A Manager's Safety Notebook

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by Elevator World, Inc.

Printed 2014
Revised 2020
Revised 2025

ISBN – 978-1-937689-51-3

This book, *A Managers Safety Notebook*, is believed to be accurate at the time of publication; however, changes in law, regulations and/or interpretations may invalidate certain portions. It is the responsibility of the employer to be familiar with all appropriate state and federal regulations. Elevator World publishes this material without accepting responsibility for its absolute accuracy but with hopes that the vast majority of it will have validity for the field. The ideas expressed here should be tempered by recognized practices, guidelines, codes and standards.

Written and published by Elevator World with thanks to Kent Lloyd, Abell Elevator International, and Richard Baxter, Baxter Consulting for their contributions.

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THE WORLD OF ELEVATOR SAFETY
A Brief History of the OSHAct of 1970 and Guidance to Compliance

The following 50 pages highlight the beginnings of the Occupational Safety and Health Act (OSHAct) of 1970 that requires employers to provide a workplace free of recognized hazards. While much of the act has been revised and expanded in the past 40 years, the basics of it are the same. When you own or manage a company that installs, repairs or maintains elevators, escalators or moving walks, you are responsible for the safety of the men and women who work for you. For the complete act containing regulations for both general industry (CFR 29 1910), and construction (CFR 29 1929), go to www.osha.gov/law-regs.html.

The following is what is known as the "general duty clause," because anything not covered in regulations 1910 or 1929 is covered under "general duty."

a) Each employer –

(1) Shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act. 29 USC 654

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

The World of Elevator Safety* outlines how the elevator industry came together to help all companies, large and small, develop safety programs, establish best practices and create tools to comply with the new OSHA regulations.

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"The World of Elevator Safety"

Reprinted from ELEVATOR WORLD, October 1973

The Crystal Palace was the focal point of New Yorkers' attention, in 1853, when a master mechanic used an old wagon spring as a pivot point in transportation history. It was then that Elisha Otis dramatized his "safety elevator" with a series of personal demonstrations. He would mount the platform of the hoist, be pulled aloft, and order the restraining rope cut. As the pressure upon the leaf spring in the crosshead was released, it straightened out, the safety dogs latched into the ratchet bars behind the guide rails and the platform was secured.

The New York Tribune alluded to the "daring" of the inventor and the "sensationalism" of the performance but the general public fixed upon the word, "Safety." It became synonymous with "elevators" and an acceptance was born without which our cities would not exist as we know them today.

The "sensationalism" of safety within the elevator industry was short-lived; what became instilled, instead, was a quiet determination upon the part of industry designers, manufacturers and installers to make equipment virtually "fail-safe"; and an equally quiet acceptance within the public mind that elevators were the safest form of moving people. Although planned obsolescence was a traditional factor in some forms of conveyance-notably the automobile - elevators, from their inception, were built to be sturdy companions to the buildings in which they became an integral part. Likened to the locomotive and steamship, they were engineered and constructed to last a generation, or more. A heavy-duty gearless machine is just "broken in" after 35 or 40 years and elevators have been known to operate for a century!

Product safety within the elevator industry was not only assured by the "build to last" philosophy but by the early development of American National Standard Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks, over 50 years ago. Beginning in 1915, under the auspices of the American Society of Mechanical Engineers, 56 technicians within the field dictated the design and installation of various pieces of equipment and allied safety apparatus. Over the years, the A 17.1 Committee – a body of almost 100 specialists representing makers, users and regulatory bodies – have brought the code through eight editions and numerous supplements, always with the thought that it should be a "living document" responding to the accelerating requirements of the general public. With this emphasis upon product safety, it is understandable that there would be an accompanying stress upon the personal safety of the men who manufacture, install and maintain elevator equipment. It is said that early elevator constructors stuffed waste material, used in wiping up oil and grease, under their bowler hats. Finding that this padding insulated their skulls against a dropped object, they adapted the derby as part of their attire. The insulated bowler, that became the elevator field man's trademark, at the turn of the century, developed later into that prime piece of safety gear - the hard hat. Otis was one of the first to prescribe this protective headgear in 1948 - as well as safety glasses - in 1938.

As far back as 1949, the National Elevator Manufacturing Industry developed, in conjunction with the International Union of Elevator Constructors, a handbook of, "Safety Regulations for Field Employees" and the stress upon field safety has permeated the various educational modules created by the National Elevator Industry Educational Program, during the past five years. Even as this is written, safety specialists from the National Elevator Industries, Inc. and the International Union of Elevator Constructors are meeting to develop a special module on "Safety Job Analysis and Hazards" which will be published before the end of the year.

When the Occupational Safety and Health Act of 1970 came into being, therefore, it was not seen as a stimulus to develop new safety programs; the industry and its companies were already safety-oriented and operational in this area. It did create a good deal of eye strain and confusion with its Construction Act that contained 97 pages and a Standard

Elish Otis demostrating his safety elevator

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that contained 254 pages and about 286,000 words. The larger companies were equipped to cope with the interpretations and refinement of their programs to meet the intricacies of the law. Many of the smaller companies were not.

Accordingly, the ELEVATOR WORLD staff determined to develop a Safety Manual in the form of its 1973 Annual Study that would, hopefully, facilitate an understanding of OSHA and the refinement of elevator company accident prevention programs. Where firms do not have safety programs, the following material may assist in their establishment.

Just as management, management associations, code committees, inspectors and the union have jointly coordinated over many decades in maximizing product, public and field personnel safety, so, now, is there a concerted effort to respond to the recent government legislation and to even further develop programs, policies and practices that will assist management in eliminating hazards and accidents. Several months ago the top safety officials of the eight largest companies within the elevator industry brought to Mobile the material they had developed upon this subject in the past year or two. Involved were: Ernest Spivey of Armor Elevator Company, Jim Finley of Dover Elevator Company, Barry Sims of Haughton Elevator Company, Tim Duin of Montgomery Elevator Company, Bill Niederauer of Otis Elevator Company, Jack Faser of Southeastern-Westbrook Elevator Company, Randy Miller of U. S. Elevator Corporation and Don Offerman of Westinghouse's Elevator Division. Each company excelled in some particular area and the team selected portions of the material that seemed best suited to general usage by the entire elevator industry. Randy Miller made several additional trips to Mobile, as a general coordinator, and the final drafts were amended by the group.

In a generous gesture, typical of that we have received during the entire project, the National Association of Elevator Contractors appropriated funds with which to print the accompanying samples of the *Field Employees' Safety Handbook*, which also has been revised to include the most worthy sections of several similar pocket books that have been developed by the larger companies.

We thank NAEC, NEII and the aforementioned companies and individuals for the time, effort and money they have expended to assure that the best possible information is made available to all management within our industry There is no reason, now, why every elevator company manager cannot have an excellent accident prevention program and every man in the field cannot have a safety handbook.

Bill Sturgeon, Editor

COMPLIANCE

In order to comply with the law one must know the law The Occupational Safety and Health Act of 1970 enforces compliance by citation involving monetary fines.

The purpose of the Act is to assure every working man and woman in the nation safe and healthful working conditions. The new law covers all locations and operations of every company, without exception. Duties of Employers and Employees:

A. Employers are to furnish to their employees employment and a place of employment free of recognized hazards and comply with safety and health standards of this Act.

B. Employees are also required to comply with all standards, rules and regulations of the Act.

Note: This is a policy statement because the enforcement of the provisions of the Act do not indicate how a violation by an employee would be enforced.

One method of understanding the law is by summarizing the Construction Act where most applicable to a business. For example SUMMARY OF SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION CODE OF FEDERAL REGULATIONS, TITLE 29, CHAPTER XVII, PART 1926, FORMER DESIGNATION, CHAPTER XIII, PART 1518.

1904 All job sites should have conspicuously posted the phone numbers and addresses of nearest doctor, hospital, ambulance and fire department.

1903.2 The OSHA posters should be conspicuously posted on job site.

1904 All accidents that require medical treatment should be posted on the OSHA 101 form or state First Report of Injury form (if information on it satisfies the necessary data on Form 101) and logged on the OSHA 100 form. This log should be kept at the reporting office. Any job, site that is inspected by OSHA should be reported to the company immediately. In the case of multiple serious injury accidents, four persons or more, or a fatality, notify company by telephone or TWX immediately.

1926.16 (a) The prime contractor and subcontractors may pool the first aid and toilet requirements.

(b) The prime contractor must assume all responsibilities as employer. Responsibilities are actual, but does not relieve the subcontractor of any legal responsibility.

(d) Unless the foregoing paragraphs are agreed to by the general contractor and subs, the general contractor and subcontractors will then have joint responsibility for compliance with the law.

1926.20 (b) Employer required to have a safety program. Employer to hold frequent and regular safety inspections Employer is responsible for accident prevention.

1926.21 (b) Employer will attend programs that the OSHA director provides. The employer shall instruct employees on hazards and their avoidance. The employer shall instruct the employee in first aid procedures to be used in the event of injury.

1926.23 The employer shall make available first aid services and provisions for medical care training.

1926.24 The employer shall be responsible for the development and maintenance of an effective fire prevention and protection program at the job site.

1926.25 (a), (b) and (c) Employer is responsible for all job site housekeeping.

1926.26 Employer is responsible for proper illumination of job site.

1926.27 Employer is responsible for health and sanitation requirements for drinking water.

1926.28 (a) The employer is responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.

1926.50 (a) The employer shall insure the availability of medical personnel for advice and consultation on matters of occupational health.

(c) Where medical assistance is over 15 minutes from work site, a person who has a valid certificate in first aid training from the U.S. Bureau of Mines, The American Red Cross or equivalent training that can be verified by document, shall be available at the work site.

(d) First aid supplies approved by the consulting physician shall be easily accessible when required. The first aid kit shall consist of materials approved by the consulting physician in a weather-proof container with individual sealed packages for each type of item. The kits shall be checked by the employer weekly and before being sent out to each job.

1926.51 (a) Drinking water shall be provided for all employees.

(c) Toilets shall be provided at each job site.

(f) Washing facilities shall be provided at each job site, if chemicals or contaminates are in use.

1926.52 (a) Protection against the effects of noise shall be provided by the employer if the noise exceeds 90 decibels throughout an entire eight hour workday.

1926.56 This covers construction area illumination requirements.

1926.100 Employees working in areas where there is possible danger of head injury shall wear protective helmets.

1926.101 This states hearing protection shall be provided if noise level is above allowable limits, as noted in 1926.52 above. No cotton allowed.

1926.102 Employees shall be provided with eye and face protection equipment where there are physical or chemical hazards.

1926.103 Respirators shall be furnished employees in hazardous atmospheres.

1926.104 Life lines, safety belts and lanyards shall be used in working above 10 feet from grade. Note: 5.400 pounds support limit.

1926.150 (a) The employer shall be responsible for the development of a fire protection program and all necessary equipment.

1926.151 (a) Electric wiring and equipment for light, heat or power shall be installed in compliance with National Electrical Code.

(b) Temporary buildings within another building shall have fire resistance of not less than one hour.

1926.152 (a) Approved metal safety cans shall be used for the handling and use of flammable liquids in quantities greater than one gallon. For quantities of one gallon or less only the original container or approved metal safety can shall be used for storage.

(b) No more than 25 gallons of flammable liquids shall be stored in a room out-side of an approved storage cabinet.

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1926.153 (a) This covers portable heaters including salamanders. Portable heaters over 7500 b.t.u. per hour input shall have automatic shut off devices in the event of flame failure.

1926.154 Temporary heating devices shall have sufficient fresh air quantities. (d) Solid fuel salamanders are prohibited in the buildings and on scaffolds.

1926.200 This section covers the signs and tags required on a construction site for dangerous or hazardous areas. Accident prevention tags shall be used as a temporary means of warning employees of existing hazards such as defective tools and equipment.

1926.250 (a) Maximum safe load limits of floors within buildings and structures used for storage of material shall have a conspicuously posted sign showing the maximum safe loads for floor or slab in pounds per square foot.

(b) Materials stored inside buildings shall not be placed within six feet of any hoist way or within ten feet of an exterior wall.

(d) Sub 81 – Used lumber shall have all nails withdrawn before stacking.

1926.251 (a) Rigging equipment for material handling shall be inspected prior to use on each shift (b) All chains for hoisting, or slings shall have permanently affixed durable identification tags stating size, grade, capacity and manufacturer.

(c) A rope or sling for hoisting shall have a safety factor of not less than five.

(c) Sub 51 -When used for eye splices, the U bolt shall be applied so that the U section is in contact with the dead end of the rope.

(d) This section covers the use of natural or synthetic rope.

1926.252 This section covers disposal of waste materials.

(e) All solvent waste, oily rags and flammable liquids shall be kept in fire-resistant covered containers.

1926.300 (a) All hand and power tools, whether furnished by employer or employee, shall be maintained in a safe condition.

(d) This section covers the type of switches required on hand-held power tools.

1926.301 (a) Employer shall not issue or permit the use of unsafe hand tools. This means that employee's tool boxes must be inspected and unsafe tools in their possession removed from job site.

1926.302 This covers jacks; lever, ratchet screw or hydraulic. The manufacturer's rated capacity shall be legibly marked on all jacks and shall not be exceeded.

1926.350 (a) Sub 6 and 7 – This covers the use of compressed gas tank valve protection caps. It states that a suitable cylinder truck, chain or other steadying device shall be used to keep cylinders from being knocked over while in use. Sub section 9 states compressed gas cylinders shall be secured in an up-right position at all times. This section covers the use of cylinders for compressed gas, hoses, torches, regulators and oil and grease hazards.

1926.351 This section covers arc welding and cutting.

(d) Operating instructions – Employers shall instruct employees in the safety of arc welding and cutting.

1926.352 This section covers fire prevention on a construction site when welding, cutting, etc. is occurring.

1926.353 This section covers ventilation for protection in welding, cutting and heating.

(a) This section covers the electrical requirements and includes pertinent provisions of the National Electric Code.

(c) This calls for protection of an employee in the proximity of live electric power.

(e) This covers work space around the equipment and refers again to the National Electric Code.

(g) This covers lockout and tagging of all circuits. Sub 3 – Tags shall be placed to identify the equipment or circuits being worked on.

1926.401 (a) Sub. 1. The non-current carrying metal parts of portable plug connected equipment shall be grounded.

(f) Extension cords used with portable electric tools and appliances shall be of three-wire type.

(h) This covers temporary wiring and grounding in accordance with the National Electric Code "In accordance with the 1971 National Electrical Code, as of January 1,1974, all 15 and 20 ampere receptacle outlets on single phase circuits for construction sites shall be equipped with ground fault circuit interrupters protection.

(j) Temporary lighting shall be equipped with guards to prevent accidental contact with bulb, and guards must be grounded. Sub 3 – Portable cords must be kept clear of working spaces and walkways.

1926.402 (a) This covers flexible cable cord and plugs and their approved design. Sub 12 – Extension cords shall not be fastened with staples, hung from nails or suspend.

(c) Sub 1 -Each disconnect switch shall be plainly marked as to its use.

1926.450 This covers the use of ladders and scaffolds.

(a) Sub 3 Manufactured portable wooden ladders provided by the employer shall be in accordance with the provisions of the ANS114.1 Sub 7 – Portable ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one quarter of the working length of the ladder. Sub 9 – Ladders used to go from one elevation to another shall extend beyond the upper elevation by 36 inches. Ladders should be secured at the top when in use.

1926.451 This covers scaffolding.

(a) Sub 4 – Guard rails and toe boards shall be installed on all open sides and ends of platform more than ten feet above the ground or floor. Sub 5 – Guard rails shall be 2" by 4" or the equivalent and 42 inches high. Toe boards shall be

minimum of 4 inches in height. Sub 10 – Planking shall be scaffold grades and this section covers maximum permissible spans for plank sizes. Sub 16 – Overhead protection shall be provided for men on a scaffold exposed to overhead hazards. Sub 20 – The use of shore pump jack or lean-to scaffolds is prohibited. "Figure-Four" Scaffolds are permissible if designed in accordance with Table L-17.

1926.500 This section covers guard rails, hand rails, and covers for hatchways and chute floor openings.

1926.501 This section covers stairways. The two proceeding paragraphs outline the necessity for handrails, clear stairways and temporary stairs. We must constantly work with the general contractor in this regard, to see that he keeps these areas in compliance. This covers the general requirements for cranes, derricks, hoists, elevators and conveyors.

(a) This states that the employer shall comply with manufacturer specifications or where manufacturer specifications are not available, limitations must be assigned to equipment based upon determinations of a qualified engineer. Sub 2 – Rated load capacities, recommended operating speeds, special hazard warnings or instructions shall be conspicuously posted on all equipment. This means that all drum hoists and capstan hoists that are not manufactured by an identifiable manufacturer must have stenciled on them the maximum capacity in pounds that they are designed to handle. Sub 4 – An illustration of hoisting signals shall be posted at the job site. Sub 6 – This paragraph covers annual inspection of all hoisting equipment. The employer shall maintain records of the dates and results of inspections. Sub 7 – This section covers the wire rope used on hoists.

1926.552 This section covers material hoists, personnel hoists and elevators.

(d) This covers permanent elevators under care and custody of the employer.

This states that the National Elevator Code ANSI A17.1 shall be complied with.

1926.750 (a) Permanent flooring shall be not more than eight floors between the erection floor and the uppermost permanent floor. Sub 2 – Not more than four floors, or 48 feet of unfinished bolting or welding, shall be allowed.

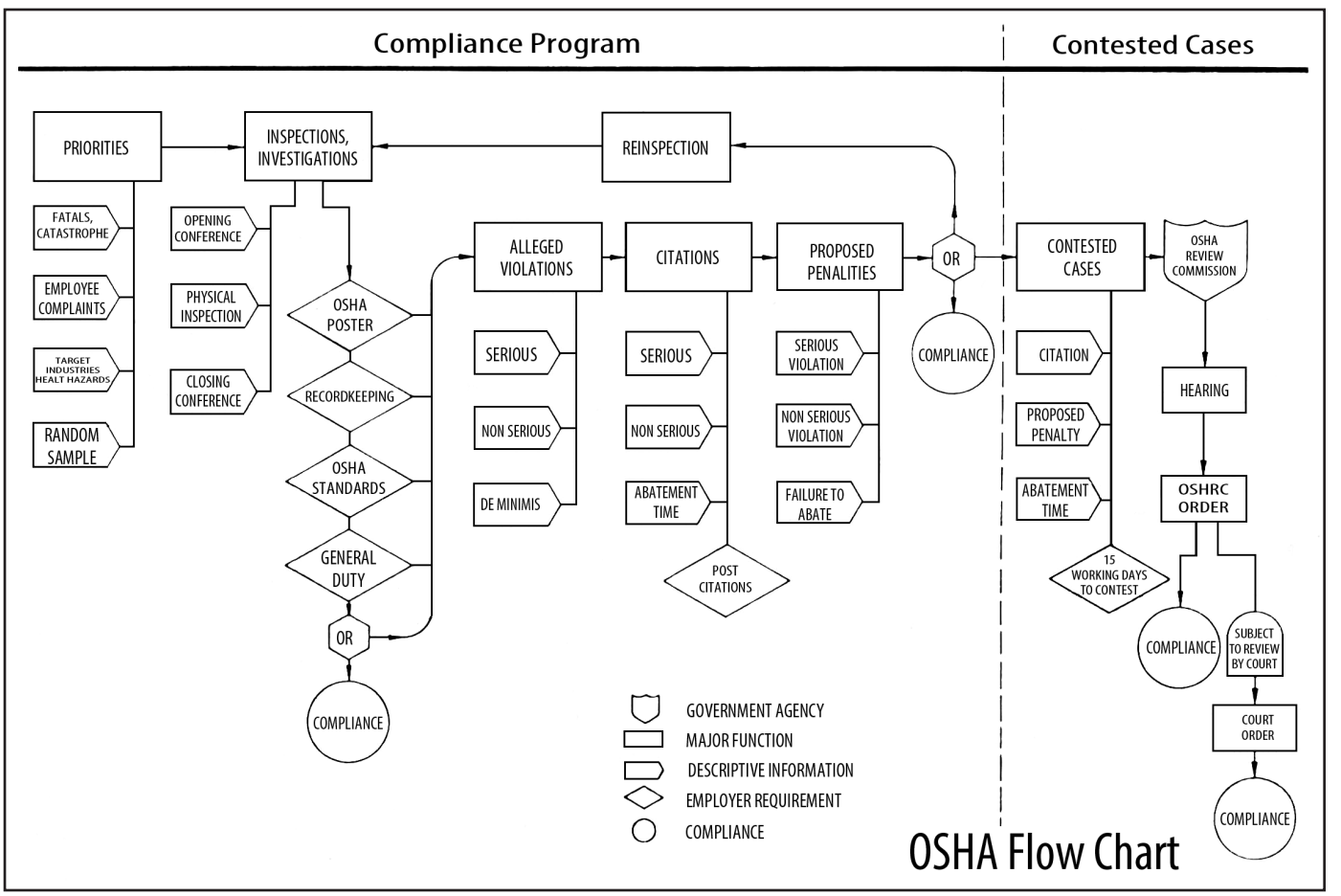
(b) Sub iii. Safety railing or periphery of 1/2 inch wire rope shall be installed 42 inches high around periphery of all floors and hoistways.

Now that our readers have familiarized themselves with the Act, they will find it only covers construction. What about Service personnel? Also, some areas of the Act need interpretation in order to comply fully.

We wrote the U. S. Department of Labor Occupational Safety and Health Administration for a series of interpretations that involved the design, placement, installation and servicing of elevator equipment. The U. S. Department of Labor Occupational Safety and Health Administrator, Gerard F. Scannel, Director, Office of Standards, answered our inquiry.

The following are our questions and their answers with the appropriate section of the law quoted.

Q. Does Part 1 926.400 (a) include elevators?



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Part 1926.400 (a) All electrical work, installations, and wire capacities shall be in accordance with pertinent provisions of the National Electrical Code, NFPA 70-1971; ANSI cl-1971 (rev. of 1968, and the National Electric Safety Code, National Bureau of Standards, Part 4 (ANSI c2.4) unless otherwise provided by regulations of this part,"

A. The standards of Part 1926 (formerly Part 1518) are applicable to construction operations including the initial erection of elevators. Section 1926.400 (a) is applicable to electrical installations used on construction job site, both temporary and permanent as stated in 1926,400 (b). Section 1926.552 (d) is applicable to permanent elevators on a construction site, such as a new building where the elevators are placed in service for the transport of construction employees engaged on the project. The standards of Part 1910 apply to places of employment not classified as "construction work" sites, including servicing and maintenance of existing elevators in buildings not under construction. Significant repair and alteration, such as modernization of an elevator, is classed as construction work where the standards of Part 1926 will be held to be applicable. There are no elevator codes for national application under OSHA in buildings not under construction. The ANSI National Elevator Code A17.1-1965, is adopted by reference in Section 1910.261 for pulp, paper and paperboard mill elevators.

Q. Does the statement of permanent installation mean elevators and that the National Electrical Code is adopted in all states including U.S. territories? Part 1926.400 (b) "Applicability. These regulations apply only to electrical installations used on the job site, both temporary and permanent. For power distribution and transmission lines, see sub-part 5 of this part."

A. The 1971 addition of the National Electrical Code is now adopted under OSHA for all new installations when such elevators are in a place of employment subject to the Act. See the Federal Register dated February 16, 1972, Section 1910.309 (b) Part 1910.309 (b) "Every new electrical installation and all new utilization equipment installed after March 15, 1972, and every replacement, modification, or repair or rehabilitation, after March 15, 1972 of any part of any electrical installation or utilization equipment installed before March 15, 1972, shall be installed or made, and maintained, in accordance with the provisions of the 1971 National Electrical Code, NFPA 70-1971; ANSI C1-1971 (rev. of 1968)."

Q. On work space around the equipment; elevator clearance is covered prior to 1971 National Electrical Code under Section 620-72. This section has specific clearances for elevators only. They were 3 feet in front of the control cabinet, 18 inches on one side and 2 feet in the rear. The 1971 National Electrical Code now refers to 110-16 which is clearly indicated in the subsection e. Again does this mean that the elevators and work space around equipment are adopted nationally by OSHA? 1926.400 (e) "Work space around equipment: Sufficient space shall be provided and maintained in the area of electrical equipment to permit ready and safe operation and maintenance of such equipment. When parts are exposed, the minimum clearance for the work space shall not be less than 6 % foot high nor less than a radius of 3 feet wide, and there shall be clearance sufficient to permit at least a 90 degree opening of all doors or hinge panels. All working clearances shall be maintained in accordance with Article 110-,16, National Electric Code, NFPA 70-1971; ANSI cl-1971 (rev. of 1968)."

A. The 1971 National Electrical Code is now in effect and clearances around electrical equipment shall meet the requirements of Article 110-16 on new installations. Existing installations acceptable to local authorities enforcing the National Electrical Code are acceptable under OSHA. See 1910 sub-part S, subpart 1910.308 (d) (2) This section defines acceptable authority and limits the retroactivity of the National Electrical Code.

Q. Where we have contractual service obligations on old equipment, is this code then retroactive to equipment installed prior to the passing of the Occupational Safety and Health Act of 1970?

A. No. See 1910.308 (d) (2) and 1910.309 (b)

Q. If the work space around the equipment is adopted nationally and retroactively, whose responsibility is it to modify existing work space conditions in previously non-code territories?

A. See answer above.

Q. If our service personnel are working on elevator equipment and an OSHA inspection is made, who will be cited, we, the employer of our personnel or the owner of the equipment?

A. The Act requires the employer to provide safe employment in a place of employment for his employees and comply with the standards promulgated by the Secretary of Labor

Q. Part 1926.552 of Section (d) "States permanent elevators under permanent custody of the employer and used by the employees for work covered by this Act shall comply with Addendum A17.la and etc." What is the general intent and purpose of this statement?

A. This means elevators newly installed in a new building or structure during construction and placed in use by contractor for transport of his employees shall meet the ANSI A 17.1 National Elevator Code. Personnel hoists and workmens' hoists must meet other ANSI standards adopted by reference in Part 1926, sub-part M.

Q. Does this apply where we have a contractual service agreement with an owner of a building?

A. No, the requirement applies to elevators during the construction of the building only.

Q. Does this apply only when the building is under construction?

A. Yes.

Q. Does this mean that the National Standards on elevators and dumbwaiters is adopted nationally?

A. No, only for elevators in buildings under construction which are placed in service for use by construction workers

Q. If this applies to our service personnel on contractual maintenance agreements, does this mean that the ANSI 17.1 National Code is adopted retroactively?

A. No, employees performing-maintenance on elevators are subject to the standards of Part 1910 which has no national requirements such as ANSI 17.1 for all elevators in use for transportation of employees.

Q. If the National Elevator Code is adopted nationally and retroactively (one or both) whose responsibility is it, the owner of this equipment or the company providing the contractual service to insure compliance?

A. See Section 5A of the Act for the duty of employers Section 5A. "Each Employer (a) should furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees; (2) shall comply with Occupational Safety and Health Standards promulgated under this Act."

It is apparent that OSHA has not made the National Electrical Code retroactive. However, they have not relieved us of the responsibility of placing our employees, especially the service personnel, in a hazardous position. Many machine rooms lack sufficient head room and work space around the controllers and machines. Therefore, one must conclude that if an employee was seriously or fatally injured while performing a service operation in an older building which did not meet today's code requirements we, the employer, would still be liable because of the Section 5A of the Act for the duty of employers.

It is obvious that a company must make a decision in regard to service contracts in one of the following ways.

1. Establish a concerted effort to have these older elevators modernized or updated to meet present code conditions.

2. Apply for an industry variance through one of our institutions and develop our own industry standards.

We should adopt a standard policy that all temporary or permanent elevators turned over to general contractor for his use should comply with the National Elevator Code in all aspects. This means all required safety equipment, data plates (capacities) and tests. Each company should also make a concerted effort to have all elevators on service modernized to conform to current codes.

So now you are reasonably sure about where you stand on construction. But Service does not come under part 1926, but part 1910.

It is obvious that general industrial safety standards have never applied to our business. Our equipment has, for the most part, complied with construction codes. The law now

CONSULTING SERVICES PROVIDED BY MOST INSURANCE COMPANIES AS A NORMAL PART OF THEIR WORKMEN'S COMPENSATION POLICIES

SAFETY SURVEYS

Trained and experienced inspectors will survey plant or job site to determine if adequate loss prevention measures are being taken. When deficiencies are found, possible corrective action will be recommended in an effort to reduce loss potential.

Periodic inspections are made in an effort to reduce losses and include checking newly-installed machines, equipment and their protective devices.

Evaluations are made of existing protective devices and systems due to structural changes or changes in operating conditions and procedures.

Examinations are made of new additions, alterations, processes or equipment which may affect the loss potential, as well as a review of manufacturing or construction procedures, material storage, handling, transportation and packaging methods.

CONSULTATION SERVICES

Representatives of Engineering Departments are available to review plans of proposed construction, installation and process. They will assist in the establishment of loss prevention programs, accident investigations procedures, identifying of high loss producing areas and measure the progress and effectiveness of the loss prevention program.

LOSS SUMMARIES

Through an analysis of previous accidents, principal causes can be highlighted and problem areas identified. This enables insureds to concentrate their accident prevention activities in areas where they will be the most effective.

LABORATORY ANALYSIS

Most have laboratories equipped to analyze such materials as dust, gases, vapors and solvents to determine what, if any, harmful effects may be encountered in use.

EMPLOYEE TRAINING AND EDUCATION

Specialists are available who will assist in the training of supervisory personnel in accident prevention techniques. Most companies have programs which define the supervisor's role in accident prevention and can give him the tools necessary to do an effective job in this field. Employee educational and training materials are also available as well as safety material such as posters, films and publications.

Experienced speakers on safety and insurance subjects are available for meetings in plant or field.

FIRE PROTECTION

Most have Fire Protection Engineers to assist in the establishment of fire protection systems, fire brigades and plant or job site fire prevention programs.

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says any employer who puts an employee on a service job where the environment does not comply with the general standards is in violation. Therefore we find ourselves faced with dual standards in our business. One elevator company has been cited under part 1910 for not guarding brake pulley, drive-sheave, commutators, governor and protecting employee against electrical shock, but the citation was dropped. The complexity of service compliance is such that we will only cover construction compliance at this time.

One thing to remember is that compliance to the law is not necessarily accident prevention. True accident prevention involves much more than the application of the law and should be part of management's planning.

A TEN-POINT ACTION PLAN FOR OSHA COMPLIANCE

1. Know the Occupational Safety & Health Act. Know the applicable standard requirements, the inspection, enforcement, and penalizing authorities of the government. Know how you can contest unreasonable application of the law.
2. Understand all rights and responsibilities inherent in the law. Be sure your employee relations program provides for them.
3. Train and educate workers in safety and health so they will exercise their rights constructively.
4. Survey all your operations to ensure they meet applicable standards. Make sure serious hazards are controlled. Substitute, eliminate, isolate, or otherwise get rid of hazards.
5. Establish written safety policies, procedures, rules and practices in order to document a "good faith" intent to meet the purpose and objective of the law.
6. Indoctrinate supervisory personnel and require them to uphold safety and health controls and employee actions.
7. Plan ahead for OSHA inspections. Don't get caught without a program of some sort, no matter how small your operation is.
8. Include safety and health clauses that OSHA standards must be met in all purchase, construction, service, and labor contracts.
9. If you produce, design, engineer, or construct anything, be sure OSHA standards are met.
10. Monitor all Governmental OSHA actions to ensure reasonable and practical standards and actions are taken.

ADMINISTRATION

One can easily become confused by the many sources of information available concerning OSHA. For instance, almost every insurance company and many commercial organizations have developed safety publications. A large corporation having the special personnel and resources to glean through the material can extract a wealth of information, but the outpouring of paper will undoubtedly present a problem for the small firms. They usually cannot justify subscribing to the expensive, continuous publications and, even if they could, do not have the personnel to service the flow. The purpose of ELEVATOR WORLD's Annual Study is to make the task of the typical company easier, providing a foundation of knowledge and the basic procedures, practices and policies that will ease the understanding of the legislation and law and the establishment of an accident prevention program where an adequate one does not already exist.

The larger companies assure their effectiveness through Industrial Relations departments and/or a Safety Director. In a medium-sized company, the responsibilities of a Safety Director will become the additional duty of one particular employee. In a small company, the Owner must shoulder an additional responsibility. Some companies may wish to consider the employment of a full-time Safety Director. Although the cost of such a man may, at first, seem out of line with a modest operation, companies should become aware of the many cost reductions that can be made through a properly implemented safety program There are a number of books on this subject, alone. Also, what will OSHA's future costs be? No one knows for certain and conformity to the law will reduce this unknown factor.

The Safety Director does not usually have a line function, but deals in the transmission of all information concerning compliance, education, administration and legal matters. Branch office performance evaluations should be made periodically, but at a level that is determined by the size and structure of the company. Performance evaluations should be made on all branch storage facilities, and spot checks on job sites.

In the smaller company, the employee or owner with co-responsibilities can supplement his appraisals by using Workman's Compensation insurance company consultants. Most insurance companies provide this service without cost. A company is paying a portion of its premiums for this back-up; it should not hesitate to ask for assistance from this source. (See adjacent box)

The sources listed within our Study's Bibliography are a first strike in the search of solutions. To obtain general information on a monthly basis, a subscription to the NATIONAL SAFETY NEWS is recommended, or, a membership in the National Safety Council will provide access to this magazine as part of its total service. Naturally, industry management associations are keenly aware of the increasing problems and demands in this area and are augmenting their staffs and activities to better serve their members. The National Elevator Industries at P.O. Box 838, Salen, New York 10016, is no exception and should be contacted for assistance. It can be more effective with input from the field and companies

should communicate with NEII concerning new problems and solutions experienced "on the firing line."

Another solution that might be considered is the hiring of a consulting firm to analyze the needs of the company and professionally establish a program. Needless to say, many "fly-by-night" consultants are interspersed with those that are soundly-grounded and an owner should carefully evaluate the background, capabilities and costs of several firms when taking this route.

A key man in the elevator business is the construction or service superintendent since he is the only man who has direct contact with every job. Much of the burden of compliance must fall upon his shoulders; yet he must still be able to fulfill his primary responsibilities. An over-burdening of paper work or undue pressure can lessen his effectiveness.

The person having the ultimate responsibility of administering the program should compile a Safety Manual. If he is now initiating one, he might place this Study within it, as a beginning, and then add statements, letters, memorandums, evaluation and report forms and other material that will comprise the company program, policy, practices and procedures. Any program should include Accident Prevention, Accident Frequency Reporting, Workman's Compensation costs, State Required Reporting Procedures, Comprehensive Insurance Reserve Follow-up and Accident Investigation Procedures. Once the program is established, the matter of continual appraisal should be assigned and spot checks made with reports going to top management. Knowledge of exposure rises are essential for short and long range planning. No one likes unexpected costs and all it takes is several fatalities or multiple serious injuries of five or more persons to place a company in the spotlight.

The OSHA Compliance Officer will ask for the following information when holding the pre-inspection interview:

In determining a citation fine, this information is used as part of "Good Faith" reductions. Companies should review this form, make an evaluation and seek to improve their present programs. Most important, though, is the need to officially establish the company responses so that, in the event of an inspection by a Compliance Officer, all personnel will be able to properly communicate.

Areas that need branch and job site procedures established are as follows :

1. 1926 . 50 (d) 2 First Aid kits serviced weekly.
2. 1926.50 (c) Provide field people who have valid first aid training.
3. 1926.150 (a) (5) & 1926.150 (c) (2) (viii) Fire fighting equipment periodically inspected and records maintained.
4. 1926.251 (a) (1) All hoists and rigging inspected daily. 1926.251 (f) (2) Shackles and hooks not identified shall be tested and records kept
5. 1926.552 (a) (1) All material hoist, personnel hoists and elevators shall comply with manufacturer's specifications and limitations. Where manufacturer specifications are not available, they shall be determined by a professional engineer competent in the field.
6. 1926 . 553 (a) (4) Drum hoist design, construction, installation, testing, inspection, maintenance and operations, as prescribed by manufacturer.

The elevator industry still has a number of "homemade" drum hoists. Most are without sequence start or any engineering design data. Many were designed and constructed by field personnel and converted from old geared machines. Efforts should be made to locate these hoists and a program planned to bring them into compliance or to eliminate them altogether. As the elevator company begins to develop a total compliance program, it will become evident that there are other types of equipment that do not meet compliance; well-digging rigs, portable welders, skips (go-devils) without safeties, etc.

Remember, keep your program as simple and straightforward as possible. Communication lines must always be open, for OSHA does not give one time to comply unless one applies for a variance. This will be covered, in detail, elsewhere.

WHO SHOULD RECEIVE EDUCATION AND TRAINING?

The OSHAct has imposed an extensive communication and training burden on all elevator companies. It is essential that all personnel in a company receive education and training on the scope of this law. It is apparent to most people familiar with the OSHAct requirements that all levels of management must be made aware of their obligations under the law. It is necessary that their new tasks and responsibilities be clearly defined.

Sessions should be held with field people to inform them of the many prerogatives provided for them under the act. It is also important to emphasize their responsibilities in that the OSHAct "requires that each employee comply with safety and health standards, rules regulations and orders issued under the act and applicable to his conduct."

Is it necessary to have a detailed and documented plan? In the education of employees, on any level, it is not enough

	Effective	Average	Ineffective
Safety Responsibility	—	—	—
Employee Participation	—	—	—
Training	—	—	—
Protective Equipment	—	—	—
Housekeeping	—	—	—
First Aid	—	—	—

A MANAGER'S SAFETY NOTEBOOK

"The World of Elevator Safety"

to explain the existence of an obligating law and the general terms of the act. Rather, there should be a documented plan along with progress reports and activity dates. It should continually be made known that a company desires to provide a safe working place and has the plans to achieve it.

Training should be divided into several categories so that various levels of employees will receive programs reflecting their responsibilities.

Programs should be presented to at least the following four levels of employees:

1. High level management.
2. Local or branch office management.
3. Field supervisory personnel.
4. Field employees.

The material covered should be tailored to fit each level of responsibility.

Basic educational goals are:

High Level Management

- Understanding of the basic law and its potential effect on the company's cost of operation and profit potential.
- Status of legislation (states and federal) and possible impact of future laws.
- Understanding of the key provision combined with summary interpretations of the OSHAct. Determination of the organizations, legal obligations and financial limitations for compliance.
- Communication system for keeping top management informed

Local Management

- Understanding of the essentials of the OSHAct and an idea of the basic cost impact in the area for which he is responsible.
- Prerogatives granted under the act for the field employees.
- Knowledge of the consequences for non-compliance to the act.
- Necessity for recordkeeping, continuous communication and reporting procedures.

Field Supervisory Personnel

- Basic understanding of the intent of the OSHAct.
- Responsibilities and obligations.
- Knowledge of specific requirements called for by the OSHAct in his activities.
- Prerogatives granted to field employees under the act.
- Plan for continuous inspections and reporting procedures.
- Necessity of maintaining good employee communications in all areas of safety to assure a climate of good faith.
- How to handle an inspection

Field Employees

- Basic understanding of the intent of the OSHAct Company's plan for compliance with the OSHAct.
- Responsibilities of the employees.
- Responsibility of the company.
- The employees' responsibility to observe company safety rules and use protective equipment that is provided.

In addition to administering a safety program, someone in the company will have to remain continuously aware of the changes in the act or acts (State OSHA acts). In smaller companies this responsibility will probably be the concern of the general manager or owner. This will obviously be true if the company is not part of a larger corporation where the subsidiaries can depend on the corporate safety director for advice and help. However, the use of a professional safety consultant, insurance carriers or published periodicals, such as Commerce Clearing House or National Bureau of Affairs on Occupational Safety and Health can provide continuous information about the law and its many changes.

The Department of Labor also publishes a monthly magazine title "Job Safety and Health" plus a subscription service on the various sections of the OSHAct.

Additional means of educating employees in compliance would be to have them attend an OSHA recognized course on construction safety.

During the educational phase of compliance, channels of communication must be established from the man on the job to management. This is important in feeding back proper interpretations when needed and in finding the most vulnerable areas of operation. This will assist in planning for capital expenditures that might be needed in order to meet compliance.

Employees may occasionally take these educational programs as a personal affront. Questions may be put such as "Why are they picking on us?", "What if the other subs won't cooperate?" and "Why are we responsible for another trade's unsafe working habits?"

The simple truth is all employers are in the same boat. It is not our responsibility to police other trades but to insure that our own people don't work in areas of noncompliance regardless of who creates the hazard.

The experience has been that most people who show dislike or fear of OSHA do so out of lack of knowledge as well as resistance to change from familiar work patterns. It's like standing in a valley looking at the side of a steep mountain – knowing one must climb it to reach the summit It all starts with the first step; with proper training and guidance one can surmount the overall obstacle. Looking back, one day, one can readily appreciate what has been accomplished and face the future with renewed confidence.

In the future, OSHA compliance will be the normal way of doing business with all employers. However, the time is now and unless one starts climbing quickly and steadily he may become caught in the avalanche called citation and abatement costs .

PREPARING FOR AN INSPECTION

It is as important to know all one's rights under the OSHAct as it is the provisions of the law. Usually, circumstances allow sufficient time to determine what rights exist in a given situation before action is taken which may affect these rights. Unfortunately, the OSHAct expressly denies an employer such time. It requires 'surprise inspections, without delay. The representatives of an employee must know and understand: the company's rights beforehand. When the inspector knocks, the time to learn is past. Without previous instructions, the Job Superintendent or " highest official" (Mechanic-in-Charge) available at the job site may find himself confused and frustrated as to what he can do in representing the company. As a result, many rights may be waived.

Since there seems to be a tendency by job superintendents, foremen or lead men to resent an outsider who attempts to interfere with, or question, the running of a job it is imperative that emotions be controlled and that a calm, businesslike poise be adopted. Hostile attitudes and attempts to delay or interfere with the investigation will only result in the company losing precious rights and receiving maximum fines and penalties for violations. The keynote is to be polite, respectful and cooperative. If a checklist is used or referred to during the inspection, it should be shown to the inspector. There is no need to be secretive about the contents.

Management has a right to know who is entering their jobs. The Act specifically provides that, "Upon presenting appropriate credentials to the . . . agent in charge" the inspector shall be allowed to enter the work place without delay. This means that the highest official available on the project is entitled to see and read the identification papers to determine if the visitor is a bonafide safety inspector before he is allowed to inspect the job site. This right should not be abused to delay entry but the visitor can be asked to wait a few minutes while an employee calls his office or the highest ranking official on the job. If the superintendent is not present, the next highest ranking man should receive the inspector.

Since a company may wish to contest an alleged violation as a result of the inspection, it is important to record all relevant information concerning the inspection. If the investigation results from a written complaint, the superintendent or foreman should secure a copy of it. The names, business affiliation and addresses of all persons present should be written down. A business card is an excellent statutory prohibition against releasing the names of complainants, it would be improper for the superintendent to ask the inspector or such names. However, it is important that management know whether outside interests are involved, therefore, the inspector should be asked whether the complaint was filed by an employee, an employee of a fellow contractor, the customer or a party not related to the workplace. Care should be taken not to appear to be trying to guess the name of the complainant and if the inspector is reluctant to provide information, the subject should be dropped. Notes should identify, as completely as possible, the areas visited, machinery and equipment examined and the employees and other persons interviewed or involved in the investigation. After the investigation is completed, a full written report should be prepared including the foregoing as well as relevant remarks by the inspector or information acquired during the pre inspection and post inspection conferences and during the inspection. A copy of this report should be forwarded as soon as possible to the company safety representative.

The following is a summary of how to handle a Federal or State safety inspection:

1. OPENING CONFERENCE
   - a. Check Credentials
   - b. Determine reason for inspection -
     - (1) If because of complaint, get copy
     - (2) Determine where inspector wants to inspect
   - c. Request that branch manager or his designee accompany Inspector.
   - d . Review accident records -
     - (1) H Form 100 and 102
   - e. Contact employee representative for his participation in "Walk Around".
2. WALK AROUND INSPECTION
   - a. Attitude is extremely important -
     - (1) Be cooperative and pleasant.
     - (2) Immediately correct those items mentioned by inspector.
   - b. Take identical notes so exact problem can be referred to later.
     - (1) Exact location of alleged violation
     - (2) Exact description of what inspector considers is problem.
   - c. Spend whatever time it takes to complete inspection

"GIVE YOUR OSHA INSPECTOR THE RED CARPET TREATMENT"

(1) Don't hurry inspector.

(2) Don't attempt to steer inspector to or from a specific area.

3. CLOSING CONFERENCE
   a. Completely review each alleged violation.
   b. Establish realistic dates for abatement.
      (1) Don't make rash promises you can't keep
      (2) Don't minimize importance by setting dates too far in future
   c. Make a point of reminding inspector of alleged violations you corrected on the spot.
4. POST INSPECTION PROCEDURE
   a. Notify safety representative within company
   b. Watch for citation letter from Bureau of Labor and record date received .
   c. Take immediate steps to order material or put wheels in motion to meet the abatement dates.
   d. Be positive decision has been made and action taken within 15 days after receipt of citation letter on whether to appeal.
   e. Post copy of citation letter at site of alleged violation for three (3) day period or until violation is corrected.

WHEN THE MAN FROM OSHA ARRIVES:

- Make sure that you see his identification. (Industrial spies are reportedly pretending to be OSHAct officers.)
- Treat him with respect. (He's the judge and your organization will have to pay the fines.)
- Be cooperative. Show him anything he wants to see. (He must have proper clearance if he wants to visit classified areas).
- Try to learn as much as you can from him about solutions to the problems that he thinks you have. His experience is broad and he should be encouraged to be solution oriented.

RECORDKEEPING

As records will be carefully examined during a Goverment inspection, this section will attempt to clarify the recordkeeping responsibilities of employers under the Williams-Steiger Occupational Safety and Health Act of 1970.

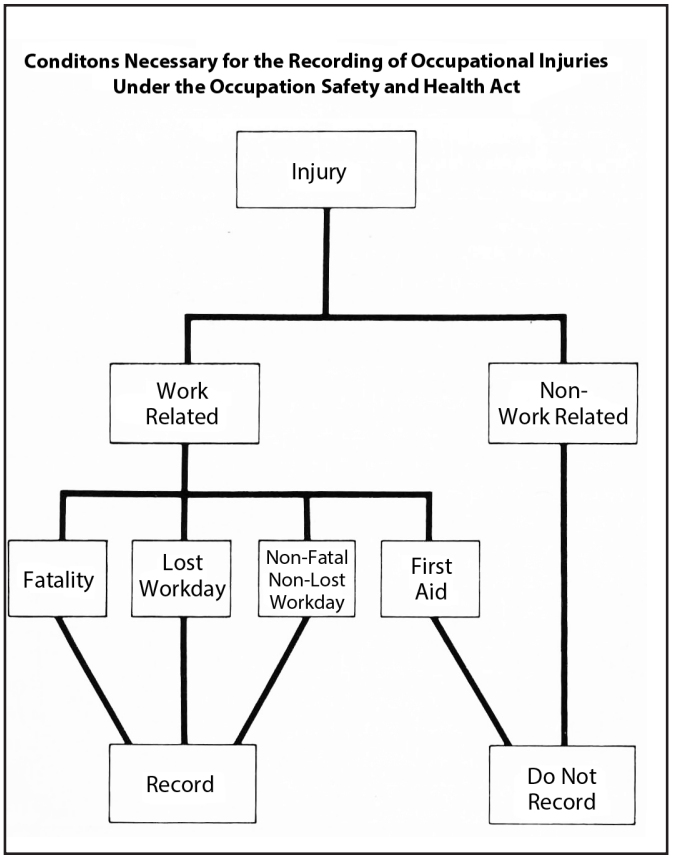
As of July 1971, employers were required to keep continuous records of occupational injuries and illnesses. Every employer must maintain a log of recordable occupational injuries and illnesses and supplementary records of each. The records should be maintained in the establishment at which the employees usually report to work.

If such recordkeeping has not been done, one should go back to the July 1, 1971 date, using whatever records are available, and establish a complete historical file. These records must be available to government representatives if they visit a facility.

The law requires that employees be informed of the safety and health protection provided under the Act. A poster has been printed for this purpose and it is available through regional OSHA offices. It must be displayed prominently on all job sites. Some employers have elected to have them posted in the tool boxes. In addition, a summary of all the occupational injuries and illnesses occurring during the year must be posted in the office at the end of the calendar year.

In order to carry out the purposes of the Act, employers are required to maintain accurate records (and periodic reports) of work-related deaths, injuries and illnesses. Minor injuries requiring only first aid treatment need not be recorded, but a record must be made if it involves medical treatment, loss of consciousness, restriction of work or motion, loss of work days, or job transfer.

Employers can also be required to maintain accurate records of employee exposure to potentially toxic materials (solvents and lubricants) or harmful physical agents which are required to be monitored or measured, and to promptly advise any employee of any excessive exposure and of the corrective action being undertaken. It would be advisable to keep



in company files a letter from each chemical supplier stating the toxicity of his product and the recommended wearing apparel (face shields, gloves) for its use.

Information about forms for keeping the required records is provided by the regional office of the Occupational Safety and Health Administration. Management should obtain a copy of the bulletin "Recordkeeping Requirements Under the Williams-Steiger Occupational Safety and Health Act of 1970." This is also available from regional offices or by writing the U.S. Department of Labor. (A map of regional offices is shown herewith).

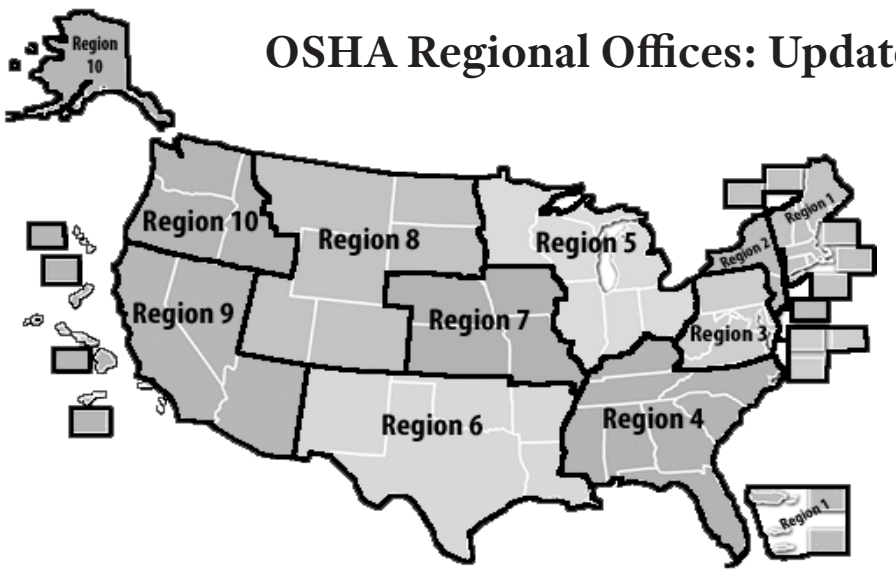
Briefly, the forms to be used in compliance with the OSHA Act are OSHA Forms 100, 101 and 102*. Each injury or illness must be entered in the log of cases (OSHA Form 100) within 6 days and signed by the person making the entry. Each change in the log must also be signed. This is important; failure to do so carries heavy penalties upon conviction of willful negligence or making false entries. This log will cover the calendar year - January 1 to December 31. A summary must be complied of OSHA Form 102 within one month after December 31. This summary, as mentioned previously, must be posted for a period of not less than 30 days. The yearly log (Form 100) and the summary (Form 102) must be kept for at least five years for inspection by employees and representatives of the State and Federal governments.

The injuries and illnesses to be recorded are: (a) all fatalities; (b) lost work-day cases which prevent the employee from performing his normal work; (c) non-fatal cases or non-lost work-day cases which involve transfer, termination of employment, loss of consciousness, restriction of work or motion; (d) any cases requiring medical treatment (not first aid treatment). (See chart). Serious accidents must be reported by telephone or telegraph within 48 hours to the nearest director of OSHA. This means (a) one or more fatalities, or (b) hospitalization of five or more employees.

An additional record of occupational injury or illness must be kept on OSHA Form 101 except where Workmen's Compensation insurance or other reports contain the information asked for on Form 101. If no other record is kept, the OSHA Form 101 must be. OSHA Form 103 is the Bureau of Labor Statistics survey data collection document. Completion of

*Form numbers have changed. See Chapter 3 for correct Forms or go to www.osha.gov.

OSHA Regional Offices: Updated 2020



REGION 1
New England BLS Information Office in Boston
JFK Federal Building
Room E-340
Boston, MA 02203
(617) 565-9860
Website: www.bls.gov/ro1/

REGION 2
New York-New Jersey BLS Information Office in New York City
Regional Economic Analysis and Information
201 Varick Street
Room 670
New York, NY 10014
Call: (212) 337-2398
Website: www.bls.gov/ro2/

REGION 3
Mid-Atlantic BLS Information Office in Philadelphia
The Curtis Center - BLS Suite 610-East
170 South Independence Mall
Philadelphia, PA 19106
(215) 861-4900
Website: www.bls.gov/ro3/

REGION 4
Southeast BLS Information Office in Atlanta
Atlanta Federal Center
61 Forsyth Street, S.W.
Room 7T50
Atlanta, GA 30303
(404) 562-2300
Website: www.bls.gov/ro4/

REGION 5
Midwest BLS Information Office in Chicago
JCK Federal Office Building
230 S. Dearborn Street
Room 3244
Chicago, IL 60604
(312) 353-2220
Website: www.bls.gov/ro5/

REGION 6
Southwest BLS Information Office in Dallas
Federal Office Building
525 Griffin Street
Room 602
Dallas, TX 75202
Website: www.bls.gov/ro6/

REGION 7
Mountain-Plains BLS Information Office in Kansas City
Two Pershing Sq. Bldg., Suite 1010
2300 Main Street
Kansas City, MO 64108
(816) 283-8745
Website: www.bls.gov/ro7/

REGION 8
US Department of Labor
1999 Broadway
Suite 1690
Denver, CO 80202
(720) 264-6550
Website: www.bls.gov/ro8/

REGION 9
Western BLS Information Office in San Francisco
90 7th Street
Suite 18100
San Francisco, CA 94103
(415) 625-2547
Website: www.bls.gov/ro9/

REGION 10
US Department of Labor
1111 Third Ave.
Suite 715
Seattle, WA 98101-3212
(206) 553-5930
Website: www.bls.gov/ro10/

this form is only mandatory for those employers who are notified that they have been selected to be in a survey.

Since it is apparent that the requirement of the law will result in better records, but also imposes a responsibility on company administrative talent, management should find ways to equate the costs with some of the benefits. It would be unfortunate if companies maintained the comprehensive records merely to live up to the letter of the law. An attempt should be made to "massage"the data to see how much can be learned about the causes of injuries or illnesses. In coding and categorizing injuries by type, management can perform an analysis that will give some insight into the establishment of trends. This insight, along with a determination of the costs of the injuries, can guide safety efforts toward activities that are focused on the solution of "real" problems. For this purpose we would recommend the "American National Standard Method of Recording and Measuring Work Injury Experience Z16.1" This is a universal standard for gathering and reporting accident frequently and severity rates. The National Safety Council compiles the statistics, by industry, from reporting members and publishes them annually in a booklet called "Injury Rates for 1972" and "Accident Facts 1972 Edition. "In this way a manager can really see where he stands within his own industry or relative to other industries. Using this system a company can develop a work Injury history for use when negotiating their next insurance policy renewal. Of course this is dependent upon how effectively an accident prevention program has lowered severity and frequency rates.

LEGAL

Now that we have covered OSHA Compliance, Administration and Education, let us review under Legal Requirements. The previous sections are covered under the following paragraphs:

1926.20 Employer is required to have a safety program. Employer is to hold frequent and regular inspections. Employer is responsible for accident prevention.

1926.21 (b) The employer shall attend programs that the OSHA Director provides. The employer shall instruct employees on hazards and their avoidance.

If the foregoing objectives have been accomplished a manager is well on the road to compliance with the law. Above all, remember, monetary fines and jail sentences may be invoked. (See Following Section on "Penalties")

Anyone who has read the law and the numerous articles published on the subject must feel that the entire burden of enforcement is aimed at the employer and that he has little or nothing to say about it. This is not entirely true. Knowing one's rights as an employer is as important as complying with the law. The law does provide some basic protections and the following statements and remarks will simplify those rights.

A COMPLIANCE OFFICER HAS THE RIGHT TO ENTER YOUR PLACE OF BUSINESS DURING NORMAL BUSINESS HOURS WITHOUT WARRANT. THIS INCLUDES SENSITIVE AREAS WHERE TRADE SECRETS MAY BE INVOLVED.

This is true, but you may request proper identification of the compliance officer and he is, by law, required to not disclose publicly any information on sensitive areas Remember though, that you are judged on your attitudes, so be polite.

AFTER THE INSPECTION AND DURING THE CLOSING CONFERENCE, THE COMPLIANCE OFFICER WILL GO OVER THE AREAS OF NON-COMPLIANCE, BUT CAN NOT ISSUE FINES OR CITATIONS.

Citations and fines are determined by the area director, therefore, if you correct a hazard while the compliance officer is still on the premises you might still receive a citation and fine. At the end of this section we append a summary of citations received by various elevator companies over a one-year period.

ONCE YOU RECEIVE A CITATION YOU HAVE FIFTEEN DAYS TO APPEAL. IF YOU DO NOT APPEAL, THEN IT IS ASSUMED THAT YOU ARE GUILTY OF THE INFRACTION.

An appeal can be made by a simple statement in letter form. It does not take legal counsel to initiate same.

THE LAW REQUIRES THAT YOU POST A COPY OF THE CITATION NEAR THE SCENE OF THE INFRACTION. IT ALSO REQUIRES THAT YOU NOTIFY YOUR EMPLOYEES OR THEIR REPRESENTATIVE .

A follow-up letter that you have complied with this requirement is necessary. If the job of installation has been completed then you should mail to each employee that was on the job, a copy of the citation. A copy of any notice of contest may be posted near the citation.

IF AN EMPLOYER DECIDED TO APPEAL, THE ENTIRE CITATION DOES NOT HAVE TO BE CONTESTED.

An employer who does not wish to have everything opened up for review should be sure that his notice of contest specifies exactly what items are to be contested. Employers are required to serve copies of their notice of contest upon all parties. Those parts not contested must be brought into compliance within the prescribed abatement period and monetary penalties must be paid.

A PERIOD OF TIME WILL BE ESTABLISHED TO ABATE THE HAZARD.

Employers are at peril if they don't comply by the specified date, because if OSHA made a reinspection and found that abatement had not been accomplished, the employer would be subject to the possibility of being assessed additional penalties. If the time to correct the citation is unreasonable you may apply for additional time. However, you must show cause.

THE LABOR DEPARTMENT TURNS YOUR LETTER OF APPEAL OVER TO THE OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION (OSAHRC). THIS IS AN INDEPENDENT FEDERAL AGENCY. IT MUST BE TURNED OVER TO OSAHRC WITHIN SEVEN DAYS OF YOUR APPEAL (NOTICE OF CONTEST) OR THE REVIEW COMMISSION WILL TEAR UP THE CITATION. OSAHRC is an independent federal agency in the executive branch. There are 40-odd independent agencies of which none are part of any of the 11 cabinet-level departments.

The commission was created to insure just and equitable enforcement of Occupational Safety and Health standards, established by law and which are contested by employes, employees, or representatives of employees. The commission has three principal functions under the Occupational Safety and Health Act of 1970:

1) Adjudicating alleged violations of occupational safety and health standards cited by the Secretary of Labor and contested by employers.
2) Determining the period of time for correction of alleged occupational safety and health violations cited by the Secretary of Labor where the reasonableness thereof is contested by any employer, employee, or representative of employees.
3) Assessing all civil penalties for occupational safety and health violations under Section 17 of the Act.

THE COMMISSION RECEIVES NUMEROUS NOTICES OF CONTEST THAT DO NOT CONTAIN THE CERTIFICATION OF SERVICE

In legal jargon, this is known as non-perfection of the notice of contest. Where such notices are received, the commission returns them with a letter informing the employer that his notice of contest was not complete, and affords him an additional seven days within which to furnish information certifying that he has served a copy of the notice upon the employees. If OSHA reinspects and the conditions had not been corrected by that time, the employer would be subject to additional penalties of up to $1,000 per day. It is obvious that it could be potentially perilous for employers who fail to perfect their notice of contest and force the commission to dismiss the action .

EXPERIENCE HAS SHOWN THAT THE REVIEW COMMISSION JUDGES ARE COMPLETELY INDEPENDENT. AS A RULE, THE HEARINGS ARE HELD IN AN INFORMAL COURT ROOM MANNER

Their decisions are rendered on the evidence presented by the Department of Labor and the letter of the Law. The burden of proof rests on the Department of Labor as an adversary party. Many persons have presented their own cases before the review commission and won, without the aid of legal counsel. However, one should consult legal counsel before attempting to defend his own case. The cost of savings and the fact that the Judge will be called upon to see that your rights are not abridged may be offset by the technical nature of your defense.

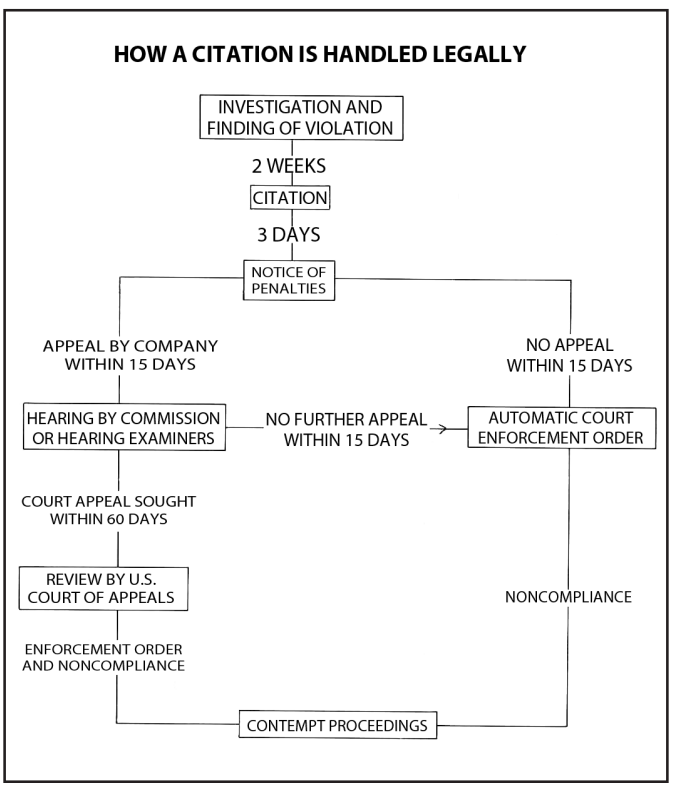
OSAHRC HAS THE POWER TO SUBPOENA. TAKE INTERROGATORIES AND DEPOSITIONS .

When you file a notice of contest you will receive a long list of questions (interrogatory) which will deal with your company's history, size, sales dollars and total number of previous violations. Where, and when, the violations occurred and the type of violation, will be asked. Therefore, in the elevator business, with as many work sites as exist, the number of violations can build up due to increased exposure. If this were to be used as a judgement factor of guilt or innocence, it certainly would be different from normal criminal law. One point to remember is that the number of previous citations does effect the amount of dollars one will be fined on each future citation. This should certainly be one of the judgement factors when weighing whether to appeal or not

ASSUMING THAT THE NOTICE OF CONTEST HAS BEEN CORRECTLY FILED AND ALL PROCEDURES PROPERLY FOLLOWED. THE COMMISSION REVIEW JUDGE WILL SCHEDULE A HEARING.

Upon completion of the hearing, the judge must study the testimony that has been recorded. Because the decision he reaches must be based upon what is on the record, the employers are urged to provide as much information as possible, because the final determination will be made on the basis of what is contained on the record, as a whole. Another prime factor is the importance of controverting any OSHA allegations that are considered to be incorrect and not appropriate to the situation. Make as complete a record as possible, introduce information that is most beneficial, and challenge any information given that is considered not to be correct. Modification can result in having alleged violations changed from non-serious to serious or vice versa, or the amount of the proposed penalties increased or decreased.

"Modification can result - - -", in review commission decision, Secretary of Labor -V. Whetmore and Parman, Inc., OASHRC Docket #221, January 17, 1973, "Review Commissional Safety



A MANAGER'S SAFETY NOTEBOOK

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and have consent of Secretary of Labor to find Occupational Safety and Health Act violation of degree higher than that charged, does not have authority to find employer charged with serious violations in willful violation of act."

And in another decision, Secretary of Labor-V. Dundas Pallet, Co., Division of Industrial Wood and Pallet Co., OSHRC Docket #266, February 14, 1973, "Review Commission, which must have consent of Secretary of Labor to find Occupational Safety and Act violation of degrees higher than that charged does not have authority to determine whether employees admitted non serious violations is a serious violation."

AFTER THE HEARING, THE JUDGE'S DECISION WILL BE FILED WITH THE REVIEW COMMISSION AND THE COMPLAINT AND THE RESPONDENT WILL RECEIVE COPIES. THE DECISION BECOMES FINAL IN 30 DAYS. HOWEVER, EITHER THE COMPLAINANT OR THE RESPONDENT MAY FILE A PETITION WITHIN 25 DAYS REQUESTING A REVIEW.

If an employer decides to ask for a review of the decision, he must file a petition stating the reasons for thinking that the judge's decision should be reviewed. The petition should be addressed to the Review Commission in Washington, D.C. If the commission decides to review a decision, concerned parties are notified and given an opportunity to submit written briefs and exceptions to the judge's decision. When the commission does not grant a review, the judge's decision becomes the final order of the commission 30 days after it is filed.

PETITIONS TURNED DOWN BY THE REVIEW COMMISSION MAY BE FILED BY AN AGGRIEVED PARTY TO AN APPROPRIATE U.S. CIRCUIT COURT OF APPEALS.

An appeal to the U.S. Court of Appeals can be made only on the basis of error in law.

WHEN FILING FOR A NOTICE OF CONTEST DO NOT PAY ANY FINE UNTIL YOU HAVE EXHAUSTED ALL AVENUES OF APPEAL.

You can withdraw your Notice of Contest anytime up to the day before the hearing and pay the fine. This can give time to investigate and determine if there are sufficient grounds for appeal.

OVER 50 PERCENT OF THE CASES APPEALED HAVE RESULTED IN DISMISSAL OF THE CHARGES OR A REDUCTION IN THE AMOUNT OF FINE.

A number of cases were dismissed because of administrative problems within OSHA. This will be less frequent as times goes on. The majority of cases dismissed, however, were dismissed because the Labor Department could not prove their allegations.

WHILE THE ACT PROVIDES FOR THE ASSESSMENT OF CIVIL PENALTIES, IT ALSO MAKES PROVISION FOR CRIMINAL PENALTIES.

Criminal penalties can be assessed where there is willful violation of any standard, rule or regulation causing death to any employee; giving unauthorized advance notice of an inspection, making false statements, representations or certification of certain specified documents.

AN EMPLOYER CAN REDUCE HIS EXPOSURE TO CITATIONS BY FILING FOR A VARIANCE IN AREAS WHERE HE NEEDS TIME TO COMPLY.

This has merit if management can meet the compliance date when the variance expires. However, be prepared for inspections since you have revealed yourself. A variance can only be renewed once by law, so be careful. The better approach would be through one of our management institutions such as National Elevator Industry, Inc. or the National Association of Elevator Contractors especially where it involves industry standards such as the service and repair contracts falling under the general industrial section of OSHA (1910).

IN FILING FOR AN INDUSTRY VARIANCE YOU MAY DEVELOP YOUR OWN STANDARDS.

In conversations with Washington and various area Directors for OSHA, it appears they are well aware of the special problems within the elevator industry. Most of them have been associated with insurance companies and have inspected elevators in many old buildings. They know the problem of applying industrial standards and new codes on old elevator equipment. They have suggested that our industry file for a variance, but warn "Be prepared to furnish people to sit on a standards board to write your own industries standards."

This is important to the elevator industry, now, since there already are proposals being made by various States, and at the Federal Level, to make service-oriented companies perform inspections on their customer's equipment and report it. From this they will issue citations and fines to the owner. One can imagine the reaction of a customer if a vendor is required by law to perform OSHA inspections on his property!

Another proposal being considered in Washington is to have companies report annually their costs to comply to the standards. This means automatic exposure of noncompliance areas. These certainly would strengthen our industry's institutions and possibly join with others such as National Electrical Manufacturing Association and National Manufactures Association in support of a lobbying group to represent our interests at State and Federal levels. Remember, 48 of the 50 States are writing their own OSHA acts right now.* The Federal OSHA law is only the minimum standard. How far will

*Forty-seven states have submitted OSHA plans of which the following ten have been approved: South Carolina, Oregon, Montana, New Jersey, Washington, North Carolina, Utah, North Dakota, California and New York.

the individual states go in their laws? What will the costs be to the business man small or large? Only time will tell and it could well be proportional to management's own efforts in supporting their industries institutions, in this regard.

By now you elevator company managers must be wondering, as many others are, is the Government running our business or are we? The answer is obvious. If nothing is done to comply with the Law to protect a company's working people, the Government will! It is your choice. Section 5A of the OSHA Act is quite clear.

Each employer (a) should furnish to each of his employees employment and a place of employment which are free from recognized hazard that are likely to cause death or serious physical harm to his employees; (2) shall comply with Occupational Safety and Health Standards promulgated under this Act."

THE OBJECT OF THE Act is not to punish the employer, but to assure safe working conditions for the worker. One can not argue the MORAL intent of the Act. Therefore, the thrust should be to increasingly define the standards as applied to our industry and their administration.

PENALTIES

OSHA only proposes amounts which it believes are appropriate as penalties. These proposals automatically become penalties assessed against the cited employer when the enforcement action is not contested within the time prescribed. Once a case is contested, the assessment of a penalty, if any, is a matter for the Commission.

When a case goes to a hearing before a Review Commission Judge, the employer's evidence and argument on what penalty, if any, should be assessed, receives the same consideration as the evidence and argument of the Secretary of Labor on this matter.

The four factors which the law requires the Commission to consider in determining the appropriateness of civil penalties are:

The size of the business of employer being charged;

The gravity of the violation;

The good faith of the employer; and

The employer's history of previous violations.

The amounts which may be assessed as penalties are set forth in Section 17 of the Act as follows:

Sec.17. (a) Any employer who willfully or repeatedly violates the requirements of Section 5 of this Act, of any standard, rule, or order promulgated pursuant to section 6 of this Act, or of any regulations prescribed pursuant to this Act, shall be assessed a civil penalty of up to $1,000* for each such violation.

(b) Any employer who has received a citation for a serious violation of the requirements of section 5 of this Act, of any standard, rule, or order promulgated pursuant to section 6 of this Act, or of any regulations prescribed pursuant to this Act, shall be assessed a civil penalty of up to $1,000* for each such violation.

(c) Any employer who has received a citation for a violation of the requirements of section 5 of this Act of any standard, rule or order promulgated pursuant to section 6 of this Act or of regulations prescribed pursuant to this Act and such violation is specifically determined not to be of a serious nature, may be assessed a civil penalty of up to $1,000* for each such violation.

(d) Any employer who fails to correct a violation for which a citation has been issued under section 9(a) within the period permitted for its correction (which period shall not begin to run until the date of the final order of the Commission in the case of any review proceeding under section 10 initiated by the employer in good faith and not solely for delay or avoidance of penalties), may be assessed a civil penalty of not more than $1,000 for each day during which such failure or violation continues.

(e) Any employer who willfully violates any standard, rule, or order promulgated pursuant to section 6 of this Act, or of any regulations prescribed pursuant to this Act and that violation caused death to any employee, shall, upon conviction, be punished by a fine of not more than $10,000* or by imprisonment for not more than six months, or by both; except that if the conviction is for a violation committed after a first conviction of such person, punishment shall be by a fine of not more than $20,000* or by imprisonment for not more than one year, or by both.

(f) Any person who gives advance notice of any inspection to be conducted under this Act, without authority from the Secretary or his designees, shall, upon conviction, be punished by a fine of not more than $1,000* or by imprisonment for not more than six months, or by both.

(g) Whoever knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to this Act shall, upon conviction, be punished by a fine of not more than $10,000*, or by imprisonment for not more than six months, or by both.

(h) (2) Notwithstanding the provisions of sections 1111 and 1114 of title 18, United States Code, whoever, in violation of the provisions of section 1114 of such title, kills a person while engaged in or on account of the performance of investigative, inspection, or law enforcement functions added to such section 1114 by paragraph (1) of this subsection, and who would otherwise be subject to the penalty provisions of such section 1111, shall be punished by imprisonment for any term of years or for life.

(i) Any employer who violates any of the posting requirements, as prescribed under the provisions of this Act, shall be assessed a civil penalty of up to $1,000* for each violation.

(j) The Commission shall have authority to assess all civil penalties provided in this section, giving due consideration to the appropriateness of the penalty with respect to the size of the business of the employer being charged, the gravity of the violation, the good faith of the employer, and the history of previous violations.

(k) For purposes of this section, a serious violation shall be deemed to exist in a place of employment if there is a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment unless the employer did not, and could not with the exercise of reasonable diligence, know of the presence of the violation.

(l) Civil penalties owed under this Act shall be paid to the Secretary for deposit into the Treasury of the United States and shall accrue to the United States and may be recovered in a civil action in the name of the United States brought in the United States district court for the district where the violation is alleged to have occurred or where the employer has its principal office.

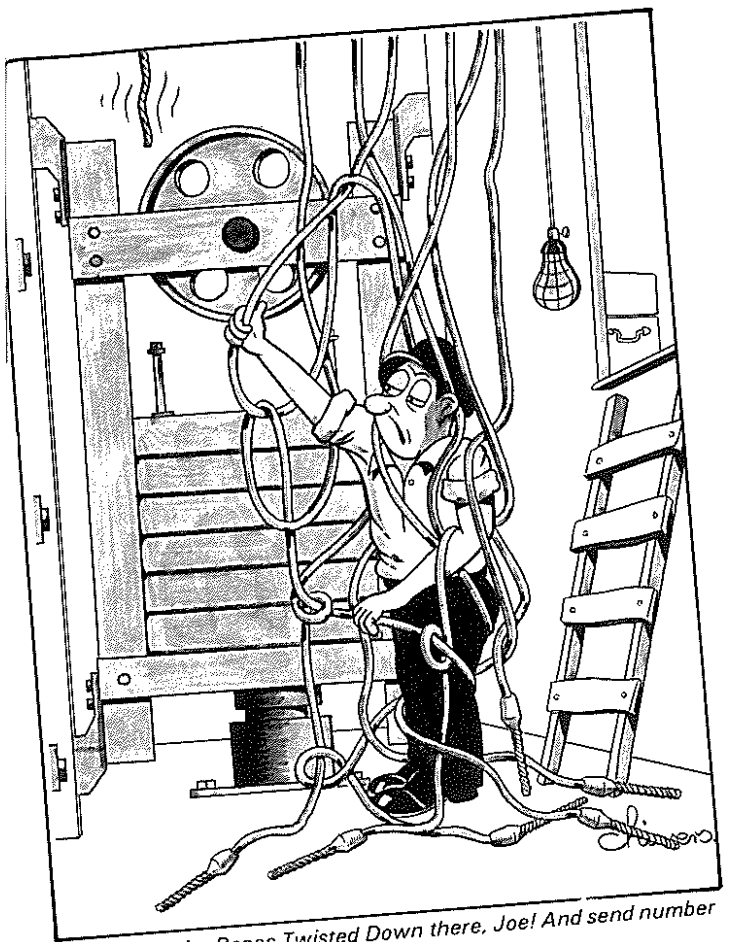
*Penalties have increased significally since 1973.

SAFETY WITH A SMILE

...By Chivers

"Gee, Joe, that was very careless of you."

"Joe, did you remember to tie in that low voltage transformer?"



"Don't get the Ropes Twisted Down there, Joe! And send number one right away."

"What's new?"

"Back to the old drawing board."

A MANAGER'S SAFETY NOTEBOOK

"The World of Elevator Safety"

FROM UNDERSTANDING TO AN ACTION PROGRAM

Hopefully the summary on the preceding pages has given our readers a better working knowledge of OSHA, the most comprehensive safety legislation ever written. After having an understanding, it is vitally important that an employer moves ahead with an "action program" to meet his responsibilities under the ACT.

It is worth reiterating, at this point, that the Occupational Safety and Health Act of 1970, leaves no room for doubt that the employer shall have safety programs that are accident prevention in nature as well as ongoing educational and safety training programs. The OSHAct states the following under "Accident Prevention Responsibility":

1. It shall be the responsibility of the employer to initiate and maintain programs which shall provide for frequent and regular inspections of job sites, materials, and equipment by competent persons designated by the employers.
2. The use of any machinery, tool, material or equipment which is not in compliance with any applicable requirement of the OSHAct is prohibited. Such machine, tool, material, or equipment shall either be identified as unsafe by tagging, the controls made inoperable or shall be physically removed from the place of operation.
3. The employer shall permit only those employees qualified by training or experience to operate equipment and machinery.

Under "Safety Training and Education", the OSHAct states that, "The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposures to illness and injury.

The OSHAct is clear in its intent and places an immediate responsibility upon all employers who have not published a written safety program for their employees to do so. Most companies have, because of insurance and production losses, moral obligations, public relations, legal commitments, published letters and directives regarding methods, tools and safe working practices. However, not all of these are formally compiled into a safety manual. It is reported that large manufacturing companies, have paid outside consulting firms as much as $20,000 to write corporate safety manuals with accompanying accident prevention programs. As smaller companies can afford to incur only a fraction of such cost, it is our intent within the following section, to facilitate the building of a satisfactory company Safety Manual and Accident Prevention Program .

An employer action safety program would necessarily incorporate the following:

1. An employer must be aware of his responsibility for the safety and health of all employees
2. Procedures should be established to convey company policy to all employees. Management must ascertain that supervisors, with line authority and functional responsibility, are familiar with the company policy.
3. The overall responsibility for safety in a company should be assigned to one person who must have a comprehensive understanding of OSHA as it applies to his industry. All related communications should be directed to him .
4. A safety program should be developed, adopted and fully supported by management. Specific organization safety objectives should be established and reviewed periodically in order to measure progress .
5. Safety considerations should be made a part of the cost of doing business by having estimators establish the expense of the safety effort and including it on every project bid. Federal safety standards should be considered an extension of bid specifications.
6. Labor contracts should be reviewed to ensure they comply with the provisions of the Safety Act. Work closely with local labor organizations in the safety and health areas.
7. Examine sub -contractors and general contractors and be certain to spell out their responsibility for their own unsafe actions; also building owners and managers in the instance of elevator maintenance.
8. Explain to vendors and equipment dealers the requirement of purchasing or renting only material or equipment that meets the regulations.
9. Emphasize to employees the expectation of their fullest cooperation in the compliance with the Safety Act. Develop an effective internal training program.
10. Keep abreast of current OSHA developments by reading any information available on compliance, citations and penalties occurring in your industry.

SAFETY PROGRAM IN CAPSULE

In capsule form, the following is an action program summary of immediate minimum safety program requirements for the elevator contractor:

1. ESTABLISH A SAFETY PROGRAM
   - A. Statement of company policy by the chief executive.
   - B. Appointment of individual responsible for the safety program.
   - C. Distribution of Field Employee's Safety Handbook to each employee.
   - D. Job site safety inspections by Superintendent or Mechanic-in-Charge.
   - E. Accident investigations by Superintendent or Mechanic-in-Charge.
   - F. Consultation with, and assistance from, insuring company.

G. Establish an approved list of personal protective clothing and equipment.

2. AREAS OF COMPLIANCE CONCENTRATION

A. Fulfill record-keeping requirements.

B. Generally upgrade overall housekeeping on the job site.

C. Have all personal protective equipment available properly maintained and in use.

D. Have proper barricades in use at hatch openings, stairs, etc.

E. Assure that all company and employee's tools are in proper and safe operating condition.

F. Have proper first aid equipment on hand and trained first aid personnel available or within adequate proximity.

G. Assure that all ladders, scaffolds and hoisting equipment are properly built and used.

H. Assure that all electrical equipment is in conformance with electrical code (properly grounded and guarded).

I. Have fire-fighting equipment available at job site.

Having digested this, our readers will need to move on to the details of "Building An Accident Prevention Program" in the second section of this book

THE SAFETY MANUAL

The Safety Manual is a necessary tool for management in building a strong Accident Prevention program. This book should incorporate the company's accident prevention policies, administrative procedures and responsibilities, accident reporting procedures and correcting methods, reporting and evaluating forms, job site compliance methods, tool selection recommendations, as well as basic references from the government

The 1973 Annual Study of ELEVATOR WORLD, 'The World of Safety" might well be the lead-off portion of the Safety Manual. The following is a suggested Table of Contents that might be included within a company's Safety Manual

1. Statement of company policy.
2. Safety policy procedures and responsibilities.
3. Branch office safety procedures.
4. Approved safety clothing and equipment.
5. Workman's compensation.
6. Insurance information - coverage and liability.
7. Pre-employment physical.
8. New employee safety orientation. (Disciplinary action)
9. Construction superintendent - definition, responsibilities. (Construction superintendent's safety check-list.)
10. Job site Safety Coordinator, definition, responsibilities.
11. Conducting Tool Box Meetings.
12. Correcting unsafe practices.
13. Investigating injuries.
14. Accident reporting.
15. Job safety analysis.
16. Guide list for Inspections.
17. Safety Coordinator's Check List.
18. Check list follow-up responsibility.
19. Stopping accidents.
20. Tool Box Meeting format.
21. Tool Box Meetings - No. 1 through 24.

Included in the Safety Manual should be the various forms that are utilized in the company's accident prevention program. Numerous forms have already been developed within our industry. Through trial and error, during the past several years they have been refined to become quite utilitarian. The Safety Committee has analyzed forms which would seem to have general value to the typical elevator company and reproduces within this Annual those that a manager might wish to utilize within his program. As our Annual Study is "perfect bound", there should be no difficult in removing form pages (break the book spine before easing out) which are to be reproduced by a local printer. The above Table of Contents would apply to almost all elevator companies. However, the small firm manager should review the listing to determine which ones are germain to his operation. Larger companies may wish to expand upon it. As we move through this second section we will expand upon the items in the suggested Table of Contents – fleshing-out" the Safety Manual and building an accident prevention program, at the same time.

The company statement of policy should be followed in the Safety Manual by a detailed explanation and delineation of administrative procedures, responsibilities, lines of communications and proper follow-up. This should set forth the responsibilities of all managerial personnel including Regional Managers, Branch Managers, Director of Industrial Relations, Insurance Manager, Safety Director (or their equivalents) down through the Field Superintendent and Safety Coordinator (Mechanic -In-Charge) to the individual employee. This explanation should also come under the signature of the highest ranking officer within the company and be made available to all employees who are in any way affected.

The few large companies utilizing Regional Managers already have set forth the role they play. A number of medium-sized elevator firms have branch operations with managers who have line responsibility. Insofar as the accident prevention program is concerned, the branch manager should be given responsibility for all facilities and activities under his administration. He should assure that the company policy is complied with in the following areas.

1. Company safety appraisals to be followed up and recommendations acted upon.
2. Establish the necessary procedures and files to comply with company policy forms and OSHA record keeping requirements.
3. Insure the following forms are correctly utilized

a. Employer's First Report of Injury (workmen's compensation). This form varies from state to state. It must be filled out in accordance with the state laws where the accident occurred and appropriate distribution made to the home office and insurance company.

b. Supervisors Accident Investigation Report – This form is to be completed for any lost time accident and appropriate routing made.

c. OSHA-101 Supplementary Record of Occupational injuries and illnesses. The employer's first report of injury may be used in lieu of OSHA 101, where the state form contains appropriate data. It must be on file for

five years. An OSHA compliance office can call for this form at any time. This form may be completed from the information on Supervisors Accident Investigation form.

d. OSHA-100 Log of Occupational Injuries and illnesses. This form is required by Federal Law The information from OSHA-101 or Employer's First Report of Injury is posted on this form. An OSHA compliance office can call for this form at any time. Must be on file 5 years.

e. Physician's Report. This form is furnished by the home office or insurance company and is used by the treating doctor

f. OSHA-1 02 Summary Occupational injuries and illnesses. This form is required by Federal Law. It is to be completed at the end of each year and posted in a place accessible to the employees. It will be posted during February of each year.

g. Insure that the Supervisors Safety Check Lists, Safety Coordinator's Check List and Tool Box Safety Meeting forms are utilized properly.

4. In concert with the Safety Director, participate in the safety glass and safety shoe programs or any other programs the company deems necessary for accident prevention.
5. Designate an alternate as the person responsible in his absence.

Where there is only the single company office, the foregoing is the responsibility of the owner or manager. These may be assigned as an additional duty to a staff member. Whether it be the owner, manager, staff member or Safety Director the person endowed with the safety management responsibility shall assure:

1. A specifically established program which produces results.
2. An active safety committee.
3. A prompt response to recommendations submitted upon accident or fire prevention.
4. A thorough and effective accident investigation and reporting procedure.
5. A training program for employees and supervisory personnel directly related to hazards and accident prevention on operational levels.
6. Conduct of safety surveys on all operations and facilities.
7. Coordination of safety programs with insurance activity.
8. Development and use of appropriate evaluation and report forms.
9. Development, or securing of Field Employees' Safety Handbook and its distribution to field men.
10. Procurement and distribution of personal safety equipment.

MANAGEMENT POLICY STATEMENT

The starting point for any company's accident prevention program is a statement of policy by the highest ranking officer in the company. For example the thought should be incorporated that, "It is the policy of the company to operate all facilities and equipment with a high regard for protection against personal injury and occupational illnesses to employees and damage to material and equipment.

It is the company's policy to comply with the requirements of all applicable laws pertaining to health and safety. All company employees are to make accident prevention a matter of personal concern at all times."

The development of such a letter should be more than a perfunctory exercise; thought should be given to having it express the personality of the chief executive as well as the traditions of the company and the philosophy of the leadership. Much will hinge upon the beginning and if employees have the feeling that only lip-service is being rendered, the program, itself will always reflect such a cursory attitude. The policy statement should be strong, sincere and reflect the personal involvement and concern of the chief executive and the management. The policy statement should be signed by the chief executive and be published and displayed in such a fashion that all employees may bear witness.

APPROVED SAFETY CLOTHING AND EQUIPMENT

The company should establish a policy that requires all vendors of power-tools, hoists, chains and major appliances used in installing or servicing elevator equipment to certify, by letter, that OSHA compliance standards have been met. These letters should be filed in the Accident Prevention Manual for future reference. In this manner, a company can standardize tools and equipment throughout their operations, plus take advantage of possible volume purchasing for cost reductions.

This procedure will also simplify the inspections required by OSHA on such equipment as hoists and chains since a company may make the inspection part of a manufacturer's purchase agreement.

This section of the Manual might well include a report from each vendor of lubricants, solvents or other chemicals used concerning the toxicity and necessary safety apparel to be used with each.

A section of the manual should also include brands and model numbers of such items as hard hats, safety belts, eye protection devices, safety lines or any other accident prevention devices approved by the company. Included should be the letters from each vendor as to their products' compliance with OSHA. Again, by standardization, a company may take advantage of cost reductions through volume buying.

With a policy in mind for future apparel, tool and equipment purchases, a company can gradually develop this section of the Manual comprehensively with little effort.

WORKMEN'S COMPENSATION

Loss control starts with workmen's compensation and medical costs and the assigned reserves for lost-time accidents. Controlling of elevator insurance losses will directly affect the industry rates for insurance. Therefore, if only some companies make good strides in controlling their lost-time accidents and others ignore the effort, the rates will change little. It will take a concentrated effort on the part of all firms to reduce the industry's manual rate. It is obvious that this should be a thrust of our industry's national management institutions.

The need for improved accident-cost control systems has been recognized for many years in the United States. Most managements have a sincere interest in their employees and their families. They, therefore, allocate money for accident prevention without expecting a fair return upon such an investment. An "experience rating" which permits insurance companies to reduce workmen's compensation premiums to companies having safety programs and showing a reduction in the number of accidents, has been an important factor in the allocation of funds by firms for accident reduction programs. Despite this position, a company cannot afford to neglect the effect of its activities on production and company profits. Competition, in many cases, has forced management to reduce overhead costs by only supporting staffs and departments that can show a profitable operation. It is important that management be aware of actual production-cost reductions resulting from a safety program. In other words, a good safety program should prevent lost production and increased costs resulting from accidents.

As we consider the area of direct and indirect costs, we must be aware that a company does not lose money just on the basis of its insurance costs which are directly charged. It will be found that indirect costs are as much, or more, than the direct one. The former are those costs that are accrued, for example, by the lack of productivity when a person is injured or "lookers-on," the time lost by the supervisor having to investigate the accident and filling out the necessary forms, the secretary's time in having to type the reports as well as the lost productive time of the person who was actually injured.

At one time, the American Engineering Research Council published a research report resulting in the development of "direct" and "indirect" costs. The compensation payment plus medical expenses were referred to as direct costs. Indirect costs included the following:

1. Cost of lost time of the injured employee.
2. Cost of time lost by other employees who stop work out of curiosity or sympathy, to assist the injured, or for some other reason.
3. Cost of time lost by foremen, supervisors or other executives.
   a. Assisting injured employee.
   b. Investigating the cause of the accident.
   c. Arranging for another employee to continue the injured employee's production.
   d. Selecting and training a new employee to replace the injured employee.
   e. Preparing accident reports or attending hearings before officials.
4. Cost of time spent on the case by first aid attendant and hospital department staff when not paid for by the insurance carrier.
5. Cost of damage to equipment, tools, or other property, or to the spoilage of material.
6. Incidental cost due to interference with production, failure to fill orders on time, loss of bonuses, payment of forfeits, and other similar causes.
7. Cost to employer under employee welfare benefit systems.
8. Cost to employer for continued wages to the injured employee who has not fully recovered upon his return, even though his services for a time may be worth only half of their normal value.
9. Cost due to the loss of profit on the injured employee's productivity, and on idle machines.
10. Cost occurring as a consequence of the excitement or weakened morale due to the accident.
11. Overhead cost per injured employee: expense (light, heat, rent, etc.) which continues while the injured employee is non productive.

During this research, a 4 to 1 ratio was developed, indicating that the indirect cost of an accident was at least four times as great as the direct cost of a disabling injury. The validity of this ratio has often been questioned. Subsequent studies have yielded ratios as low as 1 to 1 and as high as 20 to 1.

Recently, the terminology was changed from "direct cost" and "indirect cost" to ''insured costs" and "uninsured cost," because it was felt that the latter was a more definite description of the cost and it also brings management to regard the uninsured cost with more interest. The change in terminology did not affect the content of what constituted "direct cost" and "indirect cost."

Generally, industrial management has accepted the "direct" or ''insured'' cost of accidents as the actual cost without regard for the "indirect" or "uninsured" cost. The reason for this reaction was that ''indirect'' or "uninsured" costs were intangible and could not be determined without extensive research. For example, it is difficult to determine the amount of time supervisors and company executives spend in assisting an injured employee, investigation the accident, arranging for the employee's production to be continued by another employee, selecting and training a new employee, and preparing accident reports. These activities are integrated into the supervisor's regular duties and are difficult to separate. This is only one of many items included in the "indirect" or " uninsured" accident costs.

A good figure to use within our industry for indirect vs direct cost is a one-to-one ratio, although some knowledgeable safety and workmen's compensation Experts believe the indirect costs are from three to five times the direct costs. Some company's loss ratio have run as much as one percent of their total sales dollars. Studying these figures, it may be found that a company can readily afford a full-time safety professional. For example, if annual sales dollars were $5 million, direct and

PRE-EMPLOYMENT PHYSICAL FORM - PART 1
PHYSICAL EXAMINATION RECORD

THIS PORTION OF FORM TO BE FILLED OUT BY ORIGINATION OFFICE.

OFFICE _____ ADDRESS _____

NAME OF APPLICANT _____ DATE OF BIRTH _____ MALE _____ FEMALE _____

ADDRESS (NO. AND STREET) _____ (CITY & STATE) _____

OCCUPATION APPLIED FOR _____

	OCCUPATION	DURATION	OCCUPATION	DURATION
PAST OCCUPATIONAL HISTORY				

THIS PORTION OF FORM TO BE FILLED OUT BY EXAMINING PHYSICIAN

APPLICANT'S MEDICAL HISTORY

Nervous Breakdown		Kidney Disorder	
Allergy		Skin Conditions	
Epilepsy		Hernia	
Diabetes		Arthritis	
Respiratory Disease		Back Trouble	
Operations		Medical Attention (Past 2 Yrs.)	

Others

Compensation for Ind. Injury	Yes	No	Year	Cause
Compensation for Occ. Disease	Yes	No	Year	Type

APPLICANT'S PHYSICAL EXAMINATION

	WEIGHT:	HEIGHT:	TEMP.:	PULSE:	REP./MIN.
URINE	Sugar	Albumin	Sp. Gr.	Microscopic (Cast. Etc.)	
EYES	Pupils	Color Vision	Dist: O.D. O.S. Corr. O.D. Corr. O.S.		
			Dist: O.D. O.S. Corr. O.D. Corr. O.S.		
			Remarks:		
EARS	Discharge R.E. L.E.	Hearing R.E. L.E.	Pathology		
NOSE & THROAT	Pathology		Tonsils		
MOUTH & NECK	Teeth (Eff.)	Caries	Dentures	Pyorrhea	Thyroid
HEART	Condition (Size, Murmurs, Sounds, Etc.)		Blood Vessels	Pulse	Bloor Pressure Systol. Diast.

CHEST	Shape	Forced Expir.	Forced Inspir.	Percussion	Breath Sounds	Rales	Other
	Date Last X-Ray Diagnosis						

ABDOMEN	Scars		Masses (Liver, Spleen, Etc.)		Varicosities	
HERNIA	Present	Direct	Indirect	Truss Worn	Rings, (Small, Med., Large, Firms, Relaxed) Right Left	
EXTREMITIES	Contractures	Deformity	Shortening	Varicosities	Pes Planus	Other:
OTHER DEFORMITIES	Describe		Glands	Genitalia	Anus	Reflexes

SKIN	Light	Dark	Clear	Dry	Oily	Other (Scars, Etc.)	Abnormalities (Descibe)
SPINE	Deformity (Describe)						
SEROLOGY	Test (Type)	Date	Result				

DOCTOR'S SIGNATURE _____ M.D. DATE _____

Examining Physician will MAIL this form to the office of the ELEVATOR COMPANY requesting this Physical Examination.
RECOMMENDATION AND REMARKS TO BE RECORDED ON REVERSE SIDE.

A GUIDE FOR EXAMINING PHYSICIAN GIVING PRE-PLACEMENT PHYSICAL EXAMINATIONS

(*) Under each job description number, "X" is shown for each physical impairment which would serve as a basis for rejecting the applicant or determining an applicant's physical unfitness.

PRE-EMPLOYMENT PHYSICAL FORM – PART II

PHYSICAL IMPAIRMENTS	JOB DESCRIPTION PHYSICAL (*)					
	1	2	3	4	5	6
1. Anemia, underweight, overweight, and generally physically unfit	X		X			
2. Active or recently active tuberculosis	X	X	X	X		
3. Mental deficiency	X	X	X	X		
4. Heart diseases and abnormal blood pressure	X		X			
5. Inguinal (direct or indirect), femoral, ventral, abdominal or post-operative hernia, even though small	X		X			
6. A strong tendency to hernia	X					
7. Vision A. Field occupations, warehouse and stock men, clerical and administrative: a. Corrected distance acuity, 20/30 each eye b. Corrected near acuity, 20/25 each eye c. Normal near muscle balance d. Normal depth perception e. Normal color appreciacion B. Chauffers and truck operators: a. Corrected distance acuity, 20/30 each eye b. Normal distance depth perception c. Normal color discrimination d. Normal muscle balance for distance e. Normal near muscle balance						
8. Serious impairment of hearing	X	X	X	X		
9. History of epilepsy	X		X	X		
10. Active gonorrhea, syphilis or neurosyphilis	X	X	X	X		
11. Marked crippling, either of body, arms, legs or feet due to previous accidents, operations or diseases	X	X	X	X		
12. History of previous attacks of rheumatism, particularly if frequent, and which left more or less stiffness of joints	X		X	X		
13. Skin rashes of any kind which are infectious, bad varicose veins or history of varicose ulcers	X	X	X	X		
14. Diabetes	controlled					
15. Painful or prolapsed hemorrhoids which will interfere with occupations	X	X	X	X		
16. Painful varicosities, varicocele or hydrocele	X		X	X		
17. Serious active and progressive diseases	X	X	X	X		
18. Recurrent back trouble	X		X	X		
19. Contagious diseases	X	X	X	X		
20. Malignancy	X	X	X	X		
21. Severe diseases of the nervous system	X	X	X	X		

indirect costs, (one percent of this), would be $50,000.00 annual loss. A good safety director could save his salary several times over in the space of one to two years through a diligent safety and loss control program. One large elevator company spending an average of $4,000 a year on foot injuries projected the cost to conservatively be $8,000. They instituted a program whereby they paid half the cost of a $20.00 pair of safety shoes, which came to\about $2,000, per year. Last year, there were no foot injuries. The savings are obvious.

Proper reporting of accidents is a must for every employe. Most states have their own forms for accident reporting. In many cases, this same form (Employer's First Report of Injury) can be used in lieu of OSHA 101 for Federal compliance. We include a chart, herewith, showing U.S. and Canadian reporting requirements and penalties for failure to report. Appropriate forms should be in a company's Safety Manual for every state in which it does business.

It is equally important that a company receives periodic 105S reports from its insurance carrier so that it knows what its reserves are as well as the status of lost-time medical costs. In this manner, they can keep abreast of their status in the claims area, recognize claims with high dollar potential and be better able to minimize losses.

Cooperation is a two-way street. An elevator company should assist its carrier by making certain it has complete and factual information on each individual case. Some firms ease the load on the carrier by providing light work for an injured employee when possible; most make every effort to assist in the rehabilitation of a permanently disabled employee.

PRE-EMPLOYMENT PHYSICAL EXAMINATION

Pre-employment physical examinations are almost a way of life for most elevator companies today. The cost to management where an employee's physical impairment existed prior to their hiring can far exceed that of a thorough pre-employment examination. It is vital that the condition of a potential employee's heart, nervous system, sight, hearing, back and lungs be known.

When an applicant is being considered, an appointment should be made with the physician on record for examination. Whenever possible, the appointment should be scheduled for the day prior to the beginning of employment. If an examination cannot be scheduled, at once, it may be necessary to have the person begin work prior to the testing, subject to release if the results are not satisfactory.

The company should provide the potential employee with a standardized letter of introduction to the physician, along with the type of Physical Examination Record Form the company has designated to be filled out. (Sample herewith)

A Job Description Form might well be appended that will give the examiner an idea of what the company is looking for, the type of activity with which the employee will be involved and what might be a basis for rejection. (See accompanying sample).

In determining physical fitness, the physician should interpret his findings on the basis of the requirements shown upon the company's Physical Examination Record Form. The letter of introduction should direct the physician to inform the applicant of all significant conditions which he believes would affect the man's employability, or the correction of which would affect the potential employee's well -being

The potential employee should sign a statement authorizing the physician to make the examination. The Physical Examination Record will be filed permanently with the employee's personnel records and be considered confidential. Where it is required by state law, (Arkansas, Massachusetts and Oklahoma) the employee will be given a copy of the doctor's written report.

There may be occasions when an applicant found physically unfit by the physician, may have special skills, or be urgently needed for some special reasons. In such cases, management may, at its discretion, give special consideration to the applicant and employ him despite the findings.

NEW EMPLOYEE SAFETY ORIENTATION

Training is not a panacea for all ills, but it is a prime factor in drastically reducing a high disabling injury frequency rate.

When a new field employee joins the company he must undergo a thorough Initial Safety Orientation. This should start the first day the man is on the job and be completed before the end of his first week at work. The key to the new man's Safety Orientation is the *Field Employees' Safety Handbook*. There is a wealth of information in this pocket manual; a compilation that is based upon the experience and knowledge of many field men and safety experts.

The Handbook contains too many important points to be covered in just one orientation session. Three one-half hour sessions are recommended. The following may be used as a guide:

Session One

1. Explain the purpose of Safety Orientation.
2. Present the employee with the Handbook.
3. Cover Safety Coordinator (Mechanic-In-Charge) Responsibilities.
4. Cover General Safety Requirements.
5. Have the man read the first five sections by the next session.

Session Two

1. Restate the purpose of Safety Orientation
2. Cover 'Safe Wearing Apparel" and "Personal Protection."
3. Cover "Portable Ladders", "Portable Electrical Tools", "Mechanic's Hand tools" and "Safe Manual Handling of Materials."
4. Have employee read next three sections by next session.

Session Three

1. Cover "Hoists and Slings" and "Scaffolds."

2. Cover remaining sections such as "Welding and Cutting" "Working Around Electrical Equipment" and "Stairway Safety Rules".
3. Emphasize your personal concern for the man's safety. Sell him on the idea of working, always, towards accident prevention and the elimination of hazards.
4 . Let the man know you will be observing him at work, as often as possible, until you are satisfied that he is working safely.

Don't read mechanically from the Handbook; all you will get is a deaf ear. Tie in with your orientation, any knowledge that you have of near-misses or serious accidents. Don't just tell – sell!

When the Initial Safety Orientation has been concluded, have the new employee sign and date the slip in the back of the Handbook to the effect that he has received the manual and has read it. Keep this on file in the office. Emphasize to the man that this book is to be kept on his person, as a reference, at all times. If he loses the book, he is to request another.

A sample of the *Elevator Industry Field Employees' Safety Handbook*, edited by ELEVATOR WORLD and the Safety Committee, is enclosed. The printing of these samples is made possible through funding by the National Association of Elevator Contractors.

DISCIPLINARY ACTION

Every employee should be formally forewarned that disciplinary action may be taken as a result of violations of established safety rules and procedures. Several companies have developed forms setting forth the nature of disciplinary action of which the following is a typical gradiation:

1. A written warning for failure to use wearing apparel or equipment provided by the employer and use of worn or defective tools.
2. Time off without pay in the instance of first offenses for not wearing hard hats in hard hat areas, not using a safety belt as outlined in regulations and after receiving written warning and still violating safety rules and practices which could cause injury to self or others.
3. Discharge in the instance of a second offense as outlined in No. 2.

Employees should sign a form acknowledging their understanding of the degrees and nature of violations and accompanying disciplinary action. In all cases of a violation of safety rules and practices, a letter must be written to the employee, stating the violation and what disciplinary action took place. A copy should be placed in the employee's personnel file.

PRE-EMPLOMENT PHYSICAL FORM – PART III		
JOB DESCRIPTION NUMBER	**OCCUPATION**	
1	**FIELD OCCUPATION**	Exposed to all elements. May work in cramped and awkward positions and do considerable walking and climbing of ladders, stairs, etc. May work on scaffolds, platforms, and open steel beams at considerable heights above the ground. Does considerable lifting and carrying of heavy objects. Uses all types of hand tools, including power-operated tools requiring great dexterity. Vision requirements include reading of drawings and instructional procedures and normal vision performance for distance. Hearing must be adequate to hear instructions called to him above the noise level normally encountered – generally considered above average level.
2	**CLERICAL AND ADMINISTRATIVE**	Excellent working conditions with work primarily of a clerical nature. Generally sitting at a desk or table most of the time. However, some walking may be done. Excellent near vision is required with normal visual performance for distance. Hearing must be adequate to hear instructions called to him above the average noise levels encountered in a general office.
3	**WAREHOUSE AND STOCK ROOM**	Working conditions are generally good. May climb ladders for purposes of putting material in or removing it from stock bins. Does some lifting of semi-heavy objects. Vision requirements include reading of instructional procedures with normal visual performance for distance. Hearing must be adequate to hear instructions called to him above noise levels generally considered below the average level.
4	**TRUCK OPERATORS**	Exposed to all elements. Most of the time spent in a sitting position, operating motor vehicles. Must have excellent vision including color, and hearing must be adequate to hear instructions called to him above the average noise levels encountered.

SAFETY DIRECTOR'S
SAFETY PERFORMANCE EVALUATION

Building	Unsatis.	Poor	Adequate	Good	Excellent	Location	Unsatis.	Poor	Adequate	Good	Excellent
Contract No.						Appraiser Date					

A. ORGANIZATION AND ADMINISTRATION

1. Posting of Safety Information
2. Recordkeeping
3. Safety Standards and Reference Material
4. Accident Reporting Procedures
5. General Compliance with Company Safety Manual
6. Line and Staff Communications and Contracts
7. Supt. Carrying Out Safety Objectives
8. Safety Recommendations Effectively Carried Out
9. Workman's Compensation Procedures and Claims Effectively Carried Out
10. Contractual Understanding (with General Contractor or Owner) on Legal Responsibilities
11. Follow Up on Employee Safety Recommendations

B. TRAINING AND SAFE WORK PRACTICE

1. "Tool Box" Meetings Held
2. Safety Coordinator Checklists Used
3. Superintendents' Checklist Program
4. Job Safety Rules in Force
5. Personal Instruction on Specific Hazards – written/oral
6. First Aid Training
7. Safe Work Practices – written/oral

C. CONTROL OF ACCIDENT HAZARDS

I. General

1. First Aid Kits
2. First Aid Card Holders
3. Drinking water
4. Toilet Facilities
5. Washing Facilities
6. Noise Protection
7. Illumination
8. Ventilation

II. Personal Protective Eguipment

1. Head Protection
2. Eye and Face Protection
3. Safety Belts
4. Life Lines

III. Fire Protection

1. Fire Extinguishers (Welding and Cutting)
2. Fire Extinguisher Inspection
3. Fire Extinguisher Location
4. Fire Extinguisher Access
5. Employe Instruction
6. No-Smoking Signs and Areas
7. Wiring Installed According to NEC
8. Electrical Dangers Posted
9. Temporary Shanties Fire Proofing
10. Material Stacking
11. Aisles and Driveways
12. Metal Safety Cans for Flammables
13. Flammable Storage
14. Temporary Heaters (Ventilation/Location/Insulation)

IV. Accident Prevention Signs and Tags

1. Danger Signs Used Properly
2. "Caution" Signs Used Properly
3. "Exit" Signs Used Properly
4. "Do Not Operate" Tags Used Properly
5. "Out of Order" Tags Used Properly
6. Crane and Hoist Signals Posted

V. Housekeeping

1. Aisles
2. Passageways
3. Stairways
4. Material Storage
5. Nails in Lumber

VI. Hoists and Rigging

1. Inspection Procedures on Hoists
2. Inspection Procedures on Rigging
3. Inspection Procedures on Slings
4. Slings Properly Identified
5. Shackles and Hooks Properly Identified
6. Safety Latches on Hooks
7. Unidentified Shackles and Hooks Tested and Recorded

VII. Rubbish Removal

VIII. Power Tools

1. Company Power Tool Condition
2. Employee Power Tool Condition
3. Power Tool Guarding
4. Employee Personal Protective Equipment Usage with Power Tools
5. Approved ON/OFF Switches on Powered Tools

IX. Hand Tools

1. Company Hand Tool Condition
2. Employee Hand Tool Condition
3. Power Tools Grounded or Double Insulated
4. Bench Grinder Protection
5. Jacks Legibly Marked with Capacity
6. Jacks Used Properly
7. Oxygen and Acetylene Storage
8. Oxygen and Acetylene Caps in Place
9. Oxygen and Acetylene Used Upright
10. Oxygen and Acetylene Securely Fastened
11. Approved Check Valves Used (Gauge and Torch)
12. Proper Personnel Protective Equipment Used
13. Fire Extinguishers for Welding and Cutting

SAFETY DIRECTOR'S
SAFETY PERFORMANCE EVALUATION

Building	Unsatis.	Poor	Adequate	Good	Excellent
Contract No.					

Location	Unsatis.	Poor	Adequate	Good	Excellent
Appraiser Date					

X. Electrical
1. Electrical Work in Accordance to National Electrical Code (NFPA 10-1971)
2. Employee Protection From " Live" Electrical Equipment
3. Use of Warning Signs
4. Workspace Around Equipment
5. Disconnect Switch Lockout and Tagout Procedure
6. Equipment Identification
7. Equipment Grounding
8. Extension Cords (3 wire)
9. Grounded Plugs (3 prong)
10. Approved Temporary and Permanent Wiring
11. Light Bulb Guards
12. Approved Receptacles
13. Temp. Light and Extension Cords Hung Properly
14. Disconnect Switch Identification

XI. Ladders and Scaffolding
1. Approved Ladders
2. Ladder Condition
3. Ladders Used Properly
4. No Metal Ladders
5. Ladders with Approved Feet
6. Scaffoding Guard Rails, Mid Rails and Toe Boards
7. Proper Use of Scaffords
8. Scaffolding Grade Planks
9. Proper Use of Planking
10. Approved Moveable Scaffolding

XII. Guard Rails, Handrails and Covers
1 Hatch Opening Guarding
2. Openings Covered
3. Stairway Handrails
4. Stairway Condition

XIII. Material Hoists, Personnel Hoists and Elevators
1. Proper Hoist Identification
2. Annual Inspection of Hoists and Records
3. Hoist Guarding
4. Rope Inspection on Hoists
5. Temporary Elevators Comply with National Elevator Code (A17, 1-1970)
6. All Elevators Comply with National Electric Code (NFPA 70-1971)
7. Drum Hoists Have Sequence Start
8. Drum Hoist Maintenance
9. Drum Hoist Capacity Shown
10. Overhead Hoists Capacity Shown
11. Overhead Hoists Supports Proper for Capacity or Identified
12. Safety Latches on Hooks
13. Overhead Hoist Maintenance

X1V. Construction Site (General Condition – Others Responsible)
1. Clearly Defined Access to Síte
2. Clearly Marked Exits
3. Employee Protection when Hoisting on Site
4. Stairways Protected
5. Stairway Lighting
6. Corridor Lighting
7. Hatch Lighting
8. Machine Room Lighting
9. Equipment Space Access
10. Overhead Protection
11. Perimeter Cables, Guard Rails, Floor Opening Protection
12. Temporary Power
13. Hazards Identified
14. Housekeeping
15. Storage
16. Safety Meetings (Usually Stewards)
17. Insurance – Own/Pool/Other
18. Liability (Special Contract Clauses or Conditions)
19. General Contractor or Owner Cooperation in Regards to Safety
20. Subcontractor Cooperation in Regards to Safety

D. APPROVED PERSONAL PROTECTIVE EQUIPMENT
1. Safety Glasses – Plano/Prescription
2. Safety Shoes
3. Safety Goggles
4. Safety Helmets
5. Face Shields
6. Respirators
7. Welding Helmets
8. Gloves
9. Welding Goggles
10. Ear Protectors
11. Safety Belts
12. Safety Belt Rigging
13. Proper Apparel – Rings, Gloves, Loose Clothing Not Used in Hazardous Locations

E. ACCIDENT AND INJURY REPORTING
1. Use of Supervisor's Accident Investigation Report
2. Injury Investigation
3. Injury Reporting to Company Safety Officer
4. Use of Statistical Information
5. Submission of Monthly Accident Experience (by 10th of Each Month)
6. Submission of Accident Reports of Company Safety Officer (Completeness, Accuracy, Timeliness)

F. SAFETY RECORD (Improvement Compared to Previous Appraisal)
1. First Aid Cases
2. Doctor Visit Cases
3. Disabling Injuries
4. Frequency Rate – ANSI Z16.1 (Total)
5. Severity Rate ANSI Z16.1 (Total)
6. Property Damage Over $100.00

A MANAGER'S SAFETY NOTEBOOK

"The World of Elevator Safety"

SAFETY PERFORMANCE APPRAISALS

Safety performance evaluation is an important part of any Accident Prevention Program, particularly when an employer seeks to pinpoint various areas and levels of performance in branch operations. In addition, it facilitates the grading of improvement, from time to time.

The Safety Performance Evaluation Form included herewith, is to determine areas where improvement is required. This particular list is quite lengthy and detailed, however, a small company can scale it down to make it more applicable for their operation. A firm with a Safety Director and branch offices should use the evaluation form for grading various operations thus highlighting areas in which a Safety Director can be of the greatest service to his people.

This form should be used at least once a year for each branch operation as well as for that of the home office. This will give management a measure of their vulnerability, whether it will be necessary for capitol expenditures on new equipment or facilities, the effectiveness of the Safety Program, the need for reselling positive attitudes and the extent of noncompliance in respect to OSHA.

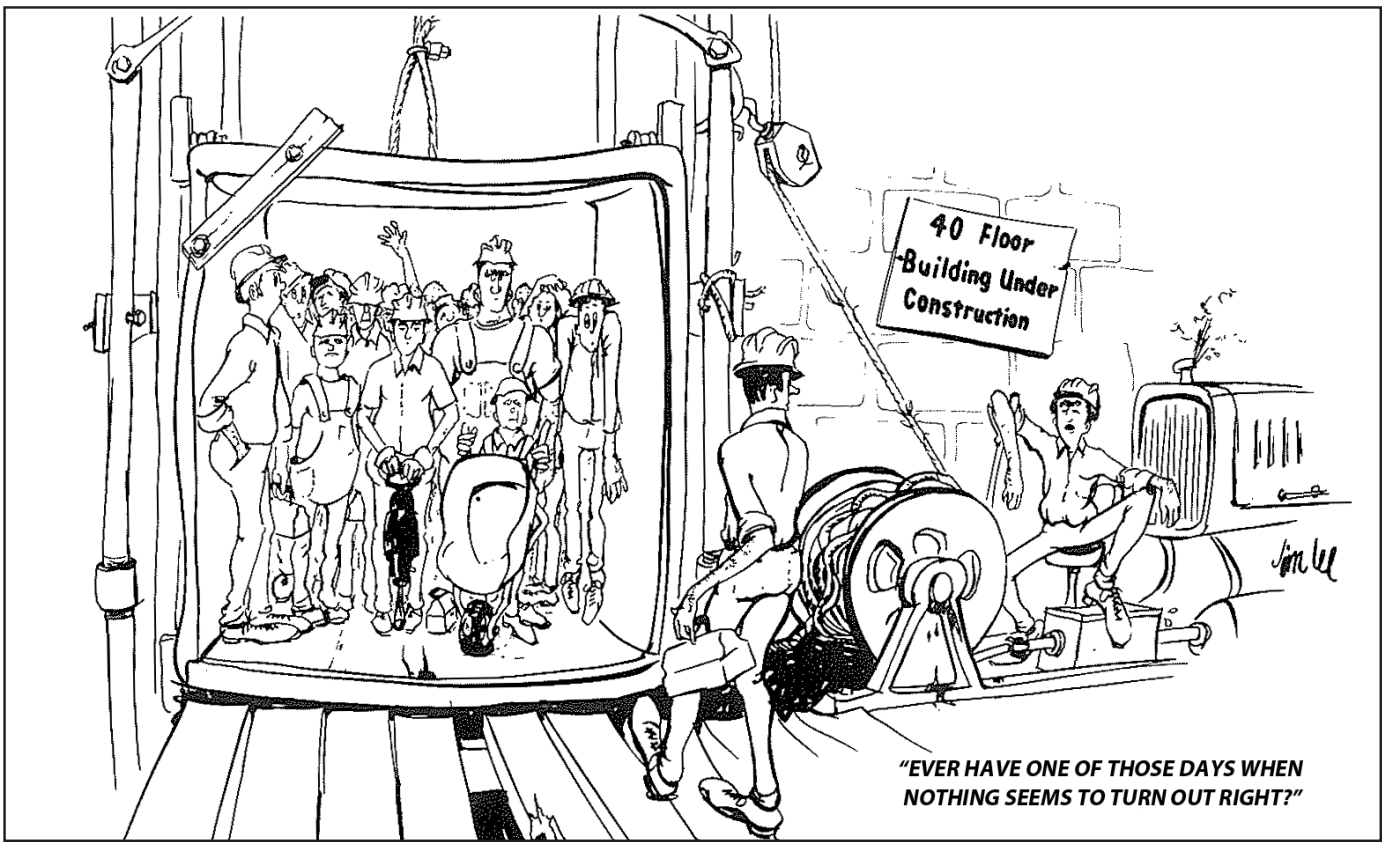
The results of this Safety Performance Evaluation Report should go to top management (with copies to branch managers, if any). The Safety Director, or executive with ultimate responsibility, should follow up after giving branch managers; and those with responsibility on other levels an opportunity to improve and take remedial action.

Using this form in branch offices and at several job sites will provide management with an excellent insight into their employee's attitudes. The Accident Prevention Program is based more upon attitude than equipment; a man whose attitude is poor will not use safety equipment when superiors are out of sight. A perusal of this report by top management will go a long way towards indicating the frame of mind in the field as regards the company's safety program.

THE FIELD SUPERINTENDENT

While accident prevention is the responsibility of all levels of management, the prime responsibility for the safe conduct of field operations is that of the company's Field Superintendent. By reason of his position he can most effectively be the link between top management, the Safety Director, the office staff and those most affected - the field employees.

The Superintendent must provide the leadership, proper example and administrative control for the accident prevention program in the field. The company Safety Director or the manager, himself, must assist the Superintendent in the necessary planning, education and



enforcement matters which make up the safety program. They will provide training programs and educational material in the form of posters, hand books, pamphlets, training aids, evaluation and reporting forms to develop interest in the program and assure its being carried out through the medium of this important "middle man." It should be the Superintendent's responsibility to carry out the following:

1. To assign the responsibility for an accident prevention program at each job site.
2. To provide the necessary tools, equipment and apparel to perform all field tasks safely - hard hats, eye protection, safety belts, first aid kits, scaffolds, hoists, etc.
3. To implement and follow up on Tool Box Meetings at the job sites.
4. To complete reports in the event of OSHA inspection on the job site.
5. To investigate all accidents and make and submit a completed Supervisory Accident Report to the Safety Director or other person designated by management.
6. To execute the "Superintendent's Safety Check List" on at least one job site a week and submit to the Safety Director or person designated by management.
7. To assure that all personnel obtain and know the contents of the Field Employees' Safety Handbook.
8. Post copies of any citation from OSHA at the site of the infraction.

JOB SITE SAFETY COORDINATOR

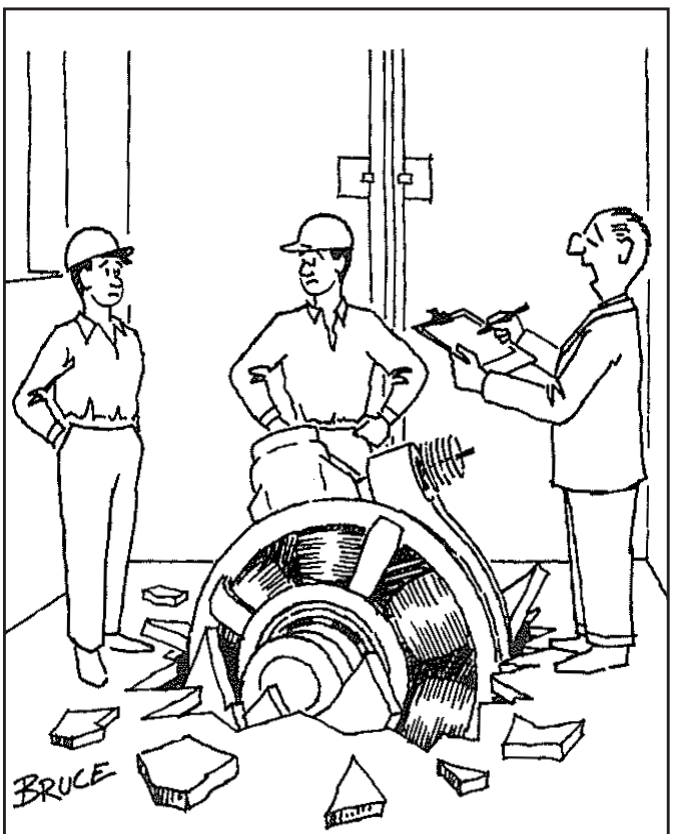
A company should assign to each Mechanic-in-Charge (MIC) the responsibility of Safety Coordinator. The duties of the MIC expose him to all phases of an installation (whether construction or service) on a daily basis. This, in turn, allows him to observe undesirable conditions and / or practices on a broad scale. Fellow workers look to him for direction, job assignments and decisions, whether there is one helper or ten crews. He is the job expert and leader for planning and motivating. Therefore, the methods, practices, and work procedures that reduce hazards and accidents are determined and directed by the MIC in his role as Safety Coordinator.

RESPONSIBILITIES OF THE JOB SITE SAFETY COORDINATOR

1. Conduct Weekly Tool Box Safety Meeting. (Suggest Mondays after lunch.)
2. Be sure all equipment and job-site areas where company work is conducted are routinely inspected, to locate any unsafe conditions that might cause injury or property damage.
3. If undesirable conditions are the responsibility of other than the elevator company, to notify those responsible for the condition. If the problem is not resolved to notify the Field Superintendent. Do this in writing!
4. Report all accidents to company personnel, or equipment using the following guidelines.

a. Take written notes at the scene, so that a complete report can be made. Always include information concerning the cause of the accident, names of witnesses, police, ambulance attendants, doctors, etc.
b. In case of serious personal injury or property damage, immediately notify local office by telephone.
c. In case of minor injuries, which do not involve loss of time, make a report by mail or telephone within 48 hours.
d. Do not discuss details of any serious accident with anyone except the police or an authorized representative of the company.

5. Whenever work is done or materials stored in areas that are accessible to the general public, to install restrictive barricades, warning signs, and traffic control (such as defined aisles).
6. Keep all unauthorized persons out of any area which the company is performing work.
7. Never, under any circumstances, allow company equipment to be loaned or used by anyone other than company personnel.
8. Never, under any circumstances, allow non company personnel or non-company material to be carried on incompleted elevators, unless a temporary or final acceptance has been signed with the Construction Superintendent's approval.
9. Tag all defective tools, ladders, hoists, protective equipment, and etc. with OSHA approved tags and report them to local office for repair or replacement.
10. Inspect all company or mechanic's tool boxes for defective tools, and have them removed from the job; i.e., flared chisels, cracked hammer handles, cracked sockets and sprung wrenches.
11. Post location and telephone of doctor, ambulance, fire department and office in a conspicuous place.



"Were you wearing your hardhats?"

A MANAGER'S SAFETY NOTEBOOK

"The World of Elevator Safety"

12. Be sure all persons know the hazards of the jobs they are to perform. A brief review may prevent an accident before they start the job.
13. Never permit any employee to work to the point that fatigue, illness or other physical conditions may cause him to expose himself or others to injury.
14. Never permit any employee to work while under the influence of drugs or alcohol.

ROUTINE SAFETY INSPECTIONS

It is the basic principle of accident prevention that undesirable conditions be detected and corrected immediately. The tool for the detection of such conditions is the Safety Inspection.

Job site safety inspections are a must in the elevator construction industry because serious, unsafe conditions develop quickly and frequently. Such inspections must be conducted routinely, looking for those items on the job which may develop unsafe conditions that could jeopardize company employees or the employees of others.

First there is normal wear and tear. Cable strands wear and break. Scaffold lumber develops cracks, lines deteriorate, hand tools develop defects; in short, all things wear out with use. In the process of wearing out, undesirable conditions are born.

Second, there are the actions of workmen that create unsafe conditions, not only fellow workers, but also those of other trades. Materials may be left in improper locations. Safeguards and barricades may be removed and not replaced. Tools may be abused and rendered inoperative from a safety standpoint. Safety devices may be made inoperative.

Therefore, there must be concentration on those areas that are most likely to produce serious accidents. However, we should never ignore other potential accident producing operations.

WHAT A SAFETY COORDINATOR LOOKS FOR

The Safety Coordinator (MIC) has a duty to be aware of all potential hazards on the job site. The following list is a basic guide:

1. Electrical Equipment: i.e., switches, cables, grounds, open wiring and other elements of electrical systems.
2. Hand tools: i.e., electric tools, wrenches, hammers, chisels and other hand tools.
3. Hazardous Supplies: i.e., oxygen and acetylene tanks, solvents, lubricants, and cleaners.
4. Material Handling Equipment: i.e., hoists, slings, dollies and ropes.
5. Personal Protective Equipment: i.e., hard hats, eye protection, safety shoes, welding hoods, burning goggles, and safety belts.
6. Personnel Supporting Equipment: i.e., scaffolds, planking and ladders.
7. Protective Structures: i.e., overhead protection, barricades, toe boards, and safety cables.
8. Structural Openings: i.e., hoist ways, pits, and other floor openings in which personnel or equipment may fall.
9. Storage Areas: i.e., all areas where company tools, equipment and materials are stored on the job site.
10. Safety Devices: i.e., safety circuits, overloads, car safeties, governor rope, governor, and generator switches.
11. Work Areas: i.e., machine rooms, pits, unloading areas, aisle ways, areas around the hoist ways, and in the hatch.
12. Miscellaneous Equipment: i.e., first aid kits, (approved by company Medical Director) space heaters, hoist cables of proper size, hoists, chain falls, slings, and other items not included in the other categories.
13. Environmental Hazards: i.e., gases, fumes, chemicals, and other hazardous conditions such as high decibel noise levels.

The Check List provided herewith covers most of these items and should be completed weekly. However, inspections should go beyond the Check List in the search for possible hazardous conditions.

When the Safety Coordinator's Safety Check List is submitted to the company office, it is the Supervisor's responsibility to follow up on any "No" answers shown. A timely response by the Field Superintendent in regard to a jobsite hazard or deficiency is paramount. This is especially true where defective equipment needs to be replaced or where an associated contractor will not cooperate in the control of a hazard he has created that endangers the elevator company's personnel.

SAFETY COORDINATORS
(MECHANICS-IN-CHARGE) CAN STOP:
98 PERCENT OF ACCIDENTS
HERE'S HOW.

UNSAFE ACTS CAUSE 88 PERCENT
1. STOP the employee in the act.
2. Show the employee the right way.
3. Check back on performance.
4 . Enforce your corrections.

UNSAFE CONDITIONS CAUSE 10 PERCENT
1. Eliminate or guard it.
2. Redesign or rearrange.
3. Warn visually and verbally.
4. If you can't correct it as above, see your superior.

Try the above prescription - DAILY. It is poison to accidents.

ONLY TWO PERCENT ARE UNPREVENTABLE.

CONSTRUCTION SUPERINTENDENT'S REPORT OF SAFETY INSPECTION

(This Report Is To Be Comploeted During First Week of Job and Monthly Thereafter Until Job is Completed.)

BUILDING LOCATION				CONTRACT NO.
TYPE & NO. OF EQUIPMENT ➡	TRACTION	HYDRO	ESCALATORS	OTHER

ALL QUESTIONS MUST BE ANSWERED. ANY "NO" MUST BE EXPLAINED IN COMMENTS SECTION.

	YES	NO	NOT APPLI-CABLE
1) Ambulance, Hospital, Doctor, Fire Department phone number listed?	❑	❑	❑
2) Has general contractor provided facilities for:			
a) First Aid?	❑	❑	❑
b) Toilets?	❑	❑	❑
c) Drinking water?	❑	❑	❑
d) Stairs, exits and entrances?	❑	❑	❑
e) Proper barricades?	❑	❑	❑
f) Correct electric power and lights?	❑	❑	❑
g) A material storage area?	❑	❑	❑
h) Firefighting equipment?	❑	❑	❑
3) Are safety meetings held weekly on job?	❑	❑	❑
4) Is personal protective equipment being used?			
a) Hard hats	❑	❑	❑
a) Eye protection	❑	❑	❑
c) Safety shoes	❑	❑	❑
d) Safety belts and lines	❑	❑	❑
e) Proper clothing	❑	❑	❑
f) Special equipment (if necessary)	❑	❑	❑

	YES	NO	NOT APPLI-CABLE
5) Are company and employee tools in safe condition?			
a) Broken or worn tool removed	❑	❑	❑
b) Proper guards available and used	❑	❑	❑
c) Properly grounded	❑	❑	❑
d) All drop cords grounded	❑	❑	❑
6) Are all hoistways and floor openings properly barricaded?	❑	❑	❑
7) Are ladders, scaffolds, ramps and walkways properly built?			
a) Non-skid feet on ladders	❑	❑	❑
b) Scaffolds over 10 ft. tall have guardrails	❑	❑	❑
c) Scaffold can hold 4 times its intended load	❑	❑	❑
d) Job-built ladders proper	❑	❑	❑
8) All hoisting equipment in safe condition?			
a) Rigging proper for lift	❑	❑	❑
b) Inspected for defects and wear	❑	❑	❑
c) Capacity clearly marked	❑	❑	❑
d) Hoist signals posted	❑	❑	❑
9) Welding and cutting equipment used only by authorized personnel?	❑	❑	❑
10) Items marked "No" at last inspection corrected?	❑	❑	❑

COMMENTS:

SUPERVISOR'S SIGNATURE DATE:

A MANAGER'S SAFETY NOTEBOOK

"The World of Elevator Safety"

CORRECTING UNSAFE PRACTICES

Because of the short duration of many elevator installation phases we must always correct unsafe practices promptly, before they become an inherent work habit.

The following is a recommended way to reinstruct a man observed working unsafely.

(1) Explain what was observed. Tell the man exactly what you observed him doing that was unsafe. Be specific and concrete, not general. For example, "John, I just noticed that you lifted that box with your legs straight and your back arched down to get that box", not "John, I saw you lift that box unsafely." It is important that you establish the precise unsafe action that is the focus of correction.

(2) Explain why it is unsafe. By telling, or by a combination of telling and showing, explain why what you observed is unsafe. Make sure he understands what could happen and how it could happen. Don't simply tell the man something is unsafe or incorrect. He must understand why and how. For example, "If you lift that way John, you're putting all the strain on your back, and almost none on your legs. It's very easy to sprain even a strong back lifting that way because a man's spine isn't designed to lift like that."

(3) Explain the safe alternative. By telling him, or by a combination of telling and showing, explain the safe alternative. Explain points in their normal order of occurrence. Check to make sure he understands. Have him explain it back to you or have him show you, whichever best checks his understanding. For example, "Here is the safe way to lift. (Demonstrate) Notice my back is almost straight. My knees are bent. I'm in a squat position. When I straighten up, the strain is all on my legs. They can take the strain. It's the legs that do the work, not the back. O.K., You try it."

(4) Try to convince him. End your reinstruction on a note of persuasion. For example, you might cite a back injury case that resulted from unsafe lifting. Or, you might explain how severely a back, can be injured. Or, you might point out how a back injury might leave him unable to work for a long time. The point is, say something that will motivate him to use his newly acquired know-how.

Reinstruction should always be friendly instruction. People don't listen well when they are angry at the person explaining. Therefore, avoid saying anything that will embarrass or humiliate the man. If others are close by, take him off to the side. He'll appreciate that. Keep in mind that you are not only trying

FOURTEEN BASIC WAYS PEOPLE GET HURT

1. Pinch Points - Getting between a wall and an object being moved, or a hand or foot under a piece of equipment being lifted.
2. Catch Points - Loose clothing on a bracket, getting hooked on a lathe wire or projecting re-bar.
3. Shear Points - A hand under hoist ropes on drive sheave, between a vane and inductor or getting between the car and counterweight.
4. Squeeze Points - A foot between car sill and hoistway sill, a hand under a counterweight when stacking, or a head between a separator beam and the car platform.
5. Flying Objects - Concrete chips when drilling holes in concrete or chipping steel fillings when drilling beams or filing rails or improper use of oxygen to blow off work.
6. Falling Objects - Material blown or dropped down the hatch, leaving tools on ladders, or the intolerable practice of men working over another.
7. Run In " Points - Cut off snap-ties, protruding bolts and screws, incomplete conduit or pipe runs.
8. Electricity - Working improperly on "hot" equipment, not tagging out electrical disconnect switches or ungrounded portable tools (drill motors, sanders, grinders and hammers).
9. Gases - Inadequate ventilation during winter when using heaters or using non-approved heaters.
10. Heavy Objects - One man carrying oxygen tanks up the stairs, one man carrying a 16 foot rail, weight of boxes or material unknown.
11. Chemicals and Flammables - Using cleaning compounds without proper protection (mineral spirits, paint thinner, petroleum distillates), storage of flammables such as gas and cleaning compounds in approved cans or cabinets.
12. Hot and Cold Objects and Radiation - Burning torches, arc welding , improper dress (winter or summer) causing frostbite, sunburn or heat exhaustion
13. Sharp and Pointed Objects – Nails in boards, screw drivers, long nose pliers or scribes.
14. Slippery Surfaces and Falls - Not using safety belts, poor scaffolding, ladders, stairways, gunnite fire proof spillage, ice, or poor housekeeping.

SAFETY COORDINATOR'S JOBSITE CHECKLIST

ALL ITEMS ARE TO BE CHECKED DAILY AND SUBMITTED TO THE OFFICE WEEKLY.

JOB _____ LOCATION _____ JOB NO. _____

INSPECTED BY _____ TIME _____ DATE_____
(Mechanic in Charge)

MARK THE FOLLOWING ITEMS:	YES	NO
1. Do you have proper (OSHA required) information posted at the jobsite?	_____	_____
2. Is the site clean and free of debris? Are materials stored or stacked neatly?	_____	_____
3. Do you have approved first aid kits on the job? Are they serviced properly?	_____	_____
4. If your job is isolated, do you have people for first aid and holding, either an American Red Cross or Bureau of Mines first-aid card present during working hours?	_____	_____
5. Do you have emergency phone numbers – doctors, ambulance and hospital – posted?	_____	_____
6. Is your drinking-water container plainly marked?	_____	_____
7. Do personnel wear proper protective equipment when exposed to possible danger?	_____	_____
8. Do you have enough fire extinguishers (proper kind) on the job?	_____	_____
9. Are open decks, scaffolds, etc. properly enclosed with 42-in. rails and 6-in. toe boards?	_____	_____
10. Are all elevator hatches, entrances and openings properly barricaded?	_____	_____
11. Are all hand and power tools in proper repair and grounded?	_____	_____
12. Are all ladders and scaffolding in good shape?	_____	_____
13. Have you posted proper signs of "danger" and "caution"?	_____	_____
14. Have you tagged defective tools and equipment with proper "out of service" or "do not use" tags?	_____	_____
15. Are all accidents being properly reported?	_____	_____
16. For jobs of over six months in duration, are the OSHA log and supplementary reports up to date?	_____	_____
17. Are there any hazards being created by other trades?	_____	_____
18. Have you notified the party at fault or the general contractor?	_____	_____
19. If they have not corrected the hazard, did you contact your office?	_____	_____
20. Date last "Tool Box" meeting held _____ On subject _____		

to tell him, you are also trying to sell him. End your reinstruction on a friendly note.

Some men will respond to a friendly correction. They will follow the suggested safe procedure. Others will be inclined to persist in doing it their way, even through it has been pointed out as unsafe. Where does this leave the Safety Coordinator? Should he give up if the man proves to be uncooperative to a correction? Obviously, the answer is "NO." The Safety Coordinator is responsible for assuring that men abide by the safety regulations stated in the Field Employees' Safety Handbook and other safe work practices that are commonly recognized in our type of work. When up against an uncooperative workman, your first effort should be to try friendly persuasion and reasoning. If that doesn't work, you may have to warn the man that unsafe practices will not be tolerated. Of course, your approach will depend upon (1) the nature of the unsafe practice, (2) the type of man you are up against, and (3) your previous efforts to straighten out the man.

Through this later process, of course, your Field Superintendent should be kept abreast of your action, as it may be necessary, at some point, to consider disciplinary action.

INVESTIGATING INJURY ACCIDENTS

The assignment of injury investigation to the Safety Coordinator (MIC) is of prime importance and two fold.

- To investigate means to learn about the hazards, causes and circumstances surrounding the accident, assuring that the facts are known of the existing conditions on the job.
- Such knowledge is needed to institute immediate corrective action to prevent recurrence of the accident.

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A five-step method is recommended as the procedure for interviewing a man to gain the facts of the accident. Keep in mind that the basic problem in the interview will be to get the man to cooperate, that is, to reveal the true and complete facts. There are many reasons why the man may be reluctant to reveal all the facts; such as, Embarrassment Fear of Ridicule - Reprimand or a false idea that it may jeopardize his right to injury compensation. It boils down to fear of some kind. Therefore, the Safety Coordinator must conduct himself so as to erase or minimize these fears. (The more he can draw upon mutual respect and good will, the more honesty he will encounter.)

Step #1 Remind the Man of the Investigation's Purpose

Explain briefly that the purpose of investigating is to learn what happened and how it occurred so that a repetition can be prevented for all men. Reassure him that the purpose is not to make him look bad or to blame him. Let him know his cooperation is appreciated.

The object of this step is to set the man at ease about telling the truth, and also to convince him that he is helping prevent accidents by cooperating. Naturally, the more you know about the man, the more you can "personalize" your introduction" to make him willing to cooperate. The few extra minutes taken by such an introduction is usually well repaid . They assure that the investigation starts on a friendly instead of a threatening basis.

Step #2: Ask Him to Give His Complete Version

Next, ask the man to explain (1) what he was doing, (2) how he was doing it, and (3) what happened. Whenever practical, have him explain at the scene of the accident. That will make it easier for him. He can demonstrate his exact location, and point things out that would be difficult to explain otherwise. Many men have difficulty in expressing themselves unless they can point, demonstrate, or in some way relate their explanation to things around them If the man wants to show you what he was doing when the accident occurred, ask him first what he intends to demonstrate. Do not let him demonstrate an unsafe practice. Warn him to proceed slowly and not to repeat the action that caused the accident.

Do not interrupt while the man is explaining, even if you don't understand everything. Wait until he finishes his version before you question him. Interruptions throw some people off balance. Also, while listening, don't make any remarks that may antagonize the man or put him on the defensive.

Step #3 : Ask Him Questions to Fill in the Gaps

Should the man's version of the accident leave some points unclear, ask specific questions to get the information you seek. At this stage of the interview, confine your questions to establishing (1) what he was doing, (2) how he was doing it and (3) what happened. Save for later, such questions as "Why he did it." Questions of the latter kind are more likely to arouse resistance. They should be asked only after the details of what he did and what happened have been established.

Put your questions to the man in a friendly way. Don't phrase your questions so they are likely to antagonize him, e.g. "And what kind of a dumb stunt did you pull when the rope got stuck?" Don't ask leading questions that suggest answers, e.g. "You didn't try to jerk it loose, did you?" Don't ask unnecessary questions, e.g. "Tell me, do you think that was a smart thing to do?" Confine your questions to completing your understanding of what happened.

Step #4: Check Your Understanding of the Accident

To make certain you understand what the man attempted to explain, check your understanding of the accident with him. Describe the accident slowly, as you understand it. Check with him after each key point to give him a chance to correct you in case you misunderstood him.

If the man's version appears to contradict itself, don't try to corner or trap him. Explore the point of conflict tactfully. Many men have difficulty in explaining things exactly. Contradictions are more often a reflection of such difficulty rather than of evasiveness. Be tactful also if his version does not square away with what you know about the job. Be relaxed. You gain nothing by trying to corner him. Handle it so that you leave him with a face -saving out. For example, "Joe, maybe I misunderstood you, but I don't see how you could have been struck the way you said you were if you were standing here. I must have missed something. Would you go over that again?"

Step # 5 : Discuss how to Prevent Accident Recurrence

A good way to bring an interview to a close is to discuss how to prevent recurrence of the accident Emphasize the precautions that will prevent recurrence by either repeating them for the man's benefit or asking him to state them. You might also ask him if he has any ideas about how to make the job safer to work. If he does, discuss them with him. If an idea needs further consideration, ask him to think about it and let you know. Try to end the interview on a friendly note.

An important point;

Never attempt to write an accident report while you are interviewing a man. The two activities are not compatible. Write the accident report as soon as practical after you have checked out all your sources of information. That will usually be after you have interviewed the man who had the accident. If, when writing the report, you find you have forgotten something or a point appears unclear, check back with the appropriate source of information. By all means, take what necessary action is required to institute immediate corrective measures to prevent recurrence.

Keep in mind that accidents are caused by unsafe acts, unsafe conditions or a combination of the two. The unsafe act is usually the last thing that the injured did before the accident.

CONDUCTING TOOL BOX MEETINGS

Many states require that "Tool Box Meetings "be held every eight to ten working days. It varies with the locale, but holding weekly meetings will comply with all regulations.

Tool Box Meetings provide excellent opportunities for presenting safety information directly to fellow workers, on the job site where the majority of accidents occur. When well-planned and handled seriously, they stimulate the exchange of ideas that can materially enhance a company's accident prevention program. The important thrust is to assure that field personnel are thinking "safety" continuously. This applies off the job as well as upon it; loss to the company, no matter where the accident occurs, has the same result in reduced productive time, personal misery and replacement problems .

To be successful, the Tool Box Meeting should involve a tangible message; a short five or ten minute talk on a specific subject. The 24 Tool Box Safety Talks reproduced within the Field Employees' Safety Handbook, concern subjects which present the greatest hazards, and should be stressed repeatedly, but topics need not be confined to these published. Originality of presentation, in the leader's own manner, and an opportunity for the fellow employees to participate, is important.

It is recommended that Tool Box Meetings be held on Mondays, immediately following the lunch period. Such scheduling allows the morning hours for routine safety inspection throughout the job site, at which time any unsafe condition that could have developed over the weekend may be observed.

Such eminent hazard may present a topic of discussion for the meeting. A recent "near-miss" or personal experience may be also used to make a point. After ten minutes, most people lose interest and it is recommended that the gatherings not exceed this length of time. The leader should follow these three simple rules:

1. Know the safety rule that is to be discussed.
2. Be able to relate it to the job.
3. Relate the discussion to a specific case or near miss.

ACCIDENT REPORTING

In any accident Prevention Program the Supervisor's Accident Investigation Report is a key toward prevention. Once an accident has occurred it is important that it be investigated as to how and why the accident happened. The object is to assure that proper steps are taken to prevent the reoccurrence of this type of accident. Herewith is a typical accident reporting form used within the elevator industry. Most insurance companies have similar report forms available for the asking.

Aside from accident prevention, these reports are valuable if months later it is necessary to recall the facts because of pending litigation.

JOB SAFETY ANALYSIS

An area of the OSHA requirements that comes under term, "the employer shall instruct" concerns what is termed, "Job Safety Analysis" and involves a series of published guide lines for each work method and procedure, setting forth the proper tools and safety equipment necessary to perform each segment.

Because of the diverse types of elevators and escalators throughout the country, as well as methods of erection, employers are faced with the need for industry standardization in this respect . Hence, we are caught in the dilemma of contending with historical precedents, traditional union resistance to change from accepted practices in particular localities, the elimination of capital tools and equipment that do not meet OSHA requirements as well as the acquisition of new capital tools .and equipment that do comply.

This problem is so complex and broad, from an industry standpoint, that it is almost certain no one company can afford to solve it on their own. It must be concluded that it need be approached by coordination between our industry's management institutions and Union. At this point, a joint NEII - IUEC Committee is exploring the development of standards, setting forth the proper equipment tools, procedures and safety apparel to be used in each phase of the various types of elevator, escalator, moving sidewalk and dumbwaiter installations.

THE FUTURE

In the future, managers will live with accident prevention programming; it will become as much a way of life as driving on the right hand side of the road, stopping for red traffic signals and keeping the oil level up in an automobile.

With the vast majority of states having applied for, and in the process of writing their own OSHActs, (ten have already been accepted by OSHA) it will not be long before inspections will become commonplace almost continuous – in all places of employment. Even the employer with only eight persons should not consider himself "home free'; all that is needed is one employee complaint or a serious accident and the OSHA man will be on the spot.

Still and all, as we have reiterated throughout this study, the thrust of developing an accident prevention program should not be primarily "To comply with OSHA." Accidents cost money. It is estimated that the total costs of work accidents to industry in 1971 were $9,300,000,000 which came out to a cost of $120

"I have something here for your men that will cut down on accidents more than all the safety equipment made."

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per worker. Every safety expert who worked upon this project stated that his company could and would "make money" upon its accident prevention program.

We can see, in the future, where the entire industry will make money if there is a wide spread drive to establish excellent safety programs, for the manual insurance rates will decrease.

Just as this Annual Study project has been one involving many within our industry, we must in the future, assure joint action when unreasonable demands are made upon individual companies. The National Elevator Industry, Inc., 1677 Route 64, Salem, New York 12865, is a clearing house for such information. Through this management association, a concerted effort can be made to appraise the governments of our position and legislate relief.

The ELEVATOR WORLD staff has enjoyed the past few months of coordinating with the safety experts of the larger companies upon this project. All of us have discussed "the future" at length during our meetings and expressed the desire to remain organized to periodically be of assistance to the industry, as a whole. Accordingly, we will be happy to receive suggestions from the field concerning the foregoing and how accident prevention programs may be made more effective. Meritorious comments will be published and we will continue to develop our reference library of forms, pamphlets and procedures. The Safety Committee will be happy to answer any questions that might emanate from the field.

In closing - sell safety as a way of life - it will be productive and profitable! Bill Sturgeon

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1818 Ridge Road
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NATIONAL INSTITUTIONS

National Institutions within the elevator industry that are concerned with the development of accident prevention programs, would like to keep abreast of field problems in this area, and may often have solutions to these problems in this area.

National Elevator Industry, Inc.
10504 Turning Leaf Lane
Spotsylvania, VA 22551-8909
703-589-9985

National Association of Elevator Contractors
1298 Wellbrook Circle
Conyers, GA 30012
800-900-6232 (USA Only)
888-847-7530 (USA/Canada)

NAESA International
P.O. Box 4367
Mankato, MN 56002-4367
360-292-4968
800-746-2372

SUPERVISOR'S REPORT OF ON-THE-JOB ACCIDENT

THIS FORM MUST BE COMPLETED AS SOON AS POSSIBLE AFTER AN ACCIDENT WHICH RESULTS IN AN INJURY TO AN EMPLOYEE OR DAMAGE TO PROPERTY IN EXCESS OF $300, WHICH RESULTS IN LOST WORK TIME IN EXCESS OF 1/2 DAY, EXCLUSIVE OF DAY OF ACCIDENT.

PART I - GENERAL INFORMATION

Name of Injured			Age
Date of Accident	Hour	Place	
Duties at Time of Accident			Contract Number

PART II - DESCRIPTION OF ACCIDENT (Describe in Detail What Happened)

PART III - THE CAUSE OF THE ACCIDENT - ACCIDENTS OCCUR BECAUSE OF EITHER UNSAFE ACTS BY PEOPLE OR UNSAFE WORKING CONDITIONS. DESCRIBE IN DETAIL THE ACT OR CONDITION WHICH CAUSED THE ACCIDENT.

A. Describe Any Unsafe Acts

B. Describe Any Unsafe Conditions

C. Equipment or Tool Involved — Est. Cost

PART IV - ABILITY TO WORK

IS WORK AVAILABLE FOR THE INJURED MAN?	YES	NO	WHEN WILL MAN BE ABLE TO DO ANY KIND OF WORK?	DATE

IF CAUSED BY UNSAFE ACTS

INSTRUCTED ☐ INJURED MAN ☐ OTHERS

WARNED ☐ INJURED MAN ☐ OTHERS

☐ REASSIGNED INJURED MAN

RECOMMENDED ☐ TRANSFER ☐ DISCHARGE

Other Action

IF CAUSED BY UNSAFE CONDITIONS

☐ ELIMINATED CONDITION

☐ GUARDED THE CONDITION

☐ WARNED OTHERS ABOUT THE CONDITION

Reported Condition To

Other Action

SPECIFICALLY EXPLAIN THE CORRECTIVE ACTION CHECKED - WHAT DID YOU DO?

REMEMBER TO MAKE AN ENTRY ON YOUR O.S.H.A. LOG.

SIGNED - Supervisor of Injured Person (Construction or Service Superintendent)	SIGNED - Branch Manger	Date

NOTE: THIS FORM DOES NOT TAKE THE PLACE OF THE REGULAR ACCIDENT REPORT REQUIRED BY OUR INSURANCE COMPANY OR ANY FORM TO BE FILED WITH THE STATE.

Form 1487

Duplicate to Safety Representative At Home Office

INTRODUCTION

A Company Safety Program (Sample)

The following document is the bare bones of a safety program for an elevator company. It sets the policy, says that the CEO supports it and designates who in upper management and field supervision is in charge of safety. It lays out the manager's responsibility and the employee's responsibility. This is just one tool for the manager. The following are the possible elements that make up a safety program:

- Company safety policy
- Safety handbooks **
- Tool box safety meetings**
- Jobsite posters++
- Training schedules^^
- Personal protective equipment
- Accident/illness reporting forms and logs for OSHA++
- Job hazard assessment forms**
- Fall protection: personal, guardrails and barricades
- Locks and tags
- Hazard communication program
- Safety position papers ^^

Sources:
** www.elevatorbooks.com and www.safety.elevatorworld.com
++ www.osha.gov
^^ www.neii.org/employeesafety

UpsyDaisy Elevator Company

Safety Program

100 Safe Streets
Gulf Shores, AL 36502

Table of Contents

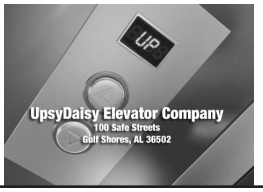
A GENERIC COMPANY SAFETY PROGRAM

COMPANY SAFETY POLICY

It shall be the policy of UpsyDaisy Elevator Company to provide a safe and healthful workplace for employees, customers, other contractors and visitors.

Safety and health will be a first consideration in the operation of this business. It is the intent of this company to comply with all regulations. Management has a primary responsibility for full implementations and maintenance of our safety programs.

Employees and contract employees are expected to perform their work in a safe manner and to follow operating procedures that will safeguard everyone present.



A GENERIC COMPANY SAFETY PROGRAM

MANAGEMENT ENDORSEMENTS STATEMENTS TO ALL MEMBERS OF MANAGEMENT AND SUPERVISORY PERSONNEL

The elimination of accidents is a total company responsibility, which we will share. The safety of every employee is a matter of greatest concern that demands maximum effort by every member of our management team.

To attain the maximum results from our programs, each of us must be dedicated to the idea that most accidents and injuries can be prevented, and that the facets making up our safety program are sound and necessary for the attainment of this objective. We must all believe that it is worth our time and effort to prevent every injury possible.

I trust each of you will join in pledging our leadership ability to gain personal commitments to safety as a way of life from those over whom you have supervisor direction and influence.

Sincerely,

John Daisy
CEO

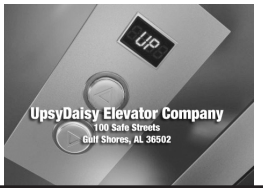
LIGHT DUTY POLICY

The company recognizes the importance of maintaining control of our incident exposure and has, therefore, implemented this light duty policy.

Accidents will be reviewed on a case-by-case basis. Provided the care provider has determined an injured team member is physically capable of returning to work on a limited duty, we will review placing that team member in a modified duty position.

Our intent is to provide adequate and prompt care for our employees and to accommodate their physical limitations until released by the care provider.

The official light duty policy can be reviewed in its entirety in Chapter 13 of this safety manual.



A GENERIC COMPANY SAFETY PROGRAM

A. RESPONSIBILITY OF SENIOR MANAGEMENT

Management shall assume primary responsibility for the Loss Control Program. Management shall take advantage of every opportunity to emphasize the importance of loss control, both as a matter of employee welfare and as a means to an efficient operation. This interest will be made well known to supervisors and employees through good example, leadership and active participation in the Safety Program.

Specifically, Management shall:

1) Delegate duties and assign authority to supervisors.
2) Make loss-control efforts a part of the total operation.
3) Keep supervisors informed of accident problems and modern corrective techniques.
4) Be alert to potential hazards by frequent observation.
5) Review accident and safety-inspection reports.
6) Consult with the Workers' Compensation Loss Control Representative and designate a company Safety Director.
7) When discussing loss control, stress the importance that executive management attached to positive results makes it clear that satisfactory results are dependent upon cooperation by all.
8) Ensure that all subcontractors provide a proof-of-insurance certificate before bidding on work.

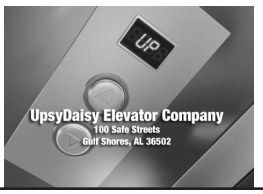
Performance of the above responsibilities shall be measured by results or lack thereof.

B. RESPONSIBILITIES OF SUPERVISORS AND MECHANICS IN CHARGE

Supervisors and mechanics in charge must accept principle responsibility for the prevention of accidents. They are the keys to the overall success of the Loss Control Program. They have direct contact with employees and the public and are in a safe position to observe unsafe acts or conditions and have them corrected.

Their duties under the Loss Control Program are:

1) Give support to safety concepts and activity through good example and leadership.
2) Ensure that employees are given an *Elevator and Field Employees' Safety Handbook* and are aware of the safety rules, as well as any general rules specific to their area or job function.
3) Enforce all safety rules and take corrective action when necessary to ensure safe work habits.
4) Employees should be trained to recognize possible hazards or unsafe conditions and the process used to correct them.
5) Report all accidents to the Safety Director immediately.
6) Investigate all accidents and injuries immediately and document all findings.
7) Make safety a daily priority and part of individual meetings held with employees.
8) Consult with the Workers' Compensation Representative and Company Safety Director on concerns or issues as needed.
9) Conduct weekly safety meetings and inspections.



A GENERIC COMPANY SAFETY PROGRAM

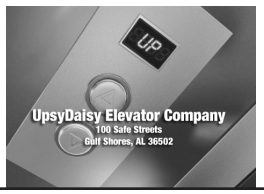
C. COMPANY SAFETY DIRECTOR RESPONSIBILITIES

1) Act as a liaison between insurance company representatives and our management team.
2) Inform supervisors and employees of all workers' compensation carriers. Ensure all insurance-carrier posters are posted on the company's bulletin board.
3) Coordinate Safety Committee meetings and report on safety in management meetings.
4) Review supervisor accident investigation reports incurred since last meeting.
    a) Determine if appropriate corrective actions were taken.
    b) Make additional recommendations for corrective action as necessary.
    c) Develop and implement training and informational programs to address safety needs.
    d) Follow up to ensure action is completed.
5) Review self-inspection reports.
    a) Determine necessary corrective actions.
    b) Assign responsibility for completion.
    c) Follow up during next meeting or the next inspection to ensure actions were implemented.
6) Review and recommend changes to corporate accident control policies and procedures as needed.
7) Review insurance company loss control reports, OSHA inspection reports, and other related reports. Determine whether actions are required; assign responsibility for implementation and follow up.
8) Review the advisability of establishing a "LOSS FREE" accident incentive program.
9) Review and evaluate information on employee safety bulletin boards.
10) Keep Senior Management advised of all incidents and be alert to potential hazards by frequent observations and jobsite visits.

D. EMPLOYEE RESPONSIBILITIES

Safety is a shared responsibility between company management and all its employees. It is the responsibility of all employees to perform their duties in a safe and effective manner and follow all safety rules. It is also the responsibility of any employee who sees another employee' performing in an unsafe manner to report it to supervisory personnel.

Employees shall be responsible for reporting any injury to their supervisor or management and completing required forms.



A GENERIC COMPANY SAFETY PROGRAM

SAFETY MEETINGS

Meetings of the company Safety Committee shall be held quarterly.

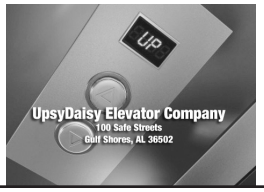
Supervisory and team safety meetings shall normally be conducted separate from regular operational meetings. When special emphasis is desired, a special safety meeting may be held.

SAFETY RULES

Safety is a joint responsibility between company management and all employees. All field employees will be supplied with an *Elevator Field Employees' Safety Handbook* and will be familiar with the safety procedures with in the handbook. In addition, employees should obey the rules below.

1) It is the responsibility of all employees to perform their duties in a safe and effective manner.
2) In case of sickness or injury, no matter how slight, report at once to your supervisor.
3) Jewelry, rings, bracelets, watch chains, key chains, etc. Should not be worn around moving machinery in which they could get caught. Loose, ragged or torn clothing should not be worn around moving machinery.
4) Steel-toed shoes must be worn at all times.
5) Throwing things, scuffling and horseplay are very dangerous, will not be tolerated and may result in termination.
6) Possession, sale use or distribution of alcohol or dangerous or illegal drugs on company property will result in termination. Reporting to work under the influence of these may result in termination.
7) Possession of firearms of any dangerous weapons anywhere on company property without the permission of management may result in termination.
8) Vehicles will be operated at safe speeds and observe all traffic laws. Pedestrians have the right-of-way. All occupants in vehicle will wear seat belts. Drivers shall not use mobile devices unless hands free. Do not text, email or use any device that requires use of hands and eyes.
9) Employee parking will be allowed only in designated parking spaces.
10) Use only approved extension cords free of defects.
11) Remain at your workstation during a power outage. Your supervisor will provide further instructions.
12) Before using any portable ladder, see that is has good safety feet and is free from cracks, broken rungs and other defects. When necessary, to prevent slipping, tie the bottom and the top of the ladder or have another worker hold the bottom of the ladder. Never use makeshift or defective scaffolding, rigging or stages. (Never stand on chairs or use shelving as a ladder.)
13) Do not attempt to lift or push objects, which may be too heavy for you. ASK FOR HELP when you need it. Learn to lift the RIGHT WAY to avoid strains: bend your knees, keep your body erect, then push upward with your legs. It is much easier and safer.
14) Pay attention to warning signs. They tell you of danger.
15) Keep general working area free of clutter and obstacles.
16) FIRE DOORS MUST BE KEPT CLEAR. Material, trucks, skids, racks, crates, boxes, ladders or other equipment must not block aisles, exits, firefighting, alarm boxes, electric lighting or power panels, valves, etc.
17) Slippery floors cause falls. Keep the floor clean and dry of oil and water.
18) Learn the location of all the fire exits and alarm boxes.
19) Learn the location and proper use of the firefighting equipment if you are required to use it.
20 Power should be turned off at the supply switch before attempting to clean, oil, adjust, repair or unjam a machine, unless there are operating instructions indicating otherwise. If work is to be done, the switch should be locked out and tagged to prevent it from being turned on by unauthorized persons.
21) Operators should never remove guards on machinery. Only authorized maintenance employees may remove guards when necessary to make adjustments or repairs, and these should be replaced immediately upon completion of work requiring their removal. If a machine guard is not in proper condition, report this to your supervisor at once.
22) When working around or handling chemicals, be sure to follow the procedures found on the Material Safety Data Sheets, which shall be obtained when purchasing or receiving any chemicals.
23) Fixed ladders shall comply with OSHA regulations before use. All hoists and rigs shall be checked at least daily prior to commensing work.
24) Only trained and authorized employees shall treat injured employees.
25) Acetylene and oxygen tanks should be maintained and chained onto the cart and in upright position with caps on at all times, including while they are being transported. Tie and secure each at least 20 feet apart.
26) Barricades should be provided around all hoistway entrances before starting work. If the general contractor refuses to provide them, call the Safety Director.

Continued



A GENERIC COMPANY SAFETY PROGRAM

Continued

27) No electric power tools or cords will be permitted in the gang box if they have defective cords or ground. If so, the cord or tool must be tagged out and sent back to the warehouse for repair.
28) GFCIs must be used at all times.
29) Hard hats must be worn at all times. Brims must face forward at all times.
30) OSHA-approved eye protection must be worn when drilling, chiseling, grinding, cutting, Babbitting, welding, when using chemicals or solvents, and when working in dusty or windy atmospheres.
31) The use of respirators is a voluntary option; you must read Appendix D of the OSHA standard Voluntary Respirator Usage before use.
32) Unless some other means of all protection is provided, full body harnesses must be worn with shock-absorbing lanyards tied to an anchorage point in any area where there is danger of falling more than 6 feet.
33) Gloves should be worn when handling material and doing rough work. They should not be worn when working near moving machinery or when putting rollers under a load.
34) Never work on circuits when standing on metal, wet surfaces or in water. Always stand on a dry board or rubber mat when working on live circuits.
35) Fire extinguishers must be sitting and ready to operate beside all torch activity within 10 feet with clear access.
36) The jobsite must be broom swept daily and all debris properly disposed of.
37) Keep exhaust at least 6 feet from combustible material.
38) Post a "DANGER HIGH VOLTAGE" sign listing voltage in every machine room before starting. Do not leave disconnect door open.

RECORDKEEPING PROCEDURES

Occupational Injuries and Illnesses (OSHA 300)

The log of Occupational Injuries and Illnesses, the OSHA 300A Log, includes the occurrence, extent, and outcome of "recordable" injuries and illnesses during the year. A recordable injury or illness could include the following:

- Fatalities
- Time lost from work
- Occupational illness (includes heat-related illnesses such as sunburns and flash burns)
- Restricted-duty cases
- Cases when medical treatment (beyond basic first aid) is administered.
- Loss of consciousness

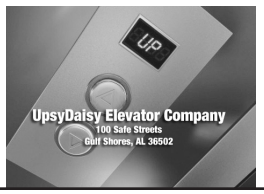
An annual summary (300A) of the OSHA 300 Log is to be posted and accessible to all employees between February 1 and March 1 of each year.

Employer's First Report of Injury or Illness (IAI) and/or Supplementary Record (301) under the Occupational Safety and Health Act

To be completed for each injury or illness (other than on-site first aid). These forms must be kept for five years.

Annual Occupational Injuries and Illnesses Survey (OSHA 300A)

The Annual Occupational Injuries and Illnesses Survey (OSHA 300A) form is a form that some, but not all, employers are required to submit to OSHA. Employers are notified by written correspondence if they must submit an OSHA 300A form.



A GENERIC COMPANY SAFETY PROGRAM

PERSONNEL PROCEDURES TO ENSURE SAFETY

The following are procedures the company has implemented to ensure employees are willing and able to work safely:

- Physical exam (Physicals are conducted after an individual has been hired, and the hiring decision can be made pending a physician's evaluation of the candidate's ability to do a specific job.)
- Drug screening
- Criminal background checks
    - o Social Security
    - o Criminal
    - o Sex Offender
    - o Driver's Record
- Reference check
- Job description signed by the employee
- Training to ensure that anyone with the authority to conduct interviews follows a rigid, predetermined format
- Safety while on the job will be enforced with the following results when safety rules are violated:
    - – First offense – Warning
    - – Second offense – Lost Time
    - – Third offense – Termination

  These enforcements depend on the seriousness of the violation. Employees should be aware that some violations could result in immediate termination.

JOBSITE POSTER REQUIREMENTS

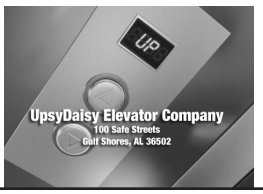
Purpose

To ensure proper notification for employees concerning various Department of Labor regulations.

General Requirements

The following must be posted on UpsyDaisy's bulletin board.

- Occupational Safety and Health Job Poster
- Equal Opportunity is the Law
- Minimum Wage
- Notice to all Employees (Prevailing Wage for Public Projects)
- Family and Medical Leave Act of 1993
- Emergency Phone Numbers



A GENERIC COMPANY SAFETY PROGRAM

HAZARD COMMUNICATION

Purpose

To ensure that both employers and employees are aware of potential hazards associated with chemicals in the workplace; an OSHA requirement.

General Requirements

The company shall provide information concerning hazards and protection from chemical substances by:

- Collecting and assembling Material Safety Data Sheets (MSDS) for each potentially harmful chemical on a jobsite
- Implement a labeling system
- Provide employee training
- Develop a written program to describe all procedures

Training

For each employee potentially exposed to hazardous substances, the training will include:

- Overview of requirements and written company program
- Review of chemicals present on jobsite
- Location and contents of MSDSs
- Hazards of chemicals
- Protection from hazards
- Emergency and first-aid procedures
- How read labels and MSDS

Frequency

Hazard communication should take place for all new hires and as new hazardous substances are introduced to the jobsite.

LOCKOUT/TAGOUT (CONTROL OF HAZARDOUS ENERGY)

Purpose

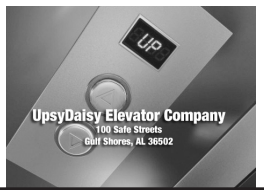
To ensure protection from unexpected energization or startup of equipment, or release of stored energy; an OSHA requirement.

General Requirements

1. The company will maintain written procedures to ensure protection from re-energized circuits of equipment.
2. Circuits and equipment being worked on shall be disconnected from its electrical source. Control circuit devices shall not be used as the sole means for disconnection. Stored energy must be released.
3. At points where re-energization is possible, locks and tags must be attached to ensure that re-energization does not occur in error.
4. A qualified person will test to ensure that the equipment is de-energized.

Training

Employees exposed to the hazards of re-energized circuits or equipment shall be familiar with the procedure and specific precautions.



A GENERIC COMPANY SAFETY PROGRAM

BLOODBORNE PATHOGENS

Purpose

To ensure that employees who may be exposed to blood or other potentially infectious materials are protected from the transmission of disease/illness as a result of an exposure; an OSHA requirement.

General Requirements

1. The company has developed a written program.
2. The company will provide training to first-aid responders and any other employee who may be subject to exposure.
3. The company will provide appropriate personal protective equipment on each jobsite. Waste is considered as medical waste and handled accordingly.
4. Hepatitis B vaccinations must be available at no cost to all employees potentially exposed.

Training

- Overview of regulations and written program
- How bloodborne pathogens are transmitted
- Specific controls to guard against infection
- Waste disposal
- Availability and rationale for vaccinations

SCAFFOLDING

Purpose

To ensure that the safe use of a wide variety of scaffold systems; an OSHA requirement.

General Requirements

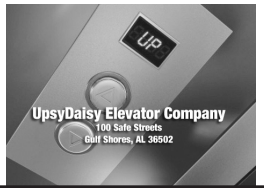
1. Construction of scaffolds shall be in strict accordance with the regulations by a competent person. Guardrails are required on welded frame, mobile and swingstage scaffolds at 10 feet. Crossbraces are not acceptable as guardrails.
2. Planks must be in accordance with the standards and in excellent condition.
3. A four-to-one height-to-width ratio is required for freestanding scaffolds.
4. A ladder or interior stairs must be used to climb a scaffold.
5. Crossbracing is required per manufacturer specifications.
6. Scaffolds must be secured to structure within 30 feet horizontally and 26 feet vertically.

Competent Person Training Should Include

- Erection and dismantling of system to be used
- Access via ladder
- Checking for plumbness and rigidness
- Securing to building
- Inspection of planks
- Purpose and requirements of crossbracing

Training

Annual training should take place or more often as needed.



A GENERIC COMPANY SAFETY PROGRAM

FIRST AID

Purpose

To ensure that first-aid services are made available to every employee; an OSHA requirement.

General Requirements

1. In the absence of an infirmary or clinic, at least one person on each jobsite shall have a valid first-aid certification. This certification shall include CPR training.
2. A complete first-aid kit shall be on each jobsite.

Training Requirements

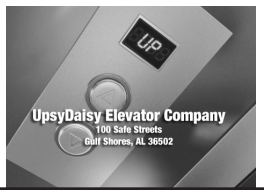
- First aid/CPR training must be equivalent to that provided in the standard Red Cross course.

COMPANY EYE WASH PROCEDURE

1) Do not panic.
2) Shout out for help to allow coworkers to assist you.
3) Get to the eye wash station and turn the eye wash on.
4) Rinse both eyes with large amounts of water for a minimum of 15 minutes.
5) Keep your eyelids open by using yours hands to ensure adequate flushing of the eyes.
6) Contact emergency personnel, if necessary, at 911.
7) Continue rinsing eyes until emergency personnel arrives.

IMPORTANT CRISIS HOTLINES

Category Number	Organization	Phone
Caregiver challenges support	Caregiver Action Network	855-227-3640
Child abuser or neglect	Childhelp National Child Abuse Hotline	800-422-4453
Domestic violence	National Domestic Violence Hotline	800-799-SAFE (7233)
Elder abuse or neglect	National Center on Elder Abuse or contact your local Adult Protective Services	855-500-3537
Mental Health	Substance Abuse and Mental Health Services Administration	800-662-HELP (4357)
Poisoning	National Poison Control	800-222-1222
Sexual assault or abuse	National Sexual Assault Hotline	800-656-4673
Substance abuse	Alcoholics Anonymous	844-802-7904
Substance abuse	Substance Abuse and Mental Health Services Administration	800-662-HELP (4357)
Suicide prevention	988 Suicide & Crisis Lifeline	988



A GENERIC COMPANY SAFETY PROGRAM

CONFINED SPACE ENTRY PERMIT PROGRAM

Purpose

Protect employees from risk of injuries and death as a result of entry, work and rescue in confined spaces; an OSHA requirement.

General Requirements

A confined space includes any enclosed space that has limited opening for entry and exit and the potential for serious hazards.

A confined space program includes:

- Requirements for authorized entry
- Testing for hazards (i.e., atmosphere, combustibility, etc.)
- Safe entry procedures
- Specification for testing and entry equipment
- Requirements for an attendant to monitor work
- Training
- Written procedure for issuing in-house permits
- Rescue procedures

Training

- Overview
- Types of confined spaces and hazards
- Air monitoring and ventilation
- Personal protective equipment
- Acceptable ranges for oxygen, flammables and toxic chemicals
- Rescue requirements and procedures

Declassification

- Many sites can be declassified with a pre-work site visit and determination. See form on page 99.

AMERICANS WITH DISABILITIES ACT (ADA)

Purpose

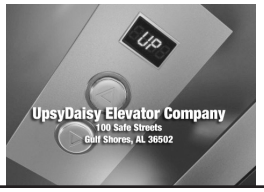
The ADA is meant to ensure protection against discrimination in hiring and promoting qualified persons with disabilities who are able to perform a job's essential function.

General Requirements

1. Reasonable accommodations will be made to ensure that buildings and structures will be accessible to disabled persons.
2. Employment cannot be denied to a qualified disabled person unless a significant health or safety threat exists.
3. An employer cannot ask applicant if he/she has a disability or about the prognosis of a disability.
4. Post-offer medical exams for new hires must be related to the essential functions of a specific job.
5. Written job description.

Training

Managers involved in the hiring process must receive information as to which interview questions may be illegal under the ADA.



A GENERIC COMPANY SAFETY PROGRAM

SAFETY PREPLANNING

Vehicle Inspection: Number: _____ Date: _____

Oil Level	_____	Fan Belts	_____
Tire Air-Pressure Level	_____	Lights	_____
Spare Tire and Jack	_____	Wipers and Washers	_____
Body Damage	_____	Cleanliness Inside	_____
Side Mirrors	_____	Cleanliness Outside	_____
Horn	_____	Mileage	_____
Seat Belts	_____		

Inventory Checklist:

Drop Light	_____	25 Foot Extension Cord	_____
Grease Gun	_____	2 Grease Gun Cartridges	_____
Dust Pan	_____	Regular Broom	_____
Wisk Broom	_____	Garbage Bags	_____
2 Gallon Mineral Spirits	_____	1 Gallon Worm Gear Oil	_____
1 Gallon Bearing Oil	_____	1 Gallon 40 Weight Oil	_____
Rags	_____	5 Gallon Bucket of Oil Dry	_____
10 Gallon Hydro Fluid	_____	Drill Index	_____
Pressure Gauge with Attachments & Test Tags	_____	Wire Ties	_____
		20 60 PSB Light Bulbs	_____
20 120 PSB Light Bulbs	_____	20 60 MB Light Bulbs	_____
20 120 MB Light Bulbs	_____	10 DL Door Gibs	_____
10 DW Door Gibs	_____	2 Cans WD 40	_____
1 ½-Inch-Drive Hammer (Variable Speed)	_____	1 Paint Brush, 2" (for Dusting Door & Sills)	_____
1 Oil Can	_____	1 Can of Rand Cleaner	_____
1 Panduit Box with Butt Splices: 100 Red, 100 Blue	_____	1 MSDS Book	_____
		1 Door Pressure Gauge	_____
1 GFI Cord	_____	Shop Vac	_____
5 Storage Boxes	_____	1 First Aid Kit	_____
1 Fire Extinguisher	_____	1 6-Foot Step Ladder	_____
1 Back Brace	_____	1 Spirators	_____
1 Gal. Door Operating Belt	_____	1 Mac Door Operating Belt	_____
3 2043 Locks for Topper	_____		

_____ _____

Employee Printed Name Employee Signature

PROOF OF INSURANCE LETTER

To: _____

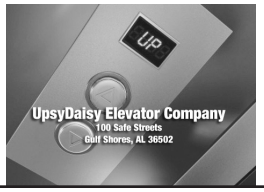
From: _____

Subject: Proof of Insurance Certificate

Please be advised that in order for your company to bid work as a subcontractor with the company, a proof of insurance certificate is required.

Thank you for your attention in this matter.

Safety Director



A GENERIC COMPANY SAFETY PROGRAM

SAFETY MEETING RECORD

Subject:

_____

Attendee Signatures:

_____

_____

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Add safety inspection

UPSYDAISY ELEVATOR COMPANY

Incident Report

Job Name: _____
Job Number: _____
Owner: _____
_____
_____

Operator: _____
_____
_____

Reason for report:
_____ Complaint
_____ Damage to apparatus
_____ Injury accident
_____ Fatality

Reported by: Name: _____
Phone: _____
____ Owner ____ Person injured
____ Operator
____ Other_____

Certificate No.: _____

Load Test Dates:
1 Yr.: _____ 5 Yr.: _____

County: _____
Make: _____
Desc. Key: _____
Capacity: _____

Has equipment been moved after accident occurred? _____

Person injured:
Name: _____
Address: _____
City: _____ Zip: _____
Age: _____ Occupation: _____
Nature of injury: _____
_____
_____
_____
_____

Date reported: _____

Date of occurrence: _____

Time reported: _____

Time of occurrence: _____

Details:

_____
_____
_____

Investigator(s): _____ Company Name: _____

_____

Date and Time Notified: _____ Time Arrived: _____

Date and Time Departed: _____

Signature of Person Filling out this Report: _____ Date: _____

INTRODUCTION

OSHA Accident Forms and Logs

The forms included in this section can be photocopied for use or obtained from the website www.osha.gov (a division of the U.S. Department of Labor).

The instructions here are for how to fill out the necessary forms when your company has a work-related injury or illness that requires more than just first aid. Form 301 is the first form you fill out when a recordable accident or injury occurs. These must be kept for five years and be available to the employees involved.

OSHA Form 300 is the log you must keep of work-related injuries and illnesses, and Form 300A is a year-end summary that must be posted every year in February so all employees can see it.

U.S. Department of Labor
Occupational Safety and Health Administration

OSHA
Forms for Recording
Work-Related Injuries and Illnesses

Dear Employer:

This booklet includes the forms needed for maintaining occupational injury and illness records for 2004. These new forms have changed in several important ways from the 2003 recordkeeping forms.

In the December 17, 2002 Federal Register (67 FR 77165-77170), OSHA announced its decision to add an occupational hearing loss column to OSHA's Form 300, Log of Work-Related Injuries and Illnesses. This forms package contains modified Forms 300 and 300A which incorporate the additional column M(5) Hearing Loss. Employers required to complete the injury and illness forms must begin to use these forms on January 1, 2004.

In response to public suggestions, OSHA also has made several changes to the forms package to make the recordkeeping materials clearer and easier to use:

- On Form 300, we've switched the positions of the day count columns. The days "away from work" column now comes before the days "on job transfer or restriction."
- We've clarified the formulas for calculating incidence rates.
- We've added new recording criteria for occupational hearing loss to the "Overview" section.
- On Form 300, we've made the column heading "Classify the Case" more prominent to make it clear that employers should mark only one selection among the four columns offered.

The Occupational Safety and Health Administration shares with you the goal of preventing injuries and illnesses in our nation's workplaces. Accurate injury and illness records will help us achieve that goal.

Occupational Safety and Health Administration
U.S. Department of Labor

What's Inside...

In this package, you'll find everything you need to complete OSHA's *Log* and the *Summary of Work-Related Injuries and Illnesses* for the next several years. On the following pages, you'll find:

- ***An Overview: Recording Work-Related Injuries and Illnesses —*** General instructions for filling out the forms in this package and definitions of terms you should use when you classify your cases as injuries or illnesses.

- ***How to Fill Out the Log —*** An example to guide you in filling out the *Log* properly.

- ***Log of Work-Related Injuries and Illnesses —*** Several pages of the *Log* (but you may make as many copies of the *Log* as you need.) Notice that the *Log* is separate from the *Summary*.

- ***Summary of Work-Related Injuries and Illnesses —*** Removable *Summary* pages for easy posting at the end of the year. Note that you post the *Summary* only, not the *Log*.

- ***Worksheet to Help You Fill Out the Summary —*** A worksheet for figuring the average number of employees who worked for your establishment and the total number of hours worked.

- ***OSHA's 301: Injury and Illness Incident Report —*** A copy of the OSHA 301 to provide details about the incident. You may make as many copies as you need or use an equivalent form.

Take a few minutes to review this package. If you have any questions, ***visit us online at www.osha. gov*** **or** ***call your local OSHA office.*** We'll be happy to help you.

An Overview:
Recording Work-Related Injuries and Illnesses

The Occupational Safety and Health (OSH) Act of 1970 requires certain employers to prepare and maintain records of work-related injuries and illnesses. Use these definitions when you classify cases on the Log. OSHA's recordkeeping regulation (see 29 CFR Part 1904) provides more information about the definitions below.

U.S. Department of Labor
Occupational Safety and Health Administration

The *Log of Work-Related Injuries and Illnesses* (Form 300) is used to classify work-related injuries and illnesses and to note the extent and severity of each case. When an incident occurs, use the *Log* to record specific details about what happened and how it happened. The *Summary* — a separate form (Form 300A) — shows the totals for the year in each category. At the end of the year, post the *Summary* in a visible location so that your employees are aware of the injuries and illnesses occurring in their workplace.

Employers must keep a *Log* for each establishment or site. If you have more than one establishment, you must keep a separate *Log* and *Summary* for each physical location that is expected to be in operation for one year or longer.

Note that your employees have the right to review your injury and illness records. For more information, see 29 Code of Federal Regulations Part 1904.35, *Employee Involvement*.

Cases listed on the *Log of Work-Related Injuries and Illnesses* are not necessarily eligible for workers' compensation or other insurance benefits. Listing a case on the *Log* does not mean that the employer or worker was at fault or that an OSHA standard was violated.

When is an injury or illness considered work-related?

An injury or illness is considered work-related if an event or exposure in the work environment caused or contributed to the condition or significantly aggravated a preexisting condition. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the workplace, unless an exception specifically applies. See 29 CFR Part 1904.5(b)(2) for the exceptions. The work environment includes the establishment and other locations where one or more employees are working or are present as a condition of their employment. See 29 CFR Part 1904.5(b)(1).

Which work-related injuries and illnesses should you record?

Record those work-related injuries and illnesses that result in:

- death,
- loss of consciousness,
- days away from work,
- restricted work activity or job transfer, or
- medical treatment beyond first aid.

You must also record work-related injuries and illnesses that are significant (as defined below) or meet any of the additional criteria listed below.

You must record any significant work-related injury or illness that is diagnosed by a physician or other licensed health care professional. You must record any work-related case involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum. See 29 CFR 1904.7.

What are the additional criteria?

You must record the following conditions when they are work-related:

- any needlestick injury or cut from a sharp object that is contaminated with another person's blood or other potentially infectious material;
- any case requiring an employee to be medically removed under the requirements of an OSHA health standard;
- tuberculosis infection as evidenced by a positive skin test or diagnosis by a physician or other licensed health care professional after exposure to a known case of active tuberculosis.
- an employee's hearing test (audiogram) reveals 1) that the employee has experienced a Standard Threshold Shift (STS) in hearing in one or both ears (averaged at 2000, 3000, and 4000 Hz) and 2) the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 Hz) in the same ear(s) as the STS.

What is medical treatment?

Medical treatment includes managing and caring for a patient for the purpose of combating disease or disorder. The following are not considered medical treatments and are NOT recordable:

- visits to a doctor or health care professional solely for observation or counseling;

What do you need to do?

1. Within 7 calendar days after you receive information about a case, decide if the case is recordable under the OSHA recordkeeping requirements.
2. Determine whether the incident is a new case or a recurrence of an existing one.
3. Establish whether the case was work-related.
4. If the case is recordable, decide which form you will fill out as the injury and illness incident report.

   You may use *OSHA's 301: Injury and Illness Incident Report* or an equivalent form. Some state workers compensation, insurance, or other reports may be acceptable substitutes, as long as they provide the same information as the OSHA 301.

How to work with the Log

1. Identify the employee involved unless it is a privacy concern case as described below.
2. Identify when and where the case occurred.
3. Describe the case, as specifically as you can.
4. Classify the seriousness of the case by recording the **most serious outcome** associated with the case, with column G (Death) being the most serious and column J (Other recordable cases) being the least serious.
5. Identify whether the case is an injury or illness. If the case is an injury, check the injury category. If the case is an illness, check the appropriate illness category.

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- diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and
- any procedure that can be labeled first aid. (*See below for more information about first aid.*)

What is first aid?

If the incident required only the following types of treatment, consider it first aid. Do NOT record the case if it involves only:

- using non-prescription medications at non-prescription strength;
- administering tetanus immunizations;
- cleaning, flushing, or soaking wounds on the skin surface;
- using wound coverings, such as bandages, BandAids™, gauze pads, etc., or using SteriStrips™ or butterfly bandages.
- using hot or cold therapy;
- using any totally non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;
- using temporary immobilization devices while transporting an accident victim (splints, slings, neck collars, or back boards).
- drilling a fingernail or toenail to relieve pressure, or draining fluids from blisters;
- using eye patches;
- using simple irrigation or a cotton swab to remove foreign bodies not embedded in or adhered to the eye;
- using irrigation, tweezers, cotton swab or other simple means to remove splinters or foreign material from areas other than the eye;
- using finger guards;
- using massages;
- drinking fluids to relieve heat stress

How do you decide if the case involved restricted work?

Restricted work activity occurs when, as the result of a work-related injury or illness, an employer or health care professional keeps, or recommends keeping, an employee from doing the routine functions of his or her job or from working the full workday that the employee would have been scheduled to work before the injury or illness occurred.

How do you count the number of days of restricted work activity or the number of days away from work?

Count the number of calendar days the employee was on restricted work activity or was away from work as a result of the recordable injury or illness. Do not count the day on which the injury or illness occurred in this number. Begin counting days from the day after the incident occurs. If a single injury or illness involved both days away from work and days of restricted work activity, enter the total number of days for each. You may stop counting days of restricted work activity or days away from work once the total of either or the combination of both reaches 180 days.

Under what circumstances should you NOT enter the employee's name on the OSHA Form 300?

You must consider the following types of injuries or illnesses to be privacy concern cases:

- an injury or illness to an intimate body part or to the reproductive system,
- an injury or illness resulting from a sexual assault,
- a mental illness,
- a case of HIV infection, hepatitis, or tuberculosis,
- a needlestick injury or cut from a sharp object that is contaminated with blood or other potentially infectious material (see 29 CFR Part 1904.8 for definition), and
- other illnesses, if the employee independently and voluntarily requests that his or her name not be entered on the log.

You must not enter the employee's name on the OSHA 300 *Log* for these cases. Instead, enter "privacy case" in the space normally used for the employee's name. You must keep a separate, confidential list of the case numbers and employee names for the establishment's privacy concern cases so that you can update the cases and provide information to the government if asked to do so.

If you have a reasonable basis to believe that information describing the privacy concern case may be personally identifiable even though the employee's name has been omitted, you may use discretion in describing the injury or illness on both the OSHA 300 and 301 forms. You must enter enough information to identify the cause of the incident and the general severity of the injury or illness, but you do not need to include details of an intimate or private nature.

What if the outcome changes after you record the case?

If the outcome or extent of an injury or illness changes after you have recorded the case, simply draw a line through the original entry or, if you wish, delete or white-out the original entry. Then write the new entry where it belongs. Remember, you need to record the most serious outcome for each case.

Classifying injuries

An injury is any wound or damage to the body resulting from an event in the work environment.

Examples: Cut, puncture, laceration, abrasion, fracture, bruise, contusion, chipped tooth, amputation, insect bite, electrocution, or a thermal, chemical, electrical, or radiation burn. Sprain and strain injuries to muscles, joints, and connective tissues are classified as injuries when they result from a slip, trip, fall or other similar accidents.

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Classifying illnesses

Skin diseases or disorders

Skin diseases or disorders are illnesses involving the worker's skin that are caused by work exposure to chemicals, plants, or other substances.

Examples: Contact dermatitis, eczema, or rash caused by primary irritants and sensitizers or poisonous plants; oil acne; friction blisters, chrome ulcers; inflammation of the skin.

Respiratory conditions

Respiratory conditions are illnesses associated with breathing hazardous biological agents, chemicals, dust, gases, vapors, or fumes at work.

Examples: Silicosis, asbestosis, pneumonitis, pharyngitis, rhinitis or acute congestion; farmer's lung, beryllium disease, tuberculosis, occupational asthma, reactive airways dysfunction syndrome (RADS), chronic obstructive pulmonary disease (COPD), hypersensitivity pneumonitis, toxic inhalation injury, such as metal fume fever, chronic obstructive bronchitis, and other pneumoconioses.

Poisoning

Poisoning includes disorders evidenced by abnormal concentrations of toxic substances in blood, other tissues, other bodily fluids, or the breath that are caused by the ingestion or absorption of toxic substances into the body.

Examples: Poisoning by lead, mercury, cadmium, arsenic, or other metals; poisoning by carbon monoxide, hydrogen sulfide, or other gases; poisoning by benzene, benzol, carbon tetrachloride, or other organic solvents; poisoning by insecticide sprays, such as parathion or lead arsenate; poisoning by other chemicals, such as formaldehyde.

Hearing Loss

Noise-induced hearing loss is defined for recordkeeping purposes as a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more in either ear at 2000, 3000 and 4000 hertz, and the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 hertz) in the same ear(s).

All other illnesses

All other occupational illnesses.

Examples: Heatstroke, sunstroke, heat exhaustion, heat stress and other effects of environmental heat; freezing, frostbite, and other effects of exposure to low temperatures; decompression sickness; effects of ionizing radiation (isotopes, x-rays, radium); effects of nonionizing radiation (welding flash, ultra-violet rays, lasers); anthrax; bloodborne pathogenic diseases, such as AIDS, HIV, hepatitis B or hepatitis C; brucellosis; malignant or benign tumors; histoplasmosis; coccidioidomycosis.

When must you post the Summary?

You must post the *Summary* only — not the *Log* — by February 1 of the year following the year covered by the form and keep it posted until April 30 of that year.

How long must you keep the Log and Summary on file?

You must keep the *Log* and *Summary* for 5 years following the year to which they pertain.

Do you have to send these forms to OSHA at the end of the year?

No. You do not have to send the completed forms to OSHA unless specifically asked to do so.

How can we help you?

If you have a question about how to fill out the *Log*,

- ❑ ***visit us online at www.osha.gov*** or
- ❑ ***call your local OSHA office.***

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Optional

Calculating Injury and Illness Incidence Rates

What is an incidence rate?

An incidence rate is the number of recordable injuries and illnesses occurring among a given number of full-time workers (usually 100 full-time workers) over a given period of time (usually one year). To evaluate your firm's injury and illness experience over time or to compare your firm's experience with that of your industry as a whole, you need to compute your incidence rate. Because a specific number of workers and a specific period of time are involved, these rates can help you identify problems in your workplace and/or progress you may have made in preventing work-related injuries and illnesses.

How do you calculate an incidence rate?

You can compute an occupational injury and illness incidence rate for all recordable cases or for cases that involved days away from work for your firm quickly and easily. The formula requires that you follow instructions in paragraph (a) below for the total recordable cases or those in paragraph (b) for cases that involved days away from work, *and* for both rates the instructions in paragraph (c).

(a) *To find out the total number of recordable injuries and illnesses that occurred during the year,* count the number of line entries on your OSHA Form 300, or refer to the OSHA Form 300A and sum the entries for columns (G), (H), (I), and (J).

(b) *To find out the number of injuries and illnesses that involved days away from work,* count the number of line entries on your OSHA Form 300 that received a check mark in column (H), or refer to the entry for column (H) on the OSHA Form 300A.

(c) *The number of hours all employees actually worked during the year.* Refer to OSHA Form 300A and optional worksheet to calculate this number.

You can compute the incidence rate for all recordable cases of injuries and illnesses using the following formula:

Total number of injuries and illnesses x *200,000* ÷ *Number of hours worked by all employees = Total recordable case rate*

(The 200,000 figure in the formula represents the number of hours 100 employees working 40 hours per week, 50 weeks per year would work, and provides the standard base for calculating incidence rates.)

You can compute the incidence rate for recordable cases involving days away from work, days of restricted work activity or job transfer (DART) using the following formula:

(Number of entries in column H + Number of entries in column I) x *200,000* ÷ *Number of hours worked by all employees = DART incidence rate*

You can use the same formula to calculate incidence rates for other variables such as cases involving restricted work activity (column (I) on Form 300A), cases involving skin disorders (column (M-2) on Form 300A), etc. Just substitute the appropriate total for these cases, from Form 300A, into the formula in place of the total number of injuries and illnesses.

What can I compare my incidence rate to?

The Bureau of Labor Statistics (BLS) conducts a survey of occupational injuries and illnesses each year and publishes incidence rate data by various classifications (e.g., by industry, by employer size, etc.). You can obtain these published data at www.bls.gov/iif or by calling a BLS Regional Office.

Worksheet

Total number of injuries and illnesses		200,000	÷	Number of hours worked by all employees	=	Total recordable case rate
	x					

Number of entries in Column H + Column I		200,000	÷	Number of hours worked by all employees	=	DART incidence rate
	x					

How to Fill Out the Log

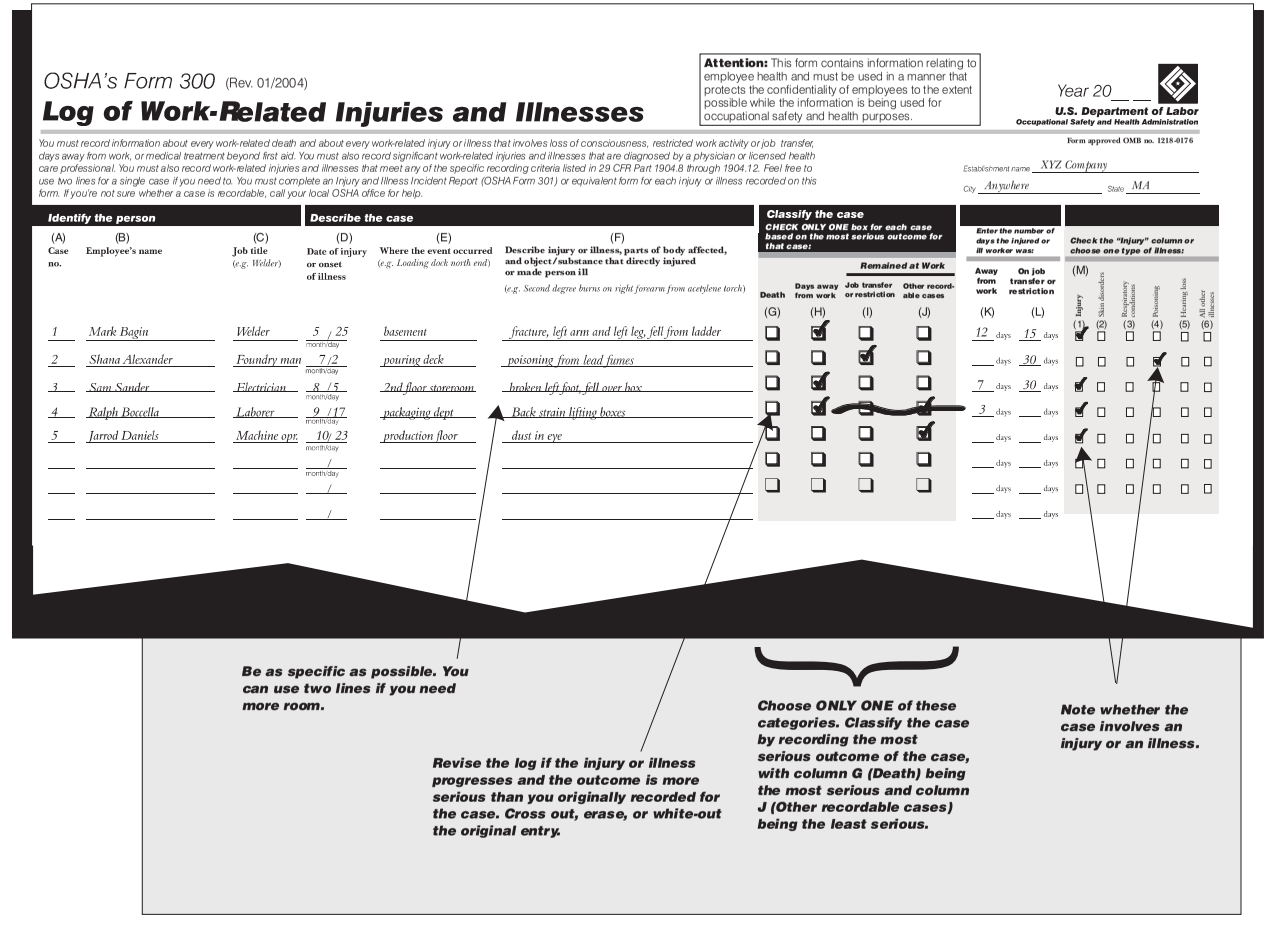
The *Log of Work-Related Injuries and Illnesses* is used to classify work-related injuries and illnesses and to note the extent and severity of each case. When an incident occurs, use the *Log* to record specific details about what happened and how it happened.

If your company has more than one establishment or site, you must keep separate records for each physical location that is expected to remain in operation for one year or longer.

We have given you several copies of the *Log* in this package. If you need more than we provided, you may photocopy and use as many as you need.

The *Summary* — a separate form — shows the work-related injury and illness totals for the year in each category. At the end of the year, count the number of incidents in each category and transfer the totals from the *Log* to the *Summary.* Then post the *Summary* in a visible location so that your employees are aware of injuries and illnesses occurring in their workplace.

You don't post the Log. You post only the Summary at the end of the year.



OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name XYZ Company
City Anywhere State MA

Identify the person			Describe the case			Classify the case (CHECK ONLY ONE box for each case based on the most serious outcome for that case:)				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness:						
(A) Case no.	(B) Employee's name	(C) Job title (e.g. Welder)	(D) Date of injury or onset of illness	(E) Where the event occurred (e.g. Loading dock north end)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (e.g. Second degree burns on right forearm from acetylene torch)	Death (G)	Days away from work (H)	Remained at Work: Job transfer or restriction (I)	Remained at Work: Other recordable cases (J)	Away from work (K)	On job transfer or restriction (L)	(M) (1) Injury	(2) Skin disorders	(3) Respiratory conditions	(4) Poisoning	(5) Hearing loss	(6) All other illnesses
1	Mark Bagin	Welder	5/25	basement	fracture, left arm and left leg, fell from ladder	☐	☑	☐	☐	12 days	15 days	☑	☐	☐	☐	☐	☐	☐
2	Shana Alexander	Foundry man	7/2	pouring deck	poisoning from lead fumes	☐	☐	☑	☐	___ days	30 days	☐	☐	☐	☑	☐	☐	☐
3	Sam Sander	Electrician	8/5	2nd floor storeroom	broken left foot, fell over box	☐	☑	☐	☐	7 days	30 days	☑	☐	☐	☐	☐	☐	☐
4	Ralph Boccella	Laborer	9/17	packaging dept	Back strain lifting boxes	☐	☑	☐	☐	3 days	___ days	☑	☐	☐	☐	☐	☐	☐
5	Jarrod Daniels	Machine opr.	10/23	production floor	dust in eye	☐	☐	☐	☑	___ days	___ days	☐	☐	☐	☐	☐	☐	☐
___	___	___	/___	___	___	☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐	☐
___	___	___	/___	___	___	☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐	☐
___	___	___	/___	___	___	☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐	☐

Be as specific as possible. You can use two lines if you need more room.

Revise the log if the injury or illness progresses and the outcome is more serious than you originally recorded for the case. Cross out, erase, or white-out the original entry.

Choose ONLY ONE of these categories. Classify the case by recording the most serious outcome of the case, with column G (Death) being the most serious and column J (Other recordable cases) being the least serious.

Note whether the case involves an injury or an illness.

U.S. Department of Labor
Occupational Safety and Health Administration

OSHA's Form 300 (Rev. 01/2004)

Log of Work-Related Injuries and Illnesses

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

You must record information about every work-related death and about every work-related injury or illness that involves loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or licensed health care professional. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR Part 1904.8 through 1904.12. Feel free to use two lines for a single case if you need to. You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form. If you're not sure whether a case is recordable, call your local OSHA office for help.

Establishment name ______________________

City ______________ State __________

Identify the person			Describe the case			Classify the case: CHECK ONLY ONE box for each case based on the most serious outcome for that case:				Enter the number of days the injured or ill worker was:		Check the "Injury" column or choose one type of illness: (M)					
								Remained at Work									
(A) Case no.	(B) Employee's name	(C) Job title (*e.g., Welder*)	(D) Date of injury or onset of illness	(E) Where the event occurred (*e.g., Loading dock north end*)	(F) Describe injury or illness, parts of body affected, and object/substance that directly injured or made person ill (*e.g., Second degree burns on right forearm from acetylene torch*)	Death (G)	Days away from work (H)	Job transfer or restriction (I)	Other record-able cases (J)	Away from work (K)	On job transfer or restriction (L)	Injury (1)	Skin disorder (2)	Respiratory condition (3)	Poisoning (4)	Hearing loss (5)	All other illnesses (6)
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
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			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
			/ month/day			☐	☐	☐	☐	___ days	___ days	☐	☐	☐	☐	☐	☐
					Page totals ➤	___	___	___	___	___	___	___ Injury (1)	___ Skin disorder (2)	___ Respiratory condition (3)	___ Poisoning (4)	___ Hearing loss (5)	___ All other illnesses (6)

Be sure to transfer these totals to the Summary page (Form 300A) before you post it.

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 20__ __

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
_____	_____	_____	_____
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
_____	_____
(K)	(L)

Injury and Illness Types

Total number of . . .	(M)		
(1) Injuries	_____	(4) Poisonings	_____
		(5) Hearing loss	_____
(2) Skin disorders	_____	(6) All other illnesses	_____
(3) Respiratory conditions	_____		

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Establishment information

Your establishment name _____

Street _____

City _____ State _____ ZIP _____

Industry description (*e.g., Manufacture of motor truck trailers*)

_____

Standard Industrial Classification (SIC), if known (*e.g., 3715*)

___ ___ ___ ___

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

___ ___ ___ ___ ___ ___

Employment information *(If you don't have these figures, see the Worksheet on the back of this page to estimate.)*

Annual average number of employees _____

Total hours worked by all employees last year _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

_____ _____
Company executive Title

( ) - / /
Phone Date

U.S. Department of Labor
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Optional

Worksheet to Help You Fill Out the Summary

At the end of the year, OSHA requires you to enter the average number of employees and the total hours worked by your employees on the summary. If you don't have these figures, you can use the information on this page to estimate the numbers you will need to enter on the Summary page at the end of the year.

How to figure the average number of employees who worked for your establishment during the year:

❶ ***Add*** the total number of employees your establishment paid in all pay periods during the year. Include all employees: full-time, part-time, temporary, seasonal, salaried, and hourly.

The number of employees paid in all pay periods = ❶ _____

❷ ***Count*** the number of pay periods your establishment had during the year. Be sure to include any pay periods when you had no employees.

The number of pay periods during the year = ❷ _____

❸ ***Divide*** the number of employees by the number of pay periods.

❶ / ❷ _____ = ❸ _____

❹ ***Round the answer*** to the next highest whole number. Write the rounded number in the blank marked *Annual average number of employees*.

The number rounded = ❹ _____

For example, Acme Construction figured its average employment this way:

For pay period...	Acme paid this number of employees...
1	10
2	0
3	15
4	30
5	40
▼	▼
24	20
25	15
26	+10
	830

Number of employees paid = 830 ❶

Number of pay periods = 26 ❷

830 / 26 = 31.92 ❸

31.92 rounds to 32 ❹

32 is the annual average number of employees

How to figure the total hours worked by all employees:

Include hours worked by salaried, hourly, part-time and seasonal workers, as well as hours worked by other workers subject to day to day supervision by your establishment (e.g., temporary help services workers).

Do not include vacation, sick leave, holidays, or any other non-work time, even if employees were paid for it. If your establishment keeps records of only the hours paid or if you have employees who are not paid by the hour, please estimate the hours that the employees actually worked.

If this number isn't available, you can use this optional worksheet to estimate it.

Optional Worksheet

_____ ***Find*** the number of full-time employees in your establishment for the year.

X _____ ***Multiply*** by the number of work hours for a full-time employee in a year.

_____ This is the number of full-time hours worked.

\+ _____ ***Add*** the number of any overtime hours as well as the hours worked by other employees (part-time, temporary, seasonal)

_____ ***Round*** the answer to the next highest whole number. Write the rounded number in the blank marked *Total hours worked by all employees last year.*

OSHA's Form 301
Injury and Illness Incident Report

Attention: This form contains information relating to employee health and must be used in a manner that protects the confidentiality of employees to the extent possible while the information is being used for occupational safety and health purposes.

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

This *Injury and Illness Incident Report* is one of the first forms you must fill out when a recordable work-related injury or illness has occurred. Together with the *Log of Work-Related Injuries and Illnesses* and the accompanying *Summary,* these forms help the employer and OSHA develop a picture of the extent and severity of work-related incidents.

Within 7 calendar days after you receive information that a recordable work-related injury or illness has occurred, you must fill out this form or an equivalent. Some state workers' compensation, insurance, or other reports may be acceptable substitutes. To be considered an equivalent form, any substitute must contain all the information asked for on this form.

According to Public Law 91-596 and 29 CFR 1904, OSHA's recordkeeping rule, you must keep this form on file for 5 years following the year to which it pertains.

If you need additional copies of this form, you may photocopy and use as many as you need.

Completed by _____

Title _____

Phone (_____)_____-_____ **Date** ____/ ____/ ____

Information about the employee

1) **Full name** _____

2) **Street** _____

City _____ **State** _____ **ZIP** _____

3) **Date of birth** _____ / _____ / _____

4) **Date hired** _____ / _____ / _____

5) ☐ Male
☐ Female

Information about the physician or other health care professional

6) **Name of physician or other health care professional** _____

_____

7) **If treatment was given away from the worksite, where was it given?**

Facility _____

Street _____

City _____ **State** _____ **ZIP** _____

8) **Was employee treated in an emergency room?**
☐ Yes
☐ No

9) **Was employee hospitalized overnight as an in-patient?**
☐ Yes
☐ No

Information about the case

10) **Case number from the *Log*** _____ *(Transfer the case number from the Log after you record the case.)*

11) **Date of injury or illness** _____ / _____ / _____

12) **Time employee began work** _____ **AM / PM**

13) **Time of event** _____ **AM / PM** ☐ **Check if time cannot be determined**

14) ***What was the employee doing just before the incident occurred?*** **Describe the activity, as well as the tools, equipment, or material the employee was using. Be specific.** *Examples:* **"climbing a ladder while carrying roofing materials"; "spraying chlorine from hand sprayer"; "daily computer key-entry."**

15) ***What happened?*** **Tell us how the injury occurred.** *Examples:* **"When ladder slipped on wet floor, worker fell 20 feet"; "Worker was sprayed with chlorine when gasket broke during replacement"; "Worker developed soreness in wrist over time."**

16) ***What was the injury or illness?*** **Tell us the part of the body that was affected and how it was affected; be more specific than "hurt," "pain," or sore."** *Examples:* **"strained back"; "chemical burn, hand"; "carpal tunnel syndrome."**

17) ***What object or substance directly harmed the employee?*** *Examples:* **"concrete floor"; "chlorine"; "radial arm saw."** *If this question does not apply to the incident, leave it blank.*

18) ***If the employee died, when did death occur?*** **Date of death** _____ / _____ / _____

If You Need Help...

If you need help deciding whether a case is recordable, or if you have questions about the information in this package, feel free to contact us. We'll gladly answer any questions you have.

- **Visit us online at www.osha.gov**
- **Call your OSHA Regional office and ask for the recordkeeping coordinator**

  or

- **Call your State Plan office**

U.S. Department of Labor
Occupational Safety and Health Administration

Federal Jurisdiction

Region 1 - 617 / 565-9860
Connecticut; Massachusetts; Maine; New Hampshire; Rhode Island

Region 2 - 212 / 337-2378
New York; New Jersey

Region 3 - 215 / 861-4900
DC; Delaware; Pennsylvania; West Virginia

Region 4 - 404 / 562-2300
Alabama; Florida; Georgia; Mississippi

Region 5 - 312 / 353-2220
Illinois; Ohio; Wisconsin

Region 6 - 214 / 767-4731
Arkansas; Louisiana; Oklahoma; Texas

Region 7 - 816 / 426-5861
Kansas; Missouri; Nebraska

Region 8 - 303 / 844-1600
Colorado; Montana; North Dakota; South Dakota

Region 9 - 415 / 975-4310

Region 10 - 206 / 553-5930
Idaho

State Plan States

Alaska - 907 / 269-4957

Arizona - 602 / 542-5795

California - 415 / 703-5100

*Connecticut - 860 / 566-4380

Hawaii - 808 / 586-9100

Indiana - 317 / 232-2688

Iowa - 515 / 281-3661

Kentucky - 502 / 564-3070

Maryland - 410 / 527-4465

Michigan - 517 / 322-1848

Minnesota - 651 / 284-5050

Nevada - 702 / 486-9020

*New Jersey - 609 / 984-1389

New Mexico - 505 / 827-4230

*New York - 518 / 457-2574

North Carolina - 919 / 807-2875

Oregon - 503 / 378-3272

Puerto Rico - 787 / 754-2172

South Carolina - 803 / 734-9669

Tennessee - 615 / 741-2793

Utah - 801 / 530-6901

Vermont - 802 / 828-2765

Virginia - 804 / 786-6613

Virgin Islands - 340 / 772-1315

Washington - 360 / 902-5554

Wyoming - 307 / 777-7786

*Public Sector only

U.S. Department of Labor
Occupational Safety and Health Administration

Have questions?

If you need help in filling out the *Log* or *Summary*, or if you have questions about whether a case is recordable, contact us. We'll be happy to help you. You can:

- Visit us online at: **www.osha.gov**
- Call your regional or state plan office. You'll find the phone number listed inside this cover.

INTRODUCTION

Safety Audits and Inspections

This chapter contains forms that can be used by a manager or supervisor to do safety site audits. When done properly, they are an audit of employees, as well as property (site conditions). Included are items that are best for you to observe and correct before OSHA comes onto a site. Safety inspections by the company Safety Manager or the Mechanic in Charge are a must in the elevator industry, and they are required by OSHA. The set of audit forms at the beginning of this chapter can be effectively used to test employees' response and knowledge of the safe way to work. In addition to the audit forms, Section 2 of the *Elevator Industry Field Employees' Safety Handbook** contains suggested inspection items. These have also been enlarged and put in this chapter for ease of use. The final form in this chapter (page 99) can be used to "de-classify" confined space with a pre-work site visit.

*Available from www.elevatorbooks.com

Elevator World

Interactive On-Site Auditor and Technician 2011 Edition FESH Safety Audit Form

AUDITOR:		TECHNICIAN:		Date: / /
Equipment Needed by Technician to begin audit: Meter; Jumpers; LO/TO Equipment. An electrical tool to plug into an outlet; Hoistway Access Tools; Other as required				
Section 3	**Prior to commencing audit, verify the technician has the appropriate PPE**		✓ for correct answer	Auditor Comments
5.1(b)	**P. 40**	Proper Clothing; **A:** 5.1(b) Electrical Arc Flash Rated Clothing		
3.1(b)	**P. 22**	**A:** 5.1(e) Hand tools and other objects removed from pockets and belts		
3.1(c)	**P. 22**	**A:** Removal of rings, jewelry, watches		
3.2(a) (1 & 2)	**P. 23**	**A:** Eye & Face protection; (Safety glasses or goggles)		
3.3	**P. 25**	Head protection		
3.4	**P. 25**	Foot protection		
3.5	**P. 26**	Hearing protection		
3.6	**P. 26**	Personal fall arrest equipment		
3.7	**P. 27**	Hand protection		
3.8	**P. 27**	Respiratory protection		
Co. Issued	**P. 41**	Field Employee Safety Handbook with 2011 Supplements		
Co. Issued	**P. 162**	Job Hazard Analysis for Service & Repair; **(look at pages 162-163)** or other Company approved forms		
7.1.1(a)	**P. 52**	Personal lock(s) and common lock		
7.1(i)	**P. 51**	All locks have identification signs and stickers		
6.1.2(b)	**P. 46**	Jumper Kit		
Section 1		**Ask the Technician about Employee Responsibilities**	**Comments:**	
1.1(e)	**P. 8**	When you arrive to perform maintenance, what is the first thing you should do prior to starting any work? **A: Contact Mgt. and place company approved "Out of Service" signs on a single unit.**		
1.1(h)	**P. 9**	When unexpected movement of the equipment/elevator presents a safety hazard while cleaning, oiling or maintaining parts that move, how should that equipment be rendered inoperative? **A: Use of Lock Out and Tag Out**		
1.1(p)	**P. 9**	When cleaning the pit, top of car, machine room or other equipment, what precaution should you take to prevent cuts or punctures? **A: Wear suitable gloves and use a broom or bust pan to pick up debris**.		
1.1 (a, c)	**P. 11**	No matter how trivial, what should you do if you sustain any type injury? **A: Report it to your supervisor in accordance with company policy.**		
1.1 (a, k)	**P. 12**	Before placing an elevator back into service, what 3 things should you always do:		
		A: Remove all locks and tags		
		A: Account for any jumpers used		
		A: Test all door and safety circuits to ensure they are operating		
1.1 (a, l)	**P. 12**	Prior to leaving the building, what is the last thing you should do? **A: Remove al "Out of Service" & check out with building management.**		
1.19 (as)	**P. 12**	Before working on an elevator with the hoistway door open, what should you do? **A: Place a barrier in front of the entrance**.		
1.2 (d)	**P. 14**	When it is the responsibility of "others" to correct unsafe conditions what should you do? Example: You have an escape hatch not properly secured or a pit ladder is not secure.		
		A: Notify those responsible (ie. Building owner/manager)		
		A: Verbally AND/OR in writing		
		A: Notify your Superintendent/Manager		
		A: Avoid the hazard until it is removed/repaired		
Section 4		**Ask the Technician to explain the requirements for use of Fall Protection**	Comments:	
Gen. Req.	**P. 29**	Is required: **A: When working more than 6' above a lower level**		
	P. 29	Is required: **A: When opening greater than 12" x 12"**		
4.1(i)	**P. 31**	Is required: **A: When working on top of a completed elevator where there is a fall hazard and the car is secured from movement**		

Section 4.3		**Ask the Technician to explain all the "Requirements for Barricades During Escalator Maintenance"**		
4.3(a)	**P. 38**	**Answer: Shall be positioned to completely surround the escalator from public access.**		
4.3(b)	**P. 38**	**Answer: Shall be positioned to surround the entire area when floor access plates are removed.**		
4.3(c)	**P. 38**	**Answer: Shall be a minimum height of 42"**		
4.3(d)	**P. 38**	**Answer: Shall be securely attached to the balustrades, handrails and or floor.**		
4.3(e)	**P. 38**	**Answer: All sections must be connected.**		
4.3(f)	**P. 38**	**Answer: A system shall be in place to keep the barricade rigid.**		
Section 4.4		**Ask the Technician to explain all the "Requirements for Barricades During Elevator Maintenance"**		
4.4(a)	**P. 39**	**Answer: When the doors are opened greater than 5" to restrict public access**		
4.4(b)	**P. 39**	**Answer: Minimum height of 42"**		
4.4(c)	**P. 39**	**Answer: Shall cover the entire entrance**		
4.4(d)	**P. 39**	**Answer: All sections connected**		
4.4(e)	**P. 39**	**Answer: Must be kept rigid**		
Section 8		**HOISTWAY ACCESS Top of Car** *(Technician to PERFORM all the requirements for hoistway access)*		
8.1.1.1		**With Access Switch**		
1.1(e)	**P. 8**	Install Out of Service signage when required		
4.4(a)	**P. 39**	Install barricades (when doors are open greater than 5"; while performing work)		
8.1.1.1(a)	**P. 56**	Prior to accessing the car or car top, always verify that the elevator has arrived, and prior to stepping on top of the elevator		
8.1.1.1(a)	**P. 56**	Take car to top landing		
8.1.1.1(a)	**P. 56**	Activate the means to disable the operating devices (in car inspection service)		
8.1.1.1(a)	**P. 56**	Verify the elevator will not run on automatic operation; (register multiple calls)		
8.1.1.1(a)	**P. 56**	Insert door wedge tool		
8.1.1.1(a)	**P. 56**	Use access key switch and lower car to a safe height; (be aware of door clearances)		
8.1.1.1(a)	**P. 56**	Remove key from hallway access switch		
8.1.1.1(a)	**P. 57**	Place the top-of-car stop switch to "STOP"; turn top of car work light On Note: if switch cannot be reached then use LOTO		
8.1.1.1(a)	**P. 57**	Insert key into hall access switch and try to move elevator in both directions		
8.1.1.1(a)	**P. 57**	Remove key		
8.1.1.1(a)	**P. 57**	Place the car top inspection switch in the "INSPECT" position.		
8.1.1.1(a)	**P. 57**	Place the car top STOP switch to the "RUN" position.		
8.1.1.1(a)	**P. 57**	Insert the key into the hall access switch and try to move elevator in both directions		
8.1.1.1(a)	**P. 57**	Remove key		
8.1.1.1(a)	**P. 57**	Prior to stepping onto the car, activate the stop switch to the "STOP" position		
8.1.1.1(a)	**P. 57**	Locate a safe refuge area, then access car top		
8.1.1.1(a)	**P. 57**	Step onto car top, remove door wedge and proceed with closing doors		
Section 8.1		**No Access Switch**		Comments:
1.1(e)	**P. 8**	Install Out of Service signage when required		
4.4(a)	**P. 57**	Install barricades (when doors are open greater than 5"; while performing work)		
8.1.1.1(b)	**P. 57**	Take car to top landing		
8.1.1.1(b)	**P. 57**	Establish down demand by activating 2 in-car car calls		
8.1.1.1(b)	**P. 57**	Use approved door tool and stop car in flight to verify operation of the door interlock		
8.1.1.1(b)	**P. 57**	Open the hoistway door more than 6" to determine the car is in a safe position		
8.1.1.1(b)	**P. 57**	Insert door wedge tool		
8.1.1.1(b)	**P. 57**	Place the top-of-car stop switch to "STOP" position Note: if switch cannot be reached then use LOTO		
8.1.1.1(b)	**P. 57**	Remove wedge and allow doors to close		
8.1.1.1(b)	**P. 58**	Wait 10 seconds then open door no more than 6"; Verify car did not move		

8.1.1.1(b)	**P. 58**	Insert wedge tool and place car top inspection switch on "INSPECT"; place stop switch to "RUN"		
8.1.1.1(b)	**P. 58**	Remove wedge and close doors		
8.1.1.1(b)	**P. 58**	Wait 10 seconds then open door no more than 6"; Verify car did not move		
8.1.1.1(b)	**P. 58**	Insert wedge tool and activate car top stop switch to "STOP" position		
8.1.1.1(b)	**P. 58**	Locate safe refuge area and access car top; remove wedge tool and close doors		
		Ask the Technician "What PPE should be used when a fall hazard exists?"		
Section 4	**P. 30**	**Answer: Lifeline or approved attachment point**		
Section 4	**P. 30**	**Answer: Body Harness**		
Section 4	**P. 30**	**Answer: Lanyard**		
8.1.2		**Ask the Technician to explain "What Safety Precautions Should Be Taken When Working On Car Tops?"**		
8.1.2(a)	**P. 59**	**Answer: Traction:** Familiarize yourself with the position of the counterweights of all cars.		
8.1.2(c)	**P. 59**	**Answer: Traction:** Never sit on the crosshead when the car is moving.		
8.1.2(d)	**P. 59**	**Answer: All:** Never hold onto the ropes or sheave guards.		
8.1.2(e)	**P. 59**	**Answer: All:** If the car top has oil or grease on it, clean it prior to performing any activities.		
8.1.2(f)	**P. 59**	**Answer: All:** Verify the proper operation of top of car inspection operating buttons.		
8.1.2(m)	**P. 59**	**Answer: All:** Open hoistway doors slowly.		
8.1.1.1(b)	**P. 58**	**QUESTION:** Are you allowed to stand on a car top exit or fan? **Answer: (N)**		
8.2		**PIT SAFETY** **Ask the Technician to explain** "All potential hazards while working in pit(s)"		
8.2.1(a)(1)	**P. 61**	**Answer: Inadequate refuge space**		
8.2.1(a)(2)	**P. 61**	**Answer: Inadequate lighting**		
8.2.1(a)(3)	**P. 61**	**Answer: Improper access**		
8.2.1(a)(4)	**P. 61**	**Answer: Tripping hazards**		
8.2.1(a)(5)	**P. 61**	**Answer: Unsafe access or lack of pit ladder**		
8.2.1(a)(6)	**P. 61**	**Answer: Water or oil on the pit floor**		
8.2.1(a)(7)	**P. 61**	**Answer: Moving equipment (adjacent cars, comp sheaves, governors, counterweights)**		
8.2.1(d)	**P. 61**	**Answer: Possibly classified as a Permit Required Confined Space**		
Section 8.2.2		**Technician to Perform Pit Access - No Access Switch:** **(No Movement of Car Required)**		
8.2.2.1(c)	**P. 8**	Install Out of Service signage when required; Notify building management		
8.2.2.1(b)	**P. 62**	Perform Lockout / Tagout procedure		
8.2.2.1(d)	**P. 62**	Install barricades (if door will remain open more than 5" while performing work)		
8.2.2.1(f)	**P. 62**	Capture the car and place 2 car calls to upper floors to establish a demand		
8.2.2.1(f)	**P. 62**	As the elevator moves away use hoistway door unlocking device to open hoistway doors to ensure the interlock stops the elevator		
8.2.2.1(h)	**P. 62**	Place door wedge tool in sill; place pit stop switch in "Stop" position		
Section 8.2.2		**Technician to Perform Pit Access - With Access Switch:** **(No Movement of Car Required)**		
8.2.2.1(c)	**P. 8**	Install Out of Service signage when required; Notify building management		
8.2.2.1(b)	**P. 62**	Perform Lockout / Tagout procedure		
8.2.2.1(d)	**P. 62**	Install barricades (if door will remain open more than 5" while performing work)		
8.2.2.1(e)	**P. 62**	Activate the means to disable the operating devices. (in car inspection service)		
8.2.2.1(e)	**P. 62**	Verify elevator is not on automatic by registering multiple calls		
8.2.2.1(e)	**P. 62**	With doors held ½ open, activate access switch in "UP" direction until toe guard clears the opening.		
8.2.2.1 **(i & l)**	**P. 63**	Insert access key. Try to run in both directions. Remove wedge, close door, place a hall call, wait 10 seconds, open door, insert wedge tool.		
8.2.2.1		**PIT ENTRY**		
8.2.2.1(h)	**P. 63**	Before accessing the pit, place a door wedge tool in the sill.		
8.2.2.1(h)	**P. 63**	Turn the pit light on		
8.2.2.1(h)	**P. 63**	Place the pit stop switch in the "STOP" position.		
8.2.2.1(m)	**P. 63**	Perform a mental assessment and locate a safe refuge space.		
8.2.2.1(m)	**P. 63**	Carefully enter the pit, close the hoistway door to about 6" and use wedge tool to block.		
7.1(h)	**P. 51**	**QUESTION TO TECHNICIAN:** When working under Hydraulic elevators, are jacks or pipe stands required? **Answer: Yes**		

		MACHINE ROOM		
5.1		**ELECTRICAL SAFETY (*technician to EXPLAIN all requirements*)**		
		QUESTION TO TECHNICIAN: What Personal Protective Equipment (PPE) Must Be Worn Or Removed When Testing Live Electrical Circuits		
5.1b	**P. 40**	**Answer: Arc-flash long-sleeved natural fiber or FR-rated shirts and pants or other company approved arc-flash protection.**		
5.1b	**P. 40**	**Answer: Above 240 volts; clean leather gloves**		
5.1b	**P. 40**	**Answer: Safety Glasses or shield**		
5.1b	**P. 40**	**Answer: EH –rated footwear or rubber mats**		
5.1b	**P. 40**	**Answer: Rubber insulated gloves with leather protectors**		
5.1e	**P. 40**	**Answer: Remove watches, rings and jewelry, cell phones, etc.**		
Section 7		**LockOut / TagOut – Demonstrate Proper LO/TO Procedure** ***(Auditor to VISUALY OBSERVE Technician perform tasks)***		
7.1(b)	**P. 49**	Has personal lock(s) and common lock		
7.1(b)	**P. 49**	All locks have identification signs and stickers		
7.1(b)	**P. 49**	Stood to the side of the disconnect when turning power off		
7.1(b)	**P. 49**	Install personal lock		
7.1(b)	**P. 49**	Proper tags applied on lock? **A: "Do not Start & Name"**		
		Verify Power is OFF: By testing mainline phases of the controller		
5.2	**P. 42**	Used a Category III volt meter		
5.3(b)	**P. 43**	Hang or rest meter; try to avoid holding		
5.3(b)	**P. 44**	Three point test method: (1) Tested meter at known live source?		
5.3(b)	**P. 44**	Three point test method: (2) Tested target source?		
5.3(b)	**P. 44**	Three point test method: (3) Tested meter at known live source?		
5.3(b)	**P. 44**	Maintained one hand or to the side of his/her back / pocket?		
		QUESTION TO TECHNICIAN: Ask the Technician to identify all potential forms of energy that should be controlled to prevent accidental movement of any equipment.		
7 General	**P. 49**	**Answer: Electrical**		
7 General	**P. 49**	**Answer: Mechanical**		
7 General	**P. 49**	**Answer: Hydraulic**		
7 General	**P. 49**	**Answer: Gravity**		
7 General	**P. 49**	**Answer: Kinetic**		
7 General	**P. 49**	**Answer: Pneumatic**		
		QUESTION TO TECHNICIAN: Ask the Technician "is LO/TO required to be used on Escalators? If so, when?)		
7.3(a)	**P. 54**	**Answer: Anytime work is being performed within the interior plane of the steps.**		

Section 6		**JUMPERS**		
6.(a)(1)	**P. 45**	Are jumpers extra long and are brightly colored or colored clips?	Y	
6.(a)(2)	**P. 45**	Are jumpers numbered in sequence?	Y	
6.(a)(3)	**P. 45**	Are jumpers affixed with insulated alligator clips?	Y	
6.(a)(4)	**P. 45**	Are jumpers marked with name or number?	Y	
6.1.2		**USE OF JUMPERS – Demonstrate proper use of jumpers:** **(Jump out the pit stop switch)** **(Auditor to visually observe technician perform tasks)**		
6.1.2(a)	**P. 46**	Remove elevator from service; make sure no passengers are in elevator	Y	
6.1.2(b)	**P. 46**	Jumper bag properly hung on door or conspicuous place?	Y	
6.1.2(c)	**P. 46**	Verbal communication that jumpers are to be used?	Y	
6.1.2(d)	**P. 46**	Counted all jumpers when returning them to his jumper kit?	Y	
		QUESTION TO TECHNICIAN: Ask the Technician "If you had to jump out at the same time both the car door and the hoistway door, what would your procedure have to be?"		
6.1.1(c)	**P. 46**	**Answer: Only when a second qualified person is present and in direct communication**	N	
6.1.1(d)	**P. 46**	**Answer: Ensure elevator is on inspection**	N	
6.1.1(d)	**P. 46**	**Answer: Visual inspection that all hoistway doors are closed**	N	
6.1.1(e)	**P. 46**	**Answer: Ensure all jumpers are removed before placing equipment back into service**	N	
Section 9.2		**Demonstrate Use Of An Electrical Tool – Non cordless drill** **(Auditor to visually observe technician perform task; or verbal description of use)**		
9.2(d)	**P. 72**	Was electrical outlet tested with meter or GFI tester prior to use? P. 72	N	
9.2(b,e)	**P. 71**	Was GFI utilized?	Y	

SAFETY INSPECTIONS

Need for Routine Safety Inspections

Safety inspections are a must in the elevator industry and required by OSHA regulations. Such inspections shall be conducted periodically to identify unsafe work practices and conditions that could injure company employees and/or the employees of others. Reasons for normal inspections include, but are not limited to:

(a) Normal wear and tear on such items as ropes, slings, scaffold planks, hand tools and PPE.
(b) Defects, damage and weather conditions.
(c) Changing conditions and other trades on site.

Inspecting for Hazards

The Competent Person on the jobsite must be aware of all potential hazards on the jobsite and take immediate corrective action. The following is a sample checklist:

- ❑ Is Company-provided information posted at jobsite (OSHA, emergency phone numbers, warning signs, etc.)?
- ❑ Is the site clean and free of debris? Are materials stored or stacked neatly and a safe distance away from your work area?
- ❑ Are Company-approved first-aid kits on the job? Are they periodically checked and refilled as required?
- ❑ Are emergency first-aid responders readily available or first-aid trained people on the job?
- ❑ Is drinking water available and container plainly marked?
- ❑ Are personnel properly wearing Company-approved personal protective equipment when exposed to possible danger (i.e., gloves, work boots/shoes, hard hats, safety harnesses, safety glasses, goggles, welding hoods, etc.)?
- ❑ Are company fire extinguishers inspected monthly, readily accessible and annual maintenance certificates up-to-date?
- ❑ Are ground fault circuit interrupters (GFCIs) available and in proper use?
- ❑ Are copies of your Company's Hazard Communication (HAZCOM) Program and MSDSs on the site?
- ❑ Are hazardous materials used (i.e., welding and cutting equipment, etc.) stored properly?
- ❑ Are required locks and tags for locking out equipment available and used properly?
- ❑ Are open decks, scaffolds, planking, etc., enclosed with approved guardrails and toeboards or are employees using approved personal fall-arrest systems?
- ❑ Are all elevator hoistways, entrances and escalator wellways properly barricaded with removable guardrails?
- ❑ Are floor openings covered or protected by OSHA compliant guardrails?
- ❑ Are all hand and power tools in safe condition and grounded or double insulated?
- ❑ Are defective tools and equipment tagged with company approved tags and removed from use?
- ❑ Is hoisting and rigging equipment in good condition and properly rated?
- ❑ Is material handling equipment in good condition and properly rated?
- ❑ Are ladders and scaffolding in good condition and being properly used?
- ❑ Are company-approved warning signs posted where necessary?
- ❑ Do work and common areas have adequate lighting?
- ❑ Are there any site specific hazards i.e., chemical plants, refineries, etc.
- ❑ Are disconnects and controllers properly labeled?
- ❑ Does the pit have adequate guards (i.e., counterweight guards, etc.), covers, is dry, and is there safe access and egress?

Pre-startup Safety Survey

A safety survey should be conducted on all construction, modernization and major repair projects prior to starting work. The responsibility for conducting a pre-startup survey shall be determined by the company. The following is a sample of the items that should be included on a pre-startup checklist.

2.3.1 Asbestos

- ❑ Customer has identified all areas containing asbestos
- ❑ Sampling has been conducted to ensure safe atmosphere
- ❑ Precautions have been taken to avoid asbestos containing material
- ❑ Employees have been properly trained, according to level of exposure

2.3.2 Lead Paint

- ❑ Customer has identified all areas containing lead paint
- ❑ Sampling has been conducted to ensure safe atmosphere
- ❑ Precautions have been taken to avoid lead paint
- ❑ Employees have been properly trained, depending on level of exposure

2.3.3 Document Requirements

- ❑ EEO, OSHA & State Posters
- ❑ Emergency phone numbers identified (i.e. fire, hospital)
- ❑ OSHA 300 log available (if required)

2.3.4 Electrical

- ❑ Wiring labeled and grounded
- ❑ Adequate power provided in areas where needed
- ❑ High voltage adequately identified and covered
- ❑ Ground Fault Circuit Interrupters (GFCI) available

2.3.5 Fall Protection

- ❑ Type of fall protection to be used is identified
- ❑ Anchor points identified
- ❑ Barricades installed properly per handbook (removable)

2.3.6 Fire Prevention

- ❑ Fire extinguishers available
- ❑ Wood/paper products or rubbish not in pit or machine room
- ❑ Smoking/No-smoking areas identified

2.3.7 First Aid
- ❑ Location of first aid station (or kit) identified
- ❑ Trained personnel identified

2.3.8 General
- ❑ Evaluate the location of work by other trades and determine impact

2.3.9 Hazard Communication
- ❑ Chemical inventory list
- ❑ Containers properly labeled
- ❑ MSDS's readily available

2.3.10 Hoisting & Rigging
- ❑ Adequate equipment for job
- ❑ Equipment inspected and certified per manufacturer recommendations
- ❑ Capacities identified (equipment and load), ensure equipment will meet expected lifting requirements

2.3.11 Housekeeping
- ❑ General condition of work area
- ❑ Walkways clear
- ❑ Regular waste disposal schedule
- ❑ Adequate lighting

2.3.12 Ladders/Stairwells
- ❑ Access stairwells have guardrails installed
- ❑ Stairwells properly lit
- ❑ Serviceable ladders of sufficient height are available
- ❑ Extension ladders have safety feet and extend 3 ft. (914 mm) above landings
- ❑ Safe access to work areas provided

2.3.13 Material Handling
- ❑ Employees are trained to operate forklifts safely and sufficient equipment is available to move material safely (forklifts, dollies, handcarts, etc.)
- ❑ Equipment in good working condition
- ❑ Staging area for material and equipment identified

2.3.14 Scaffolds
- ❑ Proper erection is supervised and inspected by Competent Person
- ❑ Locking pins installed
- ❑ Equipped with baseplates
- ❑ Tied to the structure when required
- ❑ Proper planking

2.3.15 Welding
- ❑ Adequate equipment provided (if needed)
- ❑ Area identified for proper cylinder storage
- ❑ Adequate shielding is available (if needed)
- ❑ Well ventilated area identified for welding
- ❑ Properly inspected extinguisher available

INITIAL CONFINED SPACE SITE VISIT FOR DETERMINATION

Date: _____/_____/_____

Building Name: _____

Building Address: _____

City, State, Zip Code: _____

Customer Number: _____

Elevator Company Representative/ Title: _____

Host Employer Owner/Management Company: _____

Representative/Title: _____

Elev. # _____ TDLR ID #: _____

29 CFR 1910.146(c)(8) requirements: (requirements of the Host employer)

1. Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of paragraph (d) of 1910.146.
( ) Informed ( ) Not informed

2. Apprise the contractor of the elements, including the hazards identified and the host employers experience with the space, that make the space in question a permit space.
Mechanical: Moving equipment
Electrical: Possible electrical shock
_____
_____

3. Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working.

4. Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by paragraph (d)(11) of the PRCS standard. Host employer and elevator company representative will determine the work to be provided in the confined space. Elevator company representative will either take control of the elevator or Lock and Tag and eliminate the hazard and work in conjunction with the Host employer. Only Confined Space trained personnel will be allowed in the confined space.
( ) Informed ( ) Not informed

5. Debrief the contractor at the conclusion of the entry operations regarding the permit space program followed and regarding any hazards confronted or created in permit spaces during entry operations.

INTRODUCTION

Training Schedules

The mandated training within a company is regulated by the OSHA 1926 Construction Standard and OSHA 1910 General Industry Standard. On the NEII website (www.neii.org/safety), you will find the training chart Service and Repairs PPE Assessment form that must be completed either initially, yearly or as needed. These are an excellent guide for managers.

We also include the NEII Service and Repair Assessment Form and Instructions. These are available in padded book from elevatorbooks.com.

Some of these items are in the *Elevator Industry Field Employees" Safety Handbook,* which is edited by the NEII Field Safety Committee and published by Elevator World. The handbook is revised every five years unless there is an immediate need for revision or correction. It is available online for managers with the most recent corrections/changes in red.

National Elevator Industry, Inc.

5003 Westfield Blvd. PO Box 231137 Centreville, VA 20120 • 703.266.3100

OSHA 1926 Construction Industry Standard Mandated Training Requirements

Regulations	Training Reference	Initial	Annual	Other
Safety Training and Education	29 CFR 1926.21	X		
Lead Exposure	29 CFR 1926.62 (l)(1)(iv)	X	X	Employees that are subject to exposure
Process Safety Management Highly Hazardous Chemicals	29 CFR 1926.64 (g)(1)(i)	X		As needed. Refresher training determined by facility (petrochemical, pharmaceutical, etc.)
Personal Protective Equipment (PPE)	29 CFR 1926.95	X		As needed
Signs, Signals and Barricades	29 CFR 1926.200	X		As needed
Material Handling	29 CFR 1926.250	X		As needed
Hand and Power Tools	29 CFR 1926.300	X		As needed
Welding and Cutting	29 CFR 1926.350	X		As Needed
Electrical	29 CFR 1926.400	X		As Needed
Lockout/Tagout	29 CFR 1926.417	X		Worksite changes present new hazards, different type, employee inadequacies
Scaffold	29 CFR 1926.454	X		Worksite changes present new hazards, different type, employee inadequacies
Fall Protection	29 CFR 1926.503	X		As Needed
Cranes, etc.	29 CFR 1926.550	X		As Needed

Regulations	Training Reference	Initial	Annual	Other
Motor Vehicles	29 CFR 1926.600	X		As Needed
Demolition	29 CFR 1926.850	X		As Needed
Stairways and Ladders	29 CFR 1926.1060	X		Retrain as necessary for employee understanding
Asbestos	29 CFR 1926.1101(k)(9)	X	X	If known possible exposure
Confined Spaces	29 CFR 1926.1207	X		
Cranes and Derricks	29 CFR 1926.1430	X		As needed.

NOTE: This is a summary of applicable OSHA training requirements and may not be all inclusive.

APPROVALS: November 30, 2006

REVISED: March 24, 2016

NEII® Field Employee Safety Committee

National Elevator Industry, Inc.

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OSHA 1910 General Industry Standard Mandated Training Requirements

Regulations	Training Reference	Initial	Annual	Other
Access to Medical Records	29 CFR 1910.1020	X	X	
Ionizing Radiation	29 CFR 1910.1096 (i)(2)	X	X	Typically not applicable to field personnel
Toxic and Hazardous Substances (Asbestos, Tremolite, Anthophylite, Actinolite)	29 CFR 1910.1001 (j)(7)	X	X	
Hazard Communication	29 CFR 1910.1200 (h)	X		New physical or health hazard
Control Hazardous Energy Source (lockout/tagout)	29 CFR 1910.147 (c)(7)(i)	X		Upon changes & as inspection warrant
Electrical Safety	29 CFR 1910.332 (a)	X		
Personal Protective Equipment (PPE)	29 CFR 1910.132 (f)(1)	X		Upon issue of equipment & condition change
Respiratory Protection	29 CFR 1910.134 (k)(2)	X	X	
Powered Industrial/Material Handling	29 CFR 1910.178 (l)(1)(i)	X		Minimum every 3 years & change to process or equipment
Overhead & Gantry Cranes	29 CFR 1910.179 (n)(3)(ix)	X		Not specific
Welding, Cutting, Brazing	29 CFR 1910.252 (a)(2)(xii)(C) 1910.253 (a)(4) 1910.254	X		

Regulations	Training Reference	Initial	Annual	Other
Occupational Exposure to Bloodborne Pathogens	29 CFR 1910.1030 (g)(2)(i)	X	X	Not specific
Emergency Action Plan	29 CFR 1910.38 (e)	X	X	When responsibilities change
Portable Fire Extinguishers	29 CFR 1910.157 (g)(1)	X	X	
Medical Services & First Aid	29 CFR 1910.151 (a)(b)	X	Periodic Intervals	Frequency set by certifying agency.
Permit Required Confined Space	29 CFR 1910.146 (g)(1)	X		When changes occur. Training is specific to duties and activities.
Occupational Noise Exposure	29 CFR 1910.95 (k)(1)	X	X	
Lead	29 CFR 1910.1025 (l)(1)(iii)	X	X	

NOTE: This is a summary of applicable OSHA training requirements and may not be all inclusive.

APPROVALS: November 30, 2006

INSTRUCTIONS
SERVICE AND REPAIR PPE HAZARD ASSESSMENT
NEII FORM SC01

OVERVIEW

Personal Protective Equipment (PPE) is designed to aid in the protection against work and environmental hazards that cannot be eliminated. The Occupational Health and Safety Administration requires employers to conduct a "hazard assessment" for each job performed at the workplace. The survey results can serve as the basis for establishing PPE requirements for all similar jobs.

In 1997, the National Elevator Industries, Inc. Safety Committee developed the Service and Repair Job Hazard Analysis Form to help the industry facilitate compliance with the OSHA regulations specified above. The Service and Repair Job Hazard Analysis Form (NEII® SC01) has been renamed the Service and Repair PPE Hazard Assessment and should be utilized in conjunction with the Elevator Industry Field Employees' Safety Handbook, and is intended to help your company comply with the OSHA PPE Standard.

DEFINITION

PPE is defined as:

> *Protective equipment for eyes, face, head and extremities, protective clothing, respiratory devices and protective shields and barriers.*

All equipment shall be company approved and designed for the work to be performed. All PPE equipment must be used and maintained in a sanitary and reliable condition. These provisions apply to all field personnel, management personnel and visitors.

FOOT AND LEG PROTECTION

All footwear must meet industry and company requirements and protect the worker from falling, rolling or sharp objects, wet slippery surfaces and potential electrical hazards. Work shoes should be sturdy and have an impact-resistant toe.

Leggings protect the lower leg and feet from welding sparks. Safety snaps allow them to be removed quickly. Knee guards may be required if the worker is exposed to extended kneeling.

HEAD PROTECTION

OSHA regulations mandate that all workers wear protective helmets in areas where there is a possible danger of head injury from impact, falling or flying objects, or electrical shock and burns.

Each worker is required to comply with both industry and company standards on when, where and how to fit and wear hard hats. Hard hats must comply with the "American National Standards Safety Requirements for Industrial Head Protection," ANSI Z89.I-2009, 2003, or 1997 which must be marked on the helmet's shell.

HEARING PROTECTION

OSHA has established permissible noise levels and duration of exposure for workers. When noise levels or exposure cannot be reduced to below the permissible noise level, ear protection devices must be provided and worn.

To be effective, the device used must be properly fitted. Some earplugs are disposable and should be discarded after one use. Non-disposable earplugs should be cleaned after each use.

EYE AND FACE PROTECTION

Eye and face protective equipment shall be provided when there is a potential for injury from flying particles, liquid chemicals, gases, electrical shock/arcing, and radiant energy. Companies are required to provide a type of eye protection suitable for the work to be performed.

Eye and face protection can include goggles, glasses and face shields. Eye protection devices must comply with Industry and company standards.

INSTRUCTIONS
SERVICE AND REPAIR PPE HAZARD ASSESSMENT
NEII FORM SC01

RESPIRATORY PROTECTION

The company shall provide appropriate respiratory devices, where required. They are to be used by all affected workers in accordance with the company's respiratory program.

All respiratory devices must be approved by the Department of Health and Human Services National Institute for Occupational Safety and Health for the contaminant or situation to which the worker is exposed.

PERSONAL FALL ARREST SYSTEM

The company will provide each worker an appropriate personal fall arrest system to be used, where required. Safety harnesses, lifelines, and shock absorbing lanyards are to be used when guardrails and safety nets are not available or feasible, and there is a fall exposure over 6 feet.

HAND PROTECTION

If there is a potential for cuts, abrasions, burns and skin contact with chemicals, gloves, suitable for the hazard, shall be worn.

OSHA REGULATIONS

A job hazard assessment for PPE is required by 29 CFR Subpart I, Section 1910.132 through 138. Additional PPE requirements can be located in 29 CFR Subpart E, Section 1926.95 through 107 and other regulations such as Subpart G, K and M. The Service and Repair PPE Hazard Assessment establishes the minimum PPE requirements for Elevator Industry personnel performing service and repair work.

COMPETENT PERSON

OSHA requires that the company analyze specific PPE requirements for workers on each job or project. A competent person (superintendent, field engineer, mechanic or mechanic-in-charge) must review the job prior to start up to identify additional hazards. A PPE Hazard Assessment is required to be completed by a competent person, which is:

> *a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

ASSESSING WORKPLACE HAZARDS

The employer must assess the workplace hazards to determine where PPE is required. Use of the Service and Repair PPE Hazard Assessment Form (NEII® SC01) is recommended to help the elevator company comply with OSHA regulations. The assessment process is outlined as follows:

- A competent person should conduct a hazard assessment to identify hazards which require PPE and/or to verify the PPE used by the worker is sufficient. This should be noted and documented as written certification of the assessment.
- Select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment.
- Issue and train each employee on the use and care of the required PPE and insure that each employee has properly fitted PPE.
- Appropriate equipment should be issued to the employee prior to start up or at new hire orientation by the employer. [see Elevator Industry Field Employee Safety Handbook.] The employee may be required to provide some PPE.

TRAINING

OSHA requires the company to provide training to each employee who is required to have PPE and to know:

- when PPE is necessary;
- what PPE is necessary;
- how to properly wear, fit, adjust, and remove PPE;

INSTRUCTIONS
SERVICE AND REPAIR PPE HAZARD ASSESSMENT
NEII® FORM SC01

- the limitations of the PPE; and
- the proper care, maintenance, useful life and disposal of the PPE.

If the company has reason to believe the trained worker does not have the understanding and skill required by the company to use the PPE, the company should remove the worker from the job until the worker is adequately trained.

Each company is required to certify that each worker has been trained or retrained if there is a job assignment change which presents a new hazard or, the need for retraining is identified. Documentation on the date, type of training and worker's name should be retained as documentation.

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h:\wpdocs\neii\neii service and repair ppe hazard assessment instructions.docx

☐ Top of Car ☐ Outside of Car (Landing)
☐ Pit ☐ Escalator/Moving Walk
☐ Inside of Car ☐ Machine Room

SERVICE AND REPAIR PPE HAZARD ASSESSMENT
(MAY NOT BE ALL INCLUSIVE)

Date: _____
Job: _____
Prepared By: _____

Work Location:		Personal Protective Equipment Control (CFR 1910)																			Additional Control										
		Eyes			Face				Hands/Arms								Head		Feet/Legs			Other* (Specify)									
Major Tasks: _____ _____ Steps: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____	CHECK IF APPLICABLE	SAFETY GLASSES W/SIDE SHIELDS	SAFETY GOGGLES	WELDING (GLASSES & GOGGLES)	RESPIRATOR	FACESHIELD	WELDERS HOOD (W/TINTED LENS)	HEARING PROTECTION	COTTON WORK GLOVES	CUT RESISTANT GLOVE	RUBBER GLOVE	NEOPRENE GLOVE	LEATHER GLOVE	HEAT RESISTANT GLOVE	SLEEVES	WELDERS JACKET	STANDARD HARDHAT	OTHER	SAFETY SHOES	PANTS/COVERALLS	KNEE GUARDS	PERSONAL FALL ARREST SYSTEM	LIFELINE	GUARDRAILS/BARRIERS, OR BARRICADES	HOLE COVERINGS	LOCKOUT/TAGOUT	GFCI	STOP SWITCH PROCEDURE				
Hazards																														
• Equipment Movement ❑Car ❑Escalator/Moving Walk																														
• Electrical																														
- Energized High Voltage																														
- Energized Low Voltage																														
- De-energized																														
- Inspecting Controller																														
- Use of Meters																														
• Overhead Clearances																														
• Housekeeping																														
• Hazardous Trash																														
• Environmental																														
- Chemicals																														
- Solvents/Oils																														
- Temperature																														
- Space Constraints																														
- Dust/Carbon Dust																														
- Noise																														
- Paints																														
• Site Conditions																														
- Stairways																														
- Ladders																														
- Projections																														
- Walking Surfaces																														
- Floor Openings																														

 Form: SC01

* May be required to comply with other regulatory and/or company standards

☐ Top of Car ☐ Outside of Car (Landing)
☐ Pit ☐ Escalator/Moving Walk
☐ Inside of Car ☐ Machine Room

SERVICE AND REPAIR PPE HAZARD ASSESSMENT
(MAY NOT BE ALL INCLUSIVE)

Date: _____
Job: _____
Prepared By: _____

Work Location:	Personal Protective Equipment Control (CFR 1910)																				Additional Control											
		Eyes			Face				Hands/Arms								Head		Feet/Legs			Other* (Specify)											
Major Tasks: _____ _____ Steps: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____	CHECK IF APPLICABLE	SAFETY GLASSES W/SIDE SHIELDS	SAFETY GOGGLES	WELDING (GLASSES & GOGGLES)	RESPIRATOR	FACESHIELD	WELDERS HOOD (W/TINTED LENS)	HEARING PROTECTION	COTTON WORK GLOVES	CUT RESISTANT GLOVE	RUBBER GLOVE	NEOPRENE GLOVE	LEATHER GLOVE	HEAT RESISTANT GLOVE	SLEEVES	WELDERS JACKET	STANDARD HARDHAT	OTHER	SAFETY SHOES	PANTS/COVERALLS	KNEE GUARDS	PERSONAL FALL ARREST SYSTEM	LIFELINE	GUARDRAILS/BARRIERS, OR BARRICADES	HOLE COVERINGS	LOCKOUT/TAGOUT	GFCI	STOP SWITCH PROCEDURE				
Hazards																																
• Site Conditions con't																																
- Falling Objects																																
• Mechanical Repairs																																
- Blowers																																
- Welding																																
- Soldering																																
- Cutting																																
- Hoisting																																
- Grinding																																
- Sanding/Chiseling																																
- Babbitting																																
- Drilling																																
- Power Accuated Tools																																
- Metal Working/Handling																																
- Sawing																																
- Roping																																
• Moving Equipment																																
• Other (Specify if not all inclusive)																																

 Form: SC01

* May be required to comply with other regulatory and/or company standards

RE-ROPING PRE-START CHECKLIST

There are inherent risks during roping and re-roping operations. Always refer to company procedures, perform a written Job Hazard Analysis to analyze hazards and risks, and complete any additional company-required documents/forms prior to commencing work.

Re-Roping Pre-Start Checklist		
	All Items with "No" answers must be resolved before work commences	**Completed? Yes No N/A**
Job Preparation	Check the elevator's crosshead data tag to capture the total car weight, as well as the correct number and diameter of hoist ropes. Check the existing rope tag to confirm you have the correct construction (e.g., 8x19, 6x25, etc.) and lay (regular or lay) required for the job before beginning work. NOTE: Wedge clamp shackles cannot be used with drum machines. The Supervisor will select the company approved re-roping method for the job. A written or electronic copy of the approved method must be available on sitee before starting work. Supervisor will communicate "with the lead mechanic prior to work commencing Confirm all employees on site have received training for the re-roping method being used. Any inexperienced employees must have supervision throughout the process.	
Job Hazard Analysis		
	Perform a written JHA to analyze hazards and risks prior to commencing work.	
	Follow company policy regarding JHA approval requirements.	
PPE	Employees shall have the appropriate PPE (e.g., safety glasses, correct work gloves, safety footwear, hard hats, fall protection harness, etc.) on site and shall wear it at all times.	
Jobsite Conditions	Confirm safe, clean and well-lit access is available to all work areas (e.g., machine room, car top, pit, material storage areas, etc.) Complete the confined space entry reclassification form to reclassify the pit as a non-permit confined space before work begins. Ensure there isn't any water, oil or other debris in the pit and all energy sources are controlled.	
Tooling	Confirm there is a sufficient communication system for the jobsite. Follow company communication protocol and terms used during communication (e.g., "command" and "repeat command" by everyone to indicate acknowledgement by all employees. Use only approved tooling (e.g., rope holdback devices, spreaders, rope marrying devices, torque wrenches, etc.) for the re-roping method being used.	

Re-Roping Pre-Start Checklist		
	All Items with "No" answers must be resolved before work commences	**Completed? Yes No N/A**
Guarding	Install barricades to protect entrances, work areas and the public from accessing the work area. In multi-car hoistways, remove adjacent cars from service or fully screen the hoistway and pit. All machines, sheaves, and other rotating equipment shall have temporary or permanent guarding installed before work commences.	
Fall Protection	Hang lifelines from adequately rated beam or hook rated for 5,000 lbs. Make sure fall protection is available on the car top and in the pit if necessary. Inspect all ladders prior to use. • Make sure extension ladders are the correct length, are tied off and cleated • Step ladders or platform ladders shall only be used in their fully open position with spreaders fully engaged. Ensure scaffolding (if used) is installed by a competent installer.	
Hoisting & Rigging	All hoisting and rigging equipment (e.g., rail clamps, hoists, hooks, slings, counterweight supports, etc.) must be inspected, certified, and rated to support the load independently. Car and CWT slings must be suspended by at least 2 means each, with each means capable of supporting the entire load independently. All slings used must be padded on all corners. No homemade slings allowed. Rail blocks, if used, must be in good condition and stamped with the torque value required for the cup bolts. • Cup bolts should be new and not rounded. No U-bolt cable clips allowed; use only fist grips. Use only synthetic rope.	
Method	LOTO - All employees must perform Lockout/Tagout as required by the re-roping method being followed. Verify 2 forms of control are available (e.g., stop switches and inspection operation in machine room or on the car top) Check governor, safeties and brake for proper operation prior to re-roping work commencing No stacked work allowed	

INTRODUCTION

Columns on OSHA Enforcement by Paul Waters

This section contains the collected articles by Paul Waters, since 2010. They give a very current view of OSHA and the organization's enforcement in the 21st century. Waters is an expert in the field and represents employers nationally in enforcement and rulemaking proceedings. While the first section of this book gives the reader an introduction to the beginning of OSHA and the elevator industry some forty years ago, this section brings things up to date.

"Shootout at the OSHA Corral"

by Paul Waters

Reprinted from ELEVATOR WORLD, October 2010

Last year, the Obama administration, with the help of the Democrat controlled Congress, began to transform employment policies in the country, going from what many viewed as "pro-employer" policies to an approach that, if anything, is decidedly "pro-labor." There is much evidence of this change. An early move was to sign into law the Lily Ledbetter Fair Pay Act (amending Title VII of the Civil Rights Act to make it easier to meet the time limits on pay discrimination claims) and speaking in favor of the Employee Free Choice Act (essentially making it easier to unionize work places). In addition, the president has acted through union-friendly executive orders, such as one that gives preference to union labor on large federal construction projects.

The president's appointments to the U.S. Department of Labor and most of the agencies under its purview, including OSHA, have also been characterized as "pro-labor." The U.S. Secretary of Labor, Hilda Solis, began her public career in the Carter administration and, prior to her nomination, was serving her fourth term as a member of Congress from California. American Federation of Labor/Congress of Industrial Organizations (AFL-CIO) President John Sweeney was pleased with her nomination, stating that she "voted with working men and women 97% of the time." In a June 2009 speech at the American Society of Safety Engineers' annual conference, Solis said: "There is a new sheriff in town. . . . Make no mistake about it, the Department of Labor is back in the enforcement business. We are serious, very serious."

Indeed, in 2009, OSHA became increasingly serious and aggressive in its enforcement. Secretary Solis's words were put into action by OSHA's interim administrator, Jordan Barab. Barab had a long history with organized labor, including working as a health and safety specialist for the AFL-CIO from 2001 to 2002, and directing the safety and health program for the American Federation of State, County and Municipal Employees (AFSCME) from 1982 to 1998. In a recent speech at an AFSCME convention, he boasted, "I always tell people that I still bleed AFSCME green." In another speech, echoing Solis, he told the attendees: "You are not alone. We have your back and your fight is our fight. . . . There's a new sheriff in town."

"There is a new sheriff in town. . . . Make no mistake about it, the Department of Labor is back in the enforcement business. We are serious, very serious."

Next, Deborah Berkowitz was named OSHA's chief of staff. Berkowitz formerly served as the United Food and Commercial Workers' union's health and safety director. Moreover, she was a leading voice for the union during OSHA's first round of ergonomics cases in the meatpacking industry in the 1980s and during Clinton's ergonomics rulemaking proceedings.

For OSHA's top spot, on July 28, 2009, President Barack Obama nominated David Michaels, PhD, MPH. The U.S. Senate confirmed him on December 3, 2009, while Barab will continue at OSHA as a deputy assistant secretary. Michaels, an epidemiologist, was most recently a research professor at the Department of Environmental and Occupational Health at the George Washington University School of Public Health and Health Services. He wrote the book Doubt Is Their Product: How Industry's Assault on Science Threatens Your Health. In the Clinton administration, Michaels served as assistant secretary of Energy for Environment, Safety and Health. There, he lead the effort to compensate nuclear weapons workers for occupational illnesses resulting from exposure to radiation, beryllium and other hazards.

Paul Waters represents employers nationwide in enforcement and rulemaking proceedings before the federal Occupational Safety and Health Review Commission and state OSHAs. He also represents clients in civil litigation, ranging from whistleblower claims to employment and housing discrimination. Waters has handled multiple trials and numerous appeals in state and federal courts concerning related cases. He regularly speaks on these issues and has been a panelist at the annual Occupational Safety and Health Review Commission's judge's conference. He has also participated in industry panels concerning environmental safety and health issues in the field of nanotechnology. He received his JD from Boston College Law School in 1994.

Unfortunately, Dr. Michaels' confirmation hearing was closed, preventing a public airing of his views on how he wanted to steer OSHA. In the roughly eight months since his confirmation, however, Michaels has surprised no one by aggressively increasing enforcement efforts and boosting OSHA's standards-setting process, with a particular focus on chemical exposure issues, hazardous communications and ergonomics.

"The department 'expects to hire more than 350 employees, including 177 investigators and other enforcement staff, any of whom will be bilingual to better communicate with employees in the changing workplace.'"

So, given the leadership, what can we expect from OSHA over the next several years? Enforcement certainly will increase. As of this writing, the budget requested for the Department of Labor for fiscal year 2011 was US$117 billion, with US$573 million for OSHA, a US$14.5 million increase over fiscal year 2010. Over US$10 million alone will be allocated to enforcement. According to Solis, the department "expects to hire more than 350 new employees, including 177 investigators and other enforcement staff, many of whom will be bilingual to better communicate with employees in the changing workplace."

Additionally, with the intensified enforcement, the emphasis placed on OSHA's cooperative programs during the Bush administration, such as the Voluntary Protection Program (VPP), will continue to decrease, as OSHA shifts to an approach of promulgation and enforcement of standards to increase workplace health and safety.

OSHA has taken several administrative steps, which require no rulemaking procedures or legislation, to boost enforcement efforts, as well. OSHA is increasing its use of "repeat" and "willful" classifications against employers with a history of violating the Occupational Safety and Health Act. Under certain circumstances ("egregious" cases), it is employing its ability to issue employee-by-employee violations. With this tool, OSHA can cite an employer for each employee that was affected by a particular violation. In areas such as bloodborne pathogens, hazardous communication or fall protection, for example, which requires that employees be trained or provided appropriate personal protective equipment (PPE), OSHA will now look for situations to cite for each and every employee that it believes were not given proper training or PPE. Combined with OSHA's announcement to increase its average penalty for a "serious" violation up to US$4,000, this creates the potential for penalties to mount quickly into six figures or more.

Numerous other signs of a more aggressive enforcement effort exist. For example, OSHA recently sought, for the first time, "enterprise-wide relief" against the U.S. Postal Service (USPS). Essentially, for violations observed at a single USPS facility, OSHA alleged that evidence, including USPS's citation history nationwide and its own internal documents, showed that "USPS's actions demonstrate[d] an enterprise-wide policy that resulted in ongoing systemic electrical work safety violations." Accordingly, from one inspection OSHA requested that the Occupational Safety and Health Review Commission grant relief applying to all 350 USPS processing facilities in the entire country.

In addition, OSHA has established its "Severe Violators Enforcement Program (SVEP)," which is intended to target employers that OSHA believes have demonstrated an indifference to the requirements of the act. An employer can find itself on the SVEP "hit list" if it commits willful, repeat or failure-to-abate violations in the following circumstances: (1) a fatality or catastrophic situation; (2) in industry operations or processes that expose employees to the most severe occupational hazards and those identified as "High-Emphasis Hazards"; (3) exposing employees to hazards related to the potential release of a highly hazardous chemical; or (4) all egregious enforcement actions (cases with violation-by-violation penalties). Of particular concern to the elevator industry is that fall hazards are considered one of the "high-emphasis hazards" that can put an employer on the SVEP list. An employer finding itself on the list will be subject to enhanced follow-up inspections, nationwide inspections of its worksites, more aggressive settlement provisions and federal district court actions to enforce abatement.

In addition, after years of virtually no new regulations, OSHA has embarked upon an ambitious agenda. OSHA has held stakeholders meetings in the "pre-rule" stage concerning a standard for combustible dusts (another "high-emphasis hazard" for the SVEP list). OSHA and other groups have stated that if dust from certain materials is suspended in the air in the right concentrations, it can become explosive, leading to massive explosions (such as the Imperial Sugar plant explosion in February 2008) that caused employee injuries and death. It is likely this standard will be issued over the next few years.

Another standard that in the pre-rule stage involves crystalline silica (also a "high-emphasis hazard"), which OSHA has already stated is a priority on its regulatory agenda. Crystalline silica can cause silicosis, a serious and debilitating lung disease. OSHA has been analyzing regulating this substance for years, but it appears realistic to expect action under the current leadership. Other hazardous materials like beryllium and diacetyl (a flavor additive) will also likely be regulated. Also, following California's lead (which already has such a standard), OSHA will begin to address a standard for infectious diseases with an airborne vector, such as H1N1.

A key focus of the regulatory agenda will be musculoskeletal disorders (MSDs). OSHA is developing a rule that would require employers to report defined MSDs, with a special column for work-related MSDs on the OSHA 300 log. Although OSHA may avoid promulgating a specific standard

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"Shootout at the OSHA Corral"

by Paul Waters

Reprinted from ELEVATOR WORLD, October 2010

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on MSDs, given Congress's repeal of such a standard in 2002, OSHA has explicitly announced that it will focus on and issue citations for work-related MSDs under Section 5(a)(1) of the Act (the "General Duty Clause"). Barab has stated several times that work-related MSDs remain a "high priority" for OSHA. Obviously, given the physical nature of elevator construction and maintenance work, a focus by OSHA on MSDs poses a potentially large concern for the elevator industry.

Another of OSHA's priorities will be to bring OSHA's current Hazard Communication Standard into line with the Global Harmonization System of Classification and Labeling of Chemicals. The effort is supposed to provide more information to increase the usefulness of material safety data sheets. The end result will likely require the revision of nearly every label and MSDS for hazardous chemicals in the U.S.

"Of particular concern to the elevator industry is that fall hazards are considered one of the 'high-emphasis hazards' that can put an employer on the SVEP list."

As for pending legislation, the Robert C. Byrd Miner Safety and Health Act of 2010 will significantly amend the act if passed. For example, the law would strengthen whistleblower protections for safety and health activities, protecting any employee with "reasonable apprehension" that work would result in serious injury or harm to his health or the health of other employees. It would also prohibit employers from discouraging injury/ illness reporting and prohibiting retaliation for reporting. In addition, employers would be required to pay for employee participation in OSHA inspections. This participation would extend to allowing the input from the employee or his family before any settlement of certain OSHA citations is approved. Importantly, this act would significantly increase penalties and allow for criminal prosecutions for deaths and "serious bodily injury" arising from willful violations, even against individual company officers.

Many other changes are also proposed in line with the aggressive attitude of the "new sheriffs in town" now heading OSHA. More than ever, it is important for employers and their health and safety professionals to assess their workplace risks and employee safety and health programs to ensure that both labor and management are committed to safety and have the programs and resources in place to ensure it. In addition, every employer should have a plan to handle OSHA inspections of its workplace, ensure optimal outcomes and deal with citations and OSHA contests when necessary.

"The Real Clout of Consensus Standards"

by Paul Waters

Reprinted from ELEVATOR WORLD, March 2011

Over the past two years or so, I have received many questions from companies about compliance with so-called "consensus standards" such as NFPA 70E, the National Fire Protection Association (NFPA)'s standard for electrical safety in the workplace. Companies performing elevator repair or construction have been particularly concerned about NFPA 70E. Their questions generally include, "Can OSHA cite me for not following NFPA 70E?" That is a good question with no easy answer.

"Can OSHA cite me for not following NFPA 70E?"

The original NFPA 70E was published in 1979 to address certain perceived problems in OSHA's electrical safety standards, such as those in construction (Subpart K, 29 C.F.R. § 1926.400, et seq.) or general industry (Subpart S, 29 C.F.R. § 1910.301, et seq.). One major reason for NFPA 70E was to provide a speedier and more-streamlined guide to safe work practices that could not be matched by the procedures required of OSHA in Section 6(b) of the Occupational Safety and Health Act (OSH Act) to amend its standards. Another reason was to provide an explanation of safe work practices that average employers could understand and apply in their workplaces.

By 2004, NFPA 70E had expanded in scope to cover topics such as personal protective equipment (PPE) and safe work practices in a level of detail far exceeding OSHA's electrical safe work practices standards. By this time, the sole reason for NFPA 70E was to set forth the latest in electrical work practices to guide OSHA, employers and employees, with topics such as electrical system design or installation being removed and left to the National Electrical Code.

Then, in mid 2008, the latest NFPA 70E was released, with an effective date of September 5, 2008. Even prior to that, though, my phone began ringing as companies asked urgently what it meant and what force of law it would have. The new NFPA 70E contained significant revisions to prior versions, including provisions setting forth calculations of such things as an arc flash protection boundary for workers, the contents of electrical safety programs, procedures for evaluating hazards/risk of electrical work and analyses on the permissibility and practices for energized electrical work. Employers committed (and continue to expend) significant resources trying to ascertain what is required of them under the new standard.

The first obvious question concerns why any employer should be concerned with NFPA 70E. It is important to note that, as a "voluntary consensus standard," the NFPA 70E has no independent legal force; it is "voluntary." It is not an OSHA standard, nor has it been adopted by OSHA through the proceedings set forth in Section 6(b) of the OSH Act to make it law. Thus, on one level, it is only a "guide" for employers for making decisions about safe work practices, programs and PPE. An employer cannot be cited by OSHA merely because it does not follow the provisions of a consensus standard like NFPA 70E.

Moreover, the process for creating a "voluntary consensus standard" is significantly different than the process for creating a legally binding OSHA standard. For example, parties like vendors of machinery and PPE to abate the hazards covered by the consensus have a significant role in crafting the standard's terms. Many would argue that such parties have a significant conflict of interest. Without the mechanisms that exist in an OSHA rulemaking proceeding to protect the regulated community, requirements of consensus standards may overstate potential hazards and require measures that many industries consider overkill based on their experience with actual working conditions.

The whole answer concerning a consensus standard's legal force, however, is not that simple. Although the NFPA 70E is not law, OSHA can use provisions of the NFPA 70E to support citations of OSHA regulations and the General Duty Clause of the OSH Act. For example, certain OSHA electrical PPE standards are written in very general terms. Section 1910.132(a) requires PPE "when necessary by reason of hazards." Likewise, § 1910.132(c) requires equipment to "be of safe design and construction for the work performed," while § 1910.132(d) requires that employers provide equipment that will "protect the affected employee from the [identified] hazards."

"A repeated concern voiced by employers, especially in the elevator/escalator industry, was that the NFPA 70E's apparent sweeping application could mean millions of dollars in purchases of new PPE."

These general standards do not specify which equipment to use under particular circumstances, allowing employers flexibility in determining what is appropriate based on working conditions. However, OSHA can cite an employer for not providing suitable PPE for the work being performed and use the provisions of NFPA 70E as evidence to support that violation. Similarly, in a case where a specific standard does not apply, OSHA could use NFPA 70E in a citation for a violation

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"The Real Clout of Consensus Standards"

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Reprinted from ELEVATOR WORLD, March 2011

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of the General Duty Clause, Section 5(a)(1) of the OSH Act. There, NFPA 70E is used as evidence that the alleged hazardous condition was "recognized" by industry and that a feasible method of controlling the hazard existed. OSHA has taken those approaches with NFPA 70E to issue multiple citations for violations of the electrical safe work practices, training and PPE standards to the U.S. Postal Service (USPS) over the last year, amounting to hundreds of thousands of U.S. dollars.

Therefore, given that OSHA can utilize NFPA 70E to support citations involving electrical safe work practices, PPE and training, a reasonable employer cannot blithely conclude that the standard is hogwash and ignore it simply because it does not seem relevant to the employer's work. This is especially so when given OSHA's recent emphasis on using its egregious or "instance-by-instance" penalties for violations in areas such as PPE or training. An employer of even modest size faced with penalties based on each instance of an employee who allegedly did not receive proper PPE or training could quickly see proposed penalties such as USPS has experienced.

A repeated concern voiced by employers, especially in the elevator/escalator industry, was that the NFPA 70E's apparent sweeping application could mean millions of dollars in purchases of new PPE. By applying the NFPA's key tables, such as Table 130.2(c) ("Approach Boundaries to Live Parts for Shock Protection") and Table 130.7(c) (9)(a) ("Hazard/Risk Category Classification"), work tasks that had previously been thought to present only minimal risks now seem to clearly fall into elevated hazard/risk categories. Then, by applying tables like 130.7(c)(10) ("Protective Clothing and PPE Matrix") and 130.7(c)(11) ("Protective Clothing Characteristics"), this work appeared to require specialized PPE that had not previously been considered necessary. Quite literally, work by an adjuster on an energized control panel would require an outfit that would make him look like Neil Armstrong on his moonwalk.

It is important to note that these concerns were not from employers looking to shirk their responsibility to protect workers – they were already spending millions of U.S. dollars on various types of PPE nationwide, and they consistently put safety first and tried their best to protect their workers. Elevator companies, for example, have had employees performing certain tasks on control panels repeatedly and for decades, with virtually no incidents. Suddenly, because of the guidelines in the new NFPA 70E, the industry is being told that those tasks were potentially far more hazardous than extensive field experience has shown them to be.

Other issues have shown the difficulty of applying broad consensus standards like NFPA 70E in particular settings. For example, an elevator company servicing equipment at a host employer may have employees doing diagnostic work on energized control panels. There may be multiple employees doing such work each day, with some employees doing service calls at multiple locations in a single day, with little to no advance notice. Most panels would contain parts operating at less than 240V, while others might have lines into the panel greater than 240V, but reduced to 240V or less in the area of the box where work was to occur (but still putting the employee within the "arc flash boundary" for the higher-voltage part, assuming, without calculating, that it is 48 inches). There could be multiple transformers serving circuits, as well, which would not be known beforehand. Under NFPA

70E, such conditions could be construed as requiring a detailed "arc flash hazard analysis" for each instance of service and piece of equipment, despite the fact that in decades of diagnostic work industry wide, no arc flash injury had occurred.

"Thus, what previously had been routine work thought to present no 'extraordinary' electrical hazards is elevated to work requiring higher-level math skills for an arc flash hazard analysis."

In addition, NFPA 70E tables meant to provide a "quick and easy" decision tree to avoid an "arc flash hazard analysis" technically may not be used, because their use is conditioned upon knowing such things as short-circuit current and fault clearing times for the equipment serviced. Thus, what previously had been routine work thought to present no "extraordinary" electrical hazards (where PPE could consist of appropriate gloves, boots, safety glasses, natural-fiber pants and long-sleeve shirts) is elevated to work requiring higher-level math skills for an arc flash hazard analysis, an arc flash suit hood or balaclava and face shield, coveralls with an arc rating of at least eight, and the like. This would all be in a situation where no previous serious incidents had occurred.

The foregoing is a simplification, but not by much. Obviously, the intent of consensus safety standards like NFPA 70E is to prevent accidents before they occur, so the mere fact that an industry has not had an accident does not mean a provision in a standard is not needed or not useful. Industry experience, however, is important to illustrate the difficulty of giving consensus standards the force of law.

Unfortunately, a consensus safety standard meant to be broad in application cannot help but sometimes be over-inclusive by its nature. This is partly why the procedures for the way OSHA makes rules exist, so as to minimize nasty surprises on the regulated community and provide an opportunity to have the rule reflect industry and worker concerns. Here, given that OSHA's use of NFPA 70E will be to show what allegedly is "necessary" to protect against "identified" hazards, an employer could justifiably assert that its lengthy experience and lack of incidents in its industry proved that its PPE was perfectly adequate, despite not being what was mandated by the NFPA 70E. Unfortunately, of course, such an argument most likely would come during a battle with OSHA (after violations have issued), with OSHA waving NFPA 70E before the judge. 

"The OSHA Arc Flash Dance"

by Paul Waters

Reprinted from ELEVATOR WORLD, November 2011

The Occupational Safety and Health Act of 1970 created OSHA. Its purpose was to ensure safe and healthful working conditions for employees by creating and enforcing occupational safety and health standards and providing training, outreach, education and assistance. The standards, along with section 5(a)(1) of the act (the "general duty clause"), are the law – the legal obligations that all employers must meet. If they do not meet them, they face legal consequences, including fines and, in certain cases, even imprisonment.

Where they apply, the standards set forth the conduct required of any employer. The standards are drafted for literal compliance, and employers must comply with each provision within. In contests of certain violations issued by OSHA, for example, employers argued that the steps they took to protect workers under certain circumstances were just as good as (or even better) than the steps required by the standard they allegedly violated. If the standard was found to apply to the work, however, this made absolutely no difference – an employer cannot use its own safety methods to protect against a hazard covered by a standard unless it has obtained permission from OSHA, such as a variance.

"An employer cannot use its own safety methods to protect against a hazard covered by a standard unless it has obtained permission from OSHA, such as a variance."

Sometimes, though, standards are written very generally and do not specify the precise means of compliance that an employer must use. Standards requiring the use of "appropriate" personal protective equipment (PPE), like the electrical PPE standard in 29 Code of Federal Regulations Section 1910.335, are a good example. How is an employer to determine what is "appropriate" under the circumstances? Is not what an industry has done all along, without significant incidents, good enough to define "appropriate?" Again, courts have found that industry practice, even with a safe history, is not enough standing alone to make that practice "appropriate." Instead, the Occupational Safety and Health Review Commission stated that a "reasonable person" test should be used to define "appropriate." Although this test can include looking at industry practice, it should also consider what steps a "conscientious safety expert" would take. As the review commission put it in Secretary of Labor v. S & H Riggers and Erectors, Inc., 7 BNA OSHC 1260 (No. 15855, 1979), "Compliance [with a standard] may require methods of employee protection of a higher standard than industry practice."

Many industries, including the elevator industry, continue to confront conflicts between what they believe is appropriate to work safely under certain circumstances and what OSHA believes is appropriate. The electrical PPE standard previously mentioned continues to be a point of contention. For a simple example, elevator service mechanics routinely troubleshoot circuits on controller panels, requiring the panels to be energized. The actual troubleshooting work is done on components with less than 120 V, but other parts of the panel (say, in the bottom half, more than 12 in. away from a body part) may have circuits of 480 V or higher. When doing this work, what type of electrical PPE is required by OSHA standards?

Initially, OSHA has been known to claim that such work requires a detailed arc-flash analysis for each controller panel (in the entire country, for every unit) upon which a mechanic would perform such work. Relying on NFPA 70E, a consensus standard governing arc flash hazards, OSHA has gone so far as to say that, for each individual panel, a proper arc-flash analysis would include the properties of the electrical conductors, the size of the transformer for the particular panel, the available fault current and the tripping time of the over-current protective device. In other words, an analysis based on a representative sampling of equipment from different manufacturers of different ages may not be adequate. Thus, in order to determine the "appropriate" PPE under 1910.335, an elevator contractor would have to perform a detailed arc-flash analysis each time service is performed in order to start to determine which PPE is appropriate for troubleshooting a circuit in a controller panel. And, this would have to be done for every panel.

Given that much of the data needed would not be readily available, and some could change day-by-day, this interpretation of NFPA 70E would prevent work from occurring in any kind of efficient or effective manner. Hospitals, nursing homes, office buildings, and any number of highly sensitive locations would lose the service of their elevators while a service mechanic attempted to perform an arc-flash hazard analysis, just to make sure his PPE was "appropriate" before troubleshooting a low-voltage circuit.

To add to that burden, OSHA has gone beyond this to assert that, simply to use a contact voltage tester on low-voltage components in a typical energized control panel (with 480 V in certain areas), a mechanic would have to use a full panoply of voltage-rated gloves, safety glasses, leather protectors,

fire-resistant clothing with a rating of 8 or more, arc-rated face protection and head protection, hearing protection and leather work boots.

The elevator industry has strongly disagreed with OSHA's assertions. This disagreement is based on extensive industry experience and practice, as well as detailed analysis incorporating the methods set forth in consensus standards like NFPA 70E. In keeping with its responsibility to protect its workers, the elevator industry proactively confronted the analysis of the extent of electrical hazards posed by troubleshooting control panels and the appropriate level of PPE while doing so. Utilizing the steps recommended by NFPA 70E, a detailed shock and arc-flash hazard analysis was performed on a significant sample of control panels for varying types of equipment of various ages. The results of that study were summarized in a National Elevator Industry, Inc. (*NEII*®) position paper (www.neii.org/pdf/Arc-Flash%20Hazards.pdf).

Briefly, the study fully supported what decades of industry experience and practice had indicated. Given the voltages utilized in control panels, the "zone of danger" for an arc flash would be far less than the length of the hands and arms of the employee performing the work. As discussed in detail in the position paper, body parts such as the face or chest would be well outside of the "arc-flash boundary," where concern for second-degree burns would exist. The hands would need leather gloves. The arms, being the only other body part within the boundary, would need to use natural fiber/non-melting or fire-resistant clothing (FR of 4 in most cases). Body parts outside the arc-flash boundary would need only non-melting/natural fiber clothing, as they would not be exposed to an arc-flash hazard.

"Many industries, including the elevator industry, continue to confront conflicts between what they believe is appropriate to work safely under certain circumstances and what OSHA believes is appropriate."

The *NEII*® arc-flash study confirmed what decades of industry practice and experience indicated. For typical troubleshooting work on low-voltage components in a control panel, no foreseeable risk of an arc-flash incident existed when the service mechanic utilized safe work practices (such as those in the *Elevator Industry Field Employees' Safety Handbook*) and the insulated tools or meters required for the job.

In short, industry experience and practice, as well as multiple arc-flash and shock hazard analyses, indicate that the industry is assessing the risk properly and recommending "appropriate" PPE. These recommendations and best practices are set forth in the aforementioned handbook and *NEII*® position paper on arc-flash analysis. Any claim that these steps fall short of "appropriate" protection ignore industry experience and practice and are not based on real assessments of the hazard. They instead appear to be based on a misapplication of consensus standards like NFPA 70E. This misapplication overstates the risk, results in requirements for highly overprotective and unnecessary PPE and could even prevent necessary work from being performed when needed.

Unfortunately, arc flash is not the only area where OSHA has disagreed with the elevator industry in the measures necessary to comply with existing standards. The Permit-Required Confined Space standard (on which there is a *NEII*® position paper), the Lockout/Tagout standard, (especially as it involves hoistway and pit access) and fall-protection standards are just some of the standards on which OSHA and the industry have had polite disagreements. In the absence of OSHA officially acknowledging the acceptability of industry practices, whether in a variance or even an interpretation letter, contests involving those issues are sure to continue until eventually decided by the courts.

"Lockout/Tagout Can Be Required More Than You Think"

by Paul Waters

Reprinted from ELEVATOR WORLD, March 2012

This article will look at one of the most fundamental safety rules any service mechanic must consider when working on such elevator equipment: the control of hazardous energy, more commonly known as lockout/tagout procedures. OSHA's lockout/tagout standard is set out at 29 Code of Federal Regulations § 1910.147. An employer must require its employees use lockout/tagout during servicing and maintenance whenever "the unexpected energization or startup of the machines or equipment, or release of stored energy, could harm employees." The only time lockout/tagout is not required during service or maintenance work, when unexpected startup can occur, fits into a specific exception listed in the standard. Important exceptions to this requirement include minor servicing work during normal production and operations, and testing and positioning machines during the servicing work.

"An employer must require its employees use lockout/tagout during servicing and maintenance whenever 'the unexpected energization or startup of the machines or equipment, or release of stored energy, could harm employees.'"

Section 7 of the National Elevator Industry, Inc. (*NEII*®) *Elevator Industry Field Employees' Safety Handbook* contains accepted industry procedures for lockout/tagout. The first paragraph states clearly when a service mechanic is required to use lockout/tagout: "Unless it is not feasible (i.e., inspecting, troubleshooting, observing, etc.), employees shall not perform any work on equipment where there is a potential to be exposed to energized mechanical or electrical hazards until all sources of energy have been de-energized, grounded or guarded." This statement is pretty straightforward – when performing service work, a mechanic decides if power is required to perform the task, and, if not, should lockout/tagout the unit. It sounds simple, but, as with most things, closer examination reveals many complications.

Section 8 of the aforementioned handbook illustrates one of the major complications. This section also sets forth industry-accepted procedures for accessing elevator car tops and pits safely without utilizing lockout/tagout to control the car. The section begins unambiguously: "Prior to gaining access to the hoistway, determine whether power is needed to perform the required task. If not, the appropriate lockout/tagout procedure shall be used." Thus, Section 8's procedures are intended to be used only when power is needed to perform servicing or maintenance. In your author's experience, however, many service mechanics determine whether to lockout and tagout by how much time they will be on the car top or in the pit, not by deciding whether power is needed to perform the job. Is this allowed under OSHA's lockout/tagout standard?

If the analysis involved only whether the decision can be based on the duration of the work, the answer would certainly be no. The Occupational Safety and Health Review Commission has held that, if an OSHA standard applies, it is violated by any period of noncompliance, no matter how short. So, in the case of lockout/tagout, if unexpected startup could occur while the servicing or maintenance work is performed and injure an employee, it does not matter if the work took 30 s. So, unless the work fits into a listed exception in the standard, lockout/tagout must be used before performing the work.

Let's look at an example of retrieving a set of keys that some hapless passenger dropped into an elevator pit. The building manager hopefully notifies the elevator servicing company (rather than having a janitor attempt the task), and a service mechanic comes to retrieve the keys. The mechanic must enter the elevator pit, pick up the keys from the floor, then exit the pit. A simple task performed somewhere in every state every day. The elevator pit is standard (say 4 ft. deep), with a pit access ladder where it should be and a pit stop switch within easy reach right inside the hoistway door. A hoistway access switch is helpfully awaiting use. In short, the setup of the elevator is perfectly suited to use the pit access procedures in Section 8 of the safety handbook for this quick and easy task.

The question is whether OSHA's lockout/tagout standard contains an exception that would allow the use of Section 8's hoistway access procedures instead of lockout/tagout. As even the safety handbook states, if power is not needed to perform the job, lockout/tagout should be used before the pit is entered. Nonetheless, service mechanics utilize Section 8's car-top or pit access procedures every day to perform brief jobs in the hoistway. Does an exception to OSHA's lockout/tagout standard potentially apply to allow this?

In the scenario of retrieving lost keys, a company trying to justify allowing the use of Section 8's procedures would have to rely on the "minor servicing exception" to the lockout/tagout standard. That exception applies to the following:

> *"Minor servicing activities, which take place during normal production operations, are not covered by this standard if they are routine, repetitive, and integral to the use of the equipment for production, provided that the work is performed using alternative measures which provide effective protection."*

So, to avoid a potential OSHA violation, the company must show that the work was 1) minor, 2) took place during

normal production operations, 3) was routine, 4) repetitive, and 5) integral to the use of the equipment, with 6) alternative measures used to protect the employee.

"The major question becomes whether using the hoistway/pit access procedures 'eliminates' the potential hazard of unexpected movement of the car to anyone standing in the pit."

Clearly, applying the "minor servicing exception" to retrieving a set of keys would not be simple. A company's safety representative would have to clearly and concisely explain how all of the elements above were satisfied. One would have to expect OSHA to need particular details about how retrieving dropped keys was "routine," "repetitive" or "integral to the use of the equipment." The use of alternative measures to protect the employee would be the easy part, as using redundant methods of disabling the car (hoistway doors have been wedged open, engaging interlock and pit stop switch activated, with both means verified) would eliminate the possibility of unexpected startup of the elevator car. Nonetheless, OSHA would stress the plain meaning of the standard's wording, and unless the job fit into every part of the exception, OSHA would not apply it. Instead, despite the safe conditions created by using Section 8's procedures, OSHA likely would insist lockout/tagout should be used for all such work, no matter how quick and easy.

Many other legal complications arise from using procedures other than lockout/tagout to disable a car when accessing an elevator car top or pit. For example, in a 1994 letter to NEII, OSHA stated it generally considers elevator pits "confined spaces" within the meaning of OSHA's permit-required confined-space standards. OSHA went on to say elevator pits could also be considered permit-required confined spaces, depending on the facts. As many readers may know, if a space entered by an employee is considered a "permit-required confined space," an employer needs to use an entire panoply of entry procedures and precautions, including entry attendants, before any employee can enter it. In that same letter, OSHA stated that an elevator pit could be "re-classified" as a non-permit-required confined space by "eliminating" any potential hazard in the pit.

The major question becomes whether using the hoistway/pit access procedures "eliminates" the potential hazard of unexpected movement of the car to anyone standing in the pit. OSHA stated in other interpretation letters it does not consider the use of interlocks and control circuitry, such as a pit stop switch, to provide protection equivalent to lockout/tagout. Therefore, in OSHA's view, any access to an elevator pit or car top could actually be a permit-required confined space entry by the employee. If legally correct, all of the incredibly burdensome requirements of the permit-required confined-space standard could apply, from training to written programs to equipment and extra attendants. This could be the case even when an unambiguous exception to lockout/tagout applied, such as an employee working on a car top to identify and correct a rubbing noise, noticeable only when the car operates, while his or her partner moves the car up and down.

In short, as stated in the safety handbook and the safety program of nearly every elevator company that has created its own, if a service mechanic doesn't need power to do a job, lockout/tagout must be used. In the real world, however, service mechanics often see many "exceptions" to that rule. A service mechanic needs to carefully analyze the work being performed before jumping to the conclusion the work truly fits into a legal exception to his company's work rules and OSHA's lockout/tag- out standard.

"How OSHA and the Arbitrary Enforcement of U.S. Government Laws Affect Us All"

by Paul Waters

Reprinted from ELEVATOR WORLD, October 2012

Observations on the American legal system and OSHA's *attempt* to supplant elevator codes

In 1925, Franz Kafka published his well-known work, *The Trial*. The book described a successful professional man arrested and prosecuted by an inaccessible, detached government agency, for a crime entirely unknown to him. As the farce of his prosecution unfolds, neither the man nor reader learns the nature of the alleged crime. In Kafka's world, the entire absurd process endured by the man illustrates that the "law" has nothing to do with any concept of "justice." Instead, in *The Trial,* the law appears to be nothing but the brute force of government being wielded against a helpless and confused man – an impenetrable bureaucracy arbitrarily defining the law and, without explanation or notice, using it to swallow and destroy an individual.

For much of U.S. history, such a concept of the law appeared ridiculous. Indeed, the term "Kafkaesque" was coined to describe something that was illogical or senseless, like the events befalling the hapless man in *The Trial*. Few would believe that such a travesty of justice could never happen in the country. After all, America's founding fathers predicated the country's entire system of government on the concept of "inalienable rights" grounded in natural law – laws neither created by nor dependent upon man, but universal and emanating from a supreme creator.

Concerned that select people would place themselves above the law, or enforce it arbitrarily or to their own advantage, John Adams wrote that the republic must be a "government of laws, not of men," (Massachusetts Constitution, 1780). To ensure this, the U.S. Constitution limited federal government power and instituted such things as a House of Representatives and Senate in Congress and the separation of powers between the president, Congress and courts. These checks and balances were aimed at preventing groups from using or abusing laws to oppress the individual. In short, the founding fathers were trying to avoid the kind of legal system depicted by Kafka in *The Trial*.

Unfortunately, it is uncanny how concepts thought impossible or fantastic in literature 100 years ago have become reality. From Jules Verne's globetrotting electric submarine in *20,000 Leagues Under the Sea* (1870) to the biological warfare of H.G. Wells' *War of the Worlds* (1898), civilization's progress, for better or worse, has consistently turned fantasy into reality. And so it is that, each day across the U.S., state and federal governments increasingly treat individuals and businesses like the poor, confused central character in *The Trial*. From selective application of the laws to arbitrary enforcement and interpretation of them, government increasingly sends the message that favored groups will prosper under the law, while disfavored groups will suffer.

The Trial, Victor Gollancz (1937)

Philosopher Ayn Rand once despaired that the time was approaching when the U.S. reached "the ultimate inversion: the stage when the government is free to do anything it pleases, while the citizens may act only by permission." That time, assuredly, is behind us. To prove this, in 2009, lawyer Harvey Silverglate published *Three Felonies A Day: How the Feds Target the Innocent*. There, Silverglate chillingly described a country where the average person wakes up, goes to work, comes home and goes to bed, entirely oblivious he or she probably committed multiple federal felonies that day. Because federal agencies have been given free rein to pass countless laws, with incredibly broad and vague language, a federal prosecutor can bring charges against any citizen at any time for entirely ordinary behavior. After all, ignorance of the law is no excuse. No one is able to know all the federal laws that exist at any one time, not to mention countless state and local statutes, regulations and ordinances**.** This is handy knowledge when particular groups or individuals become disfavored by the people running the government.

This unfettered power is not limited to such high-profile federal agencies as the U.S. Department of Justice or Department of Treasury. OSHA, as well as its counterparts in state-plan states,

is well aware of its power to reward favored constituents and punish disfavored employers and groups. Take the U.S. Postal Service (USPS), for example. A search on the OSHA database using the term "postal" shows that, from January 2009 to August 2012, at least 800 inspections of the USPS occurred. And those are just inspections considered "closed." More than 143 results return for inspections still categorized as "open." Even assuming a few establishments show up that are not USPS but happen to have the word "postal" in their name, this is nearly 1,000 inspections in about 3-1/2 years.

"No one is able to know all the federal laws that exist at any one time, not to mention countless state and local statutes, regulations and ordinances."

How could one establishment be hit that many times in such a short period? The answer is simple: overwhelmingly, the OSHA database shows that it inspected the USPS repeatedly because of complaints filed by the postal workers' union. Thus, despite the fact USPS is insolvent and struggling to survive, its employees' union has used OSHA to bludgeon it with inspections resulting in millions of U.S. dollars in fines over the last few years. Rather than see any ulterior motivation in the nearly 1,000 complaints submitted by the union and respond to such complaints accordingly (which can result in a letter inquiry to the employer, for example, instead of a full-blown site visit), OSHA continues to doggedly pursue USPS, find violations and issue huge fines. Coincidence? Hardly. The current OSHA, not to mention the Department of Labor (DOL), leadership has deep ties to organized labor, making unions one of the "favored groups" at OSHA and the DOL.

Moreover, OSHA is frequently attempting to enforce vaguely or generally written laws to require behavior that the plain language of its regulations does not require and, in many instances, companies have no notice would be required. One way it does this is through section 5(a)(1) of the act, known as the General Duty Clause. That section is the "catch-all provision" of the Occupational Safety and Health Act, intended to cover working conditions that are, or should be, known as dangerous but that do not fall under a specific regulation. It says that "[e]ach employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees." Recently, however, OSHA has used that section much more aggressively, using it to justify citations to employers for acts ranging from workplace violence caused by non-employees to injuries caused by an orca at iconic amusement parks to stampedes of unruly customers trying to take advantage of a Black Friday sale. The fact that millions of children may no longer be able to enjoy enthralling tricks by beautiful marine mammals at the sea park or be able to get a video-game console for Christmas that is otherwise unaffordable means little to the government agency deciding the General Duty Clause prohibits the activities that make those things possible.

The elevator industry has not been immune from OSHA's attempts to enforce vague, generally written laws to require measures never before contemplated. The electrical safe work practices standards, such as those at 29 CFR 1910.335, say nothing about what type of personal protective equipment is required, other than that it would be "appropriate" for the work performed. Nonetheless, OSHA has cited several elevator maintenance companies for failing to follow the express provisions of a non-binding, voluntary industry standard called NFPA 70E. The actual legal requirement contained in 1910.335 says nothing about following NFPA 70E. Regardless, OSHA has insisted that following the non-binding voluntary standard is, effectively, the only way to comply with its laws.

The guarding of equipment in machine rooms is another area OSHA is increasingly trying to usurp unto itself. Local jurisdictions have extensive regulations encompassed by, for example, the versions of ANSI A17.1 or A17.2 they have adopted that govern guarding requirements on elevator equipment in machine rooms. Despite this fact, OSHA has repeatedly attempted to use its very generally worded machine-guarding standards (like 29 CFR 1910.219) to require guards on machine-room equipment, even when no guards are required by the elevator codes that apply to that equipment. OSHA has also attempted to use the General Duty Clause to require guards on equipment like older drive machines. Without needing to go through any of the procedures designed to ensure building owners and elevator service companies have a chance to provide input into the process, as the local agencies charged with inspecting elevators would, OSHA would create, or make retroactive, guarding requirements in machine rooms. The fact this use of generally worded laws, should it be accepted, would impose millions of U.S. dollars in costs on building owners nationwide is of no concern to OSHA. OSHA only needs to consider such a thing when it actually engages in the rulemaking process, which is the proper way to impose new regulatory requirements.

Unfortunately, the laws and the current way government enforces them have clearly proven Kafka to be a realist. As Ayn Rand said:

> *"The only power any government has is the power to crack down on criminals. Well, when there aren't enough criminals, one makes them. One declares so many things to be a crime that it becomes impossible for men to live without breaking laws. . . pass the kind of laws that can neither be observed nor enforced nor objectively interpreted, and you create a nation of lawbreakers."*

The good news is, the government's increasing use of the law in both selective and arbitrary fashions has not gone unnoticed by the people regulated by those laws. The more people become aware of their government's abuse of the law, the more likely they will once again place limits on the power of the abusers.

"How to Avoid OSHA Pitfalls"

by Paul Waters

Reprinted from ELEVATOR WORLD, July 2013

Employers in the elevator and escalator industry take many precautions to protect their workers against safety hazards known to exist in the trade. One important step taken by most industry companies is to have a written safety and health program, containing safe work rules, which, if followed, should prevent employees from being exposed to the most common hazards. The *Field Employees' Safety Handbook*, published by the National Elevator Industry, Inc. Safety Committee and Elevator World, Inc. and available at website: www.elevator-books.com, is a model program used by many companies as their safety and health programs. Other large companies in the trade have created their own written safety and health programs for their employees. In either case, having written safe work rules and procedures is only the first step – providing some sort of training in those rules and procedures is indispensable to ensuring field employees know and follow them on a daily basis.

Even the most clairvoyant employer cannot predict all of the circumstances and hazards his or her field employees may encounter. Therefore, training employees to perform job hazard assessments (JHAs) or scans during the workday can be a very helpful tool. JHAs help field employees identify hazards that may arise when certain tasks are performed, and identify the steps or protective equipment needed to eliminate or avoid those hazards. Obviously, one area any JHA should cover in the elevator and escalator industry is whether the task will create any exposure to a potential fall hazard.

Given that the invention of the elevator made possible the birth of the skyscraper, fall hazards have always been a part of the industry. Unfortunately, because fall hazards are so common (and field employees quickly become used to working in their presence), it is easy for workers to become complacent. Complacency results in a loss of caution when performing routine tasks in and around elevator hoistways and car tops. Your author, unfortunately, has seen a number of serious injuries and fatal accidents in the elevator and escalator industry. Although my evidence is far from scientific, my experience has been that newer workers are not predominately involved in these life-altering accidents. It is the highly experienced worker who, for example, having seen it all during his 25-year career as an elevator mechanic, is apt to think an accident won't happen to him. Unfortunately, it only takes a split second for that misguided attitude to cause an accident and alter a family's life forever.

Fall hazards are a prime candidate for complacency. According to OSHA, out of 774 deaths in construction in 2010, falls accounted for 264 of them. For this reason, fall protection is one of the major topics covered by all elevator-company safety training programs. The type of fall protection acceptable, and when it must be used, varies depending upon the work being performed. The typical situation envisioned in the elevator industry is during construction work. OSHA's construction fall-protection standards, starting at 29 C.F.R. § 1926.500, set forth a number of hazardous situations and the requirements to protect against falls. They include floor holes and openings, hoist areas, wall openings and generic "working surfaces."

"Given that the invention of the elevator made possible the birth of the skyscraper, fall hazards have always been a part of the industry."

In general, in construction a fall hazard is present when there is the potential for a fall of 6 ft. or more to a lower level. If this possibility exists, the worker must be protected by some sort of system, such as guardrails or a personal fall-arrest system (PFAS). Most companies design their fall-protection requirements around those basic principles. Fall-protection considerations are much more complicated than that, however. Whether PFAS or guardrails, they must meet specific OSHA design and performance requirements. As an example, the *Field Employees' Safety Handbook* sets forth the criteria PFASes and guardrails must meet to comply with OSHA standards. Failing to achieve any of the criteria exposes an employer to OSHA violations and penalties. A top guardrail that is 38 in. high, for example, is a violation. "Close" to the required height is not an acceptable excuse to an OSHA inspector with a standard that gives precise specifications that must be achieved.

But it is not just a matter of protecting against the major falls into hoistway openings or from working platforms. Holes in floors or roofs also expose an elevator contractor to violations of OSHA's fall-protection standards. It does not matter that an elevator contractor has nothing to do with creating those holes and no ability to fix them. If an OSHA inspector thinks the elevator crew walks anywhere near holes at any time during work, he or she will likely cite the employer for failing to protect its workers against those holes. Under these circumstances, the elevator company's lead mechanic would be wise to tell the general contractor (or inform a supervisor to do this) about the situation and avoid the area, if possible. At that point, the company would at least be able to argue it

did what it reasonably could do under the circumstances, and that a citation is not warranted.

Missing stair rails are another trap for unwary elevator companies. Many times, OSHA has cited an elevator company for missing guardrails on a set of stairs in a part of a building nowhere near where the elevator construction work is occurring. Guardrails represent an easy target for an OSHA inspector. For example, the drywall contractor has removed the rails to perform work on the stairway, but through some oversight, the stair rails were not reinstalled. Most trades will be using the stairs to move up and down the building to perform their work, thus being potentially exposed to the fall hazard created by the missing rails. OSHA, under its "multi-employer worksite" citation policy, can cite any employer that creates, controls, can correct or has its employees potentially exposed to a violation.

"If an OSHA inspector thinks the elevator crew walks anywhere near holes at any time during work, he or she will likely cite the employer for failing to protect its workers against those holes."

Thus, in one stroke, OSHA can cite multiple employers on the construction site for a serious fall-protection violation, with potentially several thousand U.S. dollars each for the penalty. Never mind the elevator construction crew was probably the only group not using (or likely to use) the stairs, because it was moving up and down the hoistway on some type of running platform. That is an argument for the courtroom, where no employer wants to find itself. For this reason, it is important that elevator-industry field employees are trained to report unsafe conditions they may see while working, even if they neither created, nor can fix them. Such an act gives the employer a defense to any OSHA citation based on those conditions.

Another last observation is that OSHA's regulations draw a distinction between what constitutes a fall hazard in construction and non-construction ("general industry") work. As stated, in construction, a fall hazard is a potential fall of 6 ft. or more to the next lower level. For work that is not construction, however, OSHA has entirely different fall-protection standards, such as at 29 C.F.R. § 1910.23, which defines a potential fall hazard as a fall of just 4 ft. or more to the next level. Although elevator-industry safety programs call for the use of fall protection wherever a fall hazard exists, they tend to define a fall hazard as existing only when a fall of 6 ft. or more is present, reflecting the construction-industry fall protection standards. This difference could theoretically be important, because OSHA could consider service, maintenance or inspection work to be non-construction or general-industry work. Thus, it's possible to picture a scenario in which a service mechanic, standing in front of an open hoistway door on the first landing (with the car out of service somewhere above him) is above a 5-ft.-deep pit (not an uncommon depth). This would not trigger a fall-protection system requirement for many elevator contractors, but depending on the work being performed and the fall protection standards that apply, OSHA could still try to cite the employer for failing to require its service mechanic to use fall protection, because he was exposed to a fall of more than 4 ft.

In short, the basics of fall protection are not complicated, but as with all subjects controlled by administrative agencies like OSHA, there are many pitfalls (pardon the pun) for the unwary. This column has not even touched upon scenarios such as the working platforms used in modern, efficient construction techniques, where the final permanent platform is installed in the hoistway and the employees ride it upon the final, permanent rails. Such devices were never contemplated when OSHA first created its fall-protection standards and scaffolding standards, and OSHA has had difficulty trying to force them into existing regulatory criteria. OSHA has failed to recognize the unique design and safety features of such devices, instead trying (fortunately, unsuccessfully) to impose various fall-protection and installation criteria contained in standards for old technology such as adjustable suspension scaffolds, as if this modern elevator platform were something ridden by a window-washer outside a building. Technology advances and free enterprise adapts, but the government seems to be the last to know.

"A Trend of Strict Enforcement"

by Paul Waters

Reprinted from ELEVATOR WORLD, June 2014

To improve safety and health, OSHA continues to prefer swinging the stick over dangling the carrot.

With OSHA's 2014 fiscal year more than 50% complete (its 2015 fiscal year begins October 1), and with due respect to Led Zeppelin, the song remains the same. Enforcement continues to be OSHA's emphasis, and with ever-decreasing attention (and funding) being given to cooperative programs, such as the Voluntary Protection Program. And, while many private-sector employers are tightening their belts, OSHA's enforcement efforts are backed by full coffers — from a hefty US$552 million in 2014, OSHA seeks US$565 million for 2015. This includes US$3 million more for federal enforcement of the OSHA Act, as well as US$4 million more to handle the Whistleblower Protection Program.

"OSHA continues to ally with organizing labor by such moves as taking the position that, during inspections of nonunion employers, outside union representatives can be allowed to walk around the worksite with the inspector."

Some figures illustrate this enforcement approach. OSHA has increasingly encouraged the filing of employee complaints, with the result that, already in 2014, 28% of all inspections were complaint based, in contrast to 24% in 2013. Moreover, the average penalty for a serious item in 2014 has risen to US$2,000, from US$1,897 in 2013. In addition, OSHA continues to ally with organizing labor by such moves as taking the position that, during inspections of nonunion employers, outside union representatives can be allowed to walk around the worksite with the inspector. This contradicts both regulations and OSHA's own Field Operations Manual, which clearly state that only an "employee" may represent the interests of the employer's workforce during an inspection. Although sure to be challenged in court, it is yet one more illustration of OSHA's aggressiveness.

OSHA energetically continues to employ its controversial Severe Violators Enforcement Program (SVEP). The SVEP contains many punitive elements, such as OSHA's utilization of aggressive press releases publicly tarring an employer as a "severe violator," the entry of the employer on a public log containing the names of all severe violators, mandatory follow-up inspections at both the cited workplace and other workplaces within the same company, and enhanced settlement provisions, such as mandating abatement measures across the entire company and the hiring of third-party consultants to assess workplaces and report to OSHA. One serious problem with SVEP is that many of these punitive steps are implemented before an employer has even been found liable by a court for any violations. The mere issuance of a citation meeting the relatively low-level criteria for inclusion on the SVEP triggers many of these acts. And, after having no published criteria for getting off this "bad actor" list, OSHA's recently released criteria provide no clear guidance as to how to escape, either. In short, OSHA's implementation of SVEP flouts basic notions of fair play and due process under the U.S. Constitution.

In addition, OSHA continues its official campaign against "Employer Safety Incentive and Disincentive Policies and Practices." In other words, OSHA is scrutinizing employer safety-incentive programs, because the agency believes they constitute unfair discrimination and can discourage the accurate reporting of workplace injuries and illnesses in violation of OSHA's recordkeeping requirements. So, awarding a gift certificate to mechanics with no accidents for 12 months? According to OSHA, this is really telling employees not to report injuries and violating the law. Posting a sign in the office stating it has been 263 days since the last accident? To OSHA, this is blaming workers for accidents and, again, discouraging them from reporting them. Disciplining any employee who is injured on the job, no matter the circumstances? OSHA believes this is, yet again, discouraging injury reports.

Given this attitude, it is imperative that employers with safety-incentive programs in place review them to ensure they cannot be construed as discouraging accident reports or otherwise "blaming the worker" for accidents. The best fix is to have a written safety program in place with rules, training, safety inspections of workers and consistent (not arbitrary) discipline for workers violating the rules (with a clear description of the violation and reason for discipline). This is the preferred way by which to avoid accusations of violations of OSHA's discrimination provisions.

With the Affordable Care Act increasing the pace of full-time employees being replaced by temporary staff, OSHA continues to make temporary worker safety a top priority,

having launched its Temporary Worker Initiative. By this, OSHA intends to do the following:

1) Protect temporary workers from workplace hazards
2) Ensure staffing agencies and host employers understand the act's requirements regarding temporary workers
3) Gather information faced by temporary workers in their workplaces

With aggressive enforcement being this administration's favorite tool, OSHA's director of enforcement programs issued a memorandum to OSHA's regional administrators directing them to focus on the safety of temporary workers. As a result, inspections and citations involving staffing agencies and the use of temporary workers skyrocketed in 2013-2014. OSHA maintains that both the staffing agency and the leasing employer have joint responsibility regarding temporary worker safety. OSHA expects an employer will treat temporary workers like all of its other workers in terms of training and safety and health protections.

"The agency shows no sign of emphasizing compliance assistance over aggressive enforcement. With that in mind, an employer's basic due diligence calls for assessing operations to determine safety and health vulnerabilities."

Another effort relating to enforcement is OSHA's recent proposal to make all workplace injury and illness information publicly available. Under this rule, employers with more than 250 employees would be required to electronically submit their illness and injury data. This will allow OSHA to make the reports public and allow companies to compare their numbers against their competitors.

The concern here is that, given the approach taken by this agency in other contexts, the data will be used to shame employers and damage their reputations. Given that injuries can often result from employee misconduct or flouting of work rules, the numbers could be taken out of context to make an otherwise safety-conscious employer look bad.

In short, with Dr. David Michaels still at the helm, the agency shows no sign of emphasizing compliance assistance over aggressive enforcement. With that in mind, an employer's basic due diligence calls for assessing operations to determine safety and health vulnerabilities. The best place to start is with OSHA's list of most frequently cited violations. In 2013, the top 10 most frequently cited standards were fall protection (1926.501), hazard communication (1910.1200), scaffolding (1926.451), respiratory protection (1910.134), electrical wiring methods (1910.305), powered industrial trucks (1910.178), ladders (1926.1053), lockout/tagout (1910.147), electrical general requirements (1910.303) and machine guarding (1910.212). Each of those presents concern for elevator/escalator service and construction companies. OSHA inspectors are playing close attention to the top-ten list, and it is imperative that a safety program contain work rules and training relevant to any work involving those topics.

OSHA Update

by Paul Waters

Reprinted from ELEVATOR WORLD, September 2015

Small tweaks could mean big changes for elevator-service companies.

One defining characteristic of President Barack Obama's administration has been the energy and aggressiveness of federal agencies. OSHA under Dr. David Michaels has certainly been no exception, and, in many ways, has been a leader in bringing about the kind of "change" the president promised. From insisting that union representatives be allowed to accompany OSHA inspectors during inspections – even if the workplace is not unionized – to issuing proclamations regarding how employers need to provide for transgender restroom facilities, OSHA has been a leader in delivering the promise the president made in 2008 of "fundamentally transforming the United States of America."

Given OSHA's persistent attempts to apply the permit-required confined-space standard to service work, it is likely that it will not take OSHA long to try to apply the new construction standard to elevator and escalator construction work if the opportunity arises.

The pace of most changes, however, is gradual, not explosive. After all, if you throw a frog in a pot of boiling water, it jumps out. But, if you put the frog in tepid water and gradually heat the water up, it does not figure out what is going on until it is too late. Slow but constant, unrelenting degrees of change get you boiled frog. What follows are just a few of the very recent ways OSHA has turned up the heat on American employers.

Hazardous Energy Control

Concerning elevator-service companies and hazardous energy control (lockout/tagout), OSHA asserted in 2009 that, under the hazardous energy-control standard, 29 C.F.R. § 1910.147(f)(2)(i), an elevator-service company as an "outside employer" had to inform the "on-site employer" (the customer) of the hazardous energy-control procedures it would use while doing repair work. The citation was vigorously contested, with the service company winning at trial, but the citation was eventually upheld by the federal Circuit Court of Appeals for the District of Columbia. The court reasoned that, if a host employer had access to any zone of danger created by the service work, the elevator-service company was obliged to exchange information regarding lockout/tagout procedures before performing the repair work.

This ruling impacts every elevator-service company. It gives OSHA the green light during an inspection to cite a service company for failing to exchange information about lockout/tagout with the customer if any "on-site" employee could potentially enter the zone of danger or, in other words, be exposed to the unexpected movement of any equipment being worked on by the elevator-service company. Whether it is the elevator car itself, or just blocking a freight-car gate, work involving hazardous energy control can now likely trigger a duty to provide information about the service company's procedures before the work can proceed.

Injury-Reporting Rule

Elevator construction and service companies are also directly impacted by OSHA's changes to the work-related injury- and illness-reporting rule. The new rule, effective January 1, 2015, requires employers to report directly to OSHA within 24 hours of occurrence whenever a worker is admitted to a hospital for medical treatment, suffers an amputation or loses an eye. Previously, OSHA only had to be notified when three or more workers were hospitalized. A little short of halfway through the year, OSHA had already received 5,474 incident reports, according to the administration's head.

These reports are not only resulting in increased workplace inspections, but also raising concerns about data security. OSHA announced its intention to make the accident reports and injury logs available to the general public by the end of 2015. OSHA states that it will redact the employees' personal information, but the accident history of the employers will be available. Given the recent multiple instances of database breaches and security issues with federal-agency data, as well as the obvious potential to misuse and misinterpret the data, employers cannot be blamed for being disturbed by this plan.

Confined Spaces in Construction

Elevator and escalator construction and modernization companies will also be impacted by OSHA's new confined spaces in construction standard (ELEVATOR WORLD, August 2015 and this issue, p.??). The standard's original effective date was August 3, 2015, but OSHA announced it was postponing full enforcement of the new standard until October 2, 2015, to allow time for employers to train and acquire

the necessary equipment. Thus, before October, no citations will be issued to employers that have scheduled training required by the new standard, taken steps to obtain necessary equipment and otherwise taken steps to address confined spaces in their workplaces.

Prior to this rule, the only confined-spaces regulation applicable to construction simply required employers to provide employees entering confined-spaces training on the hazards involved, needed precautions, and the use of protective and rescue equipment. The new construction confined-spaces standard imposes a confined-spaces process very similar to the general industry rule. Construction employers now have to determine if workers enter a confined space, which hazards could be there, how to eliminate those hazards, which training to provide workers and how to rescue workers in an emergency.

The construction confined-spaces standard defines a "confined space" as a space that: 1) is large enough and so configured that an employee can bodily enter it, 2) has limited or restricted means for entry and exit and 3) is not designed for continuous employee occupancy. Importantly, "pits" are specifically identified as a potential confined space, with "elevator pits" being described as a specific example in OSHA's explanation of the new rule's potential application. Letters to the National Elevator Industry, Inc. from OSHA discussing elevator pits as potential confined spaces are included in the explanatory material of the new construction-industry confined-spaces rule. In fact, the final language of 29 C.F.R. § 1926.1201, which defines the scope of the standard, contains the following explanation of its scope (emphasis mine): "Note to paragraph (a). Examples of locations where confined spaces may occur include, but are not limited to, the following: bins; boilers; pits (such as elevator, escalator, pump, valve or other equipment)..."

OSHA continues work on multiple other rules, as well. Issues such as combustible dust, crane-operator qualifications in construction, and exposure to silica and beryllium are in early stages.

Given that ladders in pits five feet deep have been found to be "limited or restricted means for entry and exit," elevator and escalator construction companies need to be aware of this potential important issue. But whether the pit is a confined space is not the end of the analysis – the full requirements of the standard apply to permit-required confined spaces (PRCS). A confined space must have certain hazardous characteristics before it is a PRCS and the new standard's full program requirements are triggered. One triggering characteristic is if the space "contains any other recognized serious safety or health hazard." This is a catch-all phrase open to interpretation. Is moving equipment like sheaves or counterweights in a pit while an employee is located in the pit such a hazard? Is the temporary running platform such a hazard? Given OSHA's persistent attempts to apply the permit-required confined-space standard to service work, it is likely that it will not take OSHA long to try to apply the new construction standard to elevator and escalator construction work if the opportunity arises.

Transgender Workers and Restrooms

I would be remiss if I omitted discussion of OSHA's efforts to ensure transgender employees have adequate access to restrooms in the workplace. It is understandable if one erroneously concluded such a policy would fall outside of OSHA's original mandate of ensuring American workers have a place to work that is free from recognized hazards likely to cause death or serious physical harm. After all, that is what the Occupational Safety and Health Act states. To fulfill this mandate, OSHA adopted a lengthy set of regulations that apply to workplaces, one of which – the "sanitation" standard – understandably requires employers to provide employees with prompt access to toilet facilities "separate for each sex" and prohibits unreasonable restrictions on employee use of toilets.

Given the Equal Employment Opportunity Commission's targeting of employers who allegedly discriminate against transgender individuals, OSHA joined the effort by interpreting the sanitation standard to require that employers allow "all employees. . . to use the facilities that correspond with their gender identity." OSHA specifically stated no employee should be required to provide any medical or legal documentation of gender identity, nor use a segregated facility apart from other employees based on gender identity or transgender status. To OSHA, these would be "unreasonable restrictions" on toilet availability. Irrelevant are the concerns of biological males or females who object to having someone in the restroom with them who is of the opposite sex but, at the time, identifies as a different gender. Elevator and escalator service and construction companies, with mobile crews, could be impacted by the sanitation standard's requirement that mobile employees have "transportation immediately available to nearby toilet facilities which meet the other requirements of this [standard]."

Regulatory Agenda

OSHA continues work on multiple other rules, as well. Issues such as combustible dust, crane-operator qualifications in construction, and exposure to silica and beryllium are in early stages. A proposal to change the recordkeeping standard to make clear an employer's continuing obligation to create and maintain accurate injury and illness logs is also beginning. Finally, rules governing infectious-disease exposure and an employer's obligation to create written injury- and illness-prevention programs are still alive but simmering on the back burner.

The Best Defense

by Paul Waters

Reprinted from ELEVATOR WORLD, May 2016

Training-program requirements and how to use *NEII®'s* matrices for OSHA's general industry and construction standards

A thorough employee training program is an essential element of every employer's safety and health management system. First, OSHA's standards are replete with mandatory employee training requirements. Failure to provide training required by OSHA's construction or general industry standards exposes an employer to costly OSHA citations. Elevator construction and service companies are no exception and, in fact, can be subject to more training requirements because of the high-hazard nature of the elevator/escalator work environment. Second, one of the few effective defenses available to an OSHA citation is to show that the violation occurred because an employee failed to follow work rules. To do this, an employer must be able to prove the employee was trained in that work rule. Without documented training (remember, if it's not documented, it didn't happen!), an employer will be unable to point to an employee's misconduct as the cause of the alleged OSHA violation.

When in doubt, get advice from a professional about the specific training obligations associated with the types of work employees actually perform. . . . It is highly possible OSHA would view a typical 5-ft.-deep elevator pit, needing a ladder to access, as a confined space.

Keeping track of the myriad OSHA training requirements, and when or how often training must occur, can be an administrative pain. In an effort to help employers stay compliant, however, the National Elevator Industry, Inc. (NEII®), has compiled a set of matrices for OSHA's general industry and construction standards. These easy-to-use charts describe the regulation topic, the standard imposing the requirement and the frequency required by OSHA.

The general industry standards set forth in 29 CFR Part 1910 (§ 1910) apply to employers engaged in elevator service or maintenance. The training matrix covers the training requirements for such major topics as lockout/tagout (LOTO) (§ 1910.147), electrical safety (§ 1910.332), powered industrial trucks (§ 1910.178) and first aid (§ 1910.151). It is important, however, that employers use the matrices as a starting point for their training programs, because it is intended only to summarize major issues, not substitute for an employer's own program. When in doubt, get advice from a professional about the specific training obligations associated with the types of work employees actually perform.

For example, the general industry matrix for LOTO states that only "initial" training of an employee is required. Technically, this is true. Under § 1910.147(c)(7), an "authorized employee" must receive training prior to performing hazardous energy control during work. Moreover, as the matrix notes, retraining is required when an employee changes jobs, works on equipment presenting new hazards, a change in procedures occurs or "whenever a periodic inspection under paragraph (c)(6). . . reveals. . . that there are deviations from or inadequacies in the employee's knowledge. . . ."

What is this "periodic inspection under paragraph (c)(6)?" It is an inspection of the energy-control procedure that must occur "at least annually. . ." What does this have to do with training? The periodic inspection of the energy-control procedure must also "include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy-control program. . . ." In other words, an employer must review, or audit, its employees' knowledge of LOTO procedures at least once a year. In my mind, this review is much more of a training exercise than a bureaucratic checking of boxes. Many employers make this review a key part of their hazardous-energy-control training, which they perform at least once a year as part of an audit process that examines multiple key safe work rules beyond LOTO, such as fall protection, safe hoistway and pit access, and personal protective equipment. Therefore, although the general industry matrix does not have an "X" in the annual column next to LOTO, the reality is that the prudent employer would be wise to do annual LOTO training and audits to comply with the annual obligation to review all authorized employees on their knowledge of the procedures.

OSHA 1910 General Industry Standard Mandated Training Requirements

Regulation	Training Reference	Initial	Annual	Other
Access to Medical Records	29 CFR 1910.1020	X	X	
Ionizing Radiation	29 CFR 1910.1096(i)(2)	X		Typically not applicable to field personnel
Toxic and Hazardous Substances (Asbestos, Tremolite, Anthophylite, Actinolite)	29 CFR 1910.1001(j)(7)	X	X	
Hazard Communication	29 CFR 1910.1200(h)	X		New physical or health hazard
Control Hazardous Energy Source (lockout/tagout)	29 CFR 1910.147(c)(7)(i)	X		Upon changes & as inspection warrant
Electrical Safety	29 CFR 1910.332(a)	X		
Personel Protective Equipment (PPE)	29 CFR 1910.132(f)(1)	X		Upon issue of equipment & condition change
Respiratory Protection	29 CFR 1910.134(k)(2)	X	X	
Powered Industrial/Material Handling	29 CFR 1910.178(l)(1)(i)	X		Minimum every 3 years & change to process or equipment
Overhead & Gantry Cranes	29 CFR 1910.179(n)(3)(ix)	X		Not specific
Welding, Cutting, Brazing	29 CFR 1910.252(a)(2)(xii)(C) 1910.253(a)(4) 1910.254(a)(3)	X		
Occupational Exposure to Bloodborne Pathogens	29 CFR 1910.1030(g)(2)(i)	X	X	
Emergency Action Plan	29 CFR 1910.38(e)	X	X	When responsibilities change
Portable Fire Extinguishers	29 CFR 1910.157(g)(1)	X	X	
Medical Services & First Aid	29 CFR 1910.151(a)(b)	X	Periodic Intervals	Frequency set by certifying agency.
Permit Required Confined Space	29 CFR 1910.146(g)(1)	X		When changes occur. Training is specific to duties and activities.
Occupational Noise Exposure	29 CFR 1910.95(k)(1)	X	X	
Lead	29 CFR 1910.1025(l)(1)(iii)	X	X	

NOTE: This is a summary of applicable OSHA training requirements and may not be all inclusive.

APPROVED: November 30, 2006

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The permit-required confined-space (PRCS) standard has also imposed complicated training requirements. Adding to the complication is that OSHA now has adopted a PRCS standard for construction work. Previously, elevator-industry employers performing construction work needed only to be concerned with a general training requirement set forth at § 1926.21(b)(6). Since August 2015, however, a detailed construction PRCS standard with explicit training requirements has been effective. Although not set forth in the construction-industry matrix, OSHA specifically listed elevator and escalator pits as examples of potential confined spaces in construction work. Accordingly, it is imperative that elevator-industry employers performing construction work be aware of this standard, found at § 1926.1201 through 1213.

The construction industry PRCS standard is very similar to the general industry standard. For example, without addressing the specific criteria a pit must meet to satisfy the definition of a PRCS, it is highly possible OSHA would view a typical 5-ft.-deep elevator pit, needing a ladder to access, as a confined space. Should that pit then have the potential to contain a hazardous atmosphere (welding fumes? explosive vapors from glue?) or "any other recognized serious safety or health hazard" (moving equipment, such as counterweights or a temporary work platform?), an employer with employees working in the pit could be faced with a situation where OSHA believes training required by the new construction PRCS standard should have occurred.

§ 1926.1207(a) sets forth initial training and retraining whenever duties change or employee knowledge seems deficient. I expect OSHA will aggressively seek to apply the general industry and construction PRCS standards to the elevator industry. Fortunately, because of the close overlap between the general industry and construction PRCS standards, providing training to comply with the general industry requirements will likely satisfy construction requirements.

Another new construction-industry standard that elevator-industry employers need to consider (but which is not in the NEII construction training matrix) is the new crane and derrick standard for construction at § 1926.1400 through 1442. These requirements replace the old standard set forth at § 1926.550. This is important because companies performing elevator or escalator construction frequently have their

Continued

OSHA 1926 Construction Industry Standard
Mandated Training Requirements

Regulation	Training Reference	Initial	Annual	Other
Safety Training and Education	29 CFR 1926.21	X		
Lead Exposure	29 CFR 1926.62(l)(1)(iv)	X	X	Employees that are subject to exposure
Process Safety Management of Highly Hazardous Chemicals	29.CFR 1926.64(g)(1)(i)	X		As needed. Refresher training determined by facility (petrochemical, Pharmecitcal, etc.)
Personal Protective Equipment (PPE)	29 CFR 1926.95	X		As needed
Signs, Signals and Barricades	29 CFR 1926.200	X		As needed
Material Handling	29 CFR 1926.250	X		As needed
Hand and Power Tools	29 CFR 1926.300	X		As needed
Welding and Cutting	29 CFR 1926.350	X		As needed
Electrical	29 CFR 1926.400	X		As needed
Lockout/Tagout	29 CFR 1926.417	X		Worksite changes present new hazards, different type, employee inadequacies
Scaffold	29 CFR 1926.454	X		Worksite changes present new hazards, different type, employee inadequacies
Fall Protection	29 CFR 1926.503	X		As needed
Cranes, etc.	29 CFR 1926.550	X		As needed
Motor Vehicles	29 CFR 1926.600	X		As needed
Demolition	29 CFR 1926.850	X		As needed
Stairways and Ladders	29 CFR 1926.1060	X		Retrain as necessary for employee understanding
Asbestos	29 CFR 1926.1101(k)(9)	X	X	If known possible exposure
Confined Spaces	29 CFR 1926.1207	X		When duties change or knowledge is deficient.
Cranes and Derricks	29 CFR 1926.1430	X		Retrain as necessary for employee understanding

NOTE: This is a summary of applicable OSHA training requirements and may not be all inclusive.

APPROVED: November 30, 2006 (Currently under review March 2016)
NEII Field Safety Committee

own employees lift materials and equipment with cranes. Any employees engaged in this work, such as operators, signal persons or riggers, are subject to the detailed training requirements at § 1926.1430. This training must occur before employees perform such work, and retraining must be provided whenever there is reason to believe an employee's knowledge is deficient.

All in all, the NEII summary training matrices for general industry and construction are an excellent guide for employers seeking to ensure that they are covering all of the topics at the correct frequency to comply with OSHA standards. Providing such training also helps position the company to defend against violations caused by employee failures to follow work rules. It is important to remember that, although the matrices are a strong start, they are not a substitute for a thorough analysis of the work environment, OSHA standards and consultation with a safety professional.

Hazard Assessments — Assume Nothing

by Paul Waters

Reprinted from ELEVATOR WORLD, December 2016

Examining how an elevator service company can comply with OSHA's requirement to "assess the workplace to determine if hazards are present"

OSHA has long had a regulation that requires employers to "assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment" (29 C.F.R. §1910.132(d)(1)). This is fairly straightforward for employers with a fixed place of business, like a warehouse or factory: a qualified person looks at the equipment and various tasks performed by employees in the workplace, determines if they pose likely hazards and concludes which personal protective equipment (PPE) is needed to protect against those hazards.

Employers with "mobile" employees, like an elevator service or repair company, have a more complicated compliance burden. Such a company may have hundreds of customers on contract, the locations of which are visited at various intervals. In addition, one-off calls for service or repair can result in visiting a new location only for a specific job. In those situations, how does an elevator service company comply with OSHA's requirement to "assess the workplace to determine if hazards are present"?

An elevator service company should be cautious relying only on the hazard assessments, and resulting PPE determinations, contained in a standard work process.

A recent case involving a Walmart distribution center provides guidance. Although the case did not involve "mobile" employees, it involved one particular distribution center out of Walmart's 120 across the U.S. OSHA inspected one in New Braunfels, Texas, and issued Walmart a citation for failing to perform the required PPE hazard assessment for that distribution center, among other things. The distribution center contested the citation, claiming it complied with the requirement by performing a "global" hazard assessment of another distribution center located in Arkansas. This hazard assessment served as a master hazard assessment for all other distribution centers nationwide.

The trial judge rejected this argument, concluding that the plain language of the standard, along with the explanation of the standard published by OSHA, required a hazard assessment at each particular workplace. The judge further found that the "global" hazard assessment did not constitute an assessment of the New Braunfels center, because Walmart failed to verify that work conditions at that location were the same as those at the assessed location in Arkansas. The judge reasoned that Walmart could not simply assume that the working conditions of the unassessed location were the same as those at the assessed location.

On review, the Occupational Safety and Health Review Commission agreed with the trial judge. The commission found that, because Walmart was relying on a "global assessment," OSHA only had to show that this assessment did not take into account the specific working conditions of the New Braunfels distribution center. Reviewing the evidence, the commission found that it proved that Walmart never verified that conditions between the two facilities were equivalent. It, further, did not otherwise conduct a hazard assessment of the New Braunfels center for PPE. The violation was upheld.

Elevator service and repair companies can draw a few lessons from this decision. First, as an employer with "mobile" employees going to multiple jobsites every day, how can it comply with the "workplace specific" requirement of the PPE hazard assessment standard? One way is for the company to require that its mechanics perform a job hazard assessment (JHA) before performing work. The JHA will account for the activity being performed, the risks involved and which corrective measures, including PPE, are needed. The company should then train the mechanics in how to perform a JHA. It can be performed at the start of each day for big jobs or before the specific work for smaller jobs. Ideally, some record (i.e., a check sheet) is filled out by the mechanic, and the work proceeds. With this process in place, an elevator company performing modernization, repair or construction work complies with the standard on a workplace-specific basis.

Routine service work, with repeated visits under a contract for various reasons, is not exempt from the workplace-specific hazard-assessment requirement. Because service work is frequently routine and repetitive, involving the same tasks regardless of building address, many companies have standard work or maintenance processes regarding how the work should be performed. These standard processes have been developed based on the company's knowledge of eleva-

tor equipment and the hazards associated with the tasks being performed. They usually also include direction as to the required PPE for the task.

It's always easier, and frequently cheaper, to prevent an OSHA citation than to explain to a judge in court why the violation should be vacated.

Given the Walmart distribution center decision, however, an elevator service company should be cautious relying only on the hazard assessments, and resulting PPE determinations, contained in a standard work process. It is conceivable that, if the mechanic did not perform a specific JHA for the work, OSHA would assert that the company failed to comply with the workplace-specific PPE hazard-assessment requirement. The elevator service company may then be faced with demonstrating how conditions at that specific worksite were evaluated to determine they were the same as the assumed conditions underlying the PPE determinations in the standard work process.

How can a service company avoid being cited for violating the PPE hazard-assessment standard? One way would be to have a mechanic perform a hazard scan or assessment of the building at various intervals. Even one time would be enough (barring any change in workplace conditions), such as when the mechanic first gets the building on his or her route. Another possibility is that management performs (and documents) such an assessment as part of any walkthrough or inspection of the building when it comes under contract. The assessments could then be maintained in the contract file. Anything unusual can be noted and the necessary precautions or PPE used.

Complying with the requirement for a workplace-specific hazard assessment does not have to be complicated or time consuming. Most elevator companies are likely already complying with their existing JHA requirements and training. For those that aren't, the company can make workplace-specific assessments, even with multiple workplaces, with a little tweaking of JHA procedures and a checklist. It's always easier, and frequently cheaper, to prevent an OSHA citation than to explain to a judge in court why the violation should be vacated.