

Texas Tech University

Chemical Engineering

Safety and Security Policy and Procedures

## A Safer Workplace

The Chemical Engineering Department at Texas Tech University is obligated to provide and promote a safe and secure work area. A safer office/laboratory presents a more productive working environment. With safety and security enforced there are substantially less areas where injuries can occur. A minimized amount of injured personnel provides more time to focus on work and allows more productivity.

Everyone involved with the chemical engineering department here at TTU is responsible for the safety and security of themselves and others who might enter the facilities. Duties will vary from department head to professor/researcher to student to guest, but the focus will maintain emphasis on safety.

In order to fulfill safety requirements, the rules under legislation and University policy must be followed. While in the laboratory, don the necessary personal protective equipment (PPE). Make sure all your employees have been trained on the hazards that they might face in their work environment. If an accident occurs, record the event, notify the proper authorities, and take action to prevent recurrence.

### Duties as Chemical Engineering Affiliates

#### *Department Head*

- Advise staff in the department of existence of any potential hazards to health and safety
- Provide staff with proper training and written instructions on proper safety procedures
- Ensure use of appropriate PPE
- Ensure staff and students follow the set rules, policies and procedures
- Introduce and maintain systems and measures to identify, monitor and control risks
- Provide proper supervision of all staff and students

#### *Safety Officer*

- Take primary responsibility for communication between the Chemical Engineering department and the TTU Environmental Health & Safety (EH&S) office
- Inspect the workplace
- Circulate material received from EH&S
- Respond to reports of unsafe conditions
- Ensure deficiencies are corrected
- Ensure the SSC is informed, if needed, to investigate accidents or unsafe conditions
- Accompany staff from EH&S during their site visits
- Keep department chair informed on all issues
- Forward Workers Compensation Accident information to EH&S, as needed
- Provide adequate information on Fire, Chemical, Biohazard and Radiation Safety plus Mandatory Training
- Manage all documentation related to environmental, safety, and health issues

#### *Professor/Instructor*

- Ensure excellent safety practices of subordinates and students under their direction
- Know and enforce safety regulations within their area

- Consider safe procedures when making operational, research, academic, or management decisions
- Stress safety to subordinates under their direction
- Provide safety training for specific job tasks

*Staff, Student and Visitor*

- Watch for hazards, and report them to the designated responsible person of the work area, and help fix hazards
- Personally take action to avoid, eliminate, or minimize risks
- Follow safe work methods and proper use of PPE
- Ensure that people working nearby are not at risk from your activity
- Seek information or advice as necessary, particularly before carrying out new or unfamiliar tasks
- Reporting accidents and incidents to the supervisor of the work area
- Dispose of any hazardous wastes in a safe and approved manner
- Dispose of broken glass and sharps in a safe and approved manner
- Do not willfully place at risk the health, safety and welfare of others

*Chemical Engineering Safety and Security Committee (CESSC)*

The CESSC serves as an advisory committee concerned with safety, health and environmental protection. From its meetings, recommendations are made for addressing hazards and improving safety. The safety committee should meet on a regular basis, although special sessions will be called if necessary.

Members of the CESSC consist of the safety officer and three department representatives. Members are appointed by the departmental chair. The committee shall meet a minimum of once per year and will distribute discussed information to the entire department. If needed, this safety plan will also be updated to include changes that might occur.

Accident Reporting

Environment Health and Safety at TTU, MS 1090, has the necessary forms for reporting accidents. These are:

1. Supervisor/Chair:
  - a. TWCC-IS, Employer's first report of injury/illness - accident involving lost time or medical costs
  - b. AGS-10-91/TWCC-121, Supervisor's Investigation of Employee's Accident/Incident
2. Employee:
  - a. C-80, Employee's Election Regarding Utilization of Sick Leave
  - b. WCD-29, Employee's Report of Injury
  - c. 24-016-C, Authorization for Release of Information
  - d. TWCC-6, Supplemental Report of Injury/Illness
3. Witnesses:
  - a. WCD-74, Witness Statement
4. Incident Report Form goes to EH&S for incident and near miss, no lost time and no medical cost injury
5. Hazard Report Form goes to EH&S

### Accident Investigation

Investigations are conducted at the discretion of TTU EH&S. If an investigation is deemed necessary, a EH&S team will be enacted and the chemical engineering department will work directly with that team.

### Periodic Workplace Surveys

The TTU chemical engineering department safety coordinator and chair will accompany EH&S when they visit for their biannual workplace surveys. These visits may include measurements in noise and lighting, hazard communication program review, and a walk-through of facilities to determine potential hazards. Recommendations will then be presented for ways to reduce hazards in the chemical engineering department.

### Hazard Communication Program

Under the Texas Hazard Communication Act (THCA), all employees who work in non-exempt areas are required to be informed of the chemical hazards in their respective workplace by means of container labeling, Material Safety Data Sheets (MSDS's) and training.

To comply with the THCA, the following actions will be taken:

1. The Supervisor/Safety Coordinator must have a Hazard Communication Program, which is accessible to employees on all work shifts.
2. The Supervisor/Safety Coordinator must ensure that all containers for products containing hazardous chemicals are properly labeled.
3. The Supervisor/Safety Coordinator must ensure that all employees know that the University has a centralized collection of MSDS's located in EH&S (303 Drane Hall). Copies of MSDS's may be requested by sending a memorandum to EH&S at MS 1090.
4. The Supervisor/Safety Coordinator must provide the following information and training to all employees working in a non-exempt area:
  - THCA requirements
  - Location and availability of the written Hazard Communication Program
  - Location and availability of MSDS's within the department or work area
  - Identify chemicals or chemical products present in the work place operations
  - Physical and health effects of the hazardous chemicals
  - How to use the identified chemical products safely
  - Reading labels and MSDS's to obtain appropriate hazard and safety information
5. Training must be documented and the documented file is to be kept within the department for 10 years.

For non-exempt areas, the department's Hazard Communication Program must be permanent and continuous. When new products are received, an MSDS must be made available and, if the product introduces a new hazard to the workplace, all employees must receive training on the addition of new hazards prior to working with the hazardous substances.

### Obtaining MSDS

The MSDS requirements are set by the Occupational Safety and Health Administration (OSHA). TTU EH&S will assist the chemical engineering department in determining if the chemical requires a MSDS. Obtaining a MSDS from the supplier or distributor should be first. If the MSDS is not accessible, work with EH&S to find the appropriate MSDS. If a single laboratory contains a significant amount of chemicals the MSDS's will be stored alphabetically in properly labeled notebooks designated to its respective work area. Otherwise, a complete MSDS list will be kept in the main Chemical Engineering room 210. Access to MSDS's will be allowed to ALL personnel who enter each work/laboratory area.

### Interpreting Material Safety Data Sheets

Although MSDS's are provided in various formats, every one will contain the following information:

1. Identity – The product name and common synonyms used for the product.
2. Physical and Chemical Characteristics – Contains general but very important info like:
  - Flash point, Vapor pressure, Appearance, Odor, Specific gravity, Boiling point, Freezing point, Etc
3. Physical Hazards – Information concerning the potential for fire, explosion, or reaction is found here. The necessary extinguishing agent is also located here along with possible incompatible materials.
4. Health Hazards – Information about the signs and symptoms of overexposure, acute and chronic health effects from a product. Should be used as an indicator of overexposure or sensitivity.
5. Primary Routes of Entry – Common ways a product can enter your body are:
  - Ingestion (mouth), Inhalation (mouth), Absorption (skin), contact (skin)
6. Exposure Limits – Limits are set by many governmental programs. These can be in parts per million (ppm) or milligrams per cubic meter ( $\text{mg}/\text{m}^3$ ) and are based on an 8-hr time-weighted average (TWA) for a 40-hr workweek.
  - Occupational Safety and Health Administration (OSHA)
    - Permissible Exposure Limit (PEL)
  - American Conference of Governmental Industrial Hygienists (ACGIH)
    - Threshold Limit Value (TLV)
  - National Institute of Occupational Safety and Health (NIOSH)
    - Recommended Exposure Limit (REL)
7. Carcinogenic Effects – Information on whether the substance is a know carcinogen (cancer-causing agent). Produced by the National Toxicology Program (NTP) or the International Agency for Research on Cancer (IARC), or OSHA. These products need special caution when handling and require written procedures for storage and use.
8. Handling Data – Special precautions for handling and use. Appropriate hygiene practices, decontamination procedures, and spill and clean-up actions are found here.
9. Control Measures – Data concerning engineering controls, work practices, administrative controls, and personal protective equipment (PPE). These are based on worst-case scenarios, but must be followed unless EH&S has performed an evaluation and informed you in writing that less stringent controls will be satisfactory.
10. Emergency and First Aid Procedures – Necessary emergency response and first aid procedures are detailed here. Remember when reading this information that it is assumed

that you have the required training and equipment to perform any emergency response or rescue actions discussed. If training is not adequate then call 911.

11. Date of MSDS Preparation – The most current updated MSDS from the manufacturer is noted. Make sure you have the most recent published MSDS from the manufacturer of your product.
12. Manufacturer's Data – Information about the manufacturer such as name, address, and telephone number. This information can be used to access additional information on the hazardous substance or emergency procedures, if necessary.

These are all the areas that must be included on the MSDS's. It is very possible that additional information will be included.

### Labeling Containers and Chemicals

Labeling is mandatory on every container that contains a stock solution/chemical. Labels are also mandatory to mixtures from stocks or other mixtures. On each label, the chemical name and concentration should be present along with hazards or safety precautions.

### Reporting Safe Activity

In compliance with OP 78.29, the Texas Tech University Chemical Engineering department will provide an annual safety activity report to EH&S by the fifteenth of September. Using form SAR-93, record data from the previous fiscal year.

### Hazardous Waste Disposal

The key to disposing of hazardous waste is to minimize the amount of waste present. This can be accomplished by several ways. They are:

1. Surplus chemicals can be exchanged among laboratories, sections, or departments. This applies not only to 'virgin' materials, but to the end products of processes or experiments which could be of use to someone else
2. Materials may be distilled to recover them to a point of usability, if not to the original user, to another user on campus. This is greatly facilitated by segregating potential wastes to the extent practical at the point of generation.
3. Substitution of a less hazardous material for one requiring special handling will not only cut disposal costs, but reduce hazards in the laboratory as well.
4. Microscale operations reduce the waste volume by proportionately reducing the amount of chemical input for the reaction
5. Neutralization - Acids and Bases, uncontaminated with substances of a different hazard category, can be treated to bring the pH within the range of 5 to 9 and washed down the drain with 50 times their volume in water. There is no reason to turn in materials that can be neutralized at the point of generation.
6. Steps must be taken to ensure faculty and staff members do not depart until all substances in their respective work areas are clearly marked as to contents. Compliance with the Texas Hazard Communication Act will eliminate most problems of this type, however, the cost of

analysis for the identification and hazard classification of unknowns is high enough to make this a cost effective endeavor.

Once determined the chemical cannot be exchanged, recycled, or neutralized, contact EH&S to arrange for it to be picked up for entry into the waste stream.

Waste is picked up on Tuesday and Thursday every week. Do NOT allow wastes to accumulate, as this is a potential health and safety risk. Upon notifying EH&S for a waste pickup, you will need to provide the following information:

Name and telephone #

Department and room # of requestor

Department and room # of waste

Types and numbers of containers, e.g. one 5 gallon can, two 4 liter bottles, one 55 gallon drum, etc.

Whether or not the 'REQUEST FOR HAZARDOUS WASTE PICK-UP & DISPOSAL' form is complete

This information is necessary for proper disposal and should be available prior to contacting EH&S for the pick-up. The EH&S labels are to be affixed to each separate container of hazardous waste.

### General Laboratory Policies

The following policies apply to all students - undergraduate (UG) and graduate (G), faculty, and staff working in departmental laboratories, research facilities, and at field locations. Any violation of these policies will result in suspension of laboratory and research privileges.

1. Students injured in the laboratory are responsible for their own medical bills. Insurance is not provided by the University to cover medical bills incurred by a student.
2. All undergraduate students must complete appropriate safety training. This safety training will be conducted during the first laboratory session; a student missing the safety training will be dropped from the respective course. For graduate students, a safety seminar will be provided annually, usually at the beginning of the fall semester.
3. Students must review the MSDS's before using any chemicals.
4. Many experiments are hazardous if not conducted properly. Ask the laboratory instructor about safe operating procedures.
5. Students must operate all laboratory equipment safely. Use of designated personal protective equipment (PPE) is required when in the laboratory. Each laboratory carries different requirements for PPE, so use the PPE that is required by your laboratory.
6. If a dangerous situation is observed by a student, notify your instructor. Common dangerous situations: broken glass, chemical spill, laboratory misuse, etc.
7. Students are required to wear appropriate laboratory clothing (this may include long-sleeved shirts, long pants, closed-toe shoes, safety goggles, gloves) that is not loose or bulky to eliminate the possibility of being caught in machinery/laboratory equipment.
8. Fire extinguishers are marked. In case of fire, Call 9-911.

9. Some laboratories are equipped with eyewash and shower stations. Wash off any chemical that makes skin contact, or and foreign material that falls into the eyes IMMEDIATELY.
10. Common sense by faculty, staff and students is very important to laboratory safety. For example container labeling, picking up tripping hazards and other distractions.
11. No hazardous laboratory equipment or machinery may be operated by students without at least two people present.
12. Use proper lifting technique when lifting and carrying heavy items. If needed, ask for help.
13. Building access after-hours
  - It is the responsibility of the academic supervisor to be fully aware of all after-hours laboratory work being performed by a research/G student, and to ensure the safe undertaking of this work
  - A notice in a prominent location stating your contact details emergency instructions must accompany any experiment running overnight or over a weekend
  - It is the G student's responsibility to inform the supervisor and laboratory manager of intended after hours experimentation. Please provide you mobile phone number and home phone contact numbers in case of problems.
  - Avoid, at all possibilities, working alone in the laboratory after hours. Do not perform dangerous experiments at night or on the weekends without permission and always have someone there with you in case of an emergency.
  - No work with radioisotopes is to be performed after normal working hours without supervision by a licensed Radiation Safety Officer
  - Children are not permitted in any laboratory
14. In case of an emergency, first remove subject from unsafe environment and administer first aid. Notify emergency personnel if needed.

#### EMERGENCY CONTACT INFORMATION

9-911

Non-emergency contact information

742-3931

#### New Department Employees Orientation Briefing

The department safety coordinator will brief all new employees (faculty, staff, teaching assistants, research assistants and student assistants) during their first week on environment, fire health safety, and security issues and procedures related to their job assignments. This may include:

1. Material Safety Data Sheets
2. Proper Lifting Procedures
3. Fire Procedures
4. Storm and Tornado Procedures
5. Handling of hazard Chemicals
6. Electrical Hazards and Procedures
7. Unique Issues Related to Research and Laboratory Facilities
8. Health Issues

9. Safety Issues
10. Security Issues
11. Environmental Issues
12. Other Issues

### New Graduate or Research Students

The academic advisor or Chemical engineering employee responsible for new graduate students will brief them on regards to safety in their respective laboratory and what to do in case of an emergency. General information will be covered in the safety seminar that is administered annually.

### General Laboratory Safety Checklist

<http://www.depts.ttu.edu/ehs/site/radiationlabsafety/labsafetychecklist.htm>

#### A. General Laboratory Safety Information

1. Do laboratory personnel know the location of safety plans? (Chemical Hygiene Plan, Radiation Safety Manual & Carcinogen/Highly Toxic Chemical Work Procedures)
2. Do laboratory personnel know the location of MSDS's and how to access them?
3. Are chemical names on primary and secondary containers?
4. Is radiation signage in place where needed?
5. Is biohazard signage in place where needed?

#### B. Personal Protective Equipment

1. Are chemical resistant gloves available and worn during procedures?
2. Is eye protection available and worn during procedures?
3. Is protective clothing available and worn during procedures? (lab coat, apron, etc.)
4. Are respirators available or in use only with prior EH&S approval?

#### C. Housekeeping

1. Are aisles free of slip, trip and fall hazards?
2. Are bench tops free of excess storage and materials not in use?
3. Are bench tops and bench liners free of visible contamination?
4. Is broken glass segregated from regular trash?
5. Are handwashing facilities available? (soap, paper towels)

#### D. Fume Hoods

1. Are fume hood tagged with an inspection sticker dated within past year?
2. Are chemical fume hood used for volatile, flammable and gaseous hazards?
3. Are fume hoods free of excess storage?
4. Are large pieces of equipment raised to allow air flow?
5. Are procedures conducted at least 6" inside hood?
6. Is there a visual indicator of hood flow? (gauge, ribbon)
7. Is the fume hood sash lowered to or below optimum setting?
8. Are perchloric acid hoods utilized whenever perchloric acid is heated?

9. Are tissue culture hoods (i.e., non-biosafety cabinets) used for nonhazardous materials only; with chemical and biological hazards prohibited?
10. In biosafety cabinets, are volatile or gaseous hazards limited to incidental use?

#### E. Compressed Gases

1. Are cylinders properly secured?
2. Are cylinders capped when not in use?
3. Are main valves closed and the pressure in regulators released when the cylinder is not in use?
5. Are flammable gases present only where there is ongoing use?
6. Are flammable gases separated from oxidizing gases?

#### F. Work Practices

1. Are food and drink never stored or consumed in the laboratory?
2. Is proper laboratory attire worn?(no shorts, sandals, loose hair or loose clothing)
3. Is mouth pipetting prohibited?
4. Are needles and other sharps disposed of in a labeled, color coded, puncture resistant container?
5. Are sharps containers not overfilled?
6. Are ignition sources prohibited where flammable chemicals used or stored?
7. Are dewar flasks and cold traps wrapped with screen, friction tape, or a metal jacket?
8. Are closed systems under heat or pressure contained behind a blast shield or in a fume hood with the sash lowered?
9. Are pulleys, belts and other moving parts properly guarded?
10. Are vacuum lines equipped with traps?

#### G. Electrical Hazards

1. Are electrical cords and plugs intact; not damaged or frayed?
2. Are electrical cords free of tape splices or repairs?
3. Is no more than one item plugged into an individual receptacle?
4. Are extension cords used on a temporary basis only, not as a permanent source of electricity?
5. Are grounded or polarized plugs unaltered?

#### H. Emergency Equipment/Fire Safety

1. Are exits and means of egress unlocked and unobstructed?
2. Is an eighteen inch vertical clearance maintained from sprinkler heads (e.g., over shelves)?
3. Are safety showers/eyewashes clearly visible and unobstructed?
4. Does laboratory staff know the location of emergency equipment?

#### I. Chemical Handling and Storage Safety

1. Are all chemicals color-coded and segregated by hazard class?
2. Is solvent usage limited to the fume hood, or another area equipped with local exhaust? Are other chemicals (such as acrylamide) that pose serious respiratory hazards used exclusively in the fume hood?

3. When present, are hydrofluoric, nitric, and perchloric acids stored properly?
4. Are hydrofluoric acid (HF) safety procedures posted and observed? Are first aid procedures and fresh calcium gluconate gel available?
5. Are procedures involving heated perchloric acid prohibited except in a perchloric acid hood?
6. When present, are acids and bases stored on separate shelves or cabinets?
7. Is picric acid stored hydrated at all times? Is an appropriate usage log maintained?
8. Are all flammable chemicals stored in approved flammable chemical storage cabinets?
9. Flammable liquids are not stored in conventional refrigerators?
10. Is the total flammable chemical storage limited to 75 gallons in instructional laboratories and 150 gallons for research laboratories?
11. Are chemicals stored away from heat and intense light sources?
12. Are chemical containers in good condition? Are labels present and legible?
13. Are large chemical containers stored near the floor?
14. Are bottle carriers and/or transportation carts utilized when moving chemicals from one room to another?
15. Are peroxides and peroxide-forming compounds labeled with receipt date and/or expiration date? Are any peroxide or peroxide-forming compounds present that are expired?

#### J. Special Procedures for Carcinogens, Teratogens, and Other Highly Toxic Chemicals

1. Are designated work areas for these compounds present wherever these chemicals are used? Are designated work areas clearly labeled, utilized, and decontaminated regularly?
2. Have adequate written procedures been created for the use of these compounds? Have employees received training specific to work with these classes of chemicals?

#### K. Hazardous Waste Compliance

1. Are waste containers labeled using the content of the waste with complete chemical name?
2. Are waste containers in good condition and kept closed except when adding waste?
3. Is chemical waste disposed down the sink or in regular waste bins?
4. Are wastes properly segregated?
5. Are laboratory waste accumulation areas belonging to the PI located near the point of initial generation of the waste and is the waste under the control of the laboratory personnel that generated the waste?

### Chemical Engineering Department and Facilities

The five different areas of the Chemical Engineering Department are: main building, annex, Petroleum engineering, Experimental Sciences Building and the Livermore Center. Each laboratory within each building has designated purposes and thus each area can cause different degrees of hazards. For these reasons, access to many of these areas is limited. Talk to the chair, safety coordinator, or academic supervisor for access and relevant safety information. There is one teaching laboratory. All the other laboratories are research laboratories and they fall under the same set of rules, regulations and safety hazards.

#### *Chemical Engineering (CE)*

##### Teaching Laboratory

#### B-5: Undergraduate Laboratory

- Doors locked at all times
- Safety glasses and hard hats required
- Watch for head clearance areas marked with tape and make sure fan is always on.
- Acids, bases, flammables and corrosives. Use flammable storage cabinet.
- Broken glass container

#### Research Laboratories

The other laboratories in the chemical engineering department follow the same rules as described in the general laboratory procedures.

### Emergency Action Plans

These are the plans for when an emergency is deemed necessary. When an emergency arises, the plans should be followed to protect yourself and the lives of other.

In case of a **fire**, everyone should evacuate to the closest exit maintaining they do not put themselves in harms way. Do not use the elevators. Take the stairs! Each laboratory has established guidelines to exit the laboratory and then exit the building. Maintain a proper distance from the building in case of explosions. Do not block the roads in order for firefighters to reach the building.

In case of a **tornado**, all faculty, staff, students and guests should safely move to the middle corridor of the basement. Make sure to stay away from windows.

In case of a **shooter** on campus or within chemical engineering buildings, everyone must move to a room and, if possible, lock the door behind them. The hallway should be exited and direct line of sight to the hallway should be avoided at all times.

## Additional Operating Polices & Procedures

<http://www.depts.ttu.edu/opmanual/Contents.htm>

University OP's relative to the Chemical Engineering department

- 60.08 Asbestos Compliance and Abatement Program
- 60.17 Chemical Hygiene Plan
- 60.23 Compressed Gas Handling, Storage, and Transportation
- 60.10 Fire Safety Program
- 60.20 Handling and Storing Explosives
- 60.02 Hazard Communication Act
- 60.11 Hazardous Materials Shipping
- 60.03 Hazardous Material Spills
- 60.06 Lockout/Tagout Program
- 60.25 Procurement of Interlocks and other Safety Related Requirements for the Use of Lasers and/or X-ray Producing Devices
- 60.12 Procurement, Usage and Disposal of Radioactive Materials, Radiation Producing Devices, and Lasers
- 60.05 Respiratory Protection Program
- 60.01 University Health & Safety Program
- 60.13 Use and Disposal of Sharp Objects
- 60.04 Use of Laboratory Hoods, Biological Safety Cabinets and Special Exhaust Ventilation
- 70.13 Workers' Compensation Insurance
- 76.12 Severe Weather Warning and Alert Systems

College of Engineering OP's relative to this manual

- 30.01 Safety Plans and Emergency Action Plans

These OP's were enacted by Texas Tech University in order to have a universal set of codes to keep everyone safe while also following government and state laws.

**Appendix A**  
**(samples of Relevant Forms)**

# Job Orientation Guide

Company Texas Tech University  
 : Chemical Engineering  
 Trainer: (Enter Name of Trainer)  
 Date (Enter Date of Orientation)

Employee: (Enter Employee's Name)  
 Hire Date: (Enter Employee's Hire Date)  
 Position: (Enter Employee's Job Title)

This checklist is a guideline for conducting employee safety orientations for employees new to (Customize by adding the name of your company). Once completed and signed by both supervisor and employee, it serves as documentation that orientation has taken place.

	Date	Initials
1. Explain the company safety program, including:		
Orientation	_____	_____
On-the-job training	_____	_____
Safety meetings	_____	_____
Accident investigation	_____	_____
Disciplinary action	_____	_____
2. Use and care of personal protective equipment, (Hard hat, fall protection, eye protection, etc.)	_____	_____
3. Line of communication and responsibility for immediately reporting accidents.		
A. When to report an injury	_____	_____
B. How to report an injury	_____	_____
C. Who to report an injury to	_____	_____
D. Filling out accident report forms	_____	_____
4. General overview of operation, procedures, methods and hazards as they relate to the specific job	_____	_____
5. Pertinent safety rules of the company and WISHA	_____	_____
6. First aid supplies, equipment and training		
A. Obtaining treatment	_____	_____
B. Location of Facilities	_____	_____
C. Location and names of First-aid trained personnel	_____	_____
7. Emergency plan		
A. Exit location and evacuation routes	_____	_____
B. Use of fire fighting equipment (extinguishers, hose)	_____	_____
C. Specific procedures (medical, chemical, etc.)	_____	_____
8. Vehicle safety	_____	_____
9. Personal work habits		
A. Serious consequences of horseplay	_____	_____
B. Fighting	_____	_____
C. Inattention	_____	_____
D. Smoking policy	_____	_____
E. Good housekeeping practices	_____	_____
F. Proper lifting techniques	_____	_____

NOTE TO EMPLOYEES: Do not sign unless ALL items are covered and ALL questions are satisfactorily answered.

The signatures below document that the appropriate elements have been discussed to the satisfaction of both parties, and that both the supervisor and the employee accept responsibility for maintaining a safe and healthful work environment.

Date: \_\_\_\_\_ Supervisor's Signature:

\_\_\_\_\_

Date: \_\_\_\_\_ Employee's Signature:

\_\_\_\_\_

