



PHYSICAL PLANT SERVICES

FERRIS STATE UNIVERSITY

Physical Plant
Safety Manual
June 2005

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Environmental Health And Safety Policy

(Supersedes 1989:04)

I. POLICY

It is the responsibility and intent of Ferris State University to protect the health and safety of students, faculty, staff and visitors while engaged in the educational and business activities of the University. To this end the University will provide the necessary services and controls to promote, create and maintain a safe and healthful campus environment and operations. The purpose of this policy statement is to establish the University's commitment to campus environmental health and safety.

II. PROCEDURES

The Environmental Health and Safety Office has been established to provide a comprehensive program of services and activities to protect faculty, staff, students, and campus visitors from avoidable and unnecessary risks of illness, injury or death. The responsibilities of the Environmental Health and Safety Office shall include the following:

1. Perform regular inspections of campus facilities to identify hazards and potential hazards and determine compliance with OSHA and fire regulations. Recommendations of corrective actions shall be submitted to appropriate offices.
2. Provide a program of safety training for employees to comply with OSHA regulations and to promote safe and healthful operating procedures.
3. Investigate employee job-related injuries and illnesses and recommend necessary action to reduce the possibility of recurrence.
4. Review proposals for new construction and major remodeling to insure compliance with OSHA and fire safety regulations.
5. Provide technical expertise and knowledge of regulatory compliance techniques for the guidance of management in the formulation of policy and decisions regarding the maintenance of a safe and healthful campus environment and operations, and to insure compliance with health and safety laws and regulations.
6. Operate a hazardous waste management system and provide necessary control measures to insure compliance with hazardous waste laws and regulations.
7. Develop for adoption all necessary safety rules and procedures to implement the University's compliance with OSHA regulations.

In order for the Environmental Health and Safety Office to fulfill its responsibilities contained in this policy and any other efforts to create and maintain a healthful and safe campus environment, the cooperation of all members of the University community is requested.

Richard Duffett, Vice President
Administration and Finance
Contact: Environmental Health & Safety Office

Introduction

This manual is provided to the Physical Plant employees of Ferris State University. It is intended to serve as an overview of the safety programs and procedures in place at Ferris State University. This manual does not replace any written programs. This manual, all written safety programs and procedures along with the various training programs incorporates Ferris State University's commitment to safety.

Employee Responsibilities

1. Report any unsafe conditions, practices or equipment to your supervisor.
2. Abide by all FSU safety policies.
3. Attend required safety training.
4. Inform your supervisor if you are taking any medication that may jeopardize your safety.
5. Attend physicals as required.
6. Immediately report all injuries, no matter the severity, to your supervisor.
7. Use and maintain all assigned personal protective equipment (PPE).

Supervisor Responsibilities

1. Enforce all FSU safety policies.
2. Insure that employees receive the proper training and required physicals needed to safely perform their job.
3. Verify compliance to safety policies and individual practices.
4. Allow adequate time for employees to attend safety training.
5. Promote safety to the best of your ability.
6. Work diligently with the Safety Coordinator, Environmental Engineer and Risk Manager to ensure safety for all employees.
7. Ensure that the proper personal protective equipment (PPE) is available for employees.

Question:

True or False: Only employers are responsible for workplace safety?

Answer: False, safety is everyone's responsibility.

Work Related Injuries and Emergencies

- Inform your supervisor of all work related injuries or illnesses immediately.
- You and your supervisor will complete an incident report within 24 hours to document and correct the situation that caused the incident.
- The completed incident reports are then turned in to the Physical Plant Front Office, faxed to HRD, and processed through Physical Plant administrative procedures for signatures with the original then sent to FSU – Big Rapids, Human Resources, 420 Oak Street, PRK 150, Big Rapids, MI 49307-2020, (231)591-2978 fax.
- All non-life threatening injuries are treated at Birkam Health Center, 1019 Campus Drive, Phone 591-2614.
- Contact Birkam Health Center at 591-2614 to verify hours of operation.

- When the Birkam Health Center is closed **and** immediate care is needed, the Mecosta County General Hospital – Occupational Wellness Clinic is used.
- Please contact Human Resources at (231)591-2150, at the time of injury, when the Birkam Health Center is **not** used.
- Contact 911 for any life threatening injuries for medical transport to Mecosta County General Hospital. State clearly the nature of the injury, where the ambulance is needed, and remain on the phone until instructed to hang-up.

Hazard Communication/Right-To-Know

Hazard Communication Standard, Part 92 Safety

Hazard Communication Standard, Part 430 Health

1. Employees have the to Right-To-Know what hazards they may face on the job.
2. FSU relies on Material Safety Data Sheets (MSDS) for hazard determination.

Material Safety Data Sheets

- i. MSDS's are the basic hazard communication tool.
 - ii. FSU is required to have a MSDS for every hazardous chemical received.
 - iii. MSDS's give specific details on the chemical characteristics and properties as well as safe handling precautions.
 - iv. A central database of MSDS's is maintained by the Safety Coordinator.
 - v. Read and follow the MSDS before using the chemical.
 - vi. When ordering new chemicals retain a copy of the MSDS in the respective department and send a copy to Human Resources (HR) - Safety Coordinator.
 - vii. When submitting new MSDS's to HR indicate where the product is used.
 - viii. See <http://msdsfind.ferris.edu/msdsfind/> to access FSU-MSDS's.
3. Every chemical container must have a label on it.

Labels

- a. The label must identify the chemical and its hazards.
- b. Whenever possible, the labeling format to be used is the National Fire Protection Agency (NFPA) triangle. The NFPA triangle utilizes a color coding and numbering system that reflect the following:

Colors Indicate the Type of Hazard Associated with the Product

Red:	Fire Hazard
Yellow:	Re-Activity
White:	Special Warning
Blue:	Health

Numbers Indicate the Degree of Hazard Associated with the Product

- 0: Minimal Hazard
- 1: Slight Hazard
- 2: Moderate Hazard
- 3: Serious Hazard
- 4: Severe Hazard

FSU – Electronic Material Safety Data Sheet (MSDS) Database

The purpose of this database is to allow all members of the University Community access to MSDS's at any time. The only requirement necessary to access this database is web access. Contact Human Resources at extension 2150 for assistance (8am to 5pm, M-F).

Step 1 – Finding the database:

- Type www.ferris.edu into the address bar on your browser
- Open the “Quick Links” box at the bottom of the page
- Select “MSDS Finder” from the list

Step 2 – Downloading MSDS “Imagewave Viewer” (first time set-up only):

- Click on “Install Viewer” button (upper left corner of screen)
- Follow prompts and **open** the viewer installation tool

Step 3 – Finding MSDS’s:

- Type the name of the product into the “product” or “chemical” name area
- Click the “Search” button

Step 4 – Viewing MSDS’s

- Successful searches will produce a list of MSDS’s available for viewing
- Click on the MSDS # to view the MSDS.

The screenshot shows the ImageWave Intranet Module interface. At the top, the address bar contains <http://msdsfind.ferris.edu/msdsfind/>. The main content area has a search form with fields for "MSDS#", "Manufacturer", "Product Name" (containing "wd40"), and "Chemical Name". There are buttons for "Search", "Clear All", "Select All", and "Help File". Below the form is a table of search results.

MSDS #	Manufacturer	Product Name	Chemical Name
AUT0106	Kendall Refining Co.	Kendall Superb 100 10W40	- Automotive
AUT0156	Sun Co., Inc.	Kendall Super D 3 15W40	- Automotive
AUT0159	Kendall Refining Co.	Kendall SUP 3Star 80W140	- Automotive
AUT0352	CITGO Petroleum Corp.	CITGO C-500 Plus Motor Oil, SAE 15W-40	- Construction
AUT0356	STP Corp.	STP Motor Oils - 10W30, 10W40, 20W50, HD40	- Automotive
GSB369	Quaker State	Quaker State FCI Universal HDX Engine Oil SAE 15W-40	Mixture -
HEC0127	CITGO Petroleum Corp.	CITGO C-500 Plus Motor Oil, SAE 15W-40	- Heavy Equip
Test104	WD-40 Co.	WD-40 Bulk	Organic Mixture Victor F. Spe
UNK103	WD40 Company	Lubricating Oil, General Purpose	NA -
Test100	WD-40 Company	WD-40	Organic Mixture Grounds Sw

Question:

The MSDS gives you everything you need to work _____ with chemicals.

Answer:
Safely

General Safety

1. Read and abide by all signs and labels.
2. Smoke in designated areas only. See the Smoking Policy located at: <http://www.ferris.edu/htmls/administration/buspolletter/Bpl0411.pdf>
3. Utilize required personal protective equipment.
4. Do not remove or alter any safety guard, unless proper lockout procedures are followed.
5. Do not wear loose, baggy clothing or dangling jewelry around reciprocating equipment.
6. Maintain good housekeeping skills.
7. Store flammables in flammable storage cabinets and containers.
8. Be aware of the location of emergency and life safety equipment.
9. Only use items for their intended purposes.
10. Avoid horseplay.

Chemical Safety

1. Always read and follow the MSDS prior to handling the chemical.
2. Only trained and licensed employees may apply pesticides and herbicides with the exception of applying general use ready-to-use, non-licensing required pesticide and related products.
3. Never smell or taste a chemical as a means of identification.
4. Store chemicals in accordance with the MSDS. Ensure that the container is properly sealed.
5. Never combine chemicals unless you have been properly trained to do so.
6. Notify the Environmental Engineer if a chemical spill occurs.
7. Notify the Environmental Engineer for proper disposal of chemicals
8. Chemicals should be used in well ventilated areas.
9. Primary routes of entry into the body:
 - a. Inhalation
 - b. Injection
 - c. Absorption
 - d. Ingestion
10. Wear the appropriate Personal Protective Equipment (PPE) – see MSDS.
11. Practice good personal hygiene (i.e. frequent hand washing)

Helpful Tip:

Chemicals are part of our everyday lives. Medicines, cleaning products, plastics, degreasers, lubricants are some examples. These chemicals have made modern life easier in one way. Although, these chemicals help us, they must be treated with respect. Improper use and/or handling may cause injuries and illnesses.

Question:

Do you know the difference between ACUTE and CHRONIC effects?

Answer:

Acute effect happens quickly and is sever (i.e. drinking poison)

Chronic effect happens from a long time exposure (i.e. Smoking cigarettes)

Asbestos

Asbestos Standard, Part 305 Health

1. Asbestos is a fibrous material that was used in the past mainly for insulation and as a fire retardant.
2. FSU does have asbestos in various buildings. Some examples would be ceiling tile, floor tile and pipe insulation.
3. Asbestos becomes hazardous when it is disturbed and becomes airborne (i.e. friable).
4. Only employees that have received asbestos training are allowed to do work involving the removal of asbestos.
5. Appropriate PPE must be worn when handling asbestos, especially respirators.
6. Notify your supervisor in the event of a suspected asbestos spill.

Respirators

Respiratory Protection Standard, Part 451 Health

1. Respiratory protection is required to be worn in atmospheres where harmful substances are present.
2. Engineering controls shall be reviewed and tried to eliminate and/or reduce harmful substances to safe levels prior to requiring respiratory protection.
3. Employees must be trained and pass a medical examination prior to wearing a respirator.
4. Several types of respirators will be made available at no cost to the employee.
5. Negative pressure, air-purifying respirators are the most common type of respirator worn at FSU. These respirators can not be worn in oxygen deficient atmospheres.
6. Employees are responsible for the care and maintenance of their respirators.
7. Employees must notify their supervisor if they incur any problems with their respiratory protection.
8. Facial hair that will interfere with the seal of a tight-fitting respirator is not allowed.
9. Employees shall change filters and cartridges as often as necessary.
10. Employees shall always conduct positive and negative pressure fit tests prior to each use of the respirator to verify the correct fit.

Reference FSU's written Respirator Protection Program.

Question:

An oxygen deficient atmosphere (<19.5%) is considered to be IDLH. What does IDLH stand for?

Answer:

I=Immediately D=Dangerous to L=Life and H=Health

Fire Safety

1. Activate the fire alarm system (red pull system) if you discover a fire.
2. Call 911.
3. Do not use elevators as a means of escape during a fire.
4. If your clothing catches fire; stop, drop and roll.
5. To escape a smoke filled building, crawl on the floor breathing through a wet rag if possible. Remember: smoke rises.

6. Utilize:
 - a. **R**: Rescue and relocate anyone in immediate danger
 - b. **A**: Alert others by activating alarms and calling 911
 - c. **C**: Confine by closing the doors
 - d. **E**: Extinguish/evacuate
7. During a fire, never open a door without feeling for heat.
8. Follow proper hot work procedures.
9. Be aware of fire evacuation routes and locations of extinguishers.
10. Do not use frayed electrical cords.
11. Do not accumulate excess trash inside a building. Practice good housekeeping.
12. Do not prop doors open. If possible, close the doors during an evacuation.
13. Do not block access to fire and life safety equipment or emergency exits.
14. Smoke in designated areas only. See Smoking Policy located at:
<http://www.ferris.edu/htmls/administration/buspolletter/Bpl0411.pdf>
15. Store flammables in approved cabinets and containers.
16. Rags that contain oils or solvents shall be stored in approved metal cans with lids.
17. Never use matches to check for leaks in pipes, etc.
18. Never place devices on doors that may hinder escape from a building
19. *Flammable* and *combustible* liquids are categorized by their ease of ignition.
Flammables are more easily ignited than *combustibles*.
 Examples of *Flammables* (Flash Point of <100 F)
 Acetone, Gasoline, Lacquer Thinner
 Examples of *Combustibles* (Flash Point of >100 F)
 Kerosene, Stoddard Solvent, Fuel Oil
20. Only use extension cords for temporary, quick jobs.
21. The use of candles and incense is prohibited throughout campus.
22. Portable electric heaters are allowed only in approved areas.

Question:

Do you know what the term flash point means?

Do you know the flash point of gasoline?

Answer:

Flash Point is the lowest temperature at which a product emits enough vapors that it could ignite if an ignition source is introduced.

The Flash Point of gasoline is -45 F. It is an extremely flammable substance.

Fire Extinguishers

Portable Fire Extinguishers Standard, Part 8 Safety

1. Fire extinguishers are labeled as to the kind of fire they will be effective against.
2. Fire extinguishers are meant for use in small fires (i.e. trash can size).



Class "A" fires- Wood, Paper, Trash having glowing embers, cloth, rubber, etc.



Class "B" fires- Flammable liquids, Gasoline, Oil, Paints, Grease, etc.



Class "C" fires- Class "A" or "B" fires which also involves energized equipment.



Class "D" fires- Combustible metals.



Class "K" fires- Kitchen fires involving cooking oils, fat & grease.

The PASS Method – How most fire extinguishers work

- PULL – pull the pin or release other locking devices.
- AIM – aim the extinguisher nozzle at the base of the fire.
- SQUEEZE – squeeze or press the handle.
- SWEEP – sweep from side to side at the base of the fire while discharging the contents of the extinguisher



Equipment Care and Tool Use

1. Inspect all tools and equipment prior to using them.
2. Do not use equipment that is in need of repair. Report it to your supervisor.
3. Never adjust or repair equipment without conducting proper Lock out Tag Out procedures (LOTO).
4. All pinch points must be properly guarded. Never bypass safety devices unless proper LOTO procedures are implemented. Always replace guards before restarting the equipment.
5. Power take-off (PTO) shafts on equipment must be guarded. The equipment must be shut off prior to any repairs or adjustments.
6. Only use equipment for its' intended purposes. Select the right tool for the job.
7. Do not use chisels with mushroom heads. Keep all tools sharp and lubricated.
8. Electrical tools must be grounded or double insulated.
9. Always push knives away from the body.
10. Sharp-edge tools shall be stored in such a manner to prevent injuries.
11. Tools shall be cleaned and stored away properly.
12. Use Ground Fault Circuit Interrupters (GFCI) when appropriate for worker protection outdoors or in wet environments.

Floor and Wall Openings

Floor and Wall Openings, Stairways, and Skylights, Part 2 Safety

1. Report missing and/or damaged handrails from stairways.
2. Stairways having four or more risers shall be equipped with handrails.
3. Platforms or mezzanines more than 4 feet above the adjacent floor must be properly guarded with standard barriers and toe boards.
4. Use detour guards to direct employees away from potential hazards associated with openings.

Question:

When referencing the use of a fire extinguisher, what does PASS stand for?

Answer:

P=Pull the Pin A=Aim extinguisher at the base of the fire S=Squeeze the trigger S=Sweep the fire extinguisher from side to side

Bloodborne Pathogens

Bloodborne Infectious Disease Standard, Part 554 Health

1. Bloodborne pathogens are viruses or bacteria present in human blood and other body fluids that can infect and cause disease in humans.
2. If you get injured, try to help yourself as much as possible. This limits possible exposure to others.
3. If helping an injured person, always utilize Universal Precautions. *Universal Precautions* is a means of infection control that treats all human blood and Other Potentially Infectious Material (OPIM) as potentially infectious.

4. Protect yourself first. Use latex gloves and other personal protective equipment deemed necessary to protect yourself.
5. Syringes used for personal medical conditions must be taken home with the employee using them to be properly disposed of. Do not put syringes or other sharp objects in FSU's trash.
6. If clothing or medical supplies are contaminated with blood or OPIM, contact your supervisor for proper disposal. This material is a Biohazard Waste that must be disposed of in accordance with federal and state laws.
7. If an exposure to blood or OPIM occurs, contact a trained custodial staff member to properly clean up the exposure.
8. All exposure incidents must be reported immediately to your supervisor and an accident report is completed.
9. Report to the Birkam Health Center for evaluation. Everything is kept confidential.
10. FSU employees, through exposure determination, are placed into either category A or B:
Category A: Likely to come into contact with blood or OPIM.
Category B: Not likely to come into contact with blood or OPIM
11. Human Immunodeficiency Virus (HIV), Hepatitis A, B, C, D are some examples of viruses that can result due to exposure to bloodborne pathogens.

Reference FSU's written Bloodborne Pathogen Program.

Question:

Hepatitis B (HBV) is hardy and easier to contract than you might realize. Do you know how many days the HBV can survive outside the body in the form of dried blood?

Answer:

Up to 7 days.

**Source SmithKline Beecham, EBO880, 2/96*

First Aid/Work Related Injuries/Workers Compensation

1. See HRPP 04:01 for additional information.
<http://www.ferris.edu/htmls/administration/adminandfinance/Human/HRPPs/FSU-HRPP0401WorkersCompensation.pdf>
2. First aid kits are available for use in the Physical Plant.
3. If you get injured as a result of work, contact your supervisor immediately to report the incident.
4. Fill out an Incident Report with your supervisor, no matter the severity of the injury.
5. The completed incident reports are then turned in to the Physical Plant Front Office, faxed to HRD, and processed through Physical Plant administrative procedures for signatures with the original then sent to FSU – Big Rapids, Human Resources, 420 Oak Street, PRK 150, Big Rapids, MI 49307-2020, (231)591-2978 fax. Send Incident reports to the Human Resources Department within 24 hours of the incident.
6. Employees with non-emergency, work related injuries will be sent to the Birkam Health Center.
7. For a medical emergency, call 911 for an ambulance. (Life threatening conditions, uncontrolled bleeding, breathing, severe injury, loss of consciousness, chest pain, etc.)
8. Workers compensation questions can be directed to the Human Resources Department.
9. Some work related injuries may involve light duty assignments in the home department.
10. If the home department cannot accommodate the restrictions, immediately contact the Human Resources Department for alternative assignment.

11. Injured employees are required to report to the FSU Health Center for treatment of all non-life-threatening injuries.
12. Send all medical slips to the Human Resources Department and your Supervisor.

Back Safety

1. Plan your path of travel.
2. If a load is too heavy or large for one person to safely lift, obtain help.
3. Use mechanical means if possible.
4. Have a good grip on the object being lifted.
5. Get as close to the object as possible, while maintaining balance.
6. Lift with your legs and arm muscles, not your back.
7. Always keep your back straight.
8. Always lift gradually and smoothly without twisting and jerking.
9. Always have a clear view over the load you are carrying.
10. Put the object down, using the same concepts.
11. Remember, exercise is an important element to maintaining a healthy back.

Question:

What is the first thing you do prior to helping an injured person?

Do you know what the three natural curves in your back are called?

Answer:

Protect Yourself! (i.e. latex gloves)

Cervical (neck area) Thoracic (middle area) Lumbar (lower area)

Hearing Conservation

Occupational Noise Exposure Standard, Part 380 Health

1. Employees exposed to noise levels over 85 decibels must be part of FSU's hearing conservation program. Employees in the program generally work in the Boiler Plant and the Grounds Department.
2. Baseline audiograms are given upon initial assignment to employees working in these departments. Audiograms are a medical evaluation of the employee's hearing. Annual audiograms are also given to the employee.
3. Employees exposed to noise levels of 90 decibels or higher, must wear hearing protection.
4. FSU provides hearing protectors at no charge to the employee.
5. Hearing loss and/or damage is incurable.

Reference FSU's written Hearing Conservation Program.

Emergency Coordinators

1. All buildings on campus, including the Physical Plant have an emergency coordinator. The Environmental Engineer is the emergency coordinator for the Physical Plant.
2. Employees must cooperate with all tornado and fire drills.

3. Reference the FSU Emergency & Safety Procedures Guide for additional information.
4. During an evacuation, the initial meeting point for the Physical Plant employees is outside on the lawn in front of the Heavy Equipment building.
5. Reference the posted floor diagram(s) for suggested tornado shelters in the Physical Plant.

Question:

Ringling in the ears is a symptom of hearing _____.

Answer:

Loss

ForkLift Certification

Powered Industrial Trucks, Part 21 Safety

1. Only employees permitted by FSU are allowed to drive a forklift.
2. Certification is two-tier. There is a classroom training portion and a driving portion for the certification. Certification is obtained from the Safety Coordinator.
3. Forklift licenses are issued in three categories:
 - (A) Industrial Forklift
 - (B) Extended Reach Construction Equipment
 - (C) Grounds Equipment with forks
4. Employees driving a forklift must have their FSU issued license on them or accessible at all times.
5. Drivers must always yield to pedestrians and obey all posted signs.
6. Drivers must not let anyone stand or walk under the elevated part of the forklift.
7. Drivers must always keep a clear view of where they are going, driving in reverse if necessary
8. Only the driver is allowed on the forklift - no passengers.
9. Drivers must be aware of all their surroundings.
10. Do not smoke on or near a forklift.
11. Do not drive a forklift if it is not operating properly. Report it immediately.
12. Drivers must be aware of the rated load capacity.
13. Utilize caution if working around forklifts . Be aware of the “rear-end swings.”
14. Drivers must sound the horn to warn pedestrians of their presence. This is particularly important at corners, intersections and aisle ways.
15. Michigan Driver’s License restrictions apply to FSU Forklift Operator’s Permits.

Question:

An employer shall not make any modification to the forklift affecting capacity or safety without written approval from the _____.

Answer:

Manufacturer

AERIAL LIFTS (Scissors lifts & Boom lifts)

Vehicle Mounted Elevating and Rotating Work Platforms, Part 58 Safety

1. Personal Protection Equipment
 - Safety harness and lanyard.
 - Any other equipment as required.
2. Equipment
 - Never tamper with or attempt to repair the vehicle.
 - Motor Pool will perform maintenance on aerial lifts.
 - Report known hazards concerning an aerial lift to your supervisor.
3. Passengers
 - Only employees with valid aerial work platform training are authorized to ride on an aerial work platform.
 - Never exceed the rated loading capacity for the work platform.
4. Parking
 - Park and shut down the machines according to the manufacturer's operating manual.
5. Platform Positions
 - Platform shall not be raised or lowered while moving. Minor adjustments may be made for alignment purposes.
 - Major positioning of the platform shall be done with the truck stopped, to increase the stability of the platform.
 - The boom will be carried as low to the floor as possible but high enough to clear obstacles.
 - Never allow anyone to walk under an elevated platform.

Aerial Lift Pre-Operation Procedures

1. A visual and functional inspection of the machine must be done at the beginning of each work shift and use. The inspection must include but is not limited to the following:
 - a) Check decals and markings for legibility and placement on machine.
 - b) Check for leaks of hydraulic oil and battery water.
 - c) Check tire and wheel condition.
 - d) Check for problems with the machines structural areas (scissors arms, outriggers, boom, etc.).
 - e) Check the condition of the guardrail system including the platform deck extension.
 - f) Check hydraulic hoses and electrical wiring.
 - g) Check for any loose or missing parts.
 - h) Make sure the operator's manual is located on the unit.
 - i) Make sure the work platform is clean and uncluttered.
 - j) Test the ground control functions.
 - k) Test the platform control functions.
 - l) Test the operation of the manual decent valve and emergency power system.
 - m) Check safety devices (emergency stop switches, etc.).
2. The operator must conduct a workplace inspection which includes but is not limited to the following:
 - a) Check for open machinery, pits, holes, drop-offs, etc.
 - b) Check for floor obstructions, unlevelled surfaces, grade of slopes.

- c) Check for floor debris.
 - d) Check for overhead obstructions, high voltage conductors.
 - e) Check for inadequate surface or possible improper support of equipment.
 - f) Check for hazardous locations.
 - g) Check wind and weather conditions; do not use lift in winds over 30 MPH.
 - h) Check any other unsafe conditions.
3. Motor Pool or a qualified outside service will conduct an annual inspection of each aerial work platform for cracks and deformations using 1 1/2 times the rated load capacity.
4. **Do not operate a malfunctioning unit.**

Aerial Lift Operating Procedures

Do Not's

- Do Not** exceed the platform loading capacity.
- Do Not** raise the platform on unlevelled floors and unlevelled terrain.
- Do Not** drive machine into an unlevelled area when the platform is elevated.
- Do Not** exceed the machines gradability rating (see operating manual).
- Do Not** stand, reach or sit on or over the platform railings.
- Do Not** enhance the reach of the unit by using ladders, scaffolding, planks, etc.
- Do Not** tie off equipment or personnel to another object.
- Do Not** use the unit as a crane or material handling device.
- Do Not** attempt to mount or dismount the equipment while it is in motion.
- Do Not** use the platform as an electrical ground for arc welding.
- Do Not** transport any gas cylinders on the platform of an aerial lift.
- Do Not** position and operate aerial work platforms when they are on a truck, trailer, scaffolding, or similar equipment.
- Do Not** use guard rails to support any other work platforms, personnel or materials.
- Do Not** engage in horseplay or stunt driving.

Do's

- Do** place objects on the platform so they can not fall off.
- Do** place heavy objects with the weight as low to the floor of the platform as possible.
- Do** wear a safety harness and lanyard.
- Do** evenly distribute the load on the platform.
- Do** limit your traveling speed according to the surrounding conditions.
- Do** enter and exit the platform safely.
- Do** use the unit on a hard, flat surface only when the platform is elevated.
- Do** maintain a clear path of travel.
- Do** maintain a safe distance from hazards and overhead obstructions.
- Do** maintain a firm footing on the platform floor.
- Do** look around the base of the unit before moving it.
- Do** check the clearance before lowering the platform.
- Do** maintain the following distances from electrical lines:
 - 0-50KV = keep 10 feet away
 - 50KV and over = keep 10 feet away plus 4 inches per KV over 50KV
 - ex. 51KV = keep 10 feet 4 inches away
 - 52KV = keep 10 feet 8 inches away

Table 1
Minimum Clearance Distances for Equipment

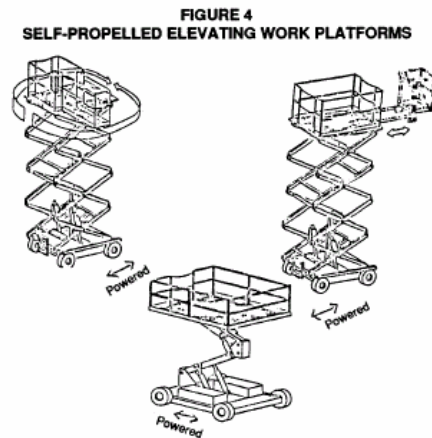
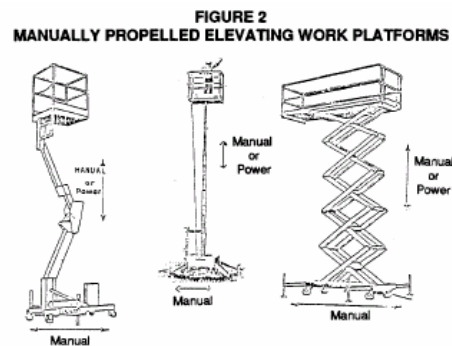
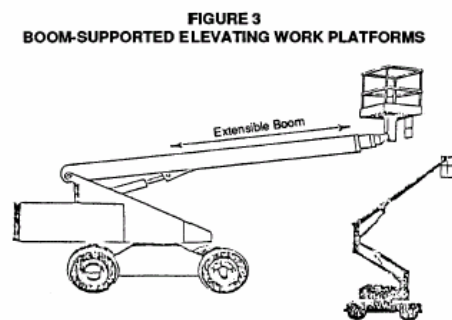
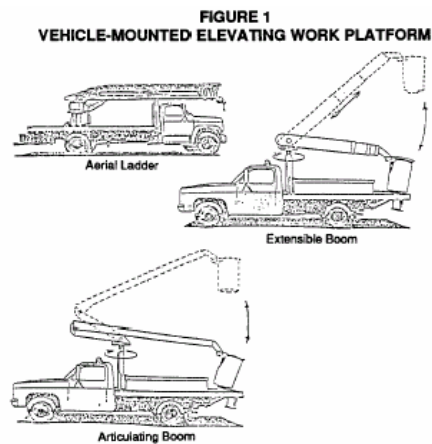
Voltage	Clearance With Boom Raised	Clearance Boom Lowered and No Load in Transit
To 50 kV	10 feet	4 feet
Over 50 kV	10 feet + .4 inch per each 1 kV over 50 kV	10 feet
50 to 345 kV		10 feet
346 to 750 kV		15 feet

Do limit travel speed according to the following factors:

- A. Slope
- B. Area congestion
- C. Floor surface congestion
- D. Location of personnel

Aerial Lift Special Procedures

1. Except in the case of an emergency do not operate ground controls unless permission has been obtained from the personnel in the platform.
2. Stop operating the unit if it becomes damaged, malfunctions, or a potentially hazardous condition is encountered.
3. Do not climb down from an elevated platform if the platform becomes non-operational (platform is stuck, auxiliary power or manual decent valve is not working). Seek help from a qualified person on the ground.



Lock-Out/Tag-Out (LOTO)

*The Control of Hazardous Energy Sources Standard, Part 85 Safety
Electrical Safety Related Work Practices, Part 40 Safety*

1. LOTO is best defined as blocking the flow of energy from a power source to a piece of equipment to help prevent accidental start up.
2. LOTO is required whenever repairs or non-routine tasks need to be completed on a machine or piece of equipment.
3. Energy to be locked out can be electrical, mechanical, hydraulic or pneumatic, etc.
4. Employees must always consider the possibility of stored/residual energy. Machines must be at a zero energy state. (Always verify before conducting the repairs.)
5. Employees conducting LOTO must be trained to proper LOTO procedures. Trained employees are considered *authorized*. Employees working in the area where the LOTO is being conducted are considered *affected*. Affected employees need to be aware of the importance of LOTO.
6. *Group Lockout*: Each authorized employee working on a machine or piece of equipment must attach their lock, utilizing a hasp.
7. Locking devices and tags to be used for LOTO are available to trained FSU employee's at no cost.
8. Locks must be used for lock out. Tags are used as a means of identification of the person conducting LOTO. Tags alone are not acceptable as a means of locking out a power source.
9. Communication is essential between shifts, trades and contractors in regards to the repairs being made to the equipment that is locked out.
10. Authorized employees conducting LOTO shall have the only key to their lock. (The locksmith shop does have a master key. Reference 13.)
11. Locks used for LOTO must only be used for LOTO purposes.
12. Locks used for LOTO must also be standardized according to color, throughout FSU.
13. *Emergency Lock Removal*: A supervisor and/or locksmith, authorized by a supervisor, may remove an employee's lock in case of an emergency. The supervisor authorizing the emergency removal is responsible for maintaining safety during the removal.

Question:

True or False. Once you have locked out all energy sources you should verify its isolation by trying to turn the equipment on.

Answer:

True, for your safety verify isolation.

Confined Space (CS)

*Confined Space Entry Standard, Part 90 Safety
Permit-Required Confined Space Standard, Part 490 Health*

1. A CS has limited or restricted means of entry or exit, is large enough for an employee to enter and perform assigned work and is not designed for continuous occupancy by the employee.
2. Examples of CS are (but not limited to) manholes, tanks, pits and tunnels.

3. Four levels of employee training is required for confined space entry.
 - a. *Attendant*: Monitors the authorized entrants from outside the confined space.
 - b. *Authorized Entrant*: Employee authorized to enter the confined space.
 - c. *Entry Supervisor*: Responsible for determining if the conditions are acceptable for entry as well as terminating if necessary.
 - d. *Rescue Team*: Trained to respond to confined space emergencies.
4. There are two different classifications of confined spaces:
 - a. *Permit-Required Confined Space* - has one of the following dangers (these man-holes are painted red throughout campus):
 1. The potential to contain a hazardous atmosphere.
 2. The potential for engulfing an entrant.
 3. The internal configuration is an entrapment hazard.
 4. Any other recognized hazard.
 - b. *Non-Permit Required Confined Space*: does not have the potential to contain a hazard atmosphere.
5. The Environmental Engineer is responsible for classifying the confined space at FSU.
6. Atmospheric testing is required for entry into confined spaces. Monitors for testing the atmosphere may be obtained through the Environmental Engineer. Air monitors measure oxygen, flammables and toxics. Always test all the possible stratospheres within the atmosphere.
7. The *South and East utility tunnel* at FSU are classified as *non-permit confined spaces (notification only)* as long as the following three requirements are met:
 - a. The main exhaust fan is on.
 - b. The entrant has a radio to contact station 20 and 30. Radio notification to station 20 (Physical Plant) during normal operating hours or station 30 (DPS) after hours, is required prior and after entry.
 - c. The entrant carries a four gas monitor.
8. Acceptable atmospheric conditions for entry are as follows:
 - Oxygen: 19.5%-23.5%
 - Flammable: Less than 10% LEL
 - Toxics: Less than PEL
9. Some of the common toxics that are monitored are:
 - Carbon Monoxide and Hydrogen Sulfide

Reference FSU's written Confined Space Program

Question:

Carbon Monoxide is generated as a result of _____ combustion.

Answer:

Fossil Fuel

Portable Ladder Safety

Portable Ladders Standard, Part 4 Safety

1. Always inspect a ladder before each use. Use only ladders in good repair and equipped with safety shoes.
2. Report defects to your supervisor.
3. Place ladders on a solid, flat surface.

4. Do not paint wooden ladders. This conceals defects.
5. Do not over-reach. Always move the ladder.
6. Always face the ladder when climbing or descending and hold onto each rung.
7. Watch for overhead power lines, etc.
8. Do not make repairs to ladders unless you have been approved by the Safety Coordinator.
9. Ladders shall not be used in a horizontal position as a plank, skid, etc.
10. Always keep the rungs clean.
11. Avoid aluminum ladders when working near electricity. Remember, wood and fiberglasses are non-conductive.
12. Maintain a 3-point contact while climbing a ladder.
13. Never stand on the top 2 steps of a step ladder (this includes the top platform).
14. Make sure the spreader bar is sturdy and locked in place with step ladders.
15. Never stand on the top 4 rungs of an extension ladder.
16. Make sure the extension locks are locked on extension ladders.
17. Extension ladders should reach at least three feet above the landing.
18. Remember the 4:1 ratio. Divide the number of rungs from the support point to the ground by 4 to determine how many feet out from the support to place the ladder.

Story Problem:

The number of rungs on an extension ladder, from the ground to the support port is 12, how many feet out from support should the ladder be set?

Answer:

3, Remember, the rule is 4:1

Question:

What does 3 point contact mean?

Answer:

Two hands and one foot maintaining, solid contact on the ladder or object climbing onto.

Scaffold Safety

Scaffolding Standard, Part 5 Safety

1. A scaffold should not be loaded to more than the designed working load.
2. Tools, materials and debris should not accumulate in a quantity to cause a hazard.
3. Scaffolding endangered by moving equipment or vehicles shall be protected by a warning device or barrier.
4. Scaffolding shall not be altered or moved horizontally while it is used or is being occupied unless the scaffolding is specifically designed for that purpose.
5. Employees shall not be permitted to work on scaffolding outdoors during a storm or high winds or when covered with ice or snow, except for emergency situations. Special safety precautions will be taken during these emergencies such as (but not limited to) safety lanyards.
6. Watch for overhead obstructions, power lines, etc. A minimum clearance of 10 feet must be maintained between the scaffolding and power lines.
7. Scaffolding shall be equipped with guardrails and toe boards. If these guards are not applicable, then a safety harness must be worn. Use outriggers when needed for stability.
8. Planks shall be scaffold grade and capable of supporting the intended load.
9. Guardrails and toe boards are required on any scaffold over 15 feet.

10. Scaffolding shall not be moved until its height is reduced to 15 feet.
11. Prior to using the Genie Man lift, see your supervisor for training information.

Question:

True or False: It is acceptable to use a physical object such as a pail or ladder on a scaffolding to increase your working height.

Answer:

False

Hot Work

Welding and Cutting, Part 12 Safety

1. Hot work is the use of tools that generate flames or sparks.
2. Examples of hot work: welding, cutting, brazing, soldering, grinding.
3. Acetylene and oxygen tanks shall be securely fastened to a dolly or stand to prevent their falling or being knocked over.
4. Keep combustible materials, especially hot oils, away from oxygen tanks.
5. Conduct hot work in designated areas if possible.
6. Utilize a hot work permit when conducting hot work outside of the designated area(s).
7. Ensure proper ventilation is available when conducting hot work.
8. When conducting hot work in confined spaces follow FSU's written confined space program.
9. Always wear the appropriate PPE while conducting confined space operations.
10. Always have a fire extinguisher readily available for use.
11. Combustible materials shall be removed from within a 35 foot radius.
12. Have the appropriate fire watch available when required.
13. Only trained personnel may perform hot work.
14. Employees must notify the appropriate personnel (supervisor, station 20 or station 30) prior to each hot work activity.
15. Use proper ignition equipment to light torches. Do not use matches or a lighter. *Do not carry butane lighters when performing hot work*
16. Do a fire watch when appropriate.

Reference FSU's written Hot Work Program.

Cylinder Storage

Welding and Cutting, Part 12 Safety

1. Oxygen cylinders must never be stored near highly combustible material such as (but not limited to) acetylene, oil and grease.
2. There must be a minimum distance of 20 feet separating oxygen and fuel gases or have a ½ hour fire rated wall separating them.
3. Always keep cylinders in the upright position.
4. Valve caps must be in place when not in use.
5. Cylinders must be secured to a cart or with a restraining device such as a chain to prevent from accidentally falling over.
6. Cylinders must be labeled.
7. Store cylinders in well ventilated areas away from stairways.

8. Always clear the valves of dust and dirt prior to connecting to a regulator by slightly opening the valve for a brief second, when closing.

Question:

It is important that oxygen and acetylene tanks are secured from falling over because they are highly_____.

Answer:

Pressurized

Housekeeping

1. Good housekeeping helps to prevent accidents and injuries.
2. Housekeeping is an essential part of everyone's job.
3. Do not obstruct stairways, aisles, entrances or exits.
4. Dispose of flammable and combustible materials in approved containers.
5. Keep your work area, including University vehicles, clean and orderly. Report conditions beyond your control to the respective supervisor.
6. If you spill something clean it up immediately and/or report it to the appropriate personnel.
7. Use "Caution, Wet Floor" signs when applicable.
8. Store tools, material and equipment in an orderly and secure manner.
9. Dispose of materials properly. Do not leave trash or unnecessary materials in mechanical rooms, on roofs, etc.

Chemical Disposal

1. Do not dump or pour chemicals down any drains including sinks, toilets, floor drains, into trashcans, etc.
2. Contact the Environmental Engineer for proper disposal of chemicals.
3. Clean up any minor spills that occur or contact the Environmental Engineer.
4. Limit samples received from vendors. Disposal of chemicals is expensive!
5. Do not store chemicals outside.
6. Pesticide containers are to be triple rinsed, punctured and disposed of in accordance with MDA requirements.
7. Use sealed and labeled containers for disposal.
8. Contact the Environmental Engineer to obtain drums to store chemical wastes in.
9. The most cost effective way to dispose of a chemical is to use it for its intended purpose.

Question:

Which governing agencies place rules on FSU with regards to chemical disposal?

You can help prevent slips, trips and falls by maintaining good _____.

Answer:

City of Big Rapids

MDEQ: Michigan Department of Environmental Quality

EPA: Environmental Protection Agency

Housekeeping

Electrical Safety

*Electrical Safety Related Work Practices, Part 40 Safety
The Control of Hazardous Energy Sources, Part 85 Safety*

1. Qualified Personnel: Personnel trained in avoiding the electrical hazards of working on or near exposed energized parts.
2. Only qualified employees are authorized to work on electrical circuitry.
3. Qualified employees shall utilize proper procedures prior to de-energizing and re-energizing of electrical circuitry.
4. Circuit-protection devices (CPD) are electrical components that protect against electrical damage and/or fire (i.e. fuses and circuit breakers).
5. Do not allow contact with water while working on or near electricity.
6. Employees must utilize the appropriate PPE while working on or near electricity.
7. Inspect electrical cords on a regular basis.
8. Do not use electrical cords or power tools with external damage such as (but not limited to) missing or deformed pins, damage to the insulation.
9. Use electrical cords for their intended purpose only.
10. All electrical tools and equipment should be properly grounded or double insulated.
11. Avoid using metal ladders and other equipment made of conductive material.
12. Do not block access to electrical equipment (i.e. circuit panels, switches, transformers, etc.). A minimum of a 3 foot clearance must be maintained in front of electrical equipment to allow for adequate space to conduct work.

Reference FSU's written Lock Out Tag Out Program

Question:

What circuit-protection device provides a predetermined safety path for stray electrical currents?

Answer:

Grounding

A lightning rod is a form of grounding. It attracts dangerous electrical energy and conducts it harmlessly to the grounds.

Helpful Tip:

The human body contains a large percentage of water and water is an excellent conductor of electricity.

Barricades

1. Appropriate barricades shall be used to ensure the safety of others when hazardous conditions are created by the work being performed. Some good examples are: tape, gates, fences, signage, etc.
2. If barricades and proper signage are not sufficient, an attendant shall be stationed in the area to caution employees/pedestrians.

Trenching and Excavation

Excavation, Trenching and Shoring, Part 9 Construction Safety

1. Follow Miss Dig procedures to locate underground utilities prior to the work.
2. The Miss Dig log book is located at the front desk at the Physical Plant.
3. Excavated material shall be kept at a minimum of 2 feet from the trench opening.
4. If an excavation is 4 feet or more in depth, confined space procedures must be followed. In addition a means of egress must be within every 25 feet.
5. Excavation under foundations requires a specially designed support.
6. Barricade the excavation area to protect pedestrians. If the excavation is left over night, barrier tape, snow fence or traffic barricades shall be utilized.
7. Excavation more than 5 feet in depth must be sloped according to the soil type or utilize a trench shield.
8. Excavations deeper than 48 inches are considered a confined space.

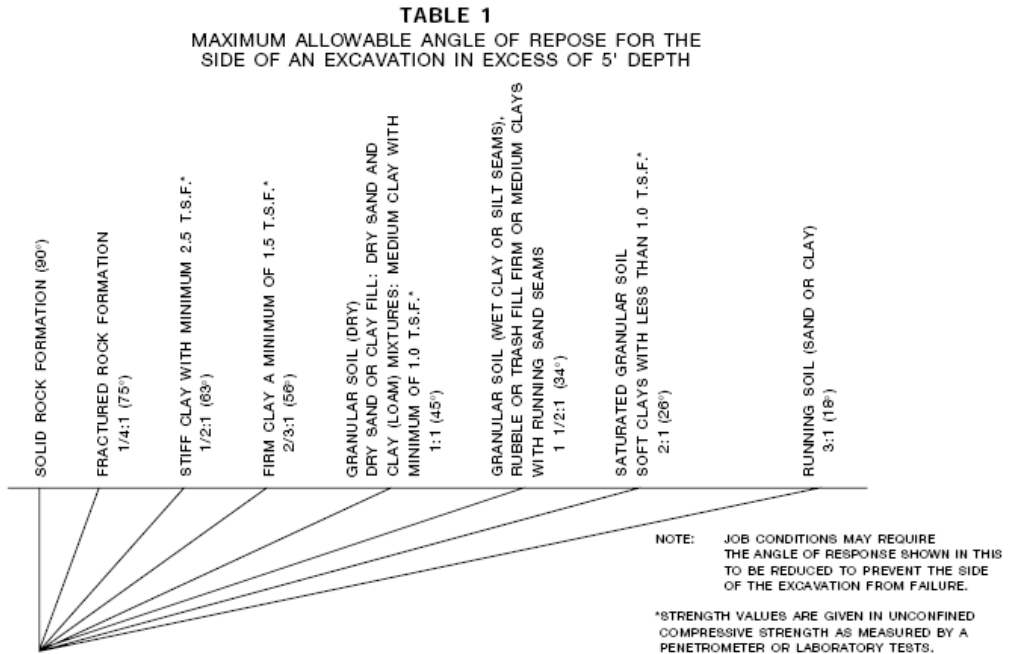
Reference FSU's written Excavation Clearance Policy

Question:

The "less firm" the soil type the _____ the vertical slope must be for safe excavation.

Answer:

Greater. See the chart above. Note: soft clay is 2 on 1 whereas firm clay is 2/3 on 1.



Severe Weather

1. A tornado warning indicates that a tornado has been sighted in the area.
2. A tornado warning is indicated through sirens within the community. When the siren alarms, shelter should immediately be taken.
3. The designated shelter area within the Physical Plant is the main hallway between the administrative offices and trade shops. If working in other campus facilities, please refer to the evacuation plans located within each building.
4. Specific attention should be given to the evacuation maps posted within other buildings frequently visited throughout campus. If you are unaware of the designated shelter area within a building, take shelter in low level floors such as basements and interior hallways. If time does not permit, take shelter under objects such as desks and tables. Avoid large rooms with high ceilings and glass.
5. There are generally 3 minutes after the warning is issued before a tornado hits.
6. Monthly severe weather siren tests are done on the first Saturday of the month at 1:00 pm.
7. There is a siren on the Boiler Plant and the Business building.

Tornado Procedure

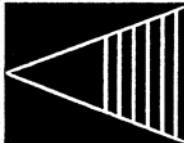


Ferris State University Tornado Safety Procedures



Tornado Watch

- Means tornadoes are expected to develop
- Notice of a tornado watch is announced on radio and TV and disseminated by a telephone fan-out system on campus.
- Stay alert for a possible **tornado warning**.



Tornado Warning

- Means a **tornado has been sighted** in the area.
- The alarm for a tornado warning is sounded from a siren located on top of the Business Building.



Take Shelter

- **Take shelter immediately** when tornado warning is given.
- **Stay away from windows.**
- Take shelter in a small windowless space. Closets, windowless bathrooms, storage rooms, and similarly protected areas provide the best shelter.
- Avoid large or high-ceilinged rooms, such as lecture halls, auditoriums and gymnasiums.
- In open country, move away from the tornado at a right angle to its path. If this is not possible, lie flat, face down, in the nearest depression or ditch.
- **Don't stay in a vehicle.**



After the Storm

- After the tornado or violent storm, avoid going outdoors until the area has been cleared of all hazards, such as downed power lines.
- **Stay alert** for the possibility of more tornadoes, violent storms often produce more than one tornado.
- The all-clear signal is a short steady sound on the siren.

University Vehicle Safety

1. Always follow State of Michigan driving laws.
2. Smoking is prohibited in all state owned vehicles. See Smoking Policy located at <http://www.ferris.edu/htmls/administration/buspolletter/Bpl0411.pdf>
3. Always wear a seatbelt.
4. Avoid tailgating and report all accidents or damages to the vehicle to your supervisor.
5. Maintain good housekeeping within the vehicle.
6. Notify the garage for any maintenance issues.
7. Do not park in unauthorized areas such as handicapped spaces or fire lanes.
8. Yield to pedestrians.
9. Secure your load and close the truck tailgate if appropriate. Do not allow employees to sit or stand on a load as a means of securing the load.
10. Place a red flag on a load that extends 4 feet or more beyond the vehicle.
11. Riders shall not be permitted to sit on the bed of trucks, on open tailgates or plows.
12. Use of cellular telephones while driving is considered to be an unsafe practice – pull over when possible.

Reference FSU's Physical Plant Vehicle Policy

Question:

What is the local AM radio station you should listen to for severe weather updates?

Answer:
1460

At Home Safety

1. At home safety cannot be emphasized enough. The same safety guidelines and regulations should be observed at home as they are on the job.
2. Maintain smoke detectors.
3. Know where gas and electrical mains are.
4. Store flammables in approved cans.
5. Maintain good housekeeping, not allowing combustibles such as oily rags to openly accumulate.
6. Label fuses and circuit breakers.
7. Do not over-load circuits or use frayed/damaged electrical cords.
8. Only use safe ladders and step stools. Do not stand on items that weren't intended for that purpose such as chairs, buckets, etc.
9. Prepare and practice family escape and shelter plans for fire and severe weather.
10. Keep emergency ladders on second stories for safe escape.
11. Store chemicals such as gas, cleaning agents, lubricants, oils, etc. in safe areas away from children and food.
12. Have the proper fire extinguishers throughout the home, garage, barns, etc.
13. Keep tools properly guarded.
14. Never conduct repair on equipment without de-energizing it.

15. Do not leave a vehicle, including tractors and ATV's running inside without opening doors and windows. Carbon Monoxide is an asphyxiant.
16. Leave emergency phone numbers posted near all phones.
17. ALWAYS watch children when near equipment, tools and chemicals.
18. Avoid placing chemicals in household containers, such as pop bottles.
19. Utilize PPE when handling chemicals.
20. Do not mix chemicals.
21. Remember, chemicals are just as dangerous at home. Just because you can purchase chemicals for at home use does not mean it is not hazardous.
22. The free guide "Family Preparedness Guide" from the Michigan State Police can be obtained via the web at:
http://www.michigan.gov/documents/familypreparedness_color_62898_7.pdf

Question:

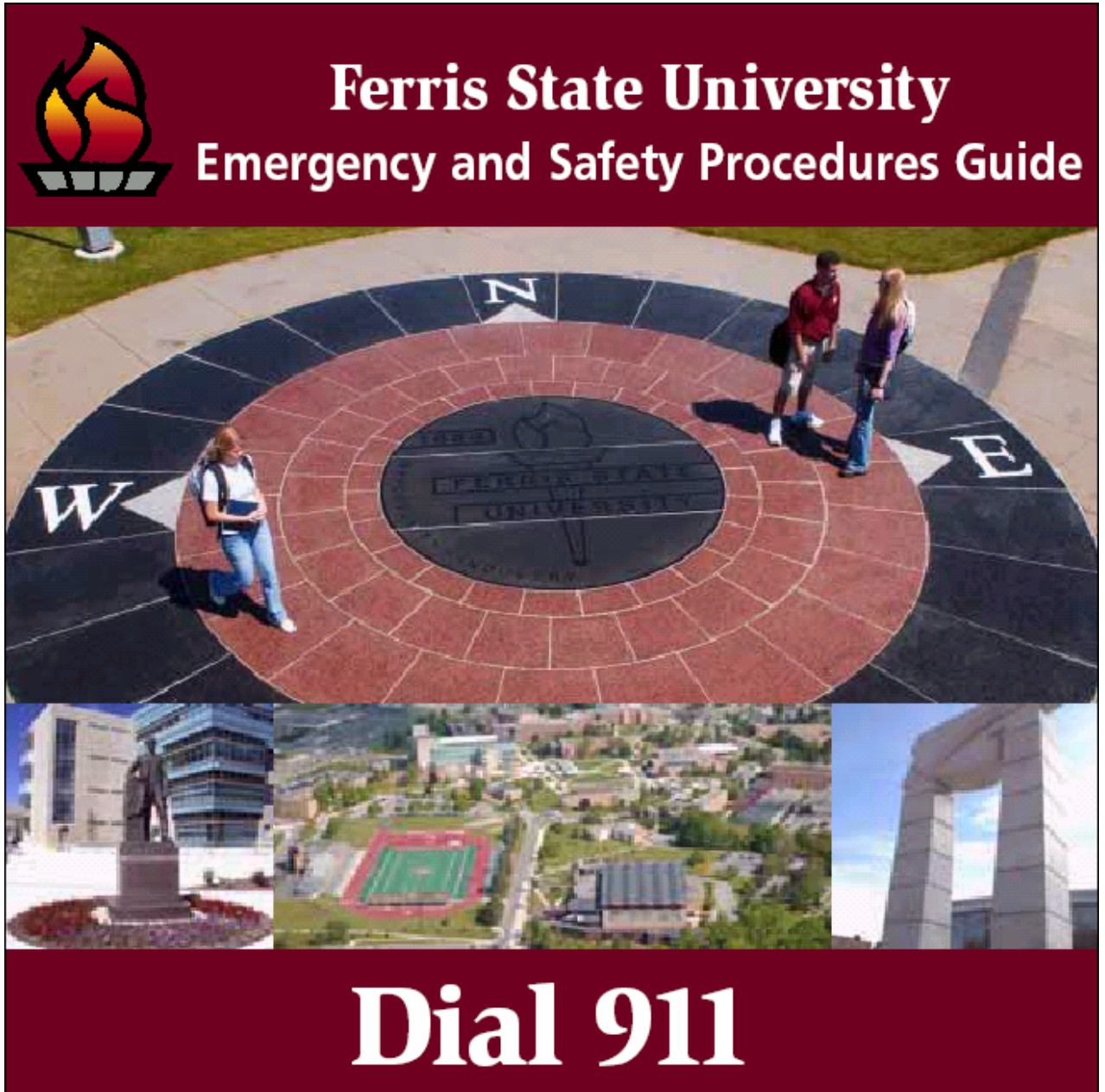
Natural gas and propane are two common home heating products. Which product's vapors are heavier than air?

Answer:

Propane, this means if you have a propane leak, the vapors will be low to the ground/floor surface!!! Natural gas vapors are lighter than air, its vapors will rise.

Campus-Wide Emergency Procedures

See the FSU Emergency and Safety Procedures Guide for additional FSU emergency information.



The image is a cover for the Ferris State University Emergency and Safety Procedures Guide. It features a dark red background. In the top left corner is the Ferris State University logo, a stylized flame in a bowl. To the right of the logo, the text "Ferris State University" is written in a large, white, serif font, and "Emergency and Safety Procedures Guide" is written below it in a smaller, white, sans-serif font. Below the text is a large, circular photograph of a compass rose on a paved area. The compass rose has a central circular plaque with the Ferris State University logo and the text "FERRIS STATE UNIVERSITY". The cardinal directions are marked with white letters: "N" at the top, "E" on the right, "S" at the bottom, and "W" on the left. Three people are standing on the compass rose. Below the compass rose are three smaller photographs: a statue of a man in front of a building, an aerial view of a campus with a green field, and a close-up of a stone archway. At the bottom of the cover, the text "Dial 911" is written in a large, white, serif font.

Ferris State University

Emergency and Safety Procedures Guide

Dial 911

Emergency Action Guide



EMERGENCY NUMBERS

Fire, Police, Ambulance 911
 FSU Department of Public Safety (DPS) 591-5000
 FSU Physical Plant 591-2920
 Mecosta County General Hospital 796-8691
 FSU Health Center 591-2614
 Emergency Radio Frequency FM 100.9 or AM 1460
 Building Emergency Coordinator:
 Name: _____ Extension: _____
 Building Emergency Coordinator Alternate:
 Name: _____ Extension: _____

FIRE/EXPLOSION

Before there is an emergency, become familiar with the nearest exits and evacuation routes in your area.

If a fire or an explosion occurs:

- ◆ Pull the nearest fire alarm.
- ◆ Use the nearest fire extinguisher, if the fire is small and it is safe to do so.
- ◆ Evacuate the area immediately, if the fire is out of hand.

If a fire alarm is activated:

- ◆ Follow established evacuation procedures & proceed to the nearest exit.

EVACUATION

- ◆ Feel closed doors before opening – if door is hot, do not open.
- ◆ Close (do not lock!) doors & windows behind you.
- ◆ Do not use elevators. Use stairwells – stay to the right and use handrails.
- ◆ Stay calm. Walk. Avoid running pushing or crowding others.
- ◆ Assist those people who are disabled.
- ◆ If you are trapped in a room, place a wet cloth around and under the closed door to prevent smoke from entering.

If time permits,

- ◆ Secure important documents and turn off electrical devices.
- ◆ Take appropriate weather apparel, car keys, purses, etc. with you.



SEVERE WEATHER

Tornado Watch: Conditions are favorable for tornado development. Stay tuned to FM 100.9/ AM 1460, or TV channel 9/10 or 13.

Tornado Warning: A tornado has been spotted in the area.

- ◆ Stay calm and remain inside.
- ◆ Go to your designated shelter/safe area:

Building _____ Room _____

- ◆ If you cannot make it to the shelter, take cover under your desk.
- ◆ Wait for your Building Emergency Coordinator to dismiss you.

Winter Storm Watch: Stay tuned to FM 100.9/ AM 1460, or TV channel 9/10 or 13.

INJURIES & ACCIDENTS

- ◆ Stop all activity around the person to prevent further injury.
- ◆ Assess the situation. If the injury appears serious, call 911.
- ◆ Do not move the victim unless he/she is in immediate danger.
- ◆ Do not attempt to treat the injury unless you are medically trained to do so. Protect yourself against bloodborne pathogens.
- ◆ Complete the applicable Employee or Student Incident Report form.

CPR

Call 911

Check the victim for unresponsiveness. If there is no response, call 911, and then return to the person.



Tilt head, lift chin. Check breathing.

Position the person flat on their back. Kneel by their side and place one hand on the forehead and the other under the chin. Tilt the head back and lift the chin until teeth almost touch. Look and listen for breathing.

Give two breaths.

If not breathing normally, pinch the nose, and cover the mouth with yours. Give two full breaths. The person's chest will rise if you are giving enough air.

Check pulse.

Put your fingertips on the Adam's apple, sliding them into the groove next to the windpipe. Feel for a pulse. If you can not feel a pulse or are unsure, move on to the next step.

Position hands.

Position your hands two fingers above the breastbone. Place one hand on top of the other.

Pump 15 times.

Push down firmly two inches. Push on chest 15 times.

Repeat Steps 3 - 6 until emergency team or another trained person relieves you.

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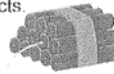
WORKPLACE VIOLENCE/BOMB THREAT

Phone Calls/Mail:

- ◆ Don't hang up – try to keep the caller on the line.
- ◆ Record the exact date and time of the call and as much information as possible about the caller and the nature of the call.
- ◆ Call 911 (or have someone do it for you, if you're still on the line).
- ◆ If you receive threatening, harassing, intimidating, or otherwise-suspicious mail, avoid handling the item as much as possible, evacuate the room, and call 911 for instructions.

Crime/Violence in Progress:

- ◆ Do not take any action that may jeopardize your safety or the safety of others. Do not attempt to apprehend or detain suspects.
- ◆ Call 911 and provide as much detailed information as possible.



Physical Plant Employee Acknowledgement Form

I have received a copy of Ferris State University's Physical Plant Safety Manual. I have reviewed this document and had the opportunity to ask questions as to its contents. I am aware that if I encounter any concerns or have any questions pertaining to my health and safety during the course of my job, I will discuss the issue(s) with my supervisor. As an employee of FSU, I have the Right-to-Know what hazards I may face on the job and how to prevent them.

Employee Name _____ Date _____

Supervisor Name _____ Date _____