



**IN CASE OF**



**EMERGENCY**

**DIAL 911**

**(from a Campus Phone)**

**University of Michigan-Dearborn  
Campus Location:**

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**Phone \_\_\_\_\_ Fax \_\_\_\_\_**

**Non-Emergency Department of Public Safety  
(DPS) call (313) 593-5333**

**Non-Emergency Environmental Health and  
Safety & Emergency Management  
Department call (313) 593-4914**

## Remember...

Become familiar with and follow these guidelines so that you can avoid costly delays!

1. Know your evacuation route at all times.
2. Report all injuries, accidents, and spills immediately to Department of Public Safety (DPS) at 911 from a campus phone or 313-593-5333 from a cell phone.
3. UM-Dearborn is a non-smoking facility. Smoking inside any University building or restricted area is prohibited. Effective July 1, 2011, smoking is prohibited on the campus property.
4. Use all personal protective equipment furnished by the contractor.
5. Ensure that all employees received the appropriate training before beginning any work.
6. Familiarize yourself and your employees with the appropriate environmental, health and safety requirements relevant to the work being performed.
7. Contact your UM-Dearborn Construction Project Manager in the event of any visits by federal, state, or local government representatives.

**Facilities Management  
University of Michigan - Dearborn  
4901 Evergreen Road  
Dearborn, MI 48128  
Phone: 313-593-5270 FAX: 313-593-5441**

After hours emergency contact DPS at 313-593-5333 from a cell phone or from a campus phone 911.

The Environmental Health and Safety & Emergency Management (EHSEM) Department can be reached at 313-593-4914 or 313-593-0921. In the event of an emergency and you do not reach some one at these two numbers please contact DPS.

**REMEMBER . . .**

# Evacuation

Prepare an evacuation plan and have it available at all times. Post in a conspicuous location. Be sure to include:

1. Primary and secondary evacuation routes
2. Procedures for the evacuation of persons with disabilities
3. Designated person(s) familiar with the building and its evacuation plan and responsible for meeting with the responding officers
4. Pre-arranged meeting point 150 feet away from the building
5. Responsibilities and procedures to establish a head count

## Remember!

- Walk, do not run to nearest exit
- Do not use elevators
- Assist people with special needs
- If you cannot return to your building, wait for instructions from DPS or other organization in charge; i.e. Dearborn Fire Department or Dearborn Police Department
- Do not re-enter until advised to do so by DPS or EHSEM or by someone from the on-site incident command team.

If you are unable to evacuate the building during an emergency due to fire or building damage, call 911 from a campus phone or 313-593-5333 and inform the DPS Communications Officer of your location and status.

# Fire Prevention/Protection

- Place an ABC dry chemical portable fire extinguishers on each floor and at stairways for hazards present on the jobsite.
- Travel distance from any point of the protected area to nearest fire extinguisher will not exceed 100 feet.
- Under no conditions will fire alarm detection devices (smoke/heat detectors) be covered, removed, or otherwise impaired without prior approval:

<b>Contacts</b>	<b>Phone Number</b>
Facilities Management	313-593-5270
EHSEM	313-593-4914

- Special fire protection considerations must be given to locations where the presence of combustible or flammable liquids are stored.
- A water supply, either temporary or permanent, shall be made available as soon as practicable. Flammable and combustible materials must be stored in a well ventilated area away from all sources of ignition.
- Storage of Class I and II flammable liquids shall not exceed 60 gallons within 50 feet of any structure.
- A permit will be issued and followed prior to all hot work. Reference Hot Work Section.
- The elimination of combustible waste on a daily basis is a fundamental and critical part of any fire prevention program.
- Fuel-powered tools and equipment must be stopped and cooled down prior to being refueled, serviced or maintained. Follow manufacturer's instructions for maintenance.
- Special fire prevention planning will be required for the following:
  - Temporary buildings or trailers
  - Lumber storage
  - Combustible/flammable liquid storage
  - Fuel gas cylinder storage
  - LP gas cylinders/tank storage
  - Heating devices/systems
- All temporary heating devices must be installed, used, and maintained in accordance with all applicable federal, state, local, and NFPA codes, and manufacturer's instructions. There should be adequate ventilation to remove emissions.
- Smoking is prohibited in University facilities. Effective July 1, 2011, smoking is prohibited on the campus property.

# Flooding

IN CASE OF IMMINENT OR ACTUAL FLOODING:

- 1 If you can safely do so:
  - Shut off all electrical equipment.
  - Secure vital equipment, records, and hazardous materials (chemical, biological, and/or radioactive) and move items to a higher level, if feasible.
  - Wait for instructions from DPS.
- 2 Do not return to your site until you have been instructed to do so by someone from the on-site incident command team, DPS or EHSEM.
- 3 If assisting in cleanup, report any oil, chemical, or radioactive materials suspected of mixing with the flood waters to EHSEM.
- 4 Do not dump flood water down any drain (storm or sanitary) unless approved by EHSEM staff.

## Flooded Area - General Safety

Be aware of the potential for electrical shock! Wear rubber boots in wet areas until it is certain no electrical hazard exists. Facilities Management or the appropriate maintenance group should be called to turn off all main electrical switches in the area. Electrical equipment used for cleanup in flooded areas must be protected with Ground Fault Circuit Interrupters (GFCI).

After the main power has been disconnected by an electrician, unplug electrical appliances in wet areas. Do not turn on any appliances which have become wet until they have been thoroughly dried and checked for proper operation.

If water may have contacted any of the following, contact EHSEM at 313-593-4914 or DPS at 313-593-5333 to evaluate the situation:

- Chemicals
- Radioactive materials
- Biological materials
- Food preparation/service areas

The gas supply to all appliances in flooded areas should be shut off until the appliance has been checked. Facilities Management or the appropriate maintenance group should be called to turn off gas lines in the affected area. Facilities Management can be reached 7:30 a.m. – 4:30 p.m. M-F at 313-593-5270 after hours, weekends or holidays contact DPS 24 hours a day at 313-593-5333. Do not use any open flame until the area has been ventilated for the potential presence of natural gas.

Sewage floods are particularly dangerous due to the solids content and volume. Precautions should be taken to prevent contact with the sewage and to isolate the area to prevent contaminants from being tracked to other parts of the building. Occupants not involved in the cleanup must be evacuated from these areas when sewage is present.

### REMEDIATION PROCEDURES

Time is an essential consideration of remediation. All remediation projects should strive to complete initial cleaning within 24 hours.

## FLOODING

# Power Outages

## **In case of a major, campus-wide power outage:**

1. Remain calm.
2. If evacuation of a building is required, seek out persons with special needs and provide assistance.
3. Do not use candles, lighters, or other types of open flames for illumination purposes.
4. Unplug all electrical equipment (including computers) and turn off the light switches.

## **If people are trapped in an elevator:**

1. Tell passengers to stay calm and that you are getting help.
2. Call 911 from the elevator call box or 313-593-5333 from a cell phone and provide information. Note: Most elevator call boxes automatically dial DPS when opened.
3. Stay near the passengers until DPS or other assistance arrives, provided it is safe to stay in the building.

# Tornado Safety Rules

A **TORNADO WATCH** means tornadoes potentially could develop and a **TORNADO WARNING** means a tornado actually has been sighted.

## **TO REPORT A TORNADO:**

Call DPS at 911 from a campus phone or 313-593-5333 from a cell phone.

**Follow your site-specific emergency action plan, if available.**

## **Seek shelter/safety in the following areas:**

- Basement, underground excavation, or lower floor of interior hallway or corridor (preferably a steel-framed or reinforced concrete building). Be aware that heavy rains may flood excavation areas!
- If no basement is available, seek shelter under a sturdy workbench or heavy furniture (i.e., table or desk)
- In open country, move away from the tornado path at a right angle
- If there is no time to escape, lie flat in the nearest depression (i.e., ditch or ravine)

## **Avoid the following:**

- Top floors of buildings
- Areas with glass windows or doors
- Auditoriums, atriums, gymnasiums, cafeterias, or other areas with large, free span roofs
- Automobiles

## **During a tornado, keep the following items with you:**

- Flashlight
- Radio
- Portable or Cellular Telephone

## **Listen for:**

- Radio reports, and the City of Dearborn siren/or the University's outdoor warning system.

# **Air Quality Control - Visible Emissions, Dust, and Odor**

**Air Quality Control** – appropriate actions should be taken to minimize the amount of air pollution created by construction operations. All operations should be conducted in a manner to avoid creating a nuisance.

- **Visible Emissions** - all project sites should minimize the amount of visible emissions. Equipment should be maintained and operated to limit vehicle exhaust emissions. All forms of visible emissions must be controlled.
- **Dust** - Dust shall be kept down at all times, including non-working hours. Construction activity should be conducted to minimize the formation of dust. This may require equipment limitations, covering soil piles, utilizing dust suppressors, etc.
- **Odor** - Work being performed on construction sites may generate odors not normally encountered in everyday work areas. All products or processes that could create odors or smoke should be reviewed in advance by EHSEM for use in occupied buildings. Any suspicious odors should be reported to EHSEM at 313-593-4914 or DPS at 313-593-5333.

# Refrigerants

To comply with EPA regulations, outside contractors must notify Facilities Management if equipment containing chlorofluorocarbons (CFCs), or hydrochlorofluorocarbons (HCFCs) is to be installed or removed.

The Facilities Management has developed procedures and a database for tracking refrigerants. Any contractor installing or removing refrigerants must complete the Contractor Refrigerant Reporting Form which is available at: Facilities Management Office – Attn: Gary Taylor, Plant Operations Manager, Phone Number 313-593-5369.

If you are removing or installing equipment containing any of these refrigerants, please contact the Facilities Management immediately at 313-593-5270.

# Contractor Refrigerant Reporting Form

To comply with EPA regulations, the following information must be provided to the Facilities Management department whenever an outside contractor removes, relocates, or installs refrigeration equipment containing CFC's or HCFC's. *Contractor shall properly dispose of refrigerant per all state, local, and federal regulations.*

**Fax reports directly to Gary Taylor, Manager Plant Operations:**

**Fax: (313) 593-5441**

**Phone: (313) 593-5396**

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

Contractor Name: \_\_\_\_\_

Contractor's Technician (name) \_\_\_\_\_ Date: \_\_\_\_\_

Technicians' Certification Number: \_\_\_\_\_

\_\_\_\_\_ Removed Equipment? \_\_\_\_\_ New Equipment? \_\_\_\_\_ Relocated?

**In All Cases Provide The Following Information:**

Equipment Make: \_\_\_\_\_

Equipment Model Number: \_\_\_\_\_

Equipment Serial Number: \_\_\_\_\_

Building and Location of Equipment: \_\_\_\_\_

Equipment Description: \_\_\_\_\_

Area Served: \_\_\_\_\_

**For Newly Installed Equipment:**

Refrigerant Type: \_\_\_\_\_

Charge (pounds & ounces): \_\_\_\_\_

From Factory: \_\_\_\_\_ Added by Tech: \_\_\_\_\_

**For Removed or Relocated Equipment:**

U of M Equipment Identification Number: \_\_\_\_\_

I.D. Number of Contractor's Recovery Cylinder: \_\_\_\_\_

Refrigerant Type: \_\_\_\_\_

Charge (pounds & ounces): \_\_\_\_\_

Recovered: \_\_\_\_\_ Added by Tech: \_\_\_\_\_

(Removed equipment)

(Relocated equipment)

# Oil & Chemical Storage

## Small Containers

Containers for oil and chemical storage (bottles, jugs, drums, vials, boxes, etc.) must be:

- In good condition (no cracks, leaks, rust, etc.)
- Placed in secondary containment
- Compatible with the chemical
- Labeled with the “Chemical Name” or each constituent in the container
- Kept CLOSED unless actively adding or removing chemicals. Funnels must be removed immediately after use and the container lid must be closed and sealed.
- Incompatible chemicals should be segregated.
- All containers should be protected from the elements.
- All containers should be secured to prevent theft or vandalism.

## Bulk Containers

- The University of Michigan-Dearborn follows the Spill Prevention Control and Countermeasure (SPCC) Plan and Michigan Part 5 Rules — Spillage of Oil and Polluting Materials to control chemical bulk storage. Contractors must follow these regulations.
- Secondary containment is required for all oil and chemical bulk storage containers. The secondary containment system must hold 110% of the largest container or 10% of the total volume of all the containers in the system, whichever is larger.
- Catchment must be in place while unloading and loading from a tanker truck to an above ground or underground storage tank. The catchment must hold the capacity of the largest inner single compartment of the delivery truck.
- All oil containers 55 gallons or greater must be inspected monthly for leaks or spills.

# Storm Water

Never pour anything down drains located outside of a facility. The only materials permitted to enter the storm water drainage system are storm water runoff and potable water (no additives, soap, chemicals, sediment, etc.) from a few very specific sources. Contact EHSEM at 313-593-4914 with any questions regarding discharges into the storm water drainage system.

Protect all storm drains from unauthorized discharges such as construction site wastes which includes concrete washout, sediment, paint, gas, oil, antifreeze, maintenance and cleaning wastes.

## **Report accidental spills or dumping**

Promptly report any suspected spills/illicit discharges into the storm water drainage system to DPS at 313-593-5333 for cleanup.

Spilled materials go directly to the Rouge River. Take appropriate action to stop the spill and attempt to block the drain/s that could be impacted by the spill – use a spill mat, drain plug, berm, absorbent materials, etc. See Section Spills for more information.

# Soil Erosion and Sedimentation Control (SESC)

As an Authorized Public Agency, the University of Michigan (statewide) has established SESC Procedures to prevent off-site soil erosion and sedimentation to Waters of the State, storm drains and adjacent properties.

All construction operations/projects involving earth work are required to use SESC measures and best management practices to prevent sediment from entering the storm water drainage system. For sites larger than 1 acre or within 500 feet of Waters of the State, a site specific SESC Plan must be designed, approved by EHSEM, and retained on-site.

- Evaluate the site to determine the location of nearby storm drains, including those along expected truck routes. If there is potential for sediment to enter storm drains, install inlet protection such as silt sacks or fabric filter. Be sure to protect the backflow opening of curb drains and wrap grates for ease of maintenance.
- Use perimeter barriers such as vegetative filter strips or silt fencing to control sediment from leaving the site. Silt fence must be installed correctly and trenched.
- Place stockpiles away from storm drains. If stockpiles must remain on-site overnight, cover the pile with water repellent material or apply other erosion control methods. Keep as few stockpiles as possible during the course of the project.
- Guard exposed soils and stockpiles against wind erosion by wetting the site during dry, windy conditions.
- Sweep trackout on a daily basis and more frequently as needed. Non-University streets cannot show any signs of trackout. To reduce trackout, install an entrance anti-tracking pad with a minimum of 50 feet in length. A geotextile filter fabric should be placed under 6 inches of limestone aggregate.
- Grade and stabilize the work area with vegetation, mulch, erosion blankets or hardscaping immediately after project completion.
- Remove all temporary SESC measures when site work is complete and vegetation is established.

SESC measures must be maintained daily, weekly and after-storm inspections are performed by EHSEM. Any recommendations identified must be corrected within 5 days, or immediately if Waters of the State are impacted.

For more information on the University's SESC procedures, visit [www.umd.umich.edu/691924/](http://www.umd.umich.edu/691924/) or contact EHSEM at 313-593-4914.

# Concrete Washout

Concrete washout typically has a high pH, can be harmful to the environment, and cannot be disposed of in a storm or sanitary drain. Proper disposal and washout practices should be implemented. Wash concrete trucks in designated areas or offsite.

Designated areas should:

- Be labeled.
- Be a pit to prevent runoff.
- Be approximately 50 ft away from storm drains, bodies of water, and ditches.
- Have some type of liner to prevent seepage.
- Have some type of barrier.

Alternative: Set up a concrete box. If only a small amount of concrete washing is to occur, line a roll-off box.

Once concrete is washed out into the designated area and allowed to harden, it should be broken up and properly disposed on a regular basis. Washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.

For more information, contact EHSEM at 313-593-4914.

# Exterior Cleaning and Power Washing

Contact EHSEM at 313-593-4914 before commencing any outdoor cleaning activities or power washing (including masonry, stone, and brick cleaning). Be aware of the impacts that any dislodged pollutants or cleaning products might have on groundwater and surface waters. Avoid using acids and other toxic cleaners, and whenever possible, use plain water. If this is not possible, use a less toxic cleaner.

## Washing with water

If only water is being used to clean a non-polluted surface ensure:

- All storm drains are blocked
- Filter fabric or silt sacks are installed to filter solids from runoff.
- Fabric or sacks are emptied of collected sediment as needed.

When work is complete, sediment and other solids that remain on the ground should be cleaned up immediately to prevent them from being washed into the storm water system. It is important to limit sediment from entering catch basins because it can clog lines and lead to localized flooding and high maintenance costs.

## Washing with water and detergents or chemical applications

If water is not sufficient for cleaning, all chemical cleaning applications must be reviewed and authorized by EHSEM for proper waste disposal requirements. The Michigan Department of Natural Resources & Environment (DNRE) Waste Management Guidance for Mobile Power Washing outlines potential disposal options. If the wash water does not meet the criteria for these disposal options, then it must be collected and tested to determine if it is a liquid industrial waste or if it is considered a hazardous waste.

On campus there are two options that are recommended for managing wastes generated by outdoor washing/cleaning activities:

1. Collect all wash water into appropriate, chemical compatible containers for proper disposal.
  - Containers must be labeled with appropriate contact information, accumulation start date and the contents of the container, including chemical constituents in the waste. Containers and labels may be acquired from EHSEM at 313-593-4914 with advanced notice.
  - Sample and analyze the waste for constituents of concern and determine proper waste management and disposal. Contact EHSEM at 313-593-4914 to provide sampling, analysis, and subsequent waste management options. Note: Analysis will need to be performed on a representative sample of the waste and may take up to 10 business days.
  - All liquid industrial waste or hazardous waste must be disposed through an EHSEM approved contractor. If the material is a liquid industrial waste or hazardous waste, all manifests must be reviewed and signed by an authorized EHSEM representative. Complete a draft manifest and fax it to EHSEM at 313-436-9161. The manifest will be reviewed and any correction or additional information will be itemized and returned to you for completion of the final manifest. Once the manifest content is approved, contact EHSEM to schedule an authorized staff member to sign the manifest during waste pickup.
2. Obtain approval from the Michigan Department of Natural Resources & Environment (DNRE) to discharge to the ground by "authorization by notification." The authorization letter from DNRE is good for 5 years. For the DNRE application, rules, and technical guidance, visit the DNRE Groundwater Discharge web page. Contact EHSEM to review the environmental requirements for your specific operation. Contractors must obtain approval as a mobile power washer which covers exterior cleaning activities throughout the State of Michigan. Please note that this approval applies only to discharge to the ground. Under this approval, discharge to the sanitary sewer or storm water drainage system is prohibited.

Contact EHSEM at 313-593-4914 for assistance or additional information on these requirements.

## Other Cleaning Alternatives

Instead of washing with water and chemical applications, determine what alternative dry methods are available. Use absorbents such as sawdust or vermiculite, brooms or wire brushes to clean pavement, building and equipment as much as possible. Mechanically remove and collect loose debris.

# Waste Disposal

## Construction/Demolition Debris Disposal

- Items that can be salvaged or recycled at contractor's discretion:
  - Carpet
  - Lumber
  - Steel and scrap metal
  - Porcelain and ceramics
  - Acoustic ceiling tiles
  - Glass
  - Concrete and brick
  - Excess latex paint
- Items covered under contract specification sections. Refer to those sections for specific waste handling, if applicable:
  - Asbestos Containing Materials
  - Lead Materials
  - PCB Waste
  - Fluorescent Light Bulbs and Ballasts (Electrical)
  - Regulated Construction Waste (batteries, smoke detectors, mercury-containing devices, etc.)

Wastes that cannot be salvaged or recycled should be managed as regular construction debris; however, some wastes require special handling.

## Hazardous and Special Waste Disposal

- Materials that may require special handling and/or are characterized as hazardous waste or special industrial waste:
  - Paint and used brushes
  - Thinners and solvents
  - Used oil
  - Antifreeze
  - Rags contaminated with any of these materials
  - Excess latex paint (Note: Solidify for disposal with other construction materials.)
  - Oil based paints
  - Other suspected chemicals may be regulated as a hazardous waste or special industrial waste
- All waste containers must be:
  - In good condition (no cracks, leaks, rust, etc.)
  - Compatible with the waste
  - Labeled with ALL the following:
    - "Hazardous Waste"
    - The RCRA/MI Act 451 Waste Code (chemical name that identifies each constituent in the container)
    - The Accumulation Start Date – the date the first drop of waste was placed in the container.  
(NOTE: The container cannot be kept for more than 90 day.)

Proper management of hazardous chemical, biological, radioactive, and non-classified waste must comply with state and federal regulations and promote environmental stewardship. Contact EHSEM at 313-593-4914 with any questions regarding hazardous waste management, manifesting and disposal. All hazardous waste manifests and disposal options must be approved and coordinated by EHSEM.

# Waste Water

Waste water generated from a project may be managed in several different ways, depending on generation and chemical constituents.

## **Potential waste water streams:**

- Chiller water
- Cleaning solutions
- Flushing solutions
- Exterior building wash water
- Window cleaning wash water
- Latex paint waste water

Refer to the Exterior Cleaning section of this document for guidelines on proper management of wash water from exterior cleaning operations.

Contact EHSEM at 313-593-4914 for a review of waste water disposal issues for your project.

**IMMEDIATELY report accidental spills, dumping, or illicit discharges to a campus storm drain to DPS at 313-593-5333. Storm drains on campus go directly to the Rouge River.**

**Never pour anything down drains located outside. Promptly report any discharges or dumping onto the ground, into sewers, etc. to DPS at 313-593-5333 for cleanup.**

# **Suspect Contaminated Soil, Groundwater, or Unknown Material**

- During work activities, if suspect contaminated soil, groundwater, or other unidentified material is encountered, please contact your UM-Dearborn Construction Project Manager.
  - Suspect contaminated soil may exhibit chemical or unusual odors, staining, unusual coloring, and may contain man-made debris.
  - Suspect groundwater may exhibit chemical or unusual odors, unusual coloring, and/or a sheen.
  
- The UM-Dearborn Construction Project Manager shall immediately contact EHSEM at 313-593-4914.
  
- All excavation, dewatering, transport, or disturbance of the suspect material shall immediately stop, but not before the site is stabilized (i.e., bracing and shoring); contact EHSEM immediately to investigate the situation.
  - If the inspection indicates no special handling or disposal protocols are required, resume work activities upon EHSEM notification.
  - If special handling or disposal protocols are required, EHSEM will notify the UM-Dearborn Construction Project Manager with pertinent instructions.

# Spills

## Report accidental spills or dumping

Immediately report any suspected spills/illicit discharges to DPS at 313-593-5333.

## If a Spill Occurs and it's safe to respond:

- Secure the area with “Caution – Do Not Enter” tape, rope, or warning signs.
- Inform your supervisor as well as others of the spill.
- Block any drains that could be impacted by the spill by using a spill mat, drain plug, berm, or any material on hand, such as plastic garbage bags tucked around the drain or dirt piled around the drain to form a berm.

If assistance is required, contact EHSEM at 313-593-4914 or DPS at 313-593-5333.

If you are comfortable cleaning up the spill, follow your company's emergency spill response procedures.

## When cleaning up a spill:

- Be sure to protect yourself with any necessary personal protective equipment.
- Familiarize yourself with the material safety data sheet for the spilled material.
- Be aware of any potential hazards associated with the cleanup.

When the spilled material has been cleaned up, place any contaminated materials in a sealed container. DO NOT dispose spill debris or contaminated protective equipment into the general trash, down a drain, or into the ground. Never wash spilled materials down a storm drain or sanitary sewer, or allow them to evaporate. If any spilled material enters a storm drain or sanitary sewer, contact DPS at 313-593-5333. The spill and materials used to cleanup any spill must be properly disposed through EHSEM. DO NOT place them in the dumpster.

## Be Prepared

- Keep a copy of your company's emergency response procedures in your work area.
- Post a list of contacts in case of a spill.
- Post an evacuation route.
- List the location of spill response materials.
- Train employees in advance on when and how to properly use spill response materials.
- Assign a person to test cleanup equipment periodically and maintain its inventory.

Rubber mats, temporary drain plugs, or berms should be kept in the area so drains can be blocked immediately. For small spills, use chemical spill pillows or adsorbent materials. Other adsorbents that can be utilized to cleanup a chemical spill are sawdust, vermiculite, oil-dry, or activated charcoal. Avoid the use of cat litter — it is relatively non-absorbent and increases waste volume.

If you have any questions or need assistance, contact EHSEM at 313-593-4914.

If improper dumping or discharge is observed on University property, immediately notify DPS at 313-593-5333.

# Medical Emergencies

**DON'T SECOND GUESS — ALWAYS CALL 911 FROM A CAMPUS PHONE OR 313-593-5333 FROM A CELL PHONE!!**

**If you suspect a head or spinal injury, DO NOT MOVE the victim unless there is an immediate life threatening emergency.**

1. Check the scene for safety, to find out what happened, and to determine how many victims there are.
2. Check the victim for consciousness; if no response, call 911 from a campus phone or 313-593-5333 from a cell phone.
3. Tilt the head, lift chin to open airway.
4. If victim is not breathing, give 2 rescue breaths (Normal breath given over 1 second until chest rises).
5. Check for signs of circulation (normal breathing, coughing, or movement and pulse).
6. If there are signs of circulation, but victim is not breathing, continue giving rescue breaths.
  - a. Re-check for signs of circulation and breathing every minute.
  - b. Continue cycle as long as victim is not breathing or until medical assistance arrives.
  - c. If victim begins breathing, place in recovery position until medical assistance arrives.
7. If there are no signs of circulation:
  - a. Find the center of the chest for adults/child or just below nipple line at center of chest for infant. Place the heel of your hand at that point and place your other hand on top of the first.
  - b. Position your shoulders over your hands.
  - c. Give 30 chest compressions pressing hard and fast. Rate of about 100 per minute.
  - d. Give 2 rescue breaths.
  - e. Continue CPR until the scene becomes unsafe, until you can see or feel signs of circulation, until an AED is ready to use, you are too exhausted to continue, or medical assistance arrives.
8. AED precautions:
  - a. Do not touch the victim while the AED is analyzing or defibrillating.
  - b. Do not use alcohol to wipe the victim's chest dry or use an AED around other flammable materials.
  - c. Do not use an AED in a moving vehicle.
  - d. Do not use an AED on a victim lying on a conductive surface or in water.
  - e. Do not use an AED on a child under age 8 or 55 pounds.
  - f. Do not use an AED on a victim wearing a nitroglycerin patch or other patch on the chest. With a gloved hand, remove any patches from the chest before attaching the device.
  - g. Do not use a cellular phone or radio transmitter within 6 feet of the AED.

## **TO STOP BLEEDING:**

1. Apply pressure directly onto the wound with a sterile gauze, clean handkerchief or bare hand.
2. Maintain a steady pressure for five or ten minutes.
3. If victim is bleeding from an arm or a leg, elevate it.
4. Stay with victim until help arrives.

## **BURNS AND CHEMICAL BURNS:**

1. Remove the victim from the source of the burn only if it is safe for you to do so. If a chemical is involved, wear gloves or other protective gear.
2. Cool the burn by flushing with large amounts of water. Use water close to room temperature. For chemical burns, also remove any contaminated clothing.
3. Loosely cover the burn with a dry, clean or sterile dressing.
4. For electrical burns, make sure the power source is off before making contact with the victim. If victim is unconscious, do not move unless there is an immediate danger. Loosely cover the burns with a dry, clean or sterile dressing.

## **ABDOMINAL THRUSTS FOR CHOKING VICTIM:**

1. Get behind the victim. Wrap your arms around the person's waist, just above their navel.
2. Clasp your hands together in a double fist. **PRESS IN AND UP IN QUICK THRUSTS.**
3. Be careful not to exert pressure against the victim's rib cage.
4. Repeat procedure until choking stops.

# Emergency Notification List

## **Serious Injury:**

Call:

1. DPS at 911 from a campus phone or 313-593-5333;

Then call:

2. UM-Dearborn Construction Project Manager at 313-593-5270

Then call:

3. EHSEM at 313-593-4914

## **Minor Injury Requiring Doctor Visit:**

After assisting, call:

1. DPS 313-593-5333 from a cell phone
2. UM-Dearborn Construction Project Manager at 313-593-5270
3. EHSEM 313-593-4914

## **Buried Utility Strike (Natural Gas, Electrical, Water, Steam, or Fiber Optic)**

Call:

1. DPS at 911 from a campus phone or 313-593-5333 from a cell phone

Then call:

2. UM-Dearborn Construction Project Manager at 313-593-5270

# Pre-Construction Safety Inspection

University of Michigan-Dearborn

Pre-Construction Safety Inspection Form

√**Check When Completed**

**COMMENTS**

## TEXT MATERIALS

- MIOSHA Standards for Construction
- Company Safety Manual / MSDS Manual (inspections)
- Sub-Contractor Safety Program / MSDS's
- Site Specific Safety Plan or Job Safety Analysis (JSA)
- Emergency Action Plan
- Environmental & Spill Plan
- Employee Orientation Procedures
- Employee Rules & Regulations

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## SIGNAGE & ACCESS

- University Project Sign
- Address conspicuously posted?
- Are required barricades, safety barriers, or warning signs in place? (See Part 22)
- Are special walkways and traffic controls required? (See Chapters 32/33 in your BOCA manual or Gen. Conditions)
- Is Caution or Danger flagging or tape available on site?

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## FIRST AID

- Is First Aid Kit available and properly stocked?
- Are all emergency phone numbers posted near each phone with the site address and directions for emergency personnel?
- Clinic Locations & Directions
- Accident Forms

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## POSTERS

- Hazard Communication Poster?
- Is OSHA 300 Form posted?
- Are State employment posters posted?

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## EQUIPMENT

- Fire extinguisher(s) for office, worksite, and storage areas.
- GFCI pigtails available for use where required (permanent power outlets)?
- GFCI available for temporary service?

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**JOB NAME / #** \_\_\_\_\_ **DATE** \_\_\_\_\_

**INSPECTOR** \_\_\_\_\_ **SIGNED** \_\_\_\_\_

# Construction Safety Checklist

University of Michigan-Dearborn

SELF-INSPECTION FORMAT

## Construction Safety Checklist

JOB NAME / # \_\_\_\_\_ DATE \_\_\_\_\_

INSPECTOR \_\_\_\_\_ SIGNED \_\_\_\_\_

	OK	Action Needed		OK	Action Needed
First Aid and Emergency			Ladders and Scaffolding		
First aid kit	_____	_____	Inspected and proper	_____	_____
Certified first aider/CPR	_____	_____	Proper location and tied	_____	_____
Emergency help posted #'s	_____	_____	Guardrails/toe boards/screen	_____	_____
Emergency communication sys	_____	_____	Working levels debris free	_____	_____
Stretcher	_____	_____	Signs posted	_____	_____
<b>Housekeeping and Sanitation</b>			<b>Hoist, Cranes, Derricks</b>		
Work areas/passages clear	_____	_____	Adequate clearances	_____	_____
Toilets adequate/clean/gender	_____	_____	Load capacity & trained emp.	_____	_____
Drinking water/cups/garbage	_____	_____	Clearances from electric	_____	_____
Scheduled dumpster removal	_____	_____	Swing radius 360°	_____	_____
<b>Fire Prevention &amp; Protection</b>			<b>Excavation &amp; Shoring</b>		
Fire code posted	_____	_____	Shoring, box for depth/soil	_____	_____
Adequate fire extinguishers	_____	_____	Traffic control	_____	_____
Standpipes required level	_____	_____	Spoil bank & equip away	_____	_____
Flammable storage marked	_____	_____	Ladders 3' above each 25'	_____	_____
No open fires	_____	_____	Water pumped/inspected	_____	_____
Gas cylinders; use & storage	_____	_____	Competent person on site	_____	_____
<b>Personal Protect Equipment</b>			<b>Material Handling &amp; Storage</b>		
Hard hats worn/sign posted	_____	_____	Pre-job storage plan	_____	_____
Eye and ear protection used	_____	_____	Stacks secure/neat/protected	_____	_____
Dust masks/respirators used	_____	_____	4 to 1 base to height stack	_____	_____
Safety harnesses/lanyards	_____	_____	Away from edge/walkways	_____	_____
<b>Electrical Installation</b>			<b>Tools, Hand &amp; Power</b>		
Electrical dangers posted	_____	_____	Proper tool for each task	_____	_____
Temporary lighting adequate	_____	_____	Inspection & maintenance	_____	_____
GFI or assured grounding	_____	_____	Training: laser, power act	_____	_____
Outlets secured	_____	_____	Guarding in place	_____	_____
Lockout/tagout	_____	_____	Electrical ground test	_____	_____
<b>Public Protection</b>			<b>Barricades &amp; Rails</b>		
Signs posted	_____	_____	Secure and clearly separate	_____	_____
Flagging	_____	_____	Floor opening protected	_____	_____
Permits	_____	_____	Stairway railings/steps	_____	_____
Overhead protection	_____	_____	Open sided floors protected	_____	_____
<b>Required Posters: Fed &amp; State</b>			<b>OSHA</b>		
EEO	_____	_____	MIOSHA Jobsite Inspection form	_____	_____
Min Wage/Overtime/Child	_____	_____	MIOSHA HAZCOM	_____	_____
Fed. Financed/Fed contract	_____	_____	MIOSHA Assured Grounding	_____	_____
Polygraph	_____	_____	MSDS	_____	_____
Work Comp/Wage-age-days	_____	_____	Safety Policy	_____	_____
Unemployment Insurance	_____	_____	MIOSHA 300	_____	_____
Fed. Med. Leave Act	_____	_____			

# Jobsite Inspection Form

University of Michigan-Dearborn

SELF-INSPECTION FORMAT

CLIENT NAME \_\_\_\_\_ DATE \_\_\_\_\_

SUPERINTENDENT \_\_\_\_\_ JOBSITE \_\_\_\_\_

<b>Standard</b>	<b>Description</b>	<b>Corrective Measure</b>

Subcontractor #1		
<b>Standard</b>	<b>Description</b>	<b>Corrective Measure</b>

Subcontractor #2		
<b>Standard</b>	<b>Description</b>	<b>Corrective Measure</b>

Subcontractor #3		
<b>Standard</b>	<b>Description</b>	<b>Corrective Measure</b>

Subcontractor #4		
<b>Standard</b>	<b>Description</b>	<b>Corrective Measure</b>

## Competent Person List

Subcontractor	Company Safety Policy	MSDS Book	HAZCOM Training	First Aid & CPR Training	OSHA Comp Person	Jobsite Inspection Sheets	Weekly Tool Box Meetings	Job Safety Analysis	Lift Training
Safety Director: OSHA Competent Person First Aid & CPR	Name: _____				Phone #: _____				
	Name: _____				Phone #: _____				
	Name: _____								
Safety Director: OSHA Competent Person First Aid & CPR	Name: _____				Phone #: _____				
	Name: _____				Phone #: _____				
	Name: _____								
Safety Director: OSHA Competent Person First Aid & CPR	Name: _____				Phone #: _____				
	Name: _____				Phone #: _____				
	Name: _____								
Safety Director: OSHA Competent Person First Aid & CPR	Name: _____				Phone #: _____				
	Name: _____				Phone #: _____				
	Name: _____								
Safety Director: OSHA Competent Person First Aid & CPR	Name: _____				Phone #: _____				
	Name: _____				Phone #: _____				
	Name: _____								

# Hot Work

- A hot work permit must be obtained from your Supervisor for campus projects or DPS at 313-593-5333 prior to the start of any hot work such as welding, brazing, soldering, cutting, use of an open flame or grinding for each day.
- Before starting work involving cutting, welding, or any similar spark generation activity, review and complete the Hot Work Permit.
- Additional ventilation may be required to prevent fume build-up.
- Combustible and flammable materials within a 35 feet radius must be removed from the area or covered with fire retardant blanket before performing any hot work.
- The hot work permit must be posted in the immediate area where hot work is being performed.
- A serviceable, ABC dry chemical portable fire extinguisher is required at any hot work operation in the immediate work area.
- All fire extinguishers must be inspected on a monthly basis and prior to beginning any hot work operation. The extinguisher should have an inspection tag on it.
- Welding screens must be used during welding and grinding operations.
- Hot work is NOT permitted:
  - Within 50 feet of explosives, compressed gas cylinders, flammable or combustible liquids
  - Unless authorized by a supervisor through the permit system
  - In a potentially explosive atmosphere
- Fire watch is a person in the hot work area who monitors the work area for the beginnings of potential, unwanted fires.
- The fire watch may be assigned to other work duties while in the hot work area, as long as they remain in the hot work area in low hazard areas.
- The fire watch will be maintained during hot work breaks, lunch and for 60 minutes following completion of work.
- A dedicated fire watch, with no additional duties, is needed during the following types of hot work:
  - In a sprinklered building while the sprinkler system is impaired
  - When there are large amounts of combustible materials present, even if located more than 35 feet from the hot work area, but close enough to be ignited by a spark
  - Anytime there is a high risk for a fire to start
- Notify DPS at 313-593-5333 when Hot Work is completed.
- Smoke and Fire Detectors/Alarms: Shut-offs and restarts are approved and coordinated through the departments listed below.

<b>Contacts</b>	<b>Phone Number</b>
Facilities Management	313-593-5270
EHSEM	313-593-4914

- All incidents of non-compliance with the UM-Dearborn hot work policy will be reported to EHSEM.
- The University requires that all contractors strictly adhere to this procedure on all work, at all times, and be particularly watchful and diligent in the execution of their hot work activities.

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# Fall Protection

## Fall Protection Selection Chart

TYPES OF WORKING SITUATIONS	PROTECTION NEEDED
Leading edges	a, b, c, or l
Hoist Areas	a or c
Holes	a, c, or d
Formwork and Reinforced Steel	a, b, or c
Ramps, Runways, and Other Walkways	a
Excavations	a or f
Edge of a Well, Pit, or Shaft	a, f, or d
Dangerous Equipment (used within 6 feet below walking/working surfaces)	a or g
Dangerous Equipment (used > 6 feet below walking/working surfaces)	a, b, or c
Overhand Bricklaying and Related Work	a, b, c, or h
Overhand Bricklaying and Related Work (reaching > 10 in. below surface)	a, b, or c
Roofing Work on Low-slope Roofs	a, b, c, j, or i
Steep Roof Work	b, c, or k
Precast Concrete Erection	a, b, c, or l
Residential Construction	a, b, c, or l
Wall Openings	a, b, or c
Walking/working Surfaces Not Otherwise Addressed	a, b, or c

- |                                 |                              |                                  |
|---------------------------------|------------------------------|----------------------------------|
| a. Guardrail systems            | f. Fences or Barricades      | k. Guardrail systems w/toeboards |
| b. Safety net systems           | g. Equipment guards          | l. Fall protection plan xxx      |
| c. Personal fall arrest systems | h. Control access zones x    |                                  |
| d. Hole covers                  | i. Warning line xx           |                                  |
| e. Positioning device systems   | j. Safety monitoring systems |                                  |

“x” in addition to the control access zone system of fall protection, the safety monitoring system must also be used to protect those working inside the Controlled Access Zone (CAZ).

“xx” this system can only be used when accompanied by one of the other protection systems listed for the type of work.

“xxx” this system can only be used when the other systems are proved to be infeasible or create a greater hazard.

# Jobsite Safety Rules

## General

- Actively participate in all safety meetings, inspections, and other forums to promote safety.
- Participate in safety and specific task training programs relevant to your work.
- Understand the supervisor's instructions. If you do not know how to do the job safely, ask your supervisor.
- Know the location of the Hazard Communication Program (HCP). It should be made available to employees on the job site. The purpose of this program is to inform you of the hazards of the chemicals you work with in order to reduce chemical source injuries and illness. If you have a question about any chemical you work with see your supervisor.
- Do not use or be under the influence of intoxicating beverages or illegal drugs while on the job. Prescription drugs which may cause drowsiness must be reported to your supervisor.
- Do not engage in horseplay or practical jokes on the job before, during and after work hours. Fighting on the job is grounds for dismissal.
- Do not run on the job.
- Be alert and keep out from under overhead loads.
- Do not operate any machines or equipment unless all guards and safety devices are in place and in proper operating condition.
- Keep all tools in safe working condition. Never use defective tools or equipment. Report all defective equipment to your foreman.
- Keep machinery properly oiled, cleaned, adjusted, refueled and operated only by authorized operators. Shut off, disconnect power, and lock out equipment under repair.
- Do not ride any boom, forklift or material handling equipment.
- Lift correctly, using your legs to take the strain. Turn by placing the proper foot into direction of the turn (do not twist with the back). Lock your lower back curve, tighten stomach muscles before you lift. Stretch your muscles before lifting.

## Incident Reporting

- Report unsafe conditions and "near misses" to your supervisor.
- Immediately report all injuries to your supervisor.
- Fill out and sign an Accident/Incident Report Form for any work-related accident, regardless of injury.
- Notify a supervisor, general superintendent, or project manager when seeking medical attention concerning a work related injury or illness after work hours.
- Notify your supervisor if you are injured away from the job as it may affect your job performance or worsen the injury.

(Continued)

## **Personal Protective Equipment**

- Wear hard hats and safety glasses on all designated jobsites at all times. Chemical splash goggles must be on hard hats ready for use and ear plugs must be with you ready for use. Personal protection equipment must be on the job each work day.
- Use safety glasses, goggles or face shields during operations involving concrete breaking, metal chipping/cutting, welding, powder-actuated tools, grinding, or dusty conditions; use eye and ear protection for operations involving powder-actuated tools, saw cuts with metal, and with all other high noise level operations.
- Wear appropriate work clothes; long sleeves, gloves, construction grade boots. Loose clothing or jewelry (especially rings) should not be worn.
- Properly care for, and be responsible for all personal and company protective equipment. Replace lost or damaged equipment.

## **Material Storage and Housekeeping**

- Store and securely transport gasoline in proper safety containers with flame arrestor in place. Engines must be shut off when refueling. No smoking anywhere near flammable liquids.
- Secure all compressed gas cylinders (Propane, Oxygen, Acetylene, etc.) in an upright position. When not in use, caps must be in place. Oxygen and Acetylene shall not be stored together.
- Practice good housekeeping on jobsites. Excess material shall be properly stacked and stored in a secure place. Protruding nails, wire, etc., shall be bent over, cut or pulled. Debris shall not be allowed to accumulate in aisles and will be frequently removed.
- Cover all electrical cable, welding cables or torch hoses that run across aisles and through work areas with a protective ramp, or run overhead, wherever practical.

## **Scaffolds/Ladders/Platforms**

- Use scaffold units instead of ladders, when feasible. Ladders shall be used only in the open and locked position. The last step prior to the top will never be used. Place ladders on a substantial base and do not use ladders with broken, split or missing rungs or rails.
- Ensure that all access ladders extend at least three feet above the landing platform and are securely fastened. Proper ladder placement is: 1/4 base/height.
- Use of elevated work platforms is restricted only to the contractors who erected them. Only companies with written approval from the erecting contractor may use scaffolding erected by that contractor.
- Do not jump off any ladder, scaffold or other height. While ascending any ladder the three point contact rule (2 hands - 1 foot; 2 feet - 1 hand) must be used. Use a rope to lift tools.

# Accident Investigation Form

University of Michigan-Dearborn

ACCIDENT REPORTING PROCEDURES

## REPORT OF ACCIDENT-PERSONAL INJURY/To Be Completed By Contractor

(Please Print)

JOB NAME	JOB NO.	PERSONAL INJURY <input type="checkbox"/> Employee <input type="checkbox"/> Other Than Employee
SUPERINTENDENT AND FOREMAN		JOB PHONE
<b>WHO WAS INJURED?</b>	Name _____ Date of Birth _____ Occupation _____	
	Address of Injured _____ Phone # _____ Street City Zip Code	
	Marital Status _____ Children Under 18 _____ Social Security # _____	
<b>TIME AND PLACE</b>	Date of Accident _____ Hour _____ <input type="checkbox"/> AM <input type="checkbox"/> PM Location _____	
	Name of Doctor or Hospital _____ Address _____	
<b>INJURED EMPLOYED BY</b>		
<b>IF INJURED IS AN EMPLOYEE</b>	Did injured leave work? <input type="checkbox"/> Yes <input type="checkbox"/> No	
	If yes, time _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	
	Did injured return to work? <input type="checkbox"/> Yes <input type="checkbox"/> No	
	If yes, time _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	
	(If injured person did NOT return to work the same day, please notify Project Manager when injured person DOES return.)	
	Witness, if any _____	
	Occupation when injured _____	
	Was injured acting in regular in of work? _____	
	Who administered first aid, if any? _____	
<b>DESCRIBE INJURY</b>		
	(If accident is fatal or involves serious injury, notify the UM-Dearborn Project Manager)	
<b>WHAT HAPPENED?</b>		
<b>WERE PHOTOS TAKEN?</b>		

Date: \_\_\_\_\_

Foreman's Signature \_\_\_\_\_ Printed Name \_\_\_\_\_

Superintendent's Signature \_\_\_\_\_ Printed Name \_\_\_\_\_

This form must be completed in full and sent to the UM-Dearborn Construction Project Manager with 24 hours of injury and must be signed by the Foreman and Superintendent.