SAFETY PROGRAM

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PURPOSE:

Although Contractor are responsible for their employees' occupational health and safety under the OSHA Construction Standard (Part 1926), the purpose of this policy is to create a standard to be followed by Contractors and their sub-contractors working at any UCM facility. The standards set forth herein constitute minimum standards to be adhered, as each specific project may have additional safety rules or guidelines made applicable by contract, Federal, State and Local regulations, or guidelines, as well as recognized industry safety standards relating to safety.

POLICY:

It is the policy of UCM to take all necessary and reasonable steps to make the workplace free from hazards and unsafe activities and establish Safety standards that comply with applicable laws, regulations, as well as UCM policies. Contractors and their sub-contractors who work at UCM are required to support this policy.

DEFINITIONS:

1. Contractor: - Company contracted to perform work or provide supplies. This definition shall include all Sub-Contractors.
2. ICRA: Infection Control Risk Assessment
3. Project Manager – The UCM employee who is directly responsible for the activities performed on site by a contractor, and sub-contractors
4. Emergency Services – Protective Services, Fire Department, or Security Department, depending on the division or facility.
5. Minor Violation – Any violation other than a Serious Violation.
6. Safety Committee – A group consisting of on-site UCM personnel who address safety issues.
7. Serious Violation – Any violation of an Safety requirement that could have resulted in or have the potential to cause a fatal or serious injury, an OSHA Recordable incident, an environmental release deemed a threat to human health or the environment, or property damage in excess of \$1000.

PROCEDURES:

Procedures are listed below. Failure to comply with procedures may be cause for termination of contractor privileges.

INTERPRETATION, IMPLEMENTATION, AND REVISION:

The Institutional Safety and Environment of Care Committee shall evaluate comments to the Contractor Safety Program as they occur from the Life Safety Sub Committee. The policy is reviewed on a regular basis.

REFERENCES:

OSHA General Industry Standards 1910

OSHA Construction Standards 1926

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Contractor Safety Requirements

Contractors (and sub-Contractors) are responsible for ensuring their employees comply with this Policy and any and all applicable Federal, State and Local regulations at all times during performance of their work.

1. Each contractor will complete a Contractor Safety Assessment pre-qualification questionnaire. The pre-qualification process will identify Contractors (and sub-Contractors), vendors and service providers who have effective Environment, Health and Safety (Safety) programs with demonstrated leadership and performance in their industry.
2. UCM reserves the right to verify that the Contractor and all of the Contractor's employees and subs meet contractual requirements.
3. Contractor employees, who are issued a picture badge or act in a supervisory role in the performance of their duties at UCM, must read this policy.
4. All Contractors (and sub-Contractors) must communicate with a level of proficiency necessary to ensure the safety of their employees and the safety of others.
5. Contractor activities and performance will be audited and evaluated by the UCM or Biological Sciences Division Project Manager to ensure ongoing compliance with UCM policies, procedures and requirements. The Project Manager will be the Contractor's primary UCM contact on all matters related to the project.
6. The requirements of this Program are in addition to the terms and conditions of any Agreement or Purchase Order between the Contractor and UCM and form a material part thereof.
7. Contractors (and sub-Contractors) with active projects will attend quarterly UCM Safety meetings. Contractors (and sub-Contractors) will also read all applicable sections of this Program before any work is conducted on UCM property.
8. Copies of this Safety Contractor Program are available via the UCM Employee intranet policy link which can be provided by the Project Manager. A copy is also included in bid or contract documents.

Each contractor shall:

1. Have ready access to this Program at all times to use as a reference source.
2. Report all injuries, spills and near-miss incidents immediately to the Project Manager who will then report this information to the UCM Safety Office.
3. Conduct daily visual assessments of work areas to ensure compliance with the requirements of this Program. Review findings and corrective actions with the Project Manager.

Important Phone Numbers to be accessible for job site

UCM Project Manager	Obtain from PM Desk Pager
Fire, Ambulance, Police, Emergency, (Dr. Red)	702-6262
Medical Emergency (Dr. Cart)	702-1000 or 147 from inside line
Plant Dept.	702-6295
Infection Control	Inside page -dial 188-7025 702-1365 department
Public Safety & Security	702-6262
Safety Office	795-SAFE Inside page dial 188-8382
Environmental Services	795-5537
Paging Operator	702-1000

Contractor Safety Performance Progressive Improvement Plan

Poor safety performance will be raised to succeeding levels of management within a contractor's organization and UCM management. A progressive improvement plan may be necessary to implement corrective actions to avoid future violations and business interruptions.

Minor Violations

Minor violations are not expected to have the potential to cause a fatal or serious injury such as failure to wear identification; however, failure to wear proper personal protection carries a higher safety risk.

The following items are not inclusive and subject to the discretion of the Director of Project Management in Facilities, Design and Construction in conjunction with the Director of Safety

1. Failure to follow verbal or written direction from the Project Manager
2. Failure to follow the Contractor Safety Program
3. Failure to follow the requirements of the Construction Contract
4. Failure to follow the requirements outlined in the Request for Proposal

Serious Violations

UCM has established 5 serious violations. These are rules that if violated, have the potential to cause a fatal or serious injury. As such, actions of a serious violation are subject to disciplinary action up to and including permanent suspension from working at UCM. The UCM serious violations include failure to comply with procedures and regulations for the following:

1. **Confined Space**

Contractors shall follow their company Confined Space program. At a minimum, Confined Spaces shall be identified and written procedures established and followed for entry.

2. **GFCI use on all Hand and Portable Power Tools**

Contractor employees shall provide and use Ground Fault Circuit Interrupters (GFCIs) on all portable tools and portable electrical devices used in all activities where construction activities are performed, or where there is the potential for exposure to damp/wet areas or the potential for damage to cords, plugs, or receptacles.

3. **Elevated Work**

Contractors shall follow their company Fall Protection program. At a minimum, Contractor employees shall use fall protection when exposed to a fall hazard (working at an elevated level of 6 feet or more).

4. **Lockout Tagout**

Contractors shall follow their company Lockout Tagout program. At a minimum and prior to performing work on machines or equipment, contractor employees shall identify all hazardous energy forms, bring them to a Zero Energy State and secure them. Zero Energy State is defined as the elimination and/or control of hazardous energy such that it no longer represents a hazard to personnel. This shall include but is not limited to mandatory use of lockout / tagout procedures when working on any electrical, mechanical, hydraulic, pneumatic, compressed gas, chemical or thermal processes.

5. **Machine Guarding**

Contractor employees shall not tamper with or disable machine/equipment guarding while operating under normal conditions.

Security and Identification

1. UCM reserves the right to request a copy of the contractor's hazard control programs, training certificates, injury logs or other safety-related program documentation in order to substantiate compliance with various regulatory requirements.
2. Contractors (and sub-Contractors) must contact their Project Manager at each UCM facility to determine what (if any) restrictions apply to individual personnel for the specific project area (i.e. Operating Room attire). Contractors (and sub-Contractors) must do this in advance of assigning personnel to work on or within a UCM property or facility. UCM reserves the right to deny property access for contractor personnel who are unwilling or unable to meet UCM requirements.
3. Contractors (and sub-Contractors) will display their UCM provided Identification Badge (either day badge or photo badge) at all times. Disposable one-day badges are to be discarded at the end of each day. Badges are not transferable. Reusable photo badges are to be turned in to the Project Manager at the end of the job.
4. For evacuation purposes, the General Contractor is to keep a daily log of all sub-Contractors onsite.
5. Contractors (and sub-Contractors) will report the loss of a contractor picture badge immediately to their Project Manager and immediately pay for and obtain a replacement.
6. Firearms and weapons are prohibited.
7. Picture taking and video equipment of security sensitive systems or of items not pertaining to the immediate project, portable radios, tape decks, television sets are prohibited.

8. Contractor employees will be restricted to the predetermined area in which they are working.
9. Contractors (and sub-Contractors) are responsible for the security of all materials, tools and equipment used for the job, whether owned or rented by the contractor.
10. The Fair Labor Standards Act prohibits the employment of anyone less than 18 years of age in hazardous occupations.
11. All packages, equipment and vehicles are subject to inspection by Public Safety and Security, the Project Manager or the Safety Office.
12. Contractors (and sub-Contractors) admitted to company property must conduct themselves in an orderly and safe manner. Fighting, engaging in horseplay, being under the influence of or possessing alcohol or drugs, gambling, soliciting, stealing, immoral, unauthorized use of UCM equipment or otherwise undesirable conduct is not permitted.
13. Access to all swiped or locked areas shall be kept locked i.e. Plant mechanical spaces or Computer Rooms. Secure access to construction areas. Do not change door cylinders unless authorized by the Project Manger.
14. Any keys specific to the project will be turned into the Project Manager upon completion i.e. mechanical space keys.
15. Contractor vehicles will be parked only in areas designated by the Project Manager.
16. Authorization must be obtained from the Project Manager for any access to UCM property before 7 am or after 5 pm (weekdays) or on weekends/holidays.
17. Report any suspicious activity, security incidents, altercations and thefts immediately to Public Safety 702-6262

Housekeeping and Sanitation

1. Absolutely no construction contaminated debris (fluids, semi-fluids or dry material) may be poured down a mop sink, drain, restroom sink or toilet
2. Contractors (and sub-Contractors) shall maintain a high standard of housekeeping on the job at all times. Daily clean up of work areas is required per fire safety and infection control policies.
3. Materials shall be neatly stored when not used and sharp objects shall either be removed or bent over to prevent puncture. A one-day amount of material staging practice is allowed. No material shall be stored outdoors without the permission of the Project Manager. **Materials shall be marked with the Contractor's Name.**
4. Each Contractor shall perform work in a manner that will minimize and control the production and migration of dust and debris to adjacent work areas and follow any directions from the Infection Control Risk Assessment (ICRA) that is posted on the site.
5. The Project Manager will notify the contractor immediately when inspections identify unsatisfactory clean-up efforts by contractor employees.
6. Restrooms are provided throughout the facility. The Project Manager will direct persons to the nearest restroom location.
7. Contractors (and sub-Contractors) are forbidden from putting any liquids, chemicals or sediments (i.e. vacuum waste) down any drain or toilet.
8. Clean Rooms & Operating Rooms- The generation of dust and dirt by job activities must be minimized in clean rooms and operating rooms. Appropriate clean room garments must be worn and if this requirement creates a perceived Safety hazard, the Contractor must immediately contact the Project Manager. Clean rooms & operating rooms shall be entered and exited through approved doorways only.
- 9.

Dumpster Management

1. Contractor and subs are to monitor the dumpsters and contact the Project Manager for switch out when needed. Provide 24 hours notice. If no PM is available, call the EVS department at 795-5537 for full or missing dumpsters
2. UCM dumpsters on the FMI Dock may be used to dispose construction debris.
3. Dumpsters must not be stored over a storm drain.
4. Dumpsters must be provided with an impermeable cover such as a tarp or be maintained under a roof at all times to prevent entry of storm water.
5. Dumpsters must be labeled for the materials they are permitted to contain and the name of the contractor who owns them.
6. If a Dumpster's cover is damaged, it must be replaced immediately.
7. Drain plugs must remain intact.
8. Dumpsters must be structurally sound (no puncture holes, severe dents, etc.).
9. Dumpsters can be provided by UCM but if provided by the Contractor or their Sub-Contractor must adhere to the aforementioned rules.

Miscellaneous Safety Requirements for Operations

1. Fire Safety
 - a. All equipment and materials shall be stored in an orderly manner. Equipment shall not obstruct emergency equipment, exits, telephones, safety showers, eye washes, fire extinguishers, pull boxes, fire hoses, etc.
 - b. Blasting - Any use of explosives, caps, blasting equipment, etc. is not allowed
 - c. Sprinkler Systems - Contractors (and sub-Contractors) shall not install or alter sprinkler systems without prints or documentation approved by the department at the site responsible for fire Safety. Only licensed/qualified Contractors (and sub-Contractors), specifically retained for such work, may alter sprinkler systems.
 - d. Internal Combustion Engines – Operation of diesel and gasoline powered vehicles or equipment is prohibited by Contractors inside buildings unless prior approval and arrangements for ventilation have been made with the Project Manager, and the Safety department.
 - e. Temporary Heating Devices - Temporary propane or resistance heating devices used on site must be approved by a nationally recognized testing agency (e.g., UL, Factory Mutual). No devices with open flames are allowed such as torpedo heaters.
 - f. A hot work permit must be issued on the day of use (see Hot Work Permit section of this Program).
 - g. MAPP™ gas and Propane are not allowed on site.
 - h. Fire alarm, suppression or utility shut downs requires Plant Department notification and approval. Contact the Project Manager to notify the affected areas, notify the Safety Office and notify Plant, Safety and the Project Manager when all systems are re-established. If a shut down lasts more than one shift, more stringent Interim Life Safety Measures must be in place per the project Interim Life Safety Risk Assessment process
 - i. Wall Penetrations- Contact the Project Manager to determine fire rating and construction material of the wall from the Life Safety Drawings. Determine the type of devices

penetrating the wall and install a properly rated UCM-Approved fire stop system appropriate for the type of penetration.

- j. Interim Life Safety Measures shall also be followed when required (and posted).
2. Compressed Air - Cleaning of clothing with compressed air is prohibited. Compressed air that is used for material cleaning must be limited to 29 psig, and appropriate personal protective equipment and chip guards shall be used.
3. Concrete, Concrete Forms and Shoring - All protruding reinforcing steel, onto which employees could fall, will be capped to eliminate the hazard of impalement. Rebar caps shall be affixed as necessary. Employees shall not work under suspended concrete buckets. Employees will be protected with fall protection systems and other necessary protective equipment when placing or tying reinforcing steel more than six feet above any working surface. Formwork and shoring will be designed, erected, supported, braced and maintained so that it will safely support all vertical and lateral loads. Reinforcing steel for walls, piers, columns and similar vertical structures shall be adequately supported to prevent overturning or collapse. A limited access zone will be established whenever a masonry wall is being constructed. The zone shall be equal to the height of the wall to be constructed plus four feet and shall run the entire length of the wall.
4. Demolition and Dismantling - An engineering and environmental survey shall be made by a competent person prior to the demolition of any structure. The survey shall determine the condition of the framing, floors, and walls and the possibility of unplanned collapse of any portion of the structure, and the presence of hazardous materials.
5. Electrostatic Discharge Sensitive (ESDS) areas – Contractor personnel shall always wear static discharge equipment (except UCM electricians), test the static discharge equipment for effectiveness and not touch any ESDS equipment or hardware.
6. Lasers – Prior approval must be obtained from the Safety Office before any laser equipment Class 3B or higher is used on site. Lasers less than class 3B i.e. those used for sighting shall be used in accordance with the manufacturer’s or contractor’s safety rules
7. Noise - Contractor personnel shall adhere to their company Hearing Protection program and at a minimum, wear appropriate hearing protection in accordance with facility rules and posted signs. Contractors (and sub-Contractors) must inform Project Manager and the Safety department if any planned task may create a noise level greater than 85 dBA for possible restrictions and area identification as deemed necessary by the Safety Office. Other sensitive areas may have additional requirements (animal care).
8. Radiographic Equipment - Prior approval must be obtained from the Safety Office before any radiation-emitting equipment (X-ray units, radioactive sources, etc.) is used on site. Approved radiation sources shall not be left unattended or on UCM property overnight.
9. Magnetic Resonance Imaging- Contractors (and sub-Contractors) shall only work around the MRIs while supervised by a MRI Supervisor. Only MRI-safe tools can be used by Contractor around the MRI. Tools that can be affected by a magnet (iron, ferrous) are not allowed.
10. Use only freight elevators for materials transport or specific elevators, if assigned.
11. Post building permits and hazard warnings as necessary or required by law.
12. Read and follow all CAUTION, NOTICE, WARNING or DANGER signage.

Emergency Response and Notification

Fires

In the event of a fire, locate and pull the nearest fire pull station or call the emergency number specific to the site you are working and call 702-6262 (Public Safety & Security). This will communicate the

fire emergency directly to the dispatcher. Be aware of the building alarm chime code or voice annunciated system (NHP)

Do not attempt to extinguish a fire yourself, unless you are trained and qualified to operate a fire extinguisher.

Follow the UCM Fire Plan:

R = RESCUE from smoke/fire. Move persons to safety

A = ALARM Activate fire alarm pull station nearest you. Call 2-6262 from a safe location.

C = CONTAIN the smoke/fire. Close all doors.

E = EXTINGUISH the fire if safe to do so and safe exit available

R = RELOCATE Shut off equipment, stop hot work. Be ready to evacuate. Evacuate upon General Alarm

1. Contractors (and sub-Contractors) shall provide their own fire extinguisher(s) for protection against hazards they introduce to the job location.
2. Contractor fire extinguishers shall be inspected annually by a certified person, and visually inspected monthly and documented by the contractor.
3. Flammable and combustible liquids dispensed at one time in quantities greater than 5 gallons shall:
 - a. Be dispensed in an area separated from other areas of operation by 25 feet or by construction having at least a one-hour fire resistance rating.
 - b. Be stored in FM approved Safety cans or drums.
 - c. Be controlled with ventilation to prevent the development of concentrations above 10% of the lower flammable limit.
 - d. Be only transferred between containers that are electrically interconnected
 - e. Not be transferred by means of air pressure.

Evacuation

Evacuations are indicated by a loud continuous intermittent or electronic signal followed by a specific announcement over the public address system. It is essential that all evacuation instructions be adhered to. Exit quickly and in an orderly manner and report to your Supervisor. Your Project Manager will review evacuation routes and assembly areas with you.

Injuries

In the event of an injury or illness requiring immediate medical attention, dial 702-6262 from any internal UCM phone if the person is non-ambulatory. Otherwise, report directly to the Emergency Department and then dial 702-6262 (if ambulatory).

Provide the dispatcher with the following information:

- Nature of emergency
- Location (department name/number, building letter, column number)
- Your name and the name of the company for which you work.
- **Also notify the Project Manager.**
- **Only properly trained UCM personnel are qualified to clean up injury sites involving body fluids.**

Spills

A **spill** is defined as an accidental release of any product such as but not limited to paint, adhesive, cleaners, including water, outside of its normal container except during use. There is no minimum to

the quantity that defines a spill. Chemicals (paints, cleaners, thinners, adhesives, tar etc) may not be disposed of by dumping on the ground or into sanitary or storm drains. Check with the Safety Office for permission to dispose non-hazardous liquids down a sink or other sanitary drain. Contractors and sub-Contractors are to clean up their own spill and to call the Safety Office to report it and receive guidelines on the disposal.

All sewer or supply water spills, leaks or breaches shall be reported to the Plant Department 702-6295. A contractor provided "flood cart" with mitigation supplies (wet vac, etc) is requested to be on site if a plumbing breach is possible for those projects at risk.

All chemical spills, including those that occur outside a building, **shall be reported immediately** by dialing 5-SAFE (can connect to on-call pager) applicable to the site where you are working and providing the dispatcher with the following information:

- Nature of emergency (injury, spill, fire)
- Location (department name/number, building letter, column number)
- Your name and the name of the company for which you work.
- Identity of material spilled/released
- Quantity of material spilled/released
- Time of the spill

Contractors (and sub-Contractors) shall be responsible for all spills that result from their work at any UCM facility. However, **the contractor cannot start cleaning up the spill until authorized to do so, unless failure to do so immediately poses an imminent risk to human health or the environment.**

If UCM determines that a spill clean up is beyond the contractor's ability, or the contractor has failed to clean up the spill adequately, UCM shall use its own personnel or contract spill clean up specialists.

In all cases, the contractor shall be responsible for all costs. These costs may include removal of contaminated materials as well as restoration of the area.

Medical Gas Leaks or Accidental Breaches

After planning with the Project Manager and Plant, **ONLY CUT CONFIRMED, CAPPED MEDICAL GAS LINES AFTER A LOCAL VALVE**

For any accidental breach of a Medical Gas Line:

- IMMEDIATELY clamp off the leak while a second person simultaneously contacts the plant department 702-6295
- Or Locate the zone shut off valve and shut it off
- The Project Manager or Plant will confirm any patient incidents
- Contractor (and sub-Contractors) shall follow up with an incident report to the Project Manager.

Accident/Incident Investigation

The Project Manager accompanied by the contractor must formally investigate all incidents, injuries and spills, including near misses, in order to prevent reoccurrence.

1. Contractors (and sub-Contractors) shall collaborate with the Project Manager and Safety Office in the incident investigation and root cause corrective action implementation.
2. An investigative report assessing the root cause and corrective action shall be submitted within 24-hours of the incident's occurrence to the Safety Office with a copy to the Project Manager.
3. Any unsafe conditions and activities shall be reported to the Project Manager or Safety Office and corrected immediately.

For all incidents:

1. Secure the area with barricades/caution tape to preserve the scene.
2. Perform a walk-through of the incident site; this may occur with the Safety Office as well as the Project Manager.
3. Interview witnesses, where applicable.
4. Take pictures and/or create a diagram of the incident site.
5. Submit a written incident investigation report to the Project Manager, within 24 hours of the incident occurrence.
6. The report shall describe the incident and identify root cause and corrective actions, along with a timetable for implementing the corrective actions.
7. With the assistance of the Project Manager, an internal divisional incident report will be completed for all incidents that result in a recordable injury, environmental release deemed hazardous by the Safety Office, or significant property damage.

Training

1. Contractors (and sub-Contractors) shall instruct each of their employees and sub-Contractors in the recognition and avoidance of unsafe conditions and of the regulations applicable to his/her work environment to control or eliminate any hazards or exposure to illness or injury. UCM Project Managers shall instruct the Contractors (and sub-Contractors) of any hazardous materials (chemical, radiological, biological) in the area of work
2. Upon request, the Project Manager or Safety Office shall be provided with documentation and certification of contractor employee training.

Aerial Lifts

1. Aerial lifts (boom, scissors, snorkel types, etc.) and other vehicle mounted elevated work platforms shall be used in accordance with applicable regulatory and industry recognized standards, and shall meet UCM Powered Industrial Vehicle (PIV) requirements.
2. All employees operating aerial lifts shall be properly trained for the lift they use and are not allowed to use UCM equipment unless consent is given by the department that owns it.
3. Employees shall work from the floor of the aerial lift only. Climbing on handrails, mid-rails, brace members or out of the lift is prohibited unless an anchor point independent of the lift has been established and an approved body harness and lanyard is worn and attached to the anchor point.
4. Areas below overhead work will be clearly marked with Safety stanchions, caution tape and signs to protect associates at grade level.
5. Major construction areas will be barricaded and construction signs erected to keep out all unauthorized personnel.
6. Contractor personnel are not permitted to use UCM overhead cranes, hoists or powered lift apparatus unless prior approval has been received from the Project Manager.
7. Mobile cranes, including portable crane derricks, power shovels, or similar equipment, shall not be operated within ten feet of overhead electrical power lines.
8. The Project Manager shall be notified of all proposed crane use at least one day in advance of the actual lift to facilitate a pre-work review with Safety, and impacted area supervision.
9. The Project Manager will notify the Safety Office a minimum of **thirty days** before proposed airlift operations.

Asbestos-Containing Materials

1. Some building materials throughout the facility may contain Asbestos Containing Materials (ACM). Furthermore, the building material may not be labeled as containing asbestos.
In the event that ACM or suspect ACM material is encountered during construction or demolition, the contractor shall stop work immediately and call the Project Manager or the Safety Office 795-SAFE.
2. Assume that all thermal insulation (piping, elbows, joint insulation, duct insulation, etc.) floor and ceiling tile, window caulking, siding, lab bench tops, fume hoods, walls, and roofing materials, do contain asbestos, unless labeled as non-ACM. This list does not include every product/material that may contain asbestos. It is intended as a general Program to show which types of materials may contain asbestos.
3. Some buildings may have thermal insulation sprayed on ceiling structural components (e.g. decking, I & H beams, etc.). The Project Manager, designated site asbestos coordinator or the site facilities department must be contacted before ceiling tiles are moved below areas that have not previously been confirmed to be free of sprayed on asbestos. Should the upper ceiling be insulated with sprayed on asbestos, only personnel trained and qualified to work with asbestos will be permitted to remove ceiling tiles and work above them, and only after authorization by the site facilities department or site asbestos coordinator. If the asbestos cannot be avoided to perform the work, it must be abated before the work is performed. Refer to the Division appendices for any buildings that have already been identified as having sprayed on asbestos insulation.

4. No new products containing asbestos or its synonyms (chrysotile, amosite, crocidolite, anthophyllite, actinolite) may be used in any facility. Some foreign country suppliers identify the names of the types of asbestos their product contains without using the word asbestos.
5. Tasks involving work on existing building material must be reviewed for ACM by the Project Manager as coordinated by the Safety Office prior to commencing the task.
6. Contractor personnel will not attempt to clean up any such debris, or perform any repair to the suspect ACM material unless they are trained and qualified to perform asbestos abatement, and are approved by UCM for asbestos abatement projects.
7. All contractor employees will vacate the immediate area while UCM personnel assess the material and the area of concern.

Barricades

Barricades for Hazardous Work Area

1. Snow fencing, expandable gates or equivalent at least 42" high - New Construction Area or Unattended Work Area.
2. Danger Tape - Work in progress that is continuously attended and supervised with a hazard that has a potential for moderate to severe injury (e.g., mounting hoist rails, hot work).
3. Caution Tape or Cones - Work in progress that is continuously attended and supervised with a hazard that has a potential for minor injury only (e.g., mounting a bulletin board, plumbing repairs on a water fountain).
4. Blocked main aisles require prior approval from the Project Manager and must have detour signs posted to re-route personnel to alternate emergency exits.
5. Major construction areas will be barricaded and construction signs erected to keep out all unauthorized personnel. Curtain barriers must be made of flame retardant materials certified by Factory Mutual, Underwriters Laboratories or equivalent on the product label or the product specifications.

Barricades for Trenches/Holes/Pits

1. If four feet or more in depth - standard rail system that meets OSHA 1910.23(e) specifications, four feet from edge of opening (*less than 4 foot distance must be approved by the Project Manager*).
2. If workers are exposed to falls greater than six feet when inside the barricade, additional UCM approved fall protection will be required for the workers.
3. If under four feet but greater than one foot - Snow fencing, expandable gates, or equivalent at least 42" high, four feet from edge of pit.
4. If under one foot and unattended (i.e. work is not in progress), caution tape four feet from edge of pit.
5. If the barrier will interfere with a main aisle or completely block the only means of egress of a department aisle, the 4-foot minimum distance from the edge is waived. If this creates a greater hazard to personnel working inside the barrier however, alternate barricading methods may be used if authorized by the Project Manager and the Safety Office.

Chemical Handling & Storage/ Hazard Communication

1. Contractors (and sub-Contractors) shall have a written Hazard Communication program and shall inform their employees of the location and availability of their program.

2. Contractors (and sub-Contractors) shall train their employees on the physical, chemical and biological agents in the workplace.
3. Material Safety Data Sheets (MSDS) shall be readily available for materials supplied and used by the contractor.
4. The Project Manager will communicate hazards inherent to the work location and provide the Contractors (and sub-Contractors) with access to MSDSs for materials at this site upon request.
5. All chemicals used by contractor personnel (including fuels, paints, coatings, coolants, cleaners, flooring materials, etc.) must have prior approval via the site Safety approval process.
6. Chemicals will be properly labeled and segregated to prevent potential hazardous mixing.
7. Factory Mutual approved metal Safety cans with self-closing lids and flame arrests shall be used for handling flammable liquids.
8. All containers must be properly labeled as to their contents and potential chronic health and target organ effects.
9. Flammable and combustible liquids shall not be used or stored in any close proximity to open flames and ignition sources.
10. All unused, flammable and combustible liquids must be stored in a flammable-storage closet or removed from the premises on a daily basis.
11. Flammable and combustible liquids and other hazardous materials shall be kept in closed containers when not in use.
12. Upon completion of the project, all unused materials will be taken off site.
13. Storage and transfer of flammable liquids will be grounded and bonded where necessary (i.e. drums).
14. Emergency Safety showers and eyewash units are provided in various areas of the facility. UCM Project Manager (eyewashes) or the Plant Department (showers) can identify their locations. In the case that there is not an immediate eyewash station available, a contractor-provided own portable eyewash station may be required.
15. All affected contractor employees shall wear appropriate personnel protective equipment per their Hazard Communication Program and the MSDS of the product in use.

Clean Fill Materials (e.g. soil, sand)

Any fill material being brought on to UCM property must be free from contaminants (Illinois EPA Adm. Code 35 Ill. 1100). This may be accomplished by any of the following methods:

1. Certify in writing by the contractor that the fill is free of contamination
2. Taking reasonable steps to ensure fill material is clean such as composite sampling and analysis, review of fill source disclosure, or photo ionization screening of fill material, etc.
3. Visual inspection of the fill material when it is placed on UCM property.

Compressed Gas Cylinders

1. Compressed gas cylinders shall always be fastened securely in the proper position to appropriate carriers or restraints for the cylinder contents.
2. Cylinders shall be kept away from welding or cutting operations so that sparks, hot slag, or flame will not impinge on them. When this is impractical, fire resistant shields will be provided. Cylinders will not be placed where they can contact an electric circuit.
3. Cylinder valves shall be closed and valve protection caps shall be in place when compressed gas cylinders are transported, moved, stored or otherwise not in use.
4. If a leak develops in a cylinder, follow emergency procedures and call the Safety Office.
5. Gas cylinders that are damaged or have a buildup of scale or rust, which could weaken the container, will not be used and shall be removed from this site as soon as possible.
6. Cylinders will be permanently labeled, marked or stenciled to identify the gas in the cylinder. Cylinders shall be mounted and stored with the content labels facing out.
7. Hose lines will be periodically inspected and tested for leaks.
8. When storing compressed gas cylinders, flammable gas such as acetylene and hydrogen will be separated from oxidizing gas such as oxygen by a distance of 20 feet, or by a fire-rated barrier when needed and removed from the job site when not in use (i.e. at the end of the day).
9. Cylinders shall be moved by tilting and rolling them on their bottom edges, or cylinder carts must be used for their transportation. All cylinders will be handled with care.
10. Cylinders shall not be transported horizontally on the forks of a fork truck
11. Compressed gas cylinders shall not be taken into confined spaces unless they are supplying breathing air.
12. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), by a minimum of 20 feet or a noncombustible barrier at least five feet high having a fire resistance rating of at least one-half hour.

Confined Spaces

1. Contractors (and sub-Contractors) shall follow their own Confined Space Entry procedure program when entry into a UCM designated permit-required confined space is necessary. Contractors (and sub-Contractors) may be asked to provide their procedure to the Project Manager and Safety Office for review and approval prior to entering a permit required confined space.

Cranes and Hoisting Equipment

1. Notification must be made by the Project Manager to Public Safety & Security, the Safety Office and Helicopter group (UCAN) for any cranes. Upon determination that a crane will be needed, the crane operator or contractor safety representative shall prepare a lift plan for approval by the Project Manager. The Project manager shall obtain approval from his/her supervisor. If applicable, the crane operator shall submit a Obstruction Evaluation / Airport Airspace Analysis to the Federal Aviation Administration pursuant to Title 14 of the Code of Federal Regulations CFR Part 77.13
2. Operator must be certified to operate cranes. Contractors (and sub-Contractors) shall operate and maintain cranes and hoisting equipment in accordance with manufacturer's specifications and limitations.
3. Equipment will be maintained and inspected in accordance with regulatory requirements.
4. Riding on crane hooks and headache balls is prohibited.
5. Eyes on crane hooks shall have a Safety latch.
6. Outriggers must be fully extended and pedestals lowered for any lift.
7. Contractors (and sub-Contractors) shall provide a documented lift plan for critical lifts (lifts over process equipment, lifts over 10 tons, etc.) to their Project Manager.
8. Crane components used for overhead work must be rated for the load. No self-fabricated lifting devices/components shall be used.
9. Cranes and derricks shall not be refueled while in operation and shall be properly secured.
10. Rated load capacities and recommended operating speeds, special hazard warnings or instruction shall be conspicuously posted on all equipment.
11. Accessible areas within the swing radius of the rear of the rotating superstructure of the crane shall be barricaded to prevent an employee from being struck or crushed.
12. If a crane exceeds the height of the tallest structure on site it must be flagged and/or equipped with a warning light.
13. When making a lift with a crane:
 - a. One person shall supervise the lift.
 - b. One person, proficient in hand signals, shall perform signaling. Signals will comply with ANSI standards for the type of crane used. An illustration of the signals will be posted at the job location.
 - c. Crane operator and signal person will maintain continuous visual contact during lifting operation.
 - d. Area shall be cleared and roped or barricaded off.
 - e. No one shall stand or pass under suspended loads.

Slings

1. Slings shall not be loaded in excess of their rated capacities. Annual inspection tags shall be affixed to chain slings.
2. All slings other than wire rope slings shall be labeled for their load capacity.
3. Slings shall be padded or protected from sharp edges of loads and will not be pulled from under a load when the load is resting on the sling.
4. Each day, prior to use, slings and all fastenings and rigging attachments shall be inspected for damage or defects. Damaged or defective slings will be immediately tagged "Do Not Use" and removed from service.
5. Wire rope and synthetic web slings shall be removed from service and destroyed when they become worn, damaged or their load markings become illegible.

Chain falls and Come-Alongs

1. Safety latches shall be installed and functional on hanging hooks and load hooks.
2. Chains, cables and hooks shall be in good physical condition. Hanging hooks shall be free to pivot when lifting or pulling a load.
3. Load chains and cables shall not be used as slings.
4. Capacities of chain falls and come-alongs shall be adequate for the load to be lifted or pulled. "Cheaters" shall be not used on the handles of the come-alongs.
5. Chain falls and come-alongs shall be inspected annually, and the most recent inspection date shall be clearly indicated on the equipment.

Electrical Safety and Utilities

1. Contractors (and sub-Contractors) shall not access, operate or otherwise tamper with any utility including medical gases without Project Manager or Plant Supervisor approval as it pertains to the current project.
2. Contractors and sub-Contractors are required to locate the utility as part of the project.
3. The requirements of NFPA 70E 2004 shall be followed for all live electrical work. This covers requirements for PPE, flash clothing, insulated tools, live work permits and establishing a blast radius for all work to be performed.
4. Electric Utility Use - Contractors (and sub-Contractors) must coordinate with their Project Manager for access to appropriate electric utility sources. Accessing power from test stands or production equipment is prohibited.
5. Exposed live electrical parts will be de-energized and locked out before working on or near them whenever practical.
6. If determined by the Project Manager that de-energizing exposed live electrical parts introduces additional hazards, or is not feasible due to equipment design or operational limitations, specific Safety related energized work practices will be developed by qualified contractor personnel and the Project Manager. Work practices will protect against direct body contact or indirect contact by means of tools or materials and be suitable for work conditions and the exposed voltage level.
7. Extension cords will be listed or approved as assemblies by a nationally recognized testing agency and will not be used in a manner that could cause damage to the outer jacket or cause tripping hazards. When crossing over aisles with extension cords appropriate overhead clearance must be maintained. Never route extension cords through door or window openings. Portable electric equipment and extension cords will be approved for the work environment and kept in good condition. Extension cords shall not be fastened with staples, hung from nails or suspended by wire.
8. Outlets (120 volts) on construction sites that are not a part of the permanent wiring of the building or structures will have approved ground fault circuit interrupters (GFCI).
9. Energized panels will be closed after normal working hours and whenever they are unattended. Temporary wiring will be de-energized when not in use.
10. Suspended temporary lighting will be UL Approved Festoon Lighting.
11. Only qualified electrical contractor employees may enter substations and/or transformer vaults and only after being specifically authorized by the Project Manager. All others must be accompanied at all times by UCM qualified personnel.

12. Contractors (and sub-Contractors) must provide ground-fault circuit interrupters (GFCI's) at all times when using electric power cords in order to protect employees from ground-fault hazards.
13. Use of electrical tape for temporary repair of frayed cords is prohibited.
14. Temporary illumination of construction areas, ramps, corridors, offices and storage areas shall be lighted to satisfy the minimum illumination intensities listed in 29 CFR 1926.56, Table D-3.
15. All lamps for general illumination shall be protected from accidental contact or breakage. Metal-case sockets must be grounded.
16. Temporary lights shall not be suspended by their cords, unless they are so designed. Temporary lighting circuits shall be used for lighting only and removed at the end of the job.
17. Contractors and sub-Contractors are not permitted to change or borrow circuits without permission from a Plant Electrician or knowledgeable PM.
18. All junction boxes must have covers

Elevated Work

1. For any employee working six feet or more above an exposed work surface, Contractors (and sub-Contractors) shall provide primary fall protection whenever possible and secondary fall protection only when primary fall protection is not practical.
2. For work that requires disconnection from an anchorage point, a full body harness with two shock absorbing lanyards and locking snap hooks shall be used. Contractors (and sub-Contractors) must attach the second lanyard to a suitable anchorage point prior to disconnection from the original anchorage point.
3. The anchorage point must be at waist level or higher; and capable of supporting at least 5,000 lbs. per employee attached.

Primary Fall Protection System

1. Primary fall protection systems provide protection for walking and working surfaces in elevated areas with open sides, including exposed floor openings and include, but are not limited to, fixed guardrails, as well as scaffolds, aerial lifts and other approved personnel lifting devices.

Secondary Fall Protection Systems

1. A secondary fall protection system consists of an approved full body harness and two shock-absorbing lanyards.
2. A secondary fall protection system shall be worn when primary fall protection is not practical or feasible.
3. Use of a secondary fall protection system shall include the prior establishment of a rescue plan for the immediate rescue of an employee in the event they experience a fall while using the system.
4. Life Line Systems
 - a. Vertical lifeline systems shall be made from materials (including the line itself) designed specifically for fall protection.
 - b. Vertical lifeline systems must be capable of supporting at least 5,000 lbs. for one person only.
 - c. Lifelines may be mounted either vertically or horizontally and are generally intended to provide mobility to personnel working in elevated areas.

- d. Horizontal lifelines must withstand at least 5,000 lbs. impact and pulled tight enough to prevent deflection.
 - e. Horizontal lifelines shall be positioned to provide points of attachment at waist level or higher.
 - f. Vertical lifelines used for vertical mobility will be equipped with sliding rope grabs or may consist of self-retracting reel type lanyard/lifeline attached directly to a Safety harness. Retractable lifelines shall be attached to supports capable of 5,000 lbs. impact loading.
 - g. Sliding rope grabs, approved for the size rope used, are the only method for securing a Safety lanyard to a vertical lifeline. Lanyards shall not be attached to lifelines by means of knots and loops.
5. All fall protection devices used in elevated work shall be inspected by a competent person prior to initial use (and annually thereafter) and by the user prior to each use.
 6. Defective equipment shall be tagged "Do Not Use" and immediately removed from service.
 7. All contractor employees who will be required to perform elevated work shall be fully trained in elevated work practices and the care and use of Safety equipment.
 8. Safety nets shall be used only with prior approval of the Safety Office.

Floor and Wall Openings/Barricades

1. A cover or a standard railing and toe board shall guard floor openings. The railing shall be provided on all exposed sides, except entrances to stairways.
2. Wall openings, from which there is a drop of more than four feet, and the bottom of the opening is less than three feet above the working surface, shall be guarded.
3. A standard railing or equivalent shall guard every open-sided floor or platform four feet or more above an adjacent floor or ground level. A toe-board shall be provided wherever persons can pass beneath the open sides or there is moving machinery or equipment which falling material could create a hazard.
4. Employees shall be protected at all open sides and edges during the performance of built-up roofing work on low-pitched roofs.
5. Contractors (and sub-Contractors) will post, install, and maintain signs, signals and barricades to detour passage of persons and vehicles at locations where potential hazards exist.
6. Barricades shall be placed where necessary to warn employees against hazardous conditions and activities, such as overhead work, floor and wall openings and trenches.

Hot Work Permits

Contractors (and sub-Contractors) shall comply with the facility's hot work permit requirements as described below.

1. A hot work permit shall be requested by the contractor by calling the Plant Department for any activity that produces a source of ignition. Such activities include but are not limited to:
 - a. Gas welding and cutting
 - b. Electric arc welding
 - c. Heating torches and other open flames
 - d. Tar pots and kettles
 - e. Other activities that produce a spark.

2. In some work activities, other hazards must be addressed before hot work may be safely undertaken. These hazards may involve:
 - a. Energized equipment
 - b. Pressurized or contaminated piping
 - c. Entry into confined spaces.
3. Hot work permits are issued for one contractor's continuous work shift for a specific operation and will be displayed at the job site.
4. Hot work permits are not transferable across Contractor shifts.
5. Suitable fire extinguishing equipment (e.g., fire blankets, non-combustible heat shields, flash curtains and fire extinguishers) shall be provided by the contractor and shall be immediately available in all welding, cutting and brazing locations.
6. The following fire prevention activities shall be completed before hot work can begin:
 - a. Combustibles shall be moved at least 35 feet from the hot work operations. If combustibles cannot be removed, they shall be protected using flame-retardant covers or curtains.
 - b. Flammable liquids shall be removed from the area or totally isolated from the vicinity of the hot work. The Project Manager is to be notified if any fire extinguishing equipment has been discharged.
 - c. Tarpaulins used as hot work barriers will be flame resistant.
 - d. Lines previously containing a flammable or combustible fluid must be purged, protected by inert gases, and verified safe for exposure to ignition sources.
 - e. Floor, wall and other openings shall be closed or covered, including floor drains.
 - f. Combustible dust shall be cleaned from the vicinity of the hot work operations.
 - g. Surrounding floors made of combustible construction shall be protected with a flame-retardant cover.
7. Where electrical equipment is not involved, the floors may be swept clean and wetted with water.
8. Contractor's employees shall be informed of the location of the nearest fire alarm pull box.
9. Contractors (and sub-Contractors) are required to bring their own fire extinguishers of the appropriate class for the hazards involved.
10. Fire watch and operator shall be trained in use of portable fire extinguishers.
11. The Safety Office shall be notified if a fire extinguisher is used in response to an incident directly related to hot work in progress.
12. For hot work involving open flame or high heat generation, a fire watch may be required during the conduct of the work as determined by the Safety Office. A fire watch is required for a minimum of 30 minutes after completion of the job, as directed by our insurance carrier Factory Mutual. The contractor shall provide the manpower for the watch.

Ladders

1. A stairway or ladder shall be provided for access where there is a break in elevation of 19 inches or more and no ramp, runway, sloped embankment or personnel lift is provided.
2. Portable metal or conductive ladders shall not be used near energized lines or equipment.
3. Fabricated ladders are prohibited.
4. Conductive or metal ladders shall be prominently marked as conductive and all necessary precautions shall be taken when used in specialized work.
5. No ladders other than Type 1 or Type 1A shall be used. Fiberglass ladders are mandatory for electrical tasks or when working in close proximity to electrical services where accidental electrical contact is a foreseeable event.
6. Ladders will be secured to keep them from shifting, slipping, being knocked or blown over. Ladders will never be tied to facility services piping, conduits, or ventilation ducting. Ladders will be lowered and securely stored at the end of each workday.
7. Ladders will not be placed in front of doors or door openings unless the door is either monitored by an attendant or blocked open to prevent contact with the ladder. If all traffic around the ladder work area cannot be re-routed, the ladder must be secured to prevent accidental knock down. The Project Manager will arrange closure of aisles, walkways and selection of alternative traffic routes. Appropriate warning signs, tape and cones will be deployed around ladder work to define exclusion zones.
8. Stepladders will not be used as straight ladders. The top or first step below the top of ordinary stepladders will not be used as a step or a stool.
9. Ladders will only be used for the purposes for which they are designed.
10. Extension ladders will not be separated and will be tied off.
11. The following requirements shall apply to the use of all ladders:
 - a. Ladders are provided by the contractor and sub-contractor and are inspected and maintained by the contractor and sub-contractor. Ladders will be visually inspected by a competent person and approved for use before being put into service. Each user shall inspect ladders visually before using.
 - b. Ladders used for access to an upper landing surface shall have side rails that extend at least **three feet** above the landing surface.
 - c. Ladders shall be maintained free of oil, grease and other slipping hazards.
 - d. Non-self-supporting ladders shall be tied off or otherwise secured to prevent accidental displacement.
 - e. Non-self-supporting ladders shall be used at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one quarter of the working length of the ladder.
 - f. When ascending or descending a ladder, the user shall face the ladder and shall use at least one hand to grasp the ladder; user shall not carry any object or load that could cause him/her to lose balance and fall.
 - g. Ladders with structural defects shall be tagged "Do Not Use," immediately taken out of service, and removed from the site by the end of the day.
 - h. Wooden ladders shall not be painted.

Lockout/Tagout of Hazardous Energy Sources

1. Contractors (and sub-Contractors) shall restrict access to work areas by unauthorized employees where energy sources have been de-energized.
2. All affected employees shall be notified. Where applicable, the area shall be secured and signs posted to alert employees that a de-energizing activity is in progress.
3. Contractors (and sub-Contractors) shall obtain specific site lockout instructions from the Project Manager.
4. Standardized lockout devices and "Danger" tags shall be used to prevent the operation of switches, valves, pieces of equipment, etc., where personal injury may occur or equipment may be damaged.
5. For work that involves multiple trades and or Contractors (and sub-Contractors):
 - a. A primary authorized employee must be designated to oversee the event and to coordinate affected work forces and to ensure continuity of protection
 - b. A lead authorized employee shall be designated for each party that is part of the group.
 - c. Each lead shall verify that a zero energy state has been achieved for each hazardous energy source that must be locked out that is associated with his or her party's work.
 - d. Each authorized employee of the party must then also verify zero energy for each hazard that is associated with the work they perform.
 - e. If any party does not have an employee that is qualified to perform the verification (e.g. an employee qualified to assess electrical hazards), then the lead employee and each member of his/her party must witness the verification performed by a designated qualified employee of one of the other parties or a qualified UCM employee.
 - f. The primary and all lead persons must sign a document attesting to the completion of these verification steps before work may begin. Project Managers should coordinate these requirements at a pre-job hazard review.
6. Each contractor and subcontractor employee performing operations where equipment or systems require de-energizing shall place his/her own lock and tag on each energy source requiring de-energizing; each employee shall sign and date the tag. The tag shall include the employee's name, the name of the contractor they work for, the date the lock is installed and the reason for lockout is required.
7. Only standard "Danger - Do Not Operate" (black, red and white) tags will be used.
8. If equipment for de-energizing is in a confined space, the confined space will be cleared of all employees prior to testing the energy source for deactivation.
9. Stored energy systems and equipment, such as electrical capacitors, mechanical springs, steam lines, and hydraulic systems, shall be put in a "zero energy" state.
10. Contractor employees shall remove only their own locks and tags when they complete their work.
11. Used danger tags will be destroyed; tags will not be reused unless designed for reuse.
12. Extended lock out requirements shall be coordinated with the Project Manager.
13. When more than one crew, trade, or contractor, etc., is used on a project that requires equipment lockout/tagout, one specific employee shall be designated to coordinate affected work forces and to ensure continuity of protection.

Motor Vehicle Safety

1. Contractor employees shall park their personal vehicles on the street unless approved by Public Safety and Security. UCM assumes no responsibility for vehicles, or articles in vehicles, parked on UCM property.
2. Vehicles and equipment shall not block exits, walkways, drive ways, loading areas, fire hydrants or emergency equipment.
3. Operators of vehicles with high overhead clearance must pre-plan travel routes on site to ensure overhead utilities, obstructions and or personnel will not be at risk of impact.
4. Contractor diesel and gas powered vehicles are prohibited inside buildings unless prior approval and arrangements for ventilation have been made with the Project Manager, Emergency Service and the Safety Office.
5. Contractors (and sub-Contractors) will not perform extensive maintenance or repairs of vehicles while on UCM property.
6. Drivers shall obey all traffic regulations and signs, and carry a current driver's license for any vehicles they operate.
7. All vehicles are subject to inspection when entering or leaving the location.
8. Vehicle's engines shall be turned off when parked.
9. Passengers are not allowed to ride in beds of pick-up trucks.
10. Drivers shall be mindful of pedestrian traffic at all times.
11. Equipment, including rentals, brought to this facility, used inside or outside, will be identified with the name of the contractor utilizing the equipment.
12. All accidents will be reported immediately to Public Safety and Security 702-6262.
13. Vehicles brought on site carrying equipment may be inspected daily.
14. All cargo and equipment on vehicles shall be properly loaded and secured. Vehicles shall not be overloaded.

Overhead Work

1. Loads shall not be suspended over any persons or over occupied building areas.
2. Contractors (and sub-Contractors) shall secure area with Safety stanchions or caution tape and post warning signs to alert (block) pedestrians and area occupants of overhead work. The distance the barricade is set up away from the work area must take into consideration the length of materials in use and the potential for materials to be projected horizontally or to rebound from the ground surface or surrounding structures if they fall from overhead. The set-up distance should allow for these types of hazards to be contained within the barricaded area.
3. When work is limited to a visual inspection without tools, Caution Tape or Safety cones at a minimum of two feet from the work (no potential for falling objects) may be used.

Personal Protective Equipment

Contractors (and sub-Contractors) shall furnish and require the use of personal protective devices and equipment (PPE) by their employees and by their subcontractor employees. PPE shall not be modified or used in any manner other than which it was designed.

Minimum PPE Requirements

1. Contractors (and sub-Contractors) shall wear Safety glasses with side shields that meet the specifications of ANSI Z87.
2. Safety glasses with side shields shall be worn under welding hoods and face shields.
3. Safety glasses with side shields shall be worn under chemical goggles unless the goggles are manufactured with high impact lenses.
4. Safety glasses with side shields shall be worn throughout the facility and in outdoor work areas, except in offices and cafeteria areas, unless performing work activities.
5. Tinted Safety glasses are not permitted indoors, unless needed for the job hazards.

Hearing Protection

Hearing protection is required in designated and posted areas and when performing noise producing activities as required by the Contractors (and sub-Contractors) company policy/Hearing Protection Program.

Respiratory Protection

1. Contractors (and sub-Contractors) shall have a Respiratory Protection Program that includes proper training of employees if employees are at risk of exposure to airborne contaminants.
2. Contractors (and sub-Contractors) shall provide their employees with respiratory protection to protect them from exposure to harmful dust, mist, fumes, gases or vapors when engineering and administrative controls are not adequate.

Gloves

1. Contractors (and sub-Contractors) shall ensure that their employees wear gloves to protect their hands from chemical agents, heat, cold, etc.
2. Gloves should not be worn around moving machine parts such as belts, pulleys and gears.

Protective Footwear

ASTM International standards, F 2412, Test Methods for Foot Protection, and F 2413, Specification for Performance Requirements for Protective Footwear rated Safety shoes or work boots are required for construction and maintenance activities. The contractor shall ensure that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.

Hard Hats

ANSI Z-89 rated hard hats are required on all construction sites areas where there is a potential for injury to the head from falling objects and shall be worn as designed.

Powered Industrial Vehicles (PIVs)

1. Contractors (and sub-Contractors) are required to provide their own PIVs unless otherwise arranged through a separate contract (i.e. linen or gas delivery). PIVs are to be in proper working order and comply with OSHA or other local standards with regard to training and maintenance.
2. Contractors (and sub-Contractors) are not permitted to use UCM vehicles without authorization from the designated manager of the owning department.
3. Powered industrial vehicles include, but are not limited to, fork trucks, electric buggies, aerial lifts, earth-moving equipment, earthmoving equipment (bobcats), cranes and hoisting equipment.
4. PIV speed will be limited to 6-mph/10-kph (approximately twice walking speed) in manufacturing areas, high pedestrian areas, and areas with other potential significant risks.
5. Makeshift fork extensions and use of C-clamps are prohibited.
6. Contractors (and sub-Contractors) shall not use any motor vehicle, earth moving or compacting equipment having an obstructed view to the rear unless the vehicle has a reverse signal alarm distinguishable from the surrounding noise level.
7. Diesel and gas powered vehicles are prohibited inside buildings unless prior approval and arrangements for ventilation have been made with the Project Manager, and the Safety Office.
8. Areas within the facility where vehicles will be operated shall be assessed for hazardous conditions, and only vehicles designed for use under any identified hazardous conditions may be used in that area.
9. PIVs operated in parking lots or on roadways must be operated with flashing lights/strobes. If such operation will involve multiple trips for several hours or more, the Project Manager should work with the site Safety Office to coordinate the activity with other operations at the facility that may be impacted (e.g. vehicle and pedestrian traffic flow)
10. Parked forklifts shall have forks resting at ground level.
11. Vehicles shall not be left running while unattended.
12. In the event of an indoor facility emergency notification, vehicles shall be pulled over to the side of the aisle and motors switched off.
13. Actively leaking vehicles or equipment are prohibited from exiting the facility.
14. The contractor shall repair or contain any leaking vehicle or equipment before exiting the facility. The Safety Office shall be notified by dialing the emergency phone number for the facility.
15. Riding construction equipment as a passenger is prohibited.
16. Towing or otherwise pulling loads with the forks on a forklift is prohibited.
17. PIV use shall be restricted or minimized during shift changes to minimize UCM employee exposure to PIV traffic.
18. PIV operators must abide local rules (e.g., speed limits, restricted areas).

Roof Work/Access

1. Access to roof work requires prior authorization from the Project Manager, Public Safety & Security, the Safety Office and UCAN.
2. Employees performing work within ten feet of the leading edge of the roof shall review fall protection compliance requirements prior to commencing the task.
3. Contractors (and sub-Contractors) are not permitted on the roof in severe weather.
4. All unused materials are to be removed after the job is finished.

Scaffolding

1. All scaffolds shall meet OSHA standards and be inspected by the contractor competent person prior to use and daily while in use. A competent person may be a 3rd party.
2. Fall protection must be used during erection and dismantling of supported scaffolds if over 6 feet tall.
3. The footings or anchorage for scaffolds shall be sound, rigid and capable of carrying the maximum intended load without settling or displacement.
4. Guardrails and toe-boards shall be installed on all open sides and ends of scaffold platforms that are more than four feet above the ground or floor.
5. Scaffolds shall be provided with an access ladder or equivalent safe access. Contractors (and sub-Contractors) shall not climb or work from scaffold handrails, mid-rails or brace members.
6. When freestanding, manually propelled scaffolds are used, the height shall not exceed four times the minimum base dimension.
7. Employees shall not ride on mobile scaffolds when they are being moved.
8. Rolling “Bakers” scaffolds are to be used in accordance with design and not to be stacked or used in place of supported scaffolding.

Stacks and Drains

1. Operational exhaust systems shall not be compromised in any way without prior approval from the Project Manager.
2. Stacks and drains shall not be painted, installed, relocated, or altered in any manner or their identification changed without prior approval from the Plant Department
3. Jobs that require removal or installation of stacks require coordination with the Plant Department for proper stack identification management.
4. DO NOT put flooring over or fill in drains UNLESS it is verified to be abandoned by the Plant Department.

Tools

1. Hand tools shall be kept in good condition, i.e., sharp, clean, oiled, dressed and not abused.
2. Tools subject to impact (chisels, star drills, and caulking irons) tend to "mushroom" and shall be kept dressed to avoid flying spalls. Any tool that has already mushroomed shall be immediately taken out of service.
3. Tools shall not be used beyond their capacity; e.g., extending the handle using a piece of pipe or other means. Use the proper tool for the job.
4. Tools and other materials shall not be left on stepladders, scaffolds, roofs or other places where they may be dislodged and fall.
5. Non-sparking tools are required in areas where flammable solvents are handled and where sparks could create an explosion.
6. Wooden handles of tools shall be kept free of splinters and cracks, and be kept tight in the tool.
7. Contractors (and sub-Contractors) shall maintain all portable power tools, electrical cords and pneumatic hoses in good condition and proper working order.
8. Faulty or damaged tools and hoses shall be removed from service immediately.
9. When powered tools are designed to accommodate guards, they shall be equipped with the manufacturer's guards in operable and original condition, when the tool is in use.
10. Contractors (and sub-Contractors) must provide ground-fault circuit interrupters (GFCI's) at all times when using portable hand held electric power cords in order to protect employees from ground-fault hazards.
11. Cords and hoses shall be protected from damage and shall be routed through the job area in a manner that prevents tripping hazards and cord or hose damage.
12. Portable electric power tools shall be marked double-insulated or electrically grounded using three-conductor cord and three-prong plugs.
13. Pneumatic power tools shall be secured by some positive means to prevent the tool from becoming accidentally disconnected.
14. Tools shall not be hoisted or lowered by their hoses/cords.
15. All pneumatically driven nailers, staplers and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi of pressure at the tool, shall have a Safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.
16. Powder actuated tools require advanced written approval by the Safety Office prior to use.
17. Powder actuated tool operators shall possess a certificate for operation.
18. Warning signs shall be posted when powder actuated tools are in use.
19. Powder actuated tools shall never be left unattended. When not in use, they shall be secured under lock and key.
20. Powder actuated tools shall not be used in explosive or flammable atmospheres.
21. Contractors (and sub-Contractors) are not permitted to use UCM tools and equipment without authorization from the Plant Department.
22. All tools need to be secured and never left unattended in corridors or areas open to the public.
23. All tools need to be secured at the end of the work day.

Trenching, Excavating and Drilling

1. Underground lines, equipment and electrical cables shall be identified and located by the contractor or sub-contractor prior to beginning work that involves trenching, excavating or drilling into structures. Any local “Call Before You Dig” program must be contacted as well for excavations and trenches. Ground Penetrating Radar may be requested by UCM for locating tunnels during crane lifts and conduit/rebar in concrete slabs for coring.
2. Contractor shall assign a competent person to all trenching and excavation work. This person shall be clearly identified to all employees assigned to the job.
3. Contractors (and sub-Contractors) will not initiate work without prior approval of the Project Manager.
4. Walls and faces of trenches and excavations, four or more feet deep, shall be shored, sloped or shielded as required by the type of soil encountered.
5. Prior approval from the Project Manager is required before commencing, or continuing, with trenching deeper than four feet.
6. A confined space entry permit shall be required where oxygen deficiency or a hazardous atmosphere exists or could exist.
7. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are four feet or more in depth so as to require no more than 25 feet of lateral travel for employees.
8. Daily inspections shall be conducted by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems or other hazardous conditions.
9. Contractors (and sub-Contractors) and UCM Employees shall not be permitted underneath loads handled by lifting or digging equipment.
10. Contractors (and sub-Contractors) shall be protected from excavated or other materials and equipment that could cause a hazard by falling or rolling into the excavation.
11. Physical barriers shall be placed around or over trenches and excavations. See “Barricades” for details. Flashing light barriers shall be provided at night.
12. Erosion control measures to minimize storm water pollution shall be reviewed approved by the Project Manager prior to implementation.
13. Shoring or sheet lining shall be made of at least 2-inch thick wood or other material with strength equivalent to 2-inch wood. Steel shoring or sheeting shall be used in all excavations more than 16-feet deep.
14. In excavations that Contractor employees may be required to enter, excavated or other material shall be effectively stored and retained more than two feet from the edge of the excavation.
15. Excavations below the base of footings of any foundation or retaining wall shall not be permitted without prior approval from an architect in Facilities Design and Construction.
16. Pedestrian walkways over open trenches must be of sufficient strength, have guardrails on both sides, and be beveled to ground level at both ends. Maximum slope for ramps is one foot rise in 12 feet, and a non-slip surface is required.

Waste Management

1. Contractors (and sub-Contractors) shall dispose of all regulated waste in accordance with Federal, State and Local Code.
2. Hazardous or otherwise regulated wastes are not to be disposed of in refuse dumpsters, down a drain or on the ground.
3. Contractors (and sub-Contractors) shall provide trash removal containers for construction debris and general trash.
4. Removal of soils from, or adding soils to, areas requires approval from UCM for each job. Soil removed and placed in these areas is characterized for specific uses and is subject to tracking. Dumping of concrete and debris in these areas is not allowed. Contact your Project Manager or the Safety Office for guidance.

Welding, Cutting and Brazing

1. A hot work permit must be obtained prior to welding, cutting, soldering, brazing operations, open flame work, and use of spark/ heat producing equipment or powder actuated tool operations.
2. The permit must be countersigned by the Plant Department Representative.
3. Suitable fire extinguishing equipment shall be immediately available in all welding, cutting and brazing locations.
4. Objects to be welded, cut or heated shall be moved to a designated safe location, or, if they cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place. If fire hazards cannot be removed, a pre-job assessment shall be performed and control measures established to protect the immovable fire hazards from heat, sparks and slag.
5. Personnel working around or below the welding, burning, or grinding operation shall be protected from falling or flying objects.
6. Should a pre-job assessment identify that an unsafe accumulation of contaminants could develop, then suitable mechanical ventilation or respiratory protective equipment shall be provided.

Gas Welding and Cutting

1. All hoses and torches carrying acetylene, oxygen, fuel gas, or any substance that may ignite or be harmful to employees shall be inspected at the beginning of each shift.
2. Defective hoses and torches shall be tagged "Do Not Use" and immediately removed from service.
3. Acetylene cylinders shall not be stored on their side.
4. Torches shall be lighted from friction lighters and not by matches or from hot work.
5. Directional gas flow fittings (back-flow valves) shall be provided on hoses to prevent reverse gas flow or back flow.
6. Torches shall be turned off and removed from confined spaces when not in use.

Arc Welding and Cutting

1. Arc welding and cutting operations shall be shielded by non-combustible or flame-retardant screens to protect employees and other persons working in the vicinity from the direct rays of the arc. When curtains or other barriers may not be feasible, "Don't Watch the Arc" signage

shall be used at safe approach distances to warn passers by about the hazards of looking into the arc.

2. Arc welding and cutting cables shall be of the completely insulated, flexible type, capable of handling the maximum current requirement of the work in progress. Cables in need of repair shall not be used.
3. The power supply switch to the equipment shall be opened when the welder or cutter has to leave the work or to stop work for any appreciable length of time, or when the welding or cutting machine is to be moved.
4. All ground return cables and all arcs welding and cutting machine grounds shall be in accordance with regulatory requirements.
5. Ground connections shall be made directly to the material being welded.