

SAFETY MANAGEMENT SYSTEM (SMS) AUDIT

The sample audit and safety inspection checklists contained herein are designed to help you evaluate the quality of your company's safety management system design and performance. It should be revised as need to best meet your organization's needs. SMS audits should be reviewed at least annually to look at each of the critical components of the SMS to determine what is working well and what changes, if any, are needed. When you identify needs that should be addressed, you have the basis for a new safety and health objective for program improvement. This audit does not replace any provision, standard, or rule contained in the OSH Act of 1970.

Does the company have a comprehensive written safety and health program that

addresses the following key elements:
Management commitment;
Employee involvement;
Management and labor accountability;
Incident and accident investigation policy and procedures;
Safety training;
Hazard identification and control; and
Periodic program review?
 Has responsibility for developing and monitoring the safety and health program been delegated to a person or office?
 Has responsibility for carrying out the safety and health program been assigned to all levels of the line organization (managers and supervisors) and employees?
 Are managers and supervisors carrying out their safety and health supervision, training, and enforcement responsibilities?



 responsibilities?
 Is there an accountability system for ensuring managers and supervisors carry out their safety and health supervision, training, and enforcement responsibilities?
 Is there an accountability system for ensuring employees comply with safety and health rules and hazard/injury reporting responsibilities?
 Is there a system that provides communication with affected employees on occupational safety and health matters (meetings, training programs, posting, written communications, a system of hazard reporting, etc.)?
 Does the communication system include provisions designed to encourage employees to inform the employer of hazards at the work site without fear of reprisal?
 Is there a system for identifying and evaluating workplace hazards whenever new substances, processes, procedures, or equipment are introduced into the workplace, and whenever the employer receives notification of a new or previously unrecognized hazard?
 Are periodic inspections for safety and health scheduled and carried out by managers and supervisors, and the safety committee?
 Are inspection records kept which identify unsafe conditions and practices?
 Is there an incident and accident investigation program?
 Are unsafe and unhealthful conditions and work practices corrected immediately, with the most hazardous exposures corrected first?
 Do employees know the safety and health hazards specific to their job assignments?
 Is training provided to all employees when they are first hired and when they receive new job assignments?
 Are training needs of employees evaluated whenever new substances, processes, procedures, or equipment are introduced into the workplace, and whenever the employer received notification of a new or previously unrecognized hazard?
 Are records kept documenting safety and health training for each employee by name or other identifier, training dates, types of training, and training provider?
 Does the employer have a labor-management safety and health committee?



Safety Inspection Checklists

Since OSHA regulations are quite extensive, these audits are by no means all inclusive. You should add to them or delete items which don't apply to your operations. More information regarding rules which may apply to your workplace is available from Federal or State OSHA.

- Abrasive Wheel Equipment Grinders
- Additional VDT Workstation Criteria
- Chemical Exposures
- Compressed Gas and Cylinders
- Compressors and Compressed Gas
- Confined Spaces
- Cranes and Hoists
- Electrical Safety
- Elevated Surfaces
- Emergency Action Plan
- Environmental Controls
- Ergonomics
- Exit or Egress
- Exit Doors
- Eye Protection
- Fire Protection
- Flammable and Combustible Materials
- Floor and Wall Openings
- General Work Environment
- Hand Tools and Equipment
- Hazard Communication
- Hearing Conservation
- Identification of Piping Systems
- Industrial Trucks Forklifts
- Infection Control

- Injury and Illness Prevention Program
- Lockout/Tagout Procedures
- Machine Guarding
- Materials Handling
- Medical Services and First Aid
- Noise
- Personal Protective Equipment and Clothing
- Posting
- Portable Ladders
- Portable (Power-operated) Tools and Equipment
- Recommended VDT Workstation Criteria
- Recordkeeping
- Safety Committees
- Spray Finishing Operations
- Stairs and Stairways
- Tire Inflation
- Transporting Employees and Materials
- Ventilation for Indoor Air Quality
- Video Display Terminals
- Walkways
- Welding, Cutting and Brazing



Abrasive Wheel Equipment Grinders

	Is the work rest used and kept adjusted to within 1/8 inch of the wheel?
	Is the adjustable tongue on the top side of the grinder used and kept adjusted with within 1/4 inch of the wheel?
	Do side guards cover the spindle, nut, flange, and 75 percent of the wheel diameter?
	Are bench and pedestal grinders permanently mounted?
	Are goggles or face shields always worn when grinding?
	Is the maximum RPM rating of each abrasive wheel compatible with the RPM rating of the grinder motor?
	Are fixed or permanently mounted grinders connected to their electrical supply system with metallic conduit or by another permanent wiring method?
	Does each grinder have an individual on/off switch?
	Is each electrically-operated grinder effectively grounded?
	Before mounting new abrasive wheels, are they visually inspected and ring tested?
	Are dust collectors and powered exhausts provided on grinders used in operations that produce large amounts of dust?
	To prevent coolant from splashing workers, are splash guards mounted on grinders that use coolant?
	Is cleanliness maintained around grinders?
Cher	nical Exposures
	Is employee exposure to chemicals kept within acceptable levels?
	Are eyewash fountains and safety showers provided in areas where caustic corrosive chemicals are handled?
	Are all employees required to use personal protective equipment when handling chemicals?
	Are flammable or toxic chemicals kept in closed containers when not in use?

 Where corrosive liquids are frequently handled in open containers or drawn from	ı storage
vessels or pipelines, are adequate means provided to neutralize or dispose of	spills or
overflows?	



Chemical Exposures, continued

	Have standard operating procedures been established, and are they being followed, when cleaning up chemical spills?
	When needed for emergency use, are respirators stored in a convenient, clean, and sanitary location?
	Are emergency-use respirators adequate for the various conditions under which they may be used?
	Are employees prohibited from eating in areas where hazardous chemicals are present?
	Is personal protective equipment provided, used, and maintained whenever necessary?
	Are there written standard operating procedures for selecting and using respirators where needed?
	Are employees instructed on the correct usage and limitations of respirators?
	Are the respirators NIOSH-approved for each particular application?
	Are respirators inspected and cleaned, sanitized, and maintained regularly?
	Are employees familiar with Threshold Limit Value (TLV) or Permissible Exposure Limit (PEL) of airborne contaminants and physical agents used in your workplace?
	Have industrial hygienists or environmental health specialists evaluated your work operations?
	If internal combustion engines are used, is carbon monoxide kept within acceptable levels?
	Is vacuuming used rather than blowing or sweeping dusts whenever possible for cleanups?
Com	pressors and Compressed Air
	Are compressors equipped with pressure-relief valves and pressure gauges?
	Are compressor air intakes installed and equipped to ensure that only clean, uncontaminated air enters the compressor?
	Are air filters installed on the compressor intake?
	Are compressors operated and lubricated in accordance with the manufacturer's



recommendations?

Compressors and Compressed Air, continued

	Are safety devices on compressed air systems check frequently?
	Before any repair work is done on the pressure systems of the compressor, is the pressure bled off and the system locked out?
	Are signs posted to warn of the automatic starting feature of the compressors?
	Is the belt drive system totally enclosed to provide protection on the front, back, top, and sides?
	Is it strictly prohibited to direct compressed air toward a person?
	Are employees prohibited from using compressed air (at over 29 psi) for cleaning purposes?
	Are employees prohibited from cleaning off clothing with compressed air?
	When using compressed air for cleaning, do employees use personal protective equipment?
	Are safety chains or other suitable locking devices used at couplings of high-pressure hose lines where a connection failure would create a hazard?
	Before compressed air is used to empty containers of liquid, is the safe working pressure of the container checked?
	When compressed air is used with abrasive blast cleaning equipment, is the operating valve a type that must be held open manually?
	When compressed air is used to inflate auto tires, is a clip-on chuck (and an inline regulator present to 40 psi) required?
	Is it prohibited to use compressed air to clean up or move combustible dust, if such action could cause the dust to be suspended in the air and cause a fire or explosion?
	If plastic piping is used, is it the plastic approved for air-line service? (ABS is Okay; PVC is not)
Com	pressed Gas & Cylinders
	Are cylinders with water-weight capacity over 30 pounds equipped with means for



	connecting a valve protector or device, or with a collar or recess to protect the valve?
	Are cylinders legibly marked to clearly identify the gas contained?
	Are compressed gas cylinders located or stored in areas where they will not be damaged by passing or falling objects or be subject to tampering by unauthorized persons?
Com	pressed Gas & Cylinders, continued
	Are cylinders containing liquefied fuel gas stored or transported in a position so that the safety relief device is always in direct contact with the vapor space in the cylinder?
	Are valve protectors always placed on cylinders when the cylinders are not in use or connected for use?
	Are all valves closed off before a cylinder is moved, when the cylinder is empty, and the completion of each job?
	Are low-pressure fuel-gas cylinders checked periodically for corrosion, general distortion, cracks, or any other defect that might indicate a weakness or render them unfit for service?
	Does the periodic check of low-pressure fuel-gas cylinders include a close inspection of the bottom of each cylinder?
Conf	ined Spaces
	Is there a written permit confined space program?
	Is the program available for inspection?
	Are confined spaces thoroughly emptied of any corrosive or hazardous substances, such as acids or caustics, before entry?
	Before entry, are all pipelines to a confined space containing inert, toxic, flammable, or corrosive materials valves off and blanked or disconnected and separated?
	Are all impellers, agitators, or other moving equipment inside confined spaces locked out if they present a hazard?
	Is either natural or mechanical ventilation provided prior to confined space entry?
	Before entry, are appropriate atmospheric tests performed to check for oxygen deficiency, toxic substances, and explosive concentrations in the confined space?



	Is the atmosphere inside the confined space frequently tested or continuously monitored during the work process?
	Is there an attendant standing by outside the confined space, whose sole responsibility is to watch the work in progress, sound an alarm if necessary, and help render assistance?
	Are the attendant or other employees prohibited from entering the confined space without lifelines and respiratory equipment if there is an emergency?
Conf	ined Spaces, continued
	Are all rescuers appropriately trained and using approved, recently inspected equipment?
	Does all rescue equipment allow for lifting employees vertically through a top opening?
	Are rescue personnel first and CPR-trained and immediately available?
	Is there an effective communication system in place whenever respiratory equipment is used, and the employee in the confined space is out of sight of the attendant?
	Is approved respiratory equipment required if the atmosphere inside the confined space cannot be made acceptable?
	Is all portable electrical equipment used inside confined spaces either grounded and insulated or equipped with ground-fault protection?
	Before gas welding or burning is started in a confined space, are hoses checked for leaks, compressed gas bottles forbidden inside the confined space, torches lighted only outside the confined space area, and the confined space area tested for an explosive atmosphere each time before a lighted torch is taken into the confined space?
	When using oxygen-consuming equipment (such as salamanders, torches, furnaces) in a confined space, is air provided to assure combustion without reducing the oxygen concentration of the atmosphere below 19.5 percent by volume?
	Whenever combustion-type equipment is used in a confined space, are provisions made to ensure that the exhaust gases are vented outside the enclosure?
	Is each confined space checked for decaying vegetation or animal matter which may produce methane?
	Is the confined spaced checked for possible industrial waste which could contain toxic



	properties?
	If the confined space is below the ground and near areas where motor vehicles are operating, is it possible for vehicle exhaust or carbon monoxide to enter the space?
Cran	es and Hoists
	Are cranes visually inspected for defective components prior to the start of any work shift?
	Are all electrically-operated cranes effectively grounded?
 Cran	Is a crane preventive maintenance program established? es and Hoists, continued
	Is the load chart clearly visible to the operator?
	Are all operators trained, and provided with the operator's manual for the particular crane being operated?
	Have construction industry crane operators been issued a valid operator's card?
	Are operating controls clearly identified?
	Is a fine extinguisher provided at the operator's station?
	Is the rated capacity visibly marked on each crane?
	Is an audible warning device mounted on each crane?
	Are cranes with booms that could fall over backward, equipped with boom stops?
	Does each crane have a certificate indicating that testing and examinations have been performed?
	Are crane inspection and maintenance records maintained and available for inspection?
Elect	rical Safety
	Are workplace electricians familiar with the OSHA electrical safety code?
	Are contractors responsible for compliance with all OSHA rules related to contract work being accomplished?



	Are all employees required to report (as soon as practical) any obvious hazard to life or property observed in connection with electrical equipment or lines?
	Are employees instructed to make preliminary inspections and/or appropriate tests to determine what conditions exist before starting work on electrical equipment or lines?
	When electrical equipment or lines are to be serviced, maintained, or adjusted, are necessary switches opened, locked out, and/or tagged?
	Are portable hand-held electrical tools and equipment grounded or else are they of the double-insulated type?
	Are electrical appliances such as vacuum cleaners, polishers, and vending machines grounded?
	Do extension cords have a grounding conductor?
Elect	rical Safety, continued
	Are multiple plug adapters prohibited?
	Are ground-fault circuit interrupters installed on each temporary 15 or 20 ampere, 120-volta AC circuit at locations where construction, demolition, modifications, alterations, or excavations are being performed?
	Are all temporary circuits protected by suitable disconnecting switches or plug connectors at the junction with permanent wiring?
	Is exposed wiring and cords with frayed or deteriorated insulation repaired or replaced promptly?
	Are flexible cords and cables free of splices or taps?
	Are clamps or other securing means provided on flexible cords or cables at plugs, receptacles, tools, equipment, and is the cord jacket securely held in place?
	Are all cords, cable, and raceway connections intact and secure?
	In wet or damp locations, are electrical tools and equipment appropriate for the use or locations (otherwise protected)?
	Is the location of electrical power lines and cables (overhead, underground, underfloor, other side of walls) determined before digging, drilling, or similar work is started?

	Is the use of metal measuring tapes, ropes, hand lines, or similar devices with metallic thread woven into the fabric, prohibited where these could come into contact with energized parts of equipment or circuit conductors?	
	Is the use of metal ladders prohibited in areas where the ladder or the person using the ladder could come into contact with energized parts of equipment, fixtures, or circuit conductors?	
	Are all disconnecting means always opened before fuses are replaced?	
	Do all interior wiring systems include provisions for grounding metal parts or electrical raceways, equipment, and enclosures?	
	Are all electrical raceways and enclosures securely fastened in place?	
	Are all energized parts of electrical circuits and equipment guarded against accidental contact by approved cabinets or enclosures?	
	Is sufficient access and working space provided and maintained around all electrical equipment to permit ready and safe operations and maintenance?	
	Are all unused openings (including conduit knockouts) of electrical enclosures and fittings closed with appropriate covers, plugs or plates?	
Electrical Safety, continued		
	Are electrical enclosures such as switches, receptacles, and junction boxes provided with tight-fitting covers or plates?	
	Are employees prohibited from working alone on energized lines or equipment over 600 volts?	
	Are employees forbidden from working closer than 10 feet of high-voltage (over 750 volts) line?	
Eleva	ated Surfaces	
	Are signs posted, when appropriate, showing elevated floor load capacity?	
	Are elevated surfaces (more than four feet above the floor or ground) provided with standard guardrails?	
	Are all elevated surfaces (beneath which people or machinery could be exposed with fall	

	objects) provided with standard toeboards?
	Is a permanent means of access/egress provided to elevated work surfaces?
	Is material on elevated surfaces piled, stacked, or racked in a manner to prevent tipping, falling, collapsing, rolling, or spreading?
	Are dock boards or bridge plates used when transferring materials between docks and trucks or railcars?
	When in use, are dock boards or bridge plates secured in place?
Emei	rgency Action Plan
	Has an emergency action plan been developed?
	Have emergency escape procedures and routes been developed and communicated to all employees?
	Do employees who must remain to operate critical plant operations before evacuating know the proper procedures?
	Is the employee alarm system that provides warning for emergency action recognizable and perceptible above ambient conditions?
	Are alarm systems properly maintained and tested regularly?
	Is the emergency action plan reviewed and revised periodically?
	Do employees know their responsibilities for reporting emergencies, actions during an emergency, and performing rescue and medical duties?
Envir	onmental Controls
	Are all work areas properly lighted?
	Are hazardous substances identified which may cause harm by inhalation, ingestion, skin absorption, or contact?
	Are employees aware of the hazards involved with the various chemicals they may be exposed to in their environment, such as ammonia, chlorine, explosives, and caustics?
	Is the work area's ventilation system appropriate for the work being performed?

	Are proper precautions being taken when handling asbestos and other fibrous materials?
	Are caution labels and signs used to warn of asbestos?
	Is the possible presence of asbestos determined prior to the beginning of any repair, demolition, construction, or reconstruction work?
	Are asbestos-covered surfaces kept in good repair to prevent release of fibers?
	Are wet methods used (when practicable) to prevent emission of airborne asbestos fibers, silica dust, and similar hazardous materials?
	Is vacuuming with appropriate equipment conducted, rather than blowing or sweeping dust?
	Are grinders, saws, and other machines that produce respirable dusts vented to an industrial collector or central exhaust system?
	Are all local exhaust ventilation systems designed and operated properly (at the airflow and volume necessary) for the application? Are the ducts free of obstructions? Have you checked to ensure that the belts are not slipping?
	Is personal protective equipment provided, used, and maintained whenever required?
	Are there written standard operating procedures for the selection and use of respirators?
	Are restrooms and washrooms kept clean and sanitary?
	Use all water (provided for drinking, washing, and cooking) potable?
	Are all outlets for water (that is not suitable for drinking) clearly identified?
	Are employees instructed in the proper manner of lifting heavy objects?
Envir	ronmental Controls, continued
	Where heat is a problem, have all fixed work areas been provided with a proper means of cooling?
	Are employees working on streets and roadways, where they are exposed to the hazards of traffic, required to wear high-visibility clothing?
	Are exhaust stacks and air intakes located so that contaminated air will not be recirculated



within a building or other enclosed area?

Ergonomics

 Are workstations and tasks assessed for ergonomics hazards?
 Is a medical surveillance program established to detect possible ergonomic injuries and hazards early-on?
 Can the work be performed without eye strain or glare to employees?
 Can the task be done without repetitive lifting of the arms above the shoulder level?
 Can the task be done without the worker having to hold his or her elbows out and away from the body?
 Can workers keep their hand and wrists in a neutral position when working?
 Are mechanical assists available to the worker performing materials-handling tasks?
 Can the task be done without having to stoop the neck and shoulders to view the work?
 Are pressure points on any part of the body (wrists, forearms, back of thighs) being avoided?
 Can the work be done using the larger muscles of the body?
 Are there sufficient rest breaks, in addition to the regular rest breaks, to relieve stress from repetitive motion tasks?
 Are tools, instruments and machinery shaped, positioned, and handled so that tasks can be performed comfortably?
 Are all pieces of furniture adjusted, positioned, and arranged to minimize strain on the body?
Are unnecessary distances eliminated when moving materials?



Ergonomics, continued

	Are lifts confined within the knuckle to shoulder zone?
	Does the task require fixed work postures?
	Is work arranged so that workers are not required to lift and carry to much weight?
	If workers have to push or pull objects using great amounts of force, are mechanical aids provided?
Exit	or Egress
	Are all exits marked with an exit sign and illuminated by a reliable light source?
	Are the directions to exits, if not immediately apparent, marked with visible signs?
	Are doors, passageways, or stairways, that are neither exits nor access to exits and which could be mistaken for exits, appropriately marked "NOT AN EXIT," or "TO BASEMENT," "STOREROOM" and the like?
	Are exit signs provided with the word "EXIT" in lettering at least five inches high and the stroke of the lettering at least 1/2 inch wide?
	Are exit doors side-hinged?
	Are all exits kept free of obstructions and unlocked?
	Are at least two means of egress provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?
	Are there sufficient exits to permit prompt escape in case of emergency?
	Are the number of exits from each floor of a building and the number of exits from the building itself appropriate for the building occupancy load?
	When workers must exit through glass doors, storm doors and such, are the doors fully tempered and meeting safety requirements for human impact?



Exit Doors

	Are doors which are required to serve as exits designed and constructed so that the way of exit travel is obvious and direct?
	Are windows (which could be mistaken for exit doors) made inaccessible by barriers or railing?
	Are exit doors able to open from the direction of exit travel without the use of a key or any special knowledge or effort?
	Is a revolving, sliding, or overhead door prohibited from serving as a required exit door?
	When panic hardware is installed on a required exit door, will it allow the door to open by applying a force of 15 pounds or less in the direction of the exit traffic?
	Are doors on cold-storage rooms provided with an inside release mechanism which will release the latch and open the door even if it is padlocked or otherwise locked on the outside?
	When exit doors open directly onto any street, alley, or other areas where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping directly into the path of traffic?
	Are doors that swing in both directions and are located between rooms where there is frequent traffic, provided with viewing panels in each door?
Fire I	Protection
	Does the company have a written fire prevention plan?
	Does the plan describe the type of fire protection equipment and/or systems used?
	Have practices and procedures been established to control potential fire hazards and ignition sources?
	Are employees aware of the fire hazards of the materials and processes to which they are exposed?
	Is the local fire department well acquainted with company facilities, location, and specific hazards?
	Is the fire alarm system tested as required?



	Are sprinkler heads protected by metal guards when exposed to physical damage?
Fire I	Is proper clearance maintained below sprinkler heads? Protection, continued
	Are portable fire extinguishers mounted in readily assessable locations?
	Are fire extinguishers mounted in readily assessable locations?
	Are fire extinguishers recharged regularly and then noted on the inspection tag?
	Are employees trained in the use of extinguishers and fire protection procedures?
Flam	mable and Combustible Materials
	Are combustible scrap, debris, and waste materials stored in covered metal receptacles, and removed from the work site promptly?
	Are proper storage methods used to minimize the risk of fire and spontaneous combustion?
	Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?
	Are all connections on drums and combustible liquid piping (vapor and liquid) tight?
	Are all flammable liquids kept in closed containers when not in use?
	Are bulk drums of flammable liquids grounded and bonded to containers during dispensing?
	Do storage rooms for flammable and combustible liquids have explosion-proof lights?
	Do storage rooms for flammables and combustible liquids have mechanical or gravity ventilation?
	Are safe practices followed when liquid petroleum gas is stored, handled, and used?
	Are liquefied petroleum storage tanks guarded to prevent damage from vehicles?
	Are all solvent wastes and flammable liquids kept in fire-resistant, covered containers untithey are removed from the work site?

	Is vacuuming used whenever possible, rather than blowing or sweeping combustible dust?
	Are fire separators placed between containers of combustibles or flammables when stacked on upon another (to assure their support and stability)?
Flam	mable and Combustible Materials, continued
	Are fuel-gas cylinders and oxygen cylinders separated by distance, fire-resistant barriers, or other means while in storage?
	If a Halon 1301 fire extinguisher is used, can employees evacuate within the specified time (for that extinguisher)?
	Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids, and within 10 feet of any inside storage area for such materials?
	Is the transfer/withdrawal of flammable or combustible liquids performed by trained personnel?
	Are fire extinguishers mounted so that employees do not have to travel more than 75 feet for a Class A fire or 50 feet for a Class B fire?
	Are employees trained in the use of fire extinguishers?
	Are all extinguishers serviced, maintained, and tagged at intervals not to exceed one year? Is a record maintained of required monthly checks of extinguishers?
	Are all extinguishers fully charged and in their designated places? Are extinguishers free from obstruction or blockage?
	Where sprinkler systems are permanently installed, are the nozzle heads directed or arranged so that water will not be sprayed into operating electrical switchboards and equipment?
	Are "NO SMOKING" signs posted where appropriate in areas where flammable or combustible materials are used or stored?
	Are "NO SMOKING" signs posted on liquefied petroleum gas tanks?
	Are "NO SMOKING" rules enforced in areas involving storage and use of flammable materials?

 Are safety cans used (for dispensing flammable or combustible liquids) at the point of use?	
 Are all spills of flammable or combustible liquids cleaned up promptly?	



Floor & Wall Openings

	Are floor holes or openings guarded by a cover, guardrail, or equivalent on all sides (except at entrance to stairways or ladders)?
	Are toeboards installed around the edges of a permanent floor opening (where persons may pass below the opening)?
	Are skylight screens of such construction and mounting that they will withstand a load of at least 200 lbs.?
	Is the glass in windows, doors, and glass walls (which may be subject to human impact) of sufficient thickness and type for all conditions of use?
	Are grates or similar covers over floor openings, such as floor drains, of such design that foot traffic or rolling equipment will not be caught by the grate spacing?
	Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?
Gene	eral Work Environment
	Are all work sites clean and orderly?
	Are work surfaces kept dry or appropriate means taken to assure the surfaces are slip-resistant?
	Are all spilled materials or liquids cleaned up immediately?
	Is combustible scrap, debris, and waste stored safely and removed from the worksite promptly?
	Are covered metal waste cans used for oily and paint-soaked waste?
	Are the minimum number of toilets and washing facilities provided?
	Are all toilets and washing facilities clean and sanitary?
	Are all work areas adequately lighted?



Hand Tools & Equipment

	Are all tools and equipment (both company and employee-owned) in good working condition?
	Are hand tools such as chisels or punches (which develop mushroomed heads during use) conditioned or replaced as necessary?
	Are broken or fractured handles on hammers, axes, or similar equipment replaced promptly?
	Are appropriate handles used on files and similar tools?
	Are appropriate safety glasses, face shields, and similar equipment used while using hand tools or equipment which might produce flying materials or be subject to breakage?
	Are jacks checked periodically to assure that they are in good operating condition?
	Are tool handles wedged tightly in the head of all tools?
	Are tool-cutting edges kept sharp so the tool will move smoothly without binding or skipping?
	Is eye and face protection used when driving hardened or tempered tools, bits, or nails?
Haza	ard Communication
	Have you compiled a list of hazardous substances that are used in your workplace?
	Is there a written hazard communications program dealing with Safety Data Sheets (SDS), labeling, and employee training?
	Is there a person designated responsible for SDSs, container labeling, and employee training?
	Is each container for hazardous substances (vat, bottles, and storage tanks) labeled with product identity and an appropriate hazard warning (communicating the specific health hazard and physical hazards)?
	Is there an SDS readily available for each hazardous substance used?
	How are employees of other employers (contractors, etc.) informed of hazardous

substances and labeling etc.?
 Is a hazard communication training program in place?



Hazard Communication, continued

	Does the written hazard communication program contain all information required in OSHA safety and health standards?
	Are employees familiar with the hazardous chemicals they use daily, including emergency procedures?
	Are SDSs placed and made readily available in a central location where most of the work is being accomplished?
Hear	ring Conservation
	Are there areas in the workplace where continuous noise levels exceed 85 dBA?
	Are noise levels being measured using a sound level meter or an octave band analyzer, and records of these levels being kept?
	Has the company tried isolating noisy machinery from the rest of your operation?
	Have engineering controls been used to reduce excessive noise?
	Where engineering controls are not feasible, are administrative controls (worker rotation) being used to minimize individual employee exposure to noise?
	Is there an ongoing preventive health program to educate employees in safe levels of noise and exposure, effects of noise on their health, and use of personal protection?
	Are employees who are exposed to continuous noise above 85 dBA retrained annually?
	Have work areas (where noise levels make voice communication difficult) been identified and posted?
	Is approved hearing protection equipment (noise attenuating devices) used by every employee working in areas where noise levels exceed 90 dBA?
	Are employees properly fitted, and instructed in the proper use and care of hearing protection?
	Are employees exposed to continuous noise above 85 dBA given periodic audiometric testing to ensure that the company has an effective hearing protection system?



Infection Control

 Are employees potentially exposed to infectious agents in body fluids?
 Have occasions of potential occupational exposure been identified and documented?
 Has a training and information program been provided for employees exposed to or potentially exposed to blood or other body fluids?
 Have infection control procedures been instituted where appropriate, such as ventilation, universal precautions, workplace practices, and personal protective equipment?
 Are employees aware of specific workplace practices to follow when appropriate (handwashing, handling sharp instruments, handling laundry, disposing contaminated materials, reusable equipment, etc.)?
 Is personal protective equipment provided to employees, and in all appropriate locations?
 Is the necessary equipment (mouthpieces, resuscitation bags, and other ventilation devices) provided for administering mouth-to-mouth resuscitation on potentially infected patients?
 Are facilities/equipment to comply with workplace practices available, such as handwashing sinks, biohazard tags and labels, sharps containers, and detergents/disinfectants to clean up spills?
 Are all equipment and environmental and working surfaces cleaned and disinfected after contact with blood or potentially infectious materials?
 Is infectious waste place in closable, leak-proof holders with proper labels?
 Has medical surveillance including HBV evaluation, antibody testing, and vaccination been made available to potentially exposed employees?
 How often is training done and does it cover: universal precautions, personal protective equipment, workplace practices, needlestick exposure/management, and Hepatitis B vaccination?



Industrial Trucks – Forklifts

	Are only trained personnel allowed to operate industrial trucks?
	Is substantial overhead protective equipment provided on high-lift rider equipment?
	Are the required lift-truck operating rules posed and enforced and is the capacity rating posed in plain view of the operator?
	Is directional lighting provided on each industrial truck that operates in an area with less than two foot-candles per square foot of general lighting?
	Does each industrial truck have a warning horn, whistle, gong, or other device which can be clearly heard above the normal noise in the area where operated?
	Are the brakes on each industrial truck capable of bring the vehicle to a complete and safe stop when fully loaded?
	Will the industrial truck's parking brake effectively prevent the vehicle from moving when unattended?
	Are industrial trucks operating in areas where flammable gases or vapors, combustible dust, or ignitable fibers may be present in the atmosphere, approved for such locations?
	Are motorized hand and hand/rider trucks so designed that the brakes are applied and power to the drive motor shuts off when the operator releases his/her grip on the device that controls the travel?
	Are industrial trucks with internal combustion engines (and operated in building or enclosed areas) carefully checked to ensure such operation do not cause harmful concentrations of dangerous gases or fumes?
Injur	y and Illness Prevention Program
	Is top management commitment evident?
	Is there a system in place to identify and control workplace hazards?
	Are systems in place to ensure management and labor accountability?
	Managers are generally accountable for safety supervision, training, and enforcement of safety and health rules.

 Employees are generally accountable for complying with safety and health rules, reportir	ng
hazards, and reporting injuries.	



Injury and Illness Prevention Program, continued

	Are procedures in place to investigate workplace accidents?
	Is safety and health training provided for management and employees?
	Are procedures in place to encourage and promote employee involvement in the safety and health program?
	Does management periodically evaluate the safety and health program?
Lock	out/Tagout Procedures
	Is all machinery or equipment (capable of movement) required to be de-energized or disengaged and locked out during cleaning, servicing, adjusting, or setting-up operations?
	Is it prohibited to lock out control circuits in lieu of locking out main power disconnects?
	Are all equipment control valve handles provided with a means of lock out?
	Does the lockout/tagout procedure require that stored energy (i.e., mechanical, hydraulic, air) be released or blocked before equipment is locked out for repairs?
	Are appropriate employees provided with individually keyed personal safety locks?
	Are employees required to keep personal control of their keys(s) while they have safety locks in use?
	Is it required that employees check the safety of the lockout by attempting to start up after making sure no one is exposed?
	Where the power disconnecting means for equipment does not also disconnect the electrical control circuit:
	Are the appropriate electrical enclosures identified?
	Are means provided to assure the control circuit can also be disconnected and locked out?



Machine Guarding

 Is there an employee training program for safe methods of machine guarding?
 Is there adequate supervision to ensure that employees are following safe machine operating procedures?
 Is there a regular program of safety inspection for machinery and equipment?
 Is all machinery and equipment clean and properly maintained?
 Is sufficient clearance provided around and between machines to allow for safe operations set up and servicing, material handling, and waste removal?
 Is equipment and machinery securely placed and anchored when necessary to prevent tipping or other movement that could result in personal injury?
 Is there a power shut-off switch within reach of the operator's position at each machine?
 Are the non-current-carrying metal parts of electrically operated machines bonded and grounded?
 Are foot-operated switches guarded or arranged to prevent accidental actuation by personnel or falling objects?
 Are manually operating valves and switches (controlling the operation of equipment and machines) clearly identified and readily accessible?
 Are all emergency-stop buttons colored red?
 Are all pulleys and belts (that are located within seven feet of the floor or working level) properly guarded?
 Are all moving chains and gears properly guarded?
 Are methods provided to protect the operator and other employees in the machine area from hazards created at the point of operation, ingoing nip points, rotating parts, flying chips, and sparks?
 Are machinery guards secured and arranged so they do not offer a hazard in their use?
 If special hand tools are used for placing and removing material, do they protect the operator's hands?





Machine Guarding, continued

	Are revolving drums, barrels, and containers (required to be guarded by an enclosure that is interlocked with the drive mechanism so that revolution cannot occur) guarded?
	Do arbors and mandrels have firm and secure bearings, and are they free from play?
	Are provisions made to prevent machines from automatically starting when power is restored (following a power failure or shutdown)?
	Are machines constructed to be free from excessive vibration (when the largest size tool is mounted and run at full speed)?
	If machinery is cleaned with compressed air, is air pressure controlled and personal protective equipment or other safeguards used to protect operators and other workers from eye and body injury?
	Are fan blades protected with a guard having openings no larger than 1/2 inch when operating within seven feet of the floor?
	Are saws used for ripping equipped with anti-kickback devices and spreaders?
	Are radial arm saws guarded and so arranged that the cutting head will gently return to the back of the table when released?
Mate	erials Handling
	Are materials stored in a manner to prevent sprain or strain injuries to employees when retrieving the materials?
	Is there safe clearance for equipment through aisles and doorways?
	Are aisleways permanently marked, and kept clear to allow safe passage?
	Are motorized vehicles and mechanized equipment inspected daily or prior to use?
	Are containers of combustibles or flammables, when stacked while being moved, always separated by dunnage sufficient to provide stability?
	Are dock boards (bridge plates) used when loading and unloading operations are taking place between vehicle and docks?
	Are trucks and trailers secured from movement during loading and unloading?



	Are hand trucks maintained in safe operating condition?
Materials Handling, continued	
	Are chutes equipped with side boards of sufficient height to prevent materials from falling off?
	Are chutes and gravity roller sections firmly placed or secured to prevent displacement?
	At the delivery end of rollers or chutes, are provisions made to brake the movement of materials?
	Are materials handled at a uniform level to prevent lifting or twisting injuries?
	Are material-handling aids used to lift or transfer heavy or awkward objects?
	Are pallets usually inspected before loading and/or moving?
	Are hooks with safety latches or other devices used when hoisting materials so that slings or load attachments won't accidentally slip off the hoist hooks?
	Are securing chains, ropes, chokers or slings adequate for the job being performed?
	When hoisting materials or equipment, are provisions made to ensure that no one will be passing under suspended loads?
Med	ical Services and First Aid
	Has an emergency medical plan been developed?
	Are emergency phone numbers posted?
	Are first aid kits easily accessible to each work area, with necessary supplies available, periodically inspected and replenished as needed?
	Are means provided for quick drenching of flushing of the eyes and body in areas where caustic or corrosive liquids or materials are handled?



Personal Protective Equipment & Clothing

 Are jobs or tasks assessed for hazards that require personal protective equipment?
 Are hazard assessments properly certified?
 Is training on the use, care and disposal of PPE conducted and documented?
 Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?
 Are approved safety glasses required to be worn at all times in areas where there is risk of eye injury such as punctures, abrasions, contusions, or burns?
 Are protective gloves, aprons, shields, or other protection provided against cuts, corrosive liquids, and chemicals?
 Are hard hats provided and worn where danger of flying or falling objects exists?
 Are hard hats inspected periodically for damage to the shell and suspension system?
 Is appropriate foot protection required where there is risk of foot injury from hot, corrosive, poisonous substances, falling objects, crushing, or penetrating actions?
 Are approved respirators provided for regular or emergency use where needed?
 Is all protective equipment maintained in a sanitary condition and ready for use?
 Are eyewash facilities and quick-drench showers within a work area where employees are exposed to caustic or corrosive materials?
 When lunches are eaten on the premises, are they eaten in areas where there is no exposure to toxic materials or other health hazards?
 Is protection against the effects of occupational noise exposure provided when sound levels exceed those of the OSHA noise and hearing conservation standard?



Piping Systems

	When non-potable water is piped through a facility, are outlets or taps posed to alert employees that it is unsafe and not to be used for drinking, washing, or personal use?
	When hazardous substances are transported through above-ground piping, is each pipeline identified?
	Have asbestos-covered pipelines been identified?
	When pipelines are identified by colored paint, are all visible parts of the line well identified?
	When pipelines are identified by color-painted bands or tapes, are these located at reasonable intervals, at each outlet, valve, or connection?
	When the contents of pipelines are identified by name or abbreviations, is the information readily visible on the pipe near each valve or outlet?
	When pipelines carrying hazardous substances are identified with tabs, are the tags constructed of durable material, the message clearly and permanently distinguishable, and tags installed at each valve or outlet?
	When pipelines are heated by electricity, steam, or other external source, are suitable warning signs or tags placed at unions, valves, or other serviceable parts of the system?
Posti	ing
	Is the required OSHA safety poster(s) displayed in a prominent location where all employees are likely to see it?
	Are other OSHA posters and notices properly displayed, such as:
	Field Sanitation Notice for farm workers? Safety Committee meeting minutes with attachments? OSHA 300 Log Summary as required? Citations?
	Are emergency telephone numbers posted where they can be readily used in case of emergency?
	Where employees may be exposed to any toxic substances or harmful physical agents, has appropriate information concerning employee access to medical and exposure records and



	Safety Data Sheets (SDS) been posted or otherwise made readily available to affected employees?
	Are signs regarding exits from buildings, room capacity, floor loading, exposure to x-ray, microwave, or other harmful radiation or substances posted where required?
Port	able Ladders
	Are all ladders maintained in good condition, joints between steps and side rails tight, all hardware and fittings securely attached, and moveable parts operating freely without binding or undue play?
	Are nonslip safety feet provided on each ladder including metal or rung ladders?
	Are ladder rungs and steps free of grease and oil?
	Is it prohibited to place a ladder in front of doors opening toward the ladder except when the door is blocked open, locked, or guarded?
	Is it prohibited to place ladders on boxes, barrels, or other unstable bases to obtain additional height?
	Are employees instructed to face the ladder when ascending/descending?
	Are employees prohibited from using ladders that are broken, missing steps, rungs or cleats, broken side rails, or other faulty equipment?
	Are employees instructed not to use the top step of ordinary stepladders as a step?
	When portable rung ladders are used to gain access to elevated platforms, roofs, and the like, does the ladder always extend at least three feet above the elevated surface?
	Is it required that when portable rung or cleat-type ladders are used, the base is so placed that slipping will not occur, or it is lashed or otherwise held in place?
	Are portable metal ladders legibly marked with signs reading "CAUTION - Do Not Use Around Electrical Equipment" or equivalent wording?
	Are rungs of ladders uniformly spaced at 12 inches, center to center?
Port	able (Power-Operated) Tools & Equipment
	Are grinders, saws, and similar equipment provided with appropriate safety guards?
	Are power tools used with the shield or guard recommended by the manufacturer?



	Are portable circular saws equipped with guards above and below the base shoe?
	Are circular saw guards checked to assure guarding of the lower blade portion?
	Are rotating or moving parts of equipment guarded to prevent physical contact?
Porta	able (Power-Operated) Tools & Equipment, cont.
	Are all cord-connected, electrically operated tools and equipment effectively grounded or of the approved double-insulated type?
	Are effective guards in place over belts, pulleys, chains, and sprockets on equipment such as concrete mixers, air compressors, and the like?
	Are portable fans provided with full guards having openings of 1/2 inch or less?
	Is hoisting equipment available and used for lifting heavy objects, and are hoist ratings and characteristics appropriate for the task?
	Are ground-fault circuit interrupters (provided on all temporary 15 and 20 ampere circuits) used during periods of construction?
	Are pneumatic and hydraulic hoses on power-operated tools checked regularly for deterioration or damage?
Reco	ordkeeping
	Are all occupational injuries and illnesses, except minor injuries requiring only first aid, being recorded as required on the OSHA Form 200?
	Are copies of the OSHA Form 200 and First Report of Injury, Form 101, kept for five years?
	Have arrangements been made to maintain required records for the legal period of time for each specific type of record?
	Are operating permits and records current for such items as elevators, pressure vessels, and liquefied petroleum gas tanks?
	Are employee safety and health training records maintained?
	Is documentation of safety inspections and corrections maintained?

Safety Committees

	Is an active safety committee in place and composed of members according to State OSHA safety and health rules?
	Are records kept documenting safety and health training for each employee by name or other identifier, training dates, type(s) of training, and training provider?
	Does the committee meet at least once a month or as often as required by State OSHA safety and health rules?
	Is a written record of safety committee meetings distributed to affected employees, and maintained for review according to State OSHA safety and health rules?
Safet	ry Committees, cont.
	Does the safety committee conduct regular safety inspections or audits?
	Does the safety committee review the results of safety inspections and offer recommendations to management for corrective actions?
	Does the committee review accident and near-miss investigations and, where necessary, submit recommendations to prevent future incidents?
	Does the committee involve all workers in the safety and health program?
	Has the safety committee developed safety programs, such as accident investigation procedures, according to State OSHA requirements?
	Have safety committee members been trained and instructed in duties, responsibilities, hazard identification and control, and accident investigation procedures?
Spray	y Finishing Operations
	Is adequate ventilation assured before spray operations are started?
	Is mechanical ventilation provided when spraying is performed in enclosed areas?
	Is the spray area free of hot surfaces?
	Is the spray area at least 20 feet from flames, sparks, operating electrical motors, and other ignition sources?
	Are the portable lamps used to illuminate spray areas suitable for use in a hazardous location?

	Is approved respiratory equipment provided and used during spraying operations?
	Do solvents used for cleaning have a flash point of 100 degrees F or more?
	Are fire control sprinkler heads kept clean?
	Are "NO SMOKING" signs posted in the spray areas, paint rooms paint booths, and paint storage areas?
	Is the spray area kept clean of combustible residue?
	Are spray booths constructed of metal, masonry, or other substantial noncombustible material?
	Is infrared drying apparatus kept out of the spray area during spraying operations?
Spra	Is the spray booth completely ventilated before the drying apparatus is used? y Finishing Operations, cont.
	Is the electric drying apparatus properly grounded?
	Do all drying spaces have adequate ventilation?
	Are lighting fixtures for spray booths located outside the booth, and the interior lighted through sealed clear panels?
	Are the electric motors for exhaust fans placed outside booths or ducts?
	Are belts and pulleys inside the booth fully enclosed?
	Do ducts have access doors to allow cleaning?
Stair	s and Stairways
	Are standard stair rails and handrails present on all stairways having four or more risers?
	Are all stairways at least 22 inches wide?
	Do stairs have at least 6.5 feet overhead clearance?
	Do stairs angle no more than 50 degrees and no less than 30 degrees?
	Are step risers on stairs uniform from top to bottom, with no riser spacing greater than 7.5

	inches?
	Are steps on stairs and stairways designed or provided with a surface that renders them slip resistant?
	Are stairway handrails located between 30-34 inches above the leading edge of stair treads?
	Do stairway handrails capable of withstanding a load of 200 pounds applied in any direction?
	Where stairs or stairways exit directly into any area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping into the path of traffic?
Tire Inflation	
	Where tires are mounted and/or inflated on drop-center wheels, is a safe practice procedure posted and enforced?
	Where tires are mounted and/or inflated on wheels with split rims and/or retainer rings, is a safe practice procedure posed and enforced?



Tire Inflation, cont.

	Does each tire inflation hose have a clip-on chuck with at least 24 inches of hose between the chuck and an inline valve and gauge?
	Does the tire-inflation control valve automatically shut off the air flow when the valve is released?
	Is a tire-retraining device such as a cage rack used while inflating tires mounted on split rims or rims using retainer rings?
	Are employees strictly forbidden from taking a position directly over or in front of a tire while it is being inflated?
Tran	sporting Employees and Materials
	Do employees operating vehicles on public thoroughfares have operator licenses?
	Are motor vehicle drivers trained in defensive driving, and proper use of the vehicle?
	Are seat belts provided and are employees required to use them?
	Does each van, bus, or truck routinely used to transport employees have an adequate number of seats?
	When employees are transported by truck, are provisions provided to prevent their falling from the vehicle?
	When transporting employees, are vehicles equipped with lamps, brakes, horns, mirrors, windshields, and turn signals that are in good repair?
	Are transport vehicles provided with handrails, steps, stirrups, or similar devices that have been placed and arranged so employees can safely mount or dismount?
	Is a fully charged fire extinguisher in good condition, with at least "4 B:C" rating maintained in each employee transport vehicle?
	When cutting tools with sharp edges are carried in passenger compartments of employee transport vehicles, are they placed in closed boxes or containers which are secured in place?
	Are employees prohibited from riding on top of any load which can shift, topple, or otherwise become unstable?

Are materials that could shift and enter the cab secured or barricaded?



Ventilation for Indoor Air Quality

	Does your HVAC system provided at least the quantity of outdoor air designed into the system at the time the building was constructed?
	Is the HVAC system inspected at least annually and maintained in a clean and efficient manner?
	Are efforts made to purchase furnishings or building treatments which do not give off toxic or offensive vapors?
	Are indoor air quality complaints investigated, and the results conveyed to workers?
Vide	o Display Terminals
	Can work be performed without eye strain or glare to the employee?
	Can workers keep their hand and wrists in a neutral position when working?
	Can the task be done without having to stoops the neck and shoulders to view the task?
	Are pressure points on any part of the body (wrists, forearms, back of thighs) being avoided?
	Are there sufficient rest breaks, in addition to the regular rest breaks, to relieve stress from repetitive motion tasks?
	Are all pieces of furniture adjusted, positioned, and arranged to minimize strain on the body?
	Are fixed work postures avoided in the task?
	Us the VDT monitor positioned in front of the employee so that the employee does not have to keep his or her neck turned to the side?
	Is the topmost line of display on the VDT monitor positioned at or slightly below eye level (for bifocal wearers)?
	Is the mouse positioned and used as close to the employee's lap as possible (not off to the side so that the employee must extend the arm to work the mouse)?
	Is the height of the work surface adjustable 23 inches to 28 inches in height?



	Is the width of the work surface at least 30 inches?
	Is the viewing distance 16 inches to 22 inches for close-range focusing?
Vide	o Display Terminals, continued
	Is the thickness of the work surface at least one inch?
	Is knee-room height a minimum of 26.2 inches non-adjustable surface and 24 inches adjustable surface?
	Is knee room width at least 20 inches?
	Is seat height adjustable 16 inches to 20.5 inches?
	Is seat size 13 inches to 17 inches in depth, and 17.7 inches to 20 inches in width with "waterfall" front edge?
	Is the seat slope adjustable 0 degrees to 10 degrees backward slope?
	Is the backrest size 15 inches to 20 inches high and 13 inches wide?
	Is backrest height adjustable 3 inches to 6 inches above the seat?
	Is the backrest tilt adjustable to 15 degrees?
	Is the angle between the backrest and seat between 90 degrees and 105 degrees?
	Is the angle between the seat and lower leg between 60 degrees and 100 degrees?
	Does the angle between the upper arm and forearm in relation to keyboard form a 90-degree angle, and are the hands in a reasonably straight line with the forearm?
	Are footrests provided if the operator cannot keep both feet flat on the floor when chair height is properly adjusted to the work surface?
	Are keyboards detached from the console and do they have palmrests?
	Are monitor screens readable with no perceptible flicker and is a brightness control available?
	Is the monitor placed at right angles to windows?

 Do windows have curtains, drapes or blinds to reduce bright outside light?
 Are operators trained on how to adjust workstation equipment?
 To reduce fatigue, do operators maintain good posture, conduct body and eye exercises, rest regularly, and vary work activity?



Walkways

	Are aisles and passageways kept clear and are they at least 22 inches wide?
	Are aisles and walkways appropriately marked?
	Are wet surfaces covered with non-slip materials?
	Are openings or holes in the floors or other reading surfaces repaired or otherwise made safe?
	Is there safe clearance for walking and aisles where vehicles are operating?
	Are materials or equipment stored so sharp objects cannot obstruct the walkway?
	Are changes of direction or elevations readily identifiable?
	Are aisles or walkways that pass near moving or operating machinery, welding operations, or similar operations arranged so employees will not be subjected to potential hazards?
	Is adequate headroom for the entire length of any walkway?
	Are standard guardrails provided wherever aisle or walkway surfaces are elevated more than four feet above any adjacent floor or the ground?
	Are bridges provided over conveyors and similar hazards?
Weld	ding, Cutting & Brazing
	Are only authorized and trained personnel permitted to use welding, cutting, or brazing equipment?
	Are compressed gas cylinders regularly examined for signs of defect, deep rusting, or leakage?
	Are cylinders kept away from sources of heat?
	Is it prohibited to use cylinders as rollers or supports?
	Are empty cylinders appropriately marked, their valves closed, and valve-protection caps placed on them?
	Are signs reading: "DANGER - NO SMOKING, MATCHES OR OPEN LIGHTS," or the equivalent

	posted?
	Unless secured on special truck, are regulators removed and valve-protection caps put in place before moving cylinders?
Weld	ding, Cutting & Brazing, cont.
	Do cylinders without fixed hand wheels have keys, handles, or nonadjustable wrenches on stem valves when in service?
	Are liquefied gases stored and shipped with the valve end up, and with valve covers in place?
	Before a regulator is removed, is the valve closed, and then gas released from the regulator?
	Is open circuit (no load) voltage of arc welding and cutting machines as low as possible, and not in excess of the recommended limit?
	Are electrodes removed from the holders when not in use?
	Is it required that electric power to the welder be shut off when no one is in attendance?
	Is suitable fire extinguishing equipment available for immediate use?
	Is the welder forbidden to coil or loop welding electrode cable around his or her body?
	Are work and electrode lead cable frequently inspected for wear and damage, and replaced with needed?
	Do means for connecting cable lengths have adequate insulation?
	When the object to be welded cannot be moved and fire hazards cannot be removed, are shields used to confine heat, sparks, and slag?
	Are fire watchers assigned when welding or cutting is performed in locations where a serious fire might develop?
	When welding is done on all metal walls, are precautions taken to protect combustibles on the other side?
	Before hot work begins, are drums, barrels, tanks, and other containers so thoroughly



cleaned and tested that no substances remain that could explode, ignite, or produce toxic vapors?
 Do eye protection helmets, hand shields, and goggles meet appropriate standards?
 Are employees exposed to the hazards created by welding, cutting, or brazing operations protected with personal protective equipment and clothing?
 Is a check made for adequate ventilation in and where welding or cutting is performed?
 When working in confined space, are environmental monitoring tests taken and means provided for quick removal of welders in an emergency?