OFFICE OF THE CHANCELLOR
LOUISIANA STATE UNIVERSITY AT ALEXANDRIA

SUBJECT: PERSONAL PROTECTIVE EQUIPMENT POLICY

PURPOSE: To protect the employees of Louisiana State University at Alexandria from exposure to work place hazards and the risk of injury through the use of personal protective equipment (PPE).

GENERAL POLICY

PPE is not a substitute for more effective control methods and its use will be considered only when other means of protection against hazards are not adequate or feasible. It will be used in conjunction with other controls unless no other means of hazard control exist.

Personal protective equipment will be provided, used, and maintained when it has been determined that its use is required to ensure the safety and health of our employees and that such use will lessen the likelihood of occupational injury and/or illness.

This section addresses general PPE requirements, including eye and face, head, foot and leg, hand and arm, body (torso) protection, respiratory protection, and protection from drowning.

The Louisiana State University at Alexandria Personal Protective Equipment Policies includes:

- Responsibilities of supervisors and employees
- Hazard assessment and PPE selection
- Employee training
- Cleaning and Maintenance of PPE
- PPE Disciplinary Policy

RESPONSIBILITIES

Campus Safety Officer

The Campus Safety Officer is responsible for the development, implementation, and administration of Louisiana State University at Alexandria's PPE policies. This involves

- Conducting workplace hazard assessments to determine the presence of hazards which necessitate the use of PPE.

Selecting and purchasing PPE.

Reviewing, updating, and conducting PPE hazard assessments whenever

- a job changes
- new equipment is used
- there has been an accident
- a supervisor or employee requests it
- or at least every year

Maintaining records on hazard assessments.

Maintaining records on PPE assignments and training.

Providing training, guidance, and assistance to supervisors and employees on the proper use, care, and cleaning of approved PPE.

Periodically re-evaluating the suitability of previously selected PPE.

Reviewing, updating, and evaluating the overall effectiveness of PPE use, training, and policies.

Maintenance Foreman / Custodial Supervisor / Utility Plant Superintendent

The Maintenance Foreman, the Custodial Supervisor, and the Utility Plant Supervisor have the primary responsibility for implementing and enforcing PPE use and policies in their work area. This involves

- Providing appropriate PPE and making it available to employees.
- Ensuring that employees are trained on the proper use, care, and cleaning of PPE.
- Ensuring that PPE training certification and evaluation forms are signed and given to the Campus Safety Officer.
- Ensuring that employees properly use and maintain their PPE, and follow Louisiana State University at Alexandria's PPE policies and rules.
- Notifying Louisiana State University at Alexandria's management and the Campus Safety Officer when new hazards are introduced or when processes are added or changed.

- Ensuring that defective or damaged PPE is immediately disposed of and replaced.

Employees

The PPE user is responsible for following the requirements of the PPE policies. This involves

- Properly wearing PPE as required.
- Attending required training sessions.
- Properly caring for, cleaning, maintaining, and inspecting PPE as required.
- Following Louisiana State University at Alexandria's PPE policies and rules.
- Informing the supervisor of the need to repair or replace PPE.

Employees who repeatedly disregard and do not follow PPE policies and rules will be disciplined according to the PPE Disciplinary Policy.

GENERAL PPE PROCEDURES

Hazard Assessment for PPE

The Campus Safety Officer in conjunction with the Maintenance Foreman, Utility Plant Superintendant, and the Custodial Supervisor will conduct a walk-through survey of each work area to identify sources of work hazards. Each survey will be documented using the Hazard Assessment Certification Form, which identifies the work area surveyed, the person conducting the survey, findings of potential hazards, and date of the survey. The Administrative Assistant of Facility Services will keep these forms in her office on file.

The Campus Safety Officer will conduct, review, and update the hazard assessment for PPE whenever

- a job changes
- new equipment or process is installed
- there has been an accident
- whenever a supervisor or employee requests it
- or at least every year

Any new PPE requirements that are developed will be added to Louisiana State University at Alexandria's written loss prevention program.

Selection of PPE

Once the hazards of a workplace have been identified, the Campus Safety Officer in conjunction with the Maintenance Foreman, the Utility Plant Supervisor, and/or the Custodial Supervisor will determine if the hazards can first be eliminated or reduced by methods other than PPE, i.e., methods that do not rely on employee behavior, such as engineering controls.

If such methods are not adequate or feasible, then Maintenance Foreman, the Utility Plant Supervisor, and/or the Custodial Supervisor will determine the suitability of the PPE presently available; and as necessary, will select new or additional equipment which ensures a level of protection greater than the minimum required to protect our employees from the hazards. Care will be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards will be recommended for purchase.

All personal protective clothing and equipment will be of safe design and construction for the work to be performed and will be maintained in a sanitary and reliable condition. Only those items of protective clothing and equipment that meet NIOSH or ANSI (American National Standards Institute) standards will be procured or accepted for use. Newly purchased PPE must conform to the updated ANSI standards which have been incorporated into the PPE regulations, as follows:

- Eye and Face Protection ANSI Z87.1-1989
- Head Protection ANSI Z89.1-1986
- Foot Protection ANSI Z41.1-1991
- Hand Protection (There are no ANSI standards for gloves, however, selection must be based on the performance characteristics of the glove in relation to the tasks to be performed.)

Affected employees whose jobs require the use of PPE will be informed of the PPE selection and will be provided PPE by Louisiana State University at Alexandria at no charge. Careful consideration will be given to the comfort and proper fit of PPE in order to ensure that the right size is selected and that it will be used.

Training

Any worker required to wear PPE will receive training in the proper use, maintenance, and disposal of PPE before being allowed to perform work requiring the use of PPE. Periodic retraining will be offered to PPE users as needed. The training will include, but not necessarily be limited to, the following subjects:

- When PPE is necessary to be worn
- What PPE is necessary
- How to properly don, doff, adjust, and wear PPE
- The limitations of the PPE
- The proper care, maintenance, useful life, and disposal of the PPE

After the training, the employees will demonstrate that they understand how to use PPE properly, or they will be retrained.

Training of each employee will be documented using the Louisiana State University at Alexandria Safety Meeting/Training Form and kept on file. The document certifies that the employee has received and understood the required training on the specific PPE he/she will be using. A copy of the completed training form should be forwarded to The Campus Safety Officer.

Retraining

The need for retraining will be indicated when

- an employee's work habits or knowledge indicates a lack of the necessary understanding, motivation, and skills required to use the PPE (i.e., uses PPE improperly)
- new equipment is installed
- changes in the work place make previous training out-of-date
- changes in the types of PPE to be used make previous training out-of-date

Cleaning and Maintenance of PPE

It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. Employees must inspect, clean, and maintain their PPE according to the manufacturers'

instructions before and after each use. Supervisors are responsible for ensuring that users properly maintain their PPE in good condition.

Personal protective equipment must not be shared between employees until it has been properly cleaned and sanitized. PPE will be distributed for individual use whenever possible.

If employees provide their own PPE, make sure that it is adequate for the work place hazards, and that it is maintained in a clean and reliable condition.

Defective or damaged PPE will not be used and will be immediately discarded and replaced.

> **NOTE:** Defective equipment can be worse than no PPE at all. Employees would avoid a hazardous situation if they knew they were not protected; but they would get closer to the hazard if they erroneously believed they were protected, and therefore would be at greater risk.

It is also important to ensure that contaminated PPE which cannot be decontaminated is disposed of in a manner that protects employees from exposure to hazards.

SPECIFIC PPE PROCEDURES

This section applies to employees, students, or visitors on campus construed to be in need of personal protective equipment by virtue of their exposure to hazards in the working, teaching, or research environment.

Protective equipment, including personal protective equipment for eyes, face, hands and extremities; protective clothing; respirator devices; and protective shields and barriers, shall be used and maintained in sanitary and reliable condition whenever it is necessary by reason of hazards of process or environment, chemical hazards, radiological hazards, biological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact. (1. OSHA 1910.132(a).)

Under no circumstances shall a person knowingly be subjected to a hazardous condition without appropriate personal protective equipment.

Persons who are exposed to hazards requiring personal protective equipment shall be properly instructed in the use of such equipment by the individual in charge of the activity or his/her designee.

It is the responsibility of the individual in charge of the activity to assure that safety practices are adhered to.

If those individuals required to wear personal protective equipment fail to do so, they will be subject to disciplinary action.

EYE PROTECTION

General

Persons working in or studying occupations such as painting, carpentry, construction, labor, landscape, general maintenance, metal trades, chemistry, other sciences and engineering, or any work/study activity which involves hazards such as flying objects, dust and/or vapors, hot metals, chemicals, or light radiation shall be required to wear approved safety eyewear/goggles at all times while exposed.

Custodial workers shall be required to wear approved safety eyewear/goggles when cleaning bathroom appliances or mopping floors with caustic or abrasive cleaners.

Food service personnel must wear approved eyewear/goggles when there is a possibility of eye injury from caustic materials, hot fat splatters, or associated hazards.

Management level employees, students, or visitors who make occasional visits to machine, welding, and carpentry shops, boiler rooms, equipment rooms, power houses, construction areas, chemistry labs, or other areas in which eye injury is a possibility shall wear approved eyewear.

Prescription Lens Wearers

If required to wear eye protection, such persons shall wear an approved face shield, goggles that fit over glasses, prescription glasses with protective optical lenses fitted with side shields, or goggles that incorporate prescription lenses.

Contact Lens Wearers

Contact lenses shall never be considered as a substitute for eye protection; eye protection shall be worn over them. “Contact lens, of themselves, does not provide eye protection in the industrial sense and shall not be worn in a hazardous environment without appropriate covering safety eyewear.” (ANSI Z87.l-1989).

Approval and Selection

Eye protection shall meet the ANSI Z87.l-1989 standard and the eyewear shall indicate such on the lens or the frame.

Visitors shall be provided protective eyewear meeting ANSI Z87.1 protection factors for visitor's eyewear. Employees shall not substitute ANSI Z87.l visitor's eyewear for other approved eyewear while on duty.

Refer to the attached "Selection Chart for Eye and Face Protection for Use in Industry, Schools, and Colleges" to determine appropriate eye and/or face protection.

Fitting

Fitting shall be done by a department member knowledgeable of the procedure, or in case of prescription lenses, by an ophthalmic specialist.

Purchase

Purchase of eye protection shall be made through an authorized department representative to assure compliance.

Inspection and Maintenance

All eye and face protection shall be kept clean and inspected daily before each use. Badly scratched or damaged items are to be replaced immediately.

Other

It is recommended that all employees required to wear eye and face protection shall have their own and be required to inspect and maintain them in accordance with this section.

FALL PROTECTION

Employees/Students Covered

Fall protection shall be utilized by those employees/students for the specific purpose of securing, suspending, or retrieving the employee/student in or from a hazardous work area, and/or when work exposes them to the risk of falling more than 15' whether outdoors or inside buildings.

Approval and Selection

Fall protection and devices and equipment shall meet ANSI A 10.14, and employees/students shall only be allowed to purchase or receive them through an authorized department representative to insure compliance.

Selection of fall protection shall be based on the attached, "Classification of Safety Belts, Harnesses, and Lanyards."

Fitting

The appropriate safety belt shall be chosen for the hazard. It shall be securely buckled and worn tightly enough to prevent any possibility of the wearer slipping out.
Inspection and Maintenance

Safety belts and associated equipment shall be inspected before each use. Every one to three months they shall be inspected by a trained inspector. Cut, worn, or damaged belts, lifelines, lanyards, etc., shall be discarded and replaced. Safety belts in service shall not be tested for maximum impact loading.

NOTE: After an accidental freefall, the safety belt and lanyard shall be discarded.

FOOT PROTECTION

Employees/Students Covered

For all non-office personnel, "Footwear such as sandals, open- toed shoes, platforms, high heels, cloth-bodied tennis shoes, or sneakers is not considered safe and is prohibited for use as a good work shoe. Well-built safety shoes, leather-bodied shoes, or boots in good condition with low heels and hard soles are to be used." (Physical Plant Operations Manual)

Approval and Selection

Foot protection used shall meet ANSI Z41.l "Men's Safety-Toe Footwear." Employees/students shall only be allowed to purchase or receive them through an authorized department representative to insure compliance.

Refer to the attached, "Foot Protection Classification and Protection Factors" to determine appropriate foot protection.

Fitting

Each employee/student shall be individually fitted by someone skilled in the procedure.

Inspection and Maintenance

All foot protection shall be kept reasonably clean and in good repair. Shoes shall be repaired or replaced periodically.

HAND PROTECTION

Employees/Students Covered

Hand protection shall be worn by employees when handling hot work, chemicals, electrical, material handling of rough and/or sharp items, doing landscaping work, welding, and "wherever it is necessary by reason of hazards of processes of environmental, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or " (OSHA 1910 Standards).

Hand protection shall not be worn while working on moving machinery such as drill saws, grinders, or other rotating and moving equipment that might catch the hand protection and pull the worker's hand into a hazardous area.

Approval and Selection

Hand protection used will meet the criteria for its particular use. Employees/students shall only be allowed to purchase or receive hand protection through an authorized department representative to insure compliance.

Refer to the attached, "Glove Materials" and "Chemical Resistance" charts to determine appropriate hand protection.

Fitting

Fitting shall be done by hazard and size of employee's hand.

Inspection and Maintenance

All hand protection shall be kept clean and inspected daily before each use. Badly worn or damaged items are to be replaced.

HEAD PROTECTION

Employees/Students Covered

Employees/Students in areas such as painting, carpentry, construction, plumbing, labor, landscape, maintenance, metal trade, and any occupations that involve hazards from falling objects and/or overhead shall be covered.

Approval and Selection

Head protection used shall bear the ANSI Z89.1 or Z89.2 approval, manufacturer's name, and ANSI class designation (A, B, C, or D). Employees shall only be allowed to purchase or receive them through an authorized department representative to insure compliance. Refer to the attached, "Selection Chart for Head Protection for University Employees" to determine appropriate head protection.

Fitting

Each employee shall be individually fitted. The hard hat shall fit firmly by comfortably on the employee's head.

Inspection and Maintenance

Painting: If the hard hat is to be painted, the manufacturer shall be contacted to see if the paint will affect the properties of the hat.

Cleaning: Hard hats shall be washed every thirty days. If worn by more than one employee, it shall be washed daily.

Inspection: Before each wearing of the hard hat, it shall be checked for wear and damages, especially the suspension system.

Other

Hard hats shall not be stored or carried on the rear window shelf of a vehicle. Sunlight and extreme heat can affect the degree of protection offered. Also, the hard hat can become a projectile in an accident.

HEARING PROTECTION

Employees/Students Covered

Hearing protection shall be worn by employees/students when noise exposure is above that of the 85dB (action level) when measured on the A-scale of the standard sound level meter at slow response.

Approval and Selection

Personal hearing protection devices shall meet ANSI 53.19 and employees/students shall only be allowed to purchase or receive them through an authorized representative to insure compliance.

Selection of hearing protection shall take into consideration durability, ease of fit, noise calculations in area, and length of time to be worn.

There are many types of disposable and permanent hearing protection. Listed below are three:

1. Earmuffs: fluid or foam-filled cushions connected by a plastic or metal band that fits over the head. They reduce noise levels by 35-40dB depending on type and fit. In order for them to be effective, a perfect seal must be formed. Glasses, long side burns, and facial movements can reduce protection.

2. Ear Plugs: the most commonly used ear protection device. They come in many different shapes, sizes, and materials. Ear plugs can be purchased as disposables, preformed, or molded (professionally fitted). They reduce noise levels by 25 -30dB depending on type and fit. Cotton is ineffective as ear plugs.

3. Ear Caps: a cross between ear muffs and ear plugs--ear plugs connected to a plastic (usually) band which can be worn under the chin, over the top of the head, or behind the neck. They reduce noise levels by 25 - 35dB depending on type and fit.

NOTE: Combinations or ear plugs and ear muffs can reduce noise level be an additional 3 - 5dB depending on type and fit.

Fitting

Preformed ear plugs have to be professionally fitted. All others are fitted according to need.

Inspection and Maintenance

All ear protection, if not disposable, shall be inspected and cleaned before each use. All damaged ear protection shall be discarded and replaced. No unauthorized modifications shall be allowed.

Other

Attached are three tables dealing with decibel values for typical sounds and various activities, as well as threshold limit values for continuous and intermittent noise.

"Sound Pressure and Decibel Values for Some Typical Sounds"
"Typical Sound Levels Associated with Various Activities"
"Threshold Limit Values for Noise"

Noise measurements shall be performed by the Office of Campus Safety personnel. Noise studies shall be authorized by the Office of Campus Safety.

PROTECTIVE CLOTHING

Employees/Students Covered

Protective clothing shall be worn by employees/students when the potential of an employee/student being exposed or coming in contact with harmful substance is evident. i.e., chemicals, high heat (radiant), dust, open flame, etc.

Approval and Selection

There are many different standards for approval of protective clothing (ANSI, ASTN, CAL-OSHA, etc.). Protective clothing shall be selected for specified hazard, degree of protection, comfort, and ease of use.

Once the specific or multi-hazards have been identified, contact a reputable vendor or Campus Safety personnel for recommendation of proper protective clothing and/or equipment needed.

Fitting

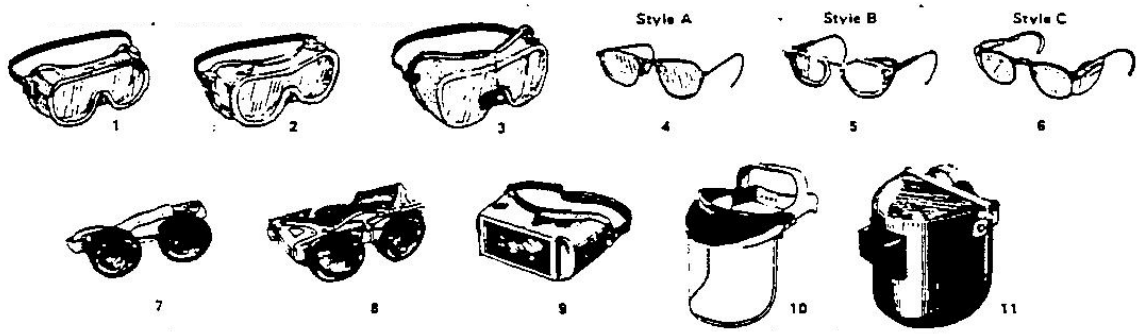
Protective clothing shall fit the wearer comfortably with a minimum of undo play.

Inspection and Maintenance

Protective clothing shall be routinely cleaned unless disposable. Disposable clothing shall be disposed of after use. Damaged, torn, ripped, etc., clothing shall be replaced before use.

SELECTION CHART FOR EYE AND FACE PROTECTORS FOR USE IN INDUSTRY, SCHOOLS, AND COLLEGES

This selection chart offers general recommendations only. Final selection of eye and face protective devices is the responsibility of management and safety specialists. (For laser protection, refer to American National Standard for Safe Use of Lasers, ANSI Zl36.I-l976.)



1. GOGGLES--Flexible fitting, regular ventilation.
2. GOGGLES--Flexible fitting, hooded ventilation.
3. GOGGLES--Cushioned fitting, rigid body.
4. SPECTACLES*--Without side shields.
5. SPECTACLES--Eyecup type side shields.
6. SPECTACLES--Semi-/Flat-fold side shields.
7. WELDING GOGGLES--Eyecup type, tinted lenses (illustrated).
7A. CHIPPING GOGGLES--Eyecup type, clear safety lenses (not illustrated).
8. WELDING GOGGLES--Coverspec type, tinted lenses (illustrated).
8A. CHIPPING GOGGLES--Coverspec type, clear safety lenses (not illustrated).
9. WELDING GOGGLES--Coverspec type, tinted plate lens.
10. FACE SHIELD--Plastic or mesh window (see caution note).
11. WELDING HELMET*

* Non spectacles are available for limited hazard use requiring only frontal protection.

APPLICATIONS

OPERATION	HAZARDS	PROTECTORS
Acetylene-Burning Acetylene-Cutting Acetylene-Welding	Sparks, harmful rays, molten metal, flying particles	7, 8, 9
Chemical Handling	Splash, acid burns, fumes	2 (for severe exposure, add 10)
Chipping	Flying particles	1, 3, 4, 5, 6, 7A, 8A
Electric (Arc) Welding Welding	Sparks, intense rays, molten metal	11 (in combination of 4, 5, 6 in tinted lenses, advisable)
Furnace Operations	Glare, heat, molten metal	7, 8, 9 (for severe exposure, add 10)
Grinding-Light	Flying particles	1, 3, 5, 6 (for severe exposure, add 10)
Grinding-Heavy	Flying particles	1, 3, 7A, 8A (for severe exposure, add 10)
Laboratory	Chemical splash, glass breakage	2 (10 when in combination with 5, 6)
Machining	Flying particles	1, 3, 5, 6 (for severe exposure, add 10)
Molten Metals	Heat, glare, sparks,	7, 8 (10 in combination with 5, 6, in tinted lenses)
Spot Welding	Flying particles sparks	1, 3, 4, 5, 6 (tinted lenses advisable; for severe exposure add 10)

CAUTION:

- Face shields alone do not provide adequate protection.
- Plastic lenses are advised for protection against molten metal splash.
- Contact lenses, of themselves, do not provide eye protection in the industrial sense and shall not be worn in a hazardous environment without appropriate covering safety eyewear.

GLOVE MATERIALS

Features:	**Benefits:**
Liquid Proof Styles	
Butyl (cement*)	Highest resistance to permeation by most gases and water vapor.
Viton (cement*)	Exceptional performance when subjected to chlorinated and aromatic solvents, coupled with excellent resistance to permeation by many vapors.
Nitrile (latex*)	Superior puncture and abrasion resistance. Recommended as a general duty glove. Excellent resistance to the degrading effects of fats, petroleum products, and a wide array of chemicals.
Natural Rubber (cement*)	Excellent resistance to the degrading (cement*) effects of alcohols and caustics. Ideal for use in sand blasting.
PVC Coated	Excellent abrasion resistance in a liquid-proof glove. Also provides cushioning.

*Cement and Latex refer to two basic manufacturing processes of unsupported liquid proof gloves. As a general rule, cement dip gloves exhibit greater resistance to liquid and vapor permeation than do Latex dipped gloves. Therefore, where a permeation barrier is required, a cement dip glove shall be selected.

General Purpose: Fabrics and Coatings	
Worknit®	Combines the toughness of a nitrile coating with the softness and stretchy comfort of jersey.

Worknit HD™	Developed and designed to replace leather and/or heavy cotton gloves, the HD fabric has a heavier cotton liner than the regular Worknit. This glove is best used where a tough job requires a product which provides protection, excellent wear, comfort, and value.

Coated Machine Knits:

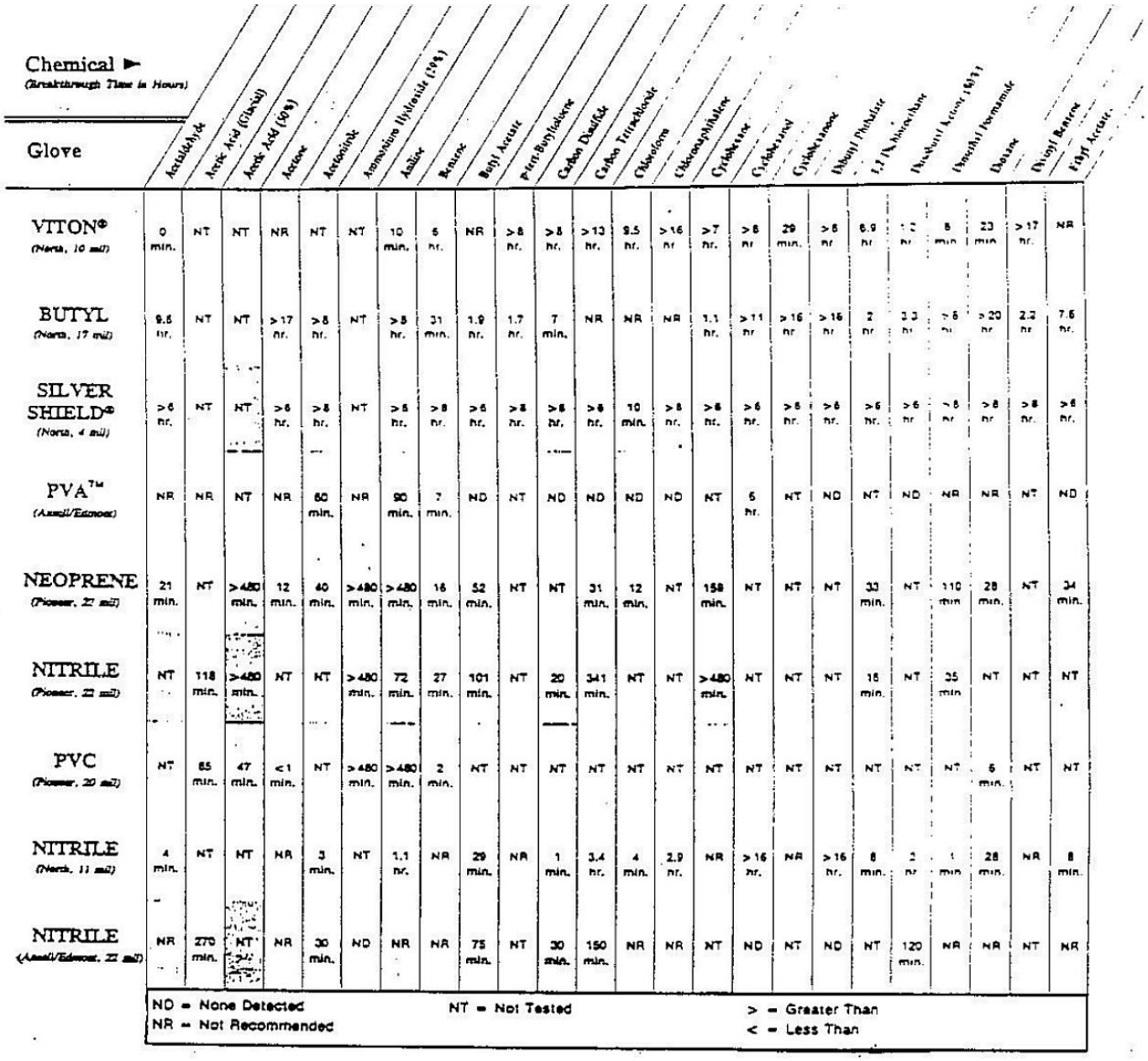
A. Grip-N, Grip-N® Hot Mill, Double Grip-N® (1) Reversibility (2) N-tread PVC coating	Unique, economical answer to the general purpose glove. Offers comfort and long wear. Four wearing surfaces instead of two. Superior grip and abrasion resistance.
B. Clean Grip™ (1) Reversible (2) Large Soft PVC Dots	

Impregnated Wovens and Jerseys:

A. Newtex	Woven cloth for strength. Coating for abrasion resistance.
B. PVC Dotted Canton Canton and Jersey	The original coated glove. Cool, comfortable cotton, permanently "dotted" for longer wear and better grip.
Uncoated Knit Fabrics (string glove)	100% cotton. They are cool, comfortable, and the lowest-priced Machine Knit glove on the market.

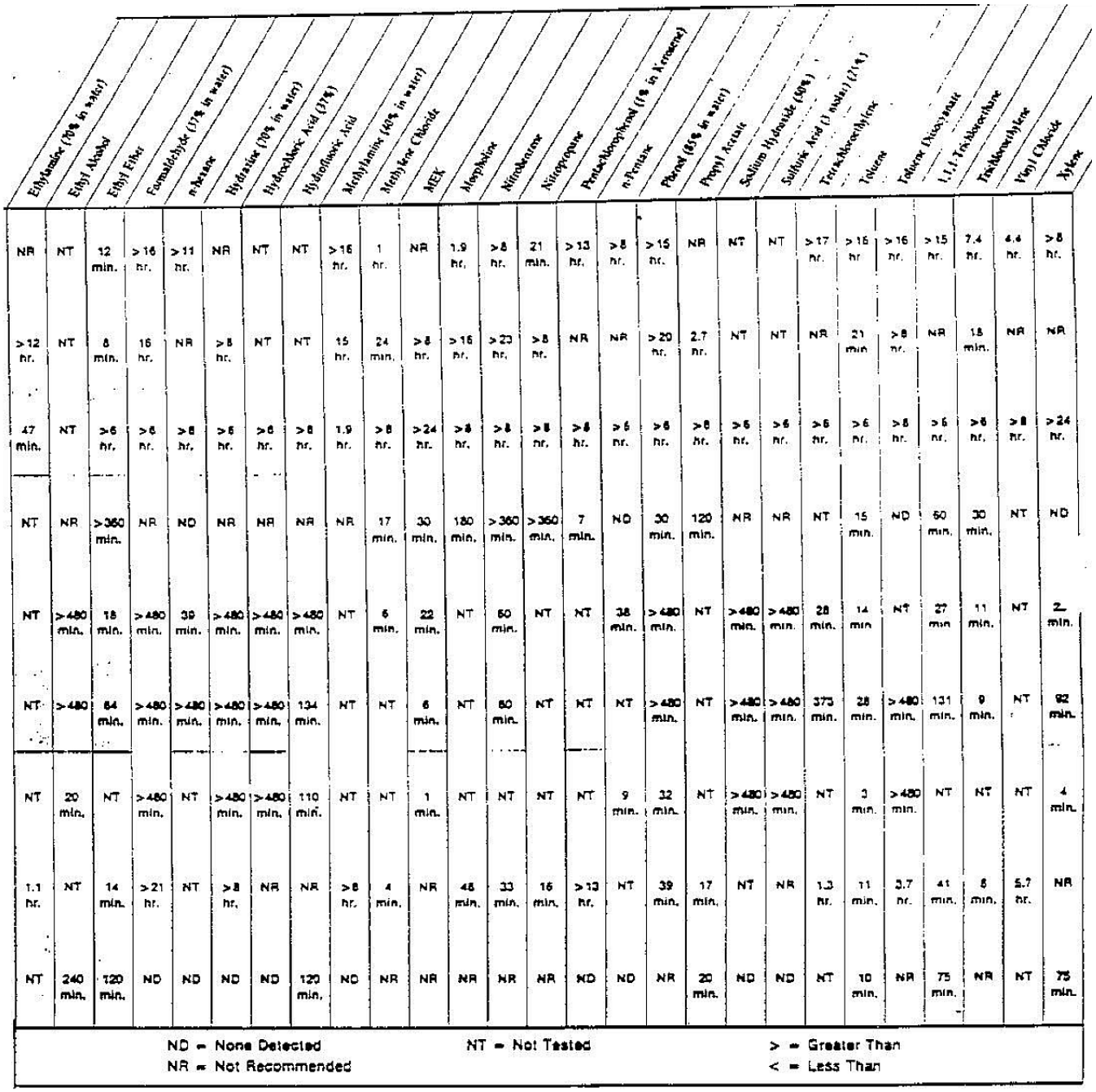
General Purpose: Leather

Side Split Leather	Superior combination of strength, thick ness and suppleness in split cowhide leather. A minimum of flaws, scars, and weaknesses, provides longer wear and comfort.
Shoulder Split Leather	Provides cushioning and abrasion resistance in a more economical grade of leather.
Grain Leather	Better flexibility, finger dexterity and fit than split leather. Generally more comfortable, but less durable than split leather.



Chemical ► (Breakthrough Time in Hours) / Glove	Acetaldehyde	Acetic Acid (Glacial)	Acetic Acid (90%)	Acetone	Acetonitrile	Ammonium Hydroxide (19%)	Aniline	Benzene	Butyl Acetate	Para-Butylphenol	Carbon Disulfide	Carbon Tetrachloride	Chloroform	Chlorosulphonic	Cyclohexane	Cyclohexanol	Cyclohexanone	Dibutyl Phthalate	1,2 Dichloroethane	Dimethyl Acetamide (DMAC)	Dimethyl Formamide	Dioxane	Diethyl Benzene	Ethyl Acetate
VITON® (North, 10 mil)	0 min.	NT	NT	NR	NT	NT	10 min.	6 hr.	NR	>8 hr.	>8 hr.	>13 hr.	9.5 hr.	>16 hr.	>7 hr.	>8 hr.	29 min.	>8 hr.	6.9 hr.	1.0 hr.	8 min.	23 min.	>17 hr.	NR
BUTYL (North, 17 mil)	9.6 hr.	NT	NT	>17 hr.	>8 hr.	NT	>8 hr.	31 min.	1.9 hr.	1.7 hr.	7 min.	NR	NR	NR	1.1 hr.	>11 hr.	>16 hr.	>16 hr.	2 hr.	3.3 hr.	>8 hr.	>20 hr.	2.2 hr.	7.6 hr.
SILVER SHIELD® (North, 4 mil)	>8 hr.	NT	NT	>8 hr.	>8 hr.	NT	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	10 min.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.	>8 hr.
PVA™ (Ansell/Edmont)	NR	NR	NT	NR	60 min.	NR	90 min.	7 min.	ND	NT	ND	ND	ND	ND	NT	6 hr.	NT	ND	NT	ND	NR	NR	NT	ND
NEOPRENE (Pioneer, 27 mil)	21 min.	NT	>480 min.	12 min.	40 min.	>480 min.	>480 min.	16 min.	52 min.	NT	NT	31 min.	12 min.	NT	158 min.	NT	NT	NT	33 min.	NT	110 min.	28 min.	NT	34 min.
NITRILE (Pioneer, 22 mil)	NT	118 min.	>480 min.	NT	NT	>480 min.	72 min.	27 min.	101 min.	NT	20 min.	341 min.	NT	NT	>480 min.	NT	NT	NT	16 min.	NT	35 min.	NT	NT	NT
PVC (Pioneer, 20 mil)	NT	85 min.	47 min.	<1 min.	NT	>480 min.	>480 min.	2 min.	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	6 min.	NT	NT
NITRILE (North, 11 mil)	4 min.	NT	NT	NR	3 min.	NT	1.1 hr.	NR	29 min.	NR	1 min.	3.4 hr.	4 min.	2.9 hr.	NR	>16 hr.	NR	>16 hr.	8 min.	2 hr.	1 min.	28 min.	NR	8 min.
NITRILE (Ansell/Edmont, 22 mil)	NR	270 min.	NT	NR	30 min.	ND	NR	NR	75 min.	NT	30 min.	150 min.	NR	NR	NT	ND	NT	ND	NT	120 min.	NR	NR	NT	NR

ND = None Detected
NR = Not Recommended
NT = Not Tested
> = Greater Than
< = Less Than



Ethylamine (70% in water)	Ethyl Alcohol	Ethyl Ether	Formaldehyde (37% in water)	n-Hexane	Hydrazine (70% in water)	Hydrochloric Acid (37%)	Hydrofluoric Acid	Methylamine (40% in water)	Methylene Chloride	MEK	Morpholine	Nitrobenzene	Nitropropane	Pentachlorophenol (5% in Kerosene)	n-Pentane	Phenol (85% in water)	Propyl Acetate	Sodium Hydroxide (50%)	Sulfuric Acid (3 molar) (11%)	Tetrachloroethylene	Toluene	Toluene Diisocyanate	1,1,1-Trichloroethane	Trichloroethylene	Vinyl Chloride	Xylene
NR	NT	12 min.	> 16 hr.	> 11 hr.	NR	NT	NT	> 16 hr.	1 hr.	NR	1.9 hr.	> 8 hr.	21 min.	> 13 hr.	> 8 hr.	> 15 hr.	NR	NT	NT	> 17 hr.	> 16 hr.	> 16 hr.	> 15 hr.	7.4 hr.	4.4 hr.	> 8 hr.
> 12 hr.	NT	8 min.	16 hr.	NR	> 8 hr.	NT	NT	15 hr.	24 min.	> 8 hr.	> 16 hr.	> 23 hr.	> 8 hr.	NR	NR	> 20 hr.	2.7 hr.	NT	NT	NR	21 min.	> 8 hr.	NR	18 min.	NR	NR
47 min.	NT	> 6 hr.	> 6 hr.	> 8 hr.	> 6 hr.	> 6 hr.	> 8 hr.	1.9 hr.	> 8 hr.	> 24 hr.	> 8 hr.	> 8 hr.	> 8 hr.	> 8 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 6 hr.	> 8 hr.	> 24 hr.
NT	NR	> 360 min.	NR	ND	NR	NR	NR	NR	17 min.	30 min.	180 min.	> 360 min.	> 360 min.	7 min.	ND	30 min.	120 min.	NR	NR	NT	15 min.	ND	60 min.	30 min.	NT	ND
NT	> 480 min.	18 min.	> 480 min.	39 min.	> 480 min.	> 480 min.	> 480 min.	NT	6 min.	22 min.	NT	60 min.	NT	NT	38 min.	> 480 min.	NT	> 480 min.	> 480 min.	28 min.	14 min.	NT	27 min.	11 min.	NT	2 min.
NT	> 480	64 min.	> 480 min.	> 480 min.	> 480 min.	> 480 min.	134 min.	NT	NT	6 min.	NT	60 min.	NT	NT	NT	> 480 min.	NT	> 480 min.	> 480 min.	373 min.	28 min.	> 480 min.	131 min.	9 min.	NT	92 min.
NT	20 min.	NT	> 480 min.	NT	> 480 min.	> 480 min.	110 min.	NT	NT	1 min.	NT	NT	NT	NT	9 min.	32 min.	NT	> 480 min.	> 480 min.	NT	3 min.	> 480 min.	NT	NT	NT	4 min.
1.1 hr.	NT	14 min.	> 21 hr.	NT	> 8 hr.	NR	NR	> 8 hr.	4 min.	NR	48 min.	33 min.	16 min.	> 13 hr.	NT	39 min.	17 min.	NT	NR	1.3 hr.	11 min.	3.7 hr.	41 min.	8 min.	5.7 hr.	NR
NT	240 min.	120 min.	ND	ND	ND	ND	120 min.	ND	NR	NR	NR	NR	NR	ND	ND	NR	20 min.	ND	ND	NT	10 min.	NR	75 min.	NR	NT	75 min.

ND = None Detected
NR = Not Recommended
NT = Not Tested
> = Greater Than
< = Less Than

SELECTION CHART FOR HEAD PROTECTION FOR UNIVERSITY EMPLOYEES

1. Hard Hat: A rigid head gear of varying materials used to protect the worker's head from impact, penetration, electrical shock, or a combination of these. -

2. Composition: Special plastics, fiberglass and plastics combination, cloth and resin, and aluminum alloy.

3. Types:

    a. Type 1--Helmet (hard hat), full brim. Allows for complete protection of head, face, and back of neck.
    b. Type 2--Helmet (hard hat), brimless with beak. This type is most commonly used and can accommodate various types of face shields and ear protection.

4. Classes: There are four different voltage classes of head protection. University personnel covered under this section shall only be allowed to wear class A and B.

    a. Class A--Limited voltage protection. Used by employees or students in general service (non-electrical) occupations, i.e., construction, landscape, etc.
    b. Class B--High voltage protection. Used by employees in electrical occupations, i.e., electricians.
    c. Class C--Metal helmets. Under no circumstances shall metal helmets be used by University employees or students.
    d. Class D--Firefighters' helmet.

5. Other Forms of Protective Head Gear:

    a. Bump Hats--Shall not be used unless approved by the Office of Campus Safety.
    b. Hair Protection--All employees/students with long hair or beards who work around chains, belts, or other machines with moving parts shall be required to wear protective hair coverings. Hair nets, bandannas, and turbans shall not be considered satisfactory. Contact local vendors for information on the type of protective hair coverings available. Those who work around sparks, hot metals, flames, etc., shall use flame-resistant protective hair coverings.

FOOT PROTECTION CLASSIFICATION AND PROTECTION FACTORS

Classification of Safety Shoes

1. Safety-toe Shoes: Steel toes and metal reinforced sole.

Usage: Areas where heavy, protruding on falling objects presents a threat.

2. Conductive Shoes: Reduces the possibility of generating a spark.
Usage: Areas where fire and explosive hazards exist.

3. Foundry Shoes: Contains no fasteners and is easily removed.
Usage: Areas where exposure to splashes of molten metal is likely.

4. Explosive Operation Shoes: A shoe with non-conductive and grounding properties.
Usage: Areas where explosive compounds are present when cleaning tanks with volatile hydrocarbons.

5. Electrical Hazard Shoes: A shoe which minimizes the hazard of conducting electricity (no metal in shoes).
Usage: Areas where electrical hazards exist.

Listed below are seven types of shoe protection which are available. These shall be considered in determining the type or types of protection needed.

1. Toe Protection from Impact and Compression: Shoes for this type of protection shall meet the rated factors. These factors are rated as Class 30, Class 50, and Class 75. The following table indicates the characteristics of each class:

CLASS	IMPACT*			COMPRESSION
	Weight (W) (pounds)	Height (H) (feet)	Impact Energy (E) (feet/(pounds)	(pounds)
75	50	1.5	75	2,500
50	50	1.0	50	1,750
30	50	0.6	30	1,000

*Impact Energy (E) = Weight (W) x Height (H)

2. Metatarsal Protection: If the top of the foot or ankle is likely to be struck by a heavy object, a metatarsal guard is needed. This type of protection can be added to the shoe or may be built into the shoe. Metatarsal protection is classified MT3O, MT5O, and MT75 to correspond with the protective potential of toe protection.

3. Puncture Protection: The purpose of puncture resistance is to reduce the hazards of puncture wounds caused by sharp objects which could penetrate the sole of the footwear. Puncture resistant footwear shall have a rating designation of PR.

4. Sole Slip Resistance: The purpose of slip resistant footwear is simply to prevent injury due to failure of footwear to resist slipping on slippery surfaces. Most safety shoe manufacturers do not provide a slip resistance rating at this time. This rating is referred to as "Dynamic Coefficient of Adherence." For example:

   0.0 There is no grip at all between the two surfaces.
   0.15 Accepted as a minimum.
   0.20 Very good coefficient.
   0.30 Indicates an outstanding grip.

5. Electrical Hazard Protection: The purpose of this requirement is to reduce hazards due to contact with electrically energized parts. Electrical hazard shoes are not intended for use in explosive or hazardous locations in which conductive foot wear is required. Footwear with this protection may be rated as EH.

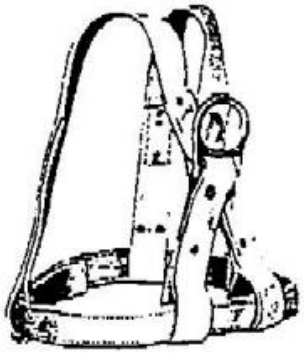
6. Conductive Protection: The purpose of this requirement is to protect against the hazards of static electricity buildup or to facilitate the equalization of electrical potential of personnel (lineman) and energized high voltage lines. Foot wear with this protection may be rated CD Type 1 or Type 2.

7. Upper Shoe Protection: The purpose of this requirement is protection from substances which may be harmful or hazardous penetrating the upper shoe covering and causing discomfort or injury to the foot. The rule of thumb here is that the upper shoe covering shall be able to resist whatever harmful sub stances the worker may spill or contaminate his/her shoes with.

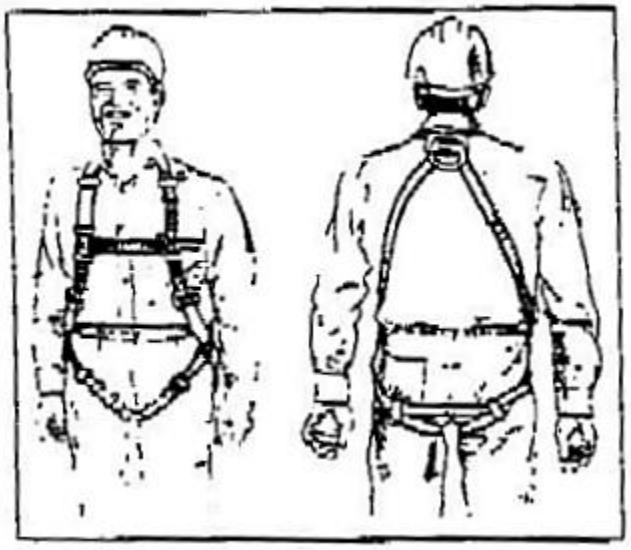
CLASSIFICATION OF SAFETY BELTS AND HARNESSES

Class I: Body belt (work belts), used to restrain a person in a hazardous work position and to reduce the probability of falls.

Class II: Chest harness, used where there are only limited fall hazards (no vertical free-fall hazard) and for retrieval purposes, such as removal of a person from a tank, bin, or other enclosed place.



Class III: Body harness, used to arrest the most severe free-falls. This harness is ideal for workers on elevated sites. During a fall, it distributes the fall impact over the body.



Class IV: Suspension belts, independent work supports used to suspend or support the worker.

Lifeline: A horizontal line between two fixed anchorages.
Support capacity: 5400 lbs.
Line diameter: ½ inch.
Personal Lifeline: This system is usually a rope system that provides flexibility for worker freedom of movement yet will arrest a fall and help absorb the shock. These systems always have some type bf belt or harness that is worn around the waist to which a lanyard or rope-grabbing device is attached.

Lanyard: A short piece of flexible line used to secure wearer of safety belt to a lifeline or dropline, or fixed anchorage.
Support capacity: 5400 lbs.

THRESHOLD LIMIT VALUES FOR NOISE

Duration per Day (hrs)	Sound Level (dBA*)
16	80
8	85
4	90
2	95
1	100
½	105
¼	110
	115**

* Sound level in decibels are measured on a sound level meter, conforming as a minimum to the requirements of the American National Standard Specification for Sound Level Meters, S1.4(1971) Type S2A, and set to use the A-weighted network with slow meter response.

** No exposure to continuous or intermittent in excess of 115 dBA.

Impulsive or Impact

It is recommended that exposure to impulsive or impact noise shall not exceed the limits listed in the table below. No exposures in excess of 140 decibels peak sound pressure level are permitted. Impulsive or impact noise is considered to be those variations in noise levels that involve maxima at intervals of >1 per second. Where the intervals are <1 second, it should be considered continuous.

THRESHOLD LIMIT VALUES IMPULSIVE OR IMPACT NOISE

Sound Level (dB*)	Permitted # of Impulses or Impacts per day
140	100
130	1,000
120	10,000

*Decibels peak sound pressure level; re 20 µPa.

LEVELS OF SOME COMMON SOUNDS

Sound Pressure, P N/m^2 (Pascal)	Sound Pressure Level, L_p dB re 20 $\mu N/m^2$ (µPascal)	Sound Source
100,000 (1 bar)	194	Saturn rocket
20,000.0	180	
	170	
2,000.0	160	Ram jet
	150	Turbo jet
200.0	140	Threshold of pain
	135	
	130	Pipe organ
20.0	120	Riveter, chipper
	110	Punch press
2.0	100	Passing truck
	90	Factory
0.2	80	Noisy office
	70	
0.02	60	Conversational speech
	50	Private office
0.002	40	Average residence
	30	Recording studio
0.0002	20	Whisper
	10	Threshold of good hearing
0.00002	0	Threshold of excellent youthful

RESPIRATORY PROTECTIVE EQUIPMENT

Toxic materials can enter the body in three ways: (1) through the gastrointestinal tract, (2) through the skin, and (3) through the lungs. The human respiratory system presents the quickest and most direct avenue of entry because of its association with the circulatory system and the constant need to oxygenate the tissue cells.

The following information provides background information on different types of respirators and the hazards associated with their use.

When respirators are to be used, the Office of Campus Safety shall be consulted before said use starts. All respirators used on the Louisiana State University campus shall be NIOSH/MSHA approved. No exceptions.

Rules for the Respirator Program

1. If a respirator is required by an OSHA standard or due to overexposure to a contaminant in the workplace, all of the requirements of the respirator program must be met, including medical evaluation, fit testing, maintenance, and program management.

2. If a respirator is required by the organization (i.e., director, manager, supervisor, principle investigator), all of the requirements of the respirator program must be met, including medical evaluation, fit testing, maintenance, and program management.

3. If respirator use is voluntary, LSUA recommends having a medical evaluation, fit testing, and maintenance. Dust masks do not require a medical evaluation or fit testing.

   Note: Voluntary respirator use applies if the employees are not exposed to hazardous agents above the permissible exposure limits, they are not emergency responders, or they are not required by the organization. Voluntary use of respirators is encouraged by Louisiana State University at Alexandria to prevent inhalation of small amounts of potentially harmful agents that are not considered to be at hazardous levels as defined by OSHA.

4. If a respirator is required use as a member of an emergency team, all of the requirements of the respirator program must be met, including medical evaluation, fit testing, maintenance, and program management.

Rules for Maintenance, Care and Use of Respirators

(Does not apply to dust masks)

1. Change filter cartridges or dispose of respirator in accordance with breakthrough times recommended by the manufacturer.

2. Clean facepieces periodically to maintain hygienic conditions using the manufacturer's recommended cleaning product (or isopropyl alcohol, or suitable disinfectant).

Emergency use respirators, respirators used by more than one person, and fit test respirators are to be cleaned after each use.

3. Perform field fit check before each use (see appendix for procedure).

4. Facial hair and glasses shall not interfere with respirator fit.

5. Inspect respirators before each use and replace if defective.

6. Store respirators to prevent contamination, moisture, or damage.

Classification of Respiratory Hazards

1. Oxygen deficiency

2. Gas and vapor contaminants
   a. Immediately dangerous to life or health
   b. Not immediately dangerous to life or health

3. Particulate contaminants (aerosols including dust, fog, fume, mist, smoke, and spray)

4. Combination of gas, vapor, and particulate contaminants
   a. Immediately dangerous to life or health
   b. Not immediately dangerous to life or health

Classification of Respiratory Protection Devices (Respirators)

Respiratory protection devices fall into three classes: (1) air purifying, (2) air supplied, and (3) self-contained breathing apparatus.

1. Air Purifying Devices (Respirators) remove contaminants from the atmosphere and can be used only in atmospheres containing sufficient oxygen to sustain life (at least 16 percent by volume at sea level) and within specified concentration limitations of the specific device. Various chemicals remove specific gases and vapors, and mechanical filters remove particulate matter. The useful life of an air purifying device is dependent upon the concentration of the contaminants, the breathing volume of the wearer, and the capacity of the air purifying medium.

   The basic types of air purifying devices are:

a. Mechanical filter respirators: provides respiratory protection against particulate matter such as non volatile dusts, mists, or metal fumes. Selection of the appropriate respirator is based on the type, toxicity, and particle size of• the particulate matter. Specific types of mechanical filter respirators are approved under USBM Approval Schedule 21 and its revisions.

b. Chemical cartridge respirators: provides respiratory protection against certain gases and vapors in concentrations not in excess of 0.1% (by volume). Specific types of chemical cartridge respirators are approved under USBM Approval Schedule 23 and its revisions.

c. Combinations of chemical cartridge and mechanical filter respirators: provides respiratory protection where exposure is both gaseous and particulate.

d. Gas masks: provides respiratory protection against certain specific gases and vapors in concentrations up to 2% (by volume) or as specified on the canister label and against particulate matter. Specific gas masks are approved USBM Approval Schedule 14 and its revisions.

NOTE: See chart "Color Coding for Air Purifying Respirators."

2. Air Supplied Respirators deliver air through a supply hose connected to the wearer's face piece. These devices shall be used only in atmospheres not immediately dangerous to life or health, unless an auxiliary ingress or egress cylinder is incorporated into the system.

a. Air line respirators are available with or without auxiliary ingress or egress cylinders. The air line respirator is connected to a suitable compressed air source (a purified air compressor and/or cylinder supply system) by a hose and air is delivered in sufficient volume to meet the wearer's breathing requirements.

b. All air supplied respirator systems shall meet OSHA 1910.134 criteria, and no air supplied system shall be used on the LSUA campus without approval from the Campus Safety Officer.

3. Self-Contained Breathing Apparatus (SCBA) provides respiratory protection against toxic gases and oxygen deficient atmospheres. SCBA's are not for underwater use.

Most SCBA5 used on campus consists of a high-pressure air cylinder (15-20 minute air supply), a demand regulator connected by a high-pressure tube to the cylinder, a face piece and tube assembly with an exhalation valve or valves, and a method of mounting the apparatus on the body.

All users of SCBA's shall be trained in its use by a competent instructor.

For more information on training, monitoring, inspection, fit testing, maintenance, and repair requirements, contact the Office of Campus Safety.

COLOR CODING FOR AIR PURIFYING RESPIRATORS

Atmospheric Contaminants to be Protected Against	Colors Assigned*
Acid gases	White
Hydrocyanic acid gas	White with ½" green stripe completely around the canister near the bottom
Chlorine gas	White with ½" yellow stripe completely around the canister near the bottom
Organic vapors	Black
Ammonia gas	Green
Acid gases and ammonia gas	Green with ½" white stripe completely around the canister near the bottom
Carbon monoxide	Blue
Acid gases and organic vapors	Yellow
Hydrocyanic acid gas and chloropicrin vapor	Yellow with ½" blue stripe completely around the canister near the bottom
Acid gases, organic vapors, and ammonia gases	Brown
Radioactive materials, excepting tritium and noble gases	Purple (magenta)
Particulates (dusts, fumes, mists, fogs, or smokes) in combination with any of the above gases or vapors	Canister color for contaminant, as designated above, with ½" gray stripe completely around the canister near the top
All of the above atmospheric contaminants	Red with ½" gray stripe completely around the canister near the top

*Gray shall not be assigned as the main color for a canister designed to remove acids or vapors.

NOTE: Orange shall be used as a complete body or stripe color to represent gases not included in this table. The user shall refer to the canister label to deter mine the degree of protection the canister will afford.

GUIDE SELECTION OF RESPIRATORS

Hazard	Respirator
Oxygen Deficiency	Self-contained breathing apparatus. Hose mask with blower. Combination airline respirator with auxiliary self-contained air supply or an air-storage receiver alarm.
Gas and Vapor Contaminants:	
- Immediately dangerous to life or health (See Note 2)	Self-contained breathing apparatus. Hose mask with blower. Air-purifying, full face piece respirator with chemical canister (gas mask). Self-rescue mouthpiece respirator (for escape only). Combination airline respirator with auxiliary self-contained air supply or an air storage receiver with alarm.
- Not immediately dangerous to life or health	Airline respirator. Hose mask without blower. Air-purifying, half-mask or mouth piece respirator with chemical cartridge.
Particulate Contaminants:	
- Immediately dangerous to life or health (See Note 2)	Self-Contained breathing apparatus. Hose mask with blower. Air-purifying, full face piece respirator with appropriate filter. Self-rescue mouthpiece respirator (for escape only). Combination airline respirator with auxiliary self-contained air supply or an air storage receiver with alarm.
-Not immediately dangerous to life or health filter pad or cartridge.	Air-purifying, half-mask or mouth piece respirator with Airline respirator. Airline abrasive-blasting respirator. Hose mask without blower.
Combination gas, vapor, and particulate contaminates	
-Immediately dangerous to life or health (see Note 2).	Self-contained breathing apparatus. Hose mask with blower. Air-purifying, full face piece respirator with chemical canister and appropriate filter (gas mask with filter). Self-rescue mouthpiece respirator (for escape only).

	Combination air-line respirator with auxiliary self-contained air supply or an air-storage receiver with alarm.
-Not immediately dangerous to life or health	Airline respirator. Hose mask without blower. Air-purifying, half-mask or mouth piece respirator with chemical cartridge and appropriate filter.

(P.P.E.) Disciplinary Policy

Louisiana State University at Alexandria believes that a safety and health Accident Prevention Program is unenforceable without some type of disciplinary policy. Our Agency believes that in order to maintain a safe and healthful workplace, the employees must be cognizant and aware of all Agency, State, and Federal safety and health regulations as they apply to the specific job duties required. The following disciplinary policy is in effect and will be applied to all P.P.E. Violations.

The following steps will be followed unless the seriousness of the violation would dictate going directly to Step 2 or Step 3.

1. A first time violation will be discussed orally between company supervision and the employee. This will be done as soon as possible.

2. A second time offense will be followed up in written form and a copy of this written documentation will be entered into the employee's personnel folder.

3. A third time violation will result in time off or possible termination, depending on the seriousness of the violation.

AUTHORIZED: Robert Karam 08/12/09
Robert Karam *Date*
Executive Director of Facility Services

APPROVED: David P. Manuel 08/24/09
David P. Manuel *Date*
Chancellor

Louisiana State University at Alexandria
PPE Assessment Form

Date _____

Area/Job Assessed _____

Proper PPE to be used

_____

_____

_____

_____

_____

Notes on Area/Job

_____

_____

_____

_____

Campus Safety Officer _____

Maintenance Foreman/Custodial Supervisor/Utility Plant Superintendant

_____

Executive Director of Facility Services _____