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JOB SAFETY & HEALTH QUARTERLY

Volume 10 Number 2
Winter 1999

**What's Next?
Where Do We
Go from Here?**

*An interview with
Assistant Secretary
Charles Jeffress*

U.S. Department of Labor
Alexis M. Herman, Secretary



Occupational Safety and Health Administration
Charles N. Jeffress, Assistant Secretary

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From the Editor...

It has been a difficult winter across the country, but here in Washington, DC, some trees already are showing their buds—a sign that spring is near. To get through the winter doldrums, we are looking ahead at various issues. Our cover story is an interview with Assistant Secretary Charles Jeffress who talks about what is ahead for OSHA. He also discusses OSHA's new approach to standards setting in his regular column—*Assistant Secretary's Message*.

Other articles feature OSHA's ergonomics proposal and new training requirements for powered industrial trucks. We also look at OSHA state programs and how each deals with specific workplace hazards—from ergonomics to logging. We have a short piece on one of OSHA's advisory committees, NACOSH, and its activities.

Please note our fact sheet on Y2K as well as our regular departments—*Q&A*, *What's Happening?* and *Mark Your Calendar*. Our *Toolbox* column discusses proper eye and face protection for various construction activities, and *SafeWorks* shows how to control dust exposure during solid counter top manufacturing.

If you have ideas or suggestions about *Job Safety & Health Quarterly*, please complete and return the reader response card in the front of this issue.

Thanks for your continued support. I hope you enjoy the issue.

A handwritten signature in cursive script that reads "Anne Crown-Cyr".

Anne Crown-Cyr

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ASSISTANT SECRETARY'S MESSAGE

As we move into the next century, OSHA is continuing to focus its efforts and resources on producing results and improving the way we do business. One of my personal goals is to improve and shorten our rule-making process as well as make sure our regulations are easy to understand.

We need rules that protect workers. Rules that direct employers and employees to safe and healthful workplace performance. Rules written simply enough for everyone to understand. Rules that are updated more often than once every 30 years.

There is much that we can do within OSHA to improve rulemaking. We took a look at our internal process and found that we had too many levels of review, took too long to develop a standard, lacked clear direction, and lacked accountability for progress. As a result, I am setting up a new structure within the agency to help things flow more smoothly. I see this as a pilot project to run for 6 months. At that point, we'll re-evaluate. If this system works, we'll make it permanent.

I believe the solution is to reinvent the current process by consolidating rulemaking operations under one experienced manager, accountable directly to me, who is responsible for the development of all safety and health standards—except for construction standards. We've established a one-stop shop for construction, with enforcement, standards interpretation, and standards development grouped to-



gether. We'll maintain that plan. A health executive and two deputies—one for economics and one for operations—will assist the senior manager in the new process.

To help make these things happen, we will have new cross-cutting teams responsible for two or three standards. For example, the team working on safety and health programs also will handle two other standards. Each team will include members from all the disciplines we draw on in drafting standards—safety specialists or health scientists, economists, risk assessment experts, and attorneys. Each team will call on compliance officers, occupational health nurses or doctors, and others as necessary to complete their work. That will cut down on multiple reviews. Further, each team will be headed by a strong team leader who can develop the team members into a cohesive working group and move the process forward expeditiously. Team leaders will be held accountable for the quality of the standards their

team produces as well as the timeliness. They will hold their team members accountable.

At the same time, I want to continue our commitment to a process that includes consensus building and input from our stakeholders. OSHA faces many external constraints as well, so it is important for us to get interested parties to the table earlier to resolve policy questions. Negotiated rulemaking offers one possibility. Using international standards or OSHA state plan standards as a basis for proposals offers another. The stakeholder process we are using for the safety and health programs and ergonomics rules also is proving helpful in developing standards that will have broader public support.

I believe this new standards-setting structure makes more sense, will streamline the process, and will result in a better, more timely product. We want better standards—ones that employers and employees can readily understand and apply to their workplaces—and we want them more quickly. We want to do everything we can to ensure the safety and health of the nation's workers.

A handwritten signature in black ink that reads "Charles Jeffress". The signature is fluid and cursive.

*Charles Jeffress
Assistant Secretary
of Labor for Occupational
Safety and Health*

Q&A

Q What are the details of a new rule OSHA is considering for all employers to develop a safety and health program?

A The agency is planning on calling on all employers to set up a safety and health program to manage workplace hazards and reduce injuries, illnesses, and fatalities.

The safety and health program establishes a system for managing workplace safety and health so that employers can identify and assess workplace hazards to which employees could be exposed. Employers must inspect the workplace and assess and rank the severity of identified hazards and evaluate new equipment, materials, and processes for their potential to cause injuries and illnesses before implementing them.

The program must be appropriate to conditions in the workplace and must contain the following core elements: (1) management leadership and employee participation, (2) hazard identification and assessment, (3) hazard prevention and control, (4) information and training, and (5) evaluation of program effectiveness. OSHA's current timetable has the agency submitting the rule to the Office of Management and Budget this spring, publishing the final proposal this summer, and holding public hearings in the fall.

Q What are the requirements of OSHA's compliance directive covering new communications tower construction activities?

A The directive sets inspection policies and procedures to ensure uniform enforcement of OSHA provisions covering fall protection and safe access to communications towers under construction. All employees climbing or otherwise accessing these towers

must be adequately trained in accordance with *Title 29 Code of Federal Regulations 1926.21* or *1926.1060*. Employees, when climbing the towers during construction, must be protected from falls by a fall arrest system complying with OSHA standards (*CFR 1926.502*) or a ladder assist safety device meeting OSHA ladder safety requirements (*CFR 1926.1053(a)*). The directive covers worker access by hoists. Following the training of hoist operators and workers and after meeting specific criteria, employees may be lifted on hoist lines to reach work stations at heights greater than 200 feet (60.6 meters). The criteria are as follows: (1) hoist lines must





be equipped with a swivel to prevent the rotation of workers being hoisted; (2) the use of spin-resistant wire rope is prohibited; (3) workers must wear proper personal protective equipment; (4) when hoisting personnel, the hoist capacity load rating shall be reduced by half; and (5) riding the hoist line to work stations at heights less than 200 feet (60.6 meters) is prohibited. Maintenance, retrofitting, and dismantling of existing towers are not addressed in the directive, but will be covered in future directives.

Q What are the amendments to OSHA's permit-required confined spaces standard?

A Effective February 1, 1999, the clarifications provide for enhanced employee participation in an employer's permit space program. OSHA requires that authorized representatives of employees have access to information developed by employers under the standard. OSHA requires employers to consult with affected employees and their representatives in developing and implementing their confined space programs. For example,

prior to entering permit required spaces, employees or their authorized representatives can observe any employer testing or monitoring of permit spaces.

The new requirements also strengthen and clarify the criteria employers must satisfy when preparing for the timely rescue of workers incapacitated during confined space work. The employer must take into account the specific hazards of the space to be entered and develop a worker rescue plan tailored to those conditions. Such a plan must include an assessment of the skill and competence of any prospective rescuers. Employers must provide: (1) personal protective equipment to employees who enter confined spaces and train them so they are proficient in its use, (2) reevaluate the permit space if requested to do so by employees and immediately provide the results, and (3) train employees who work in confined spaces in basic first aid and cardiopulmonary resuscitation.

For more information on this and other safety and health topics, visit OSHA's website at www.osha.gov.

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WHAT'S HAPPENING?

Publications

OSHA

OSHA 3156, a laminated pocket card on cold stress, contains information on signs and symptoms of cold induced illnesses and what to do to help workers.

The *Cold Stress Equation* card is on the Internet at www.osha.gov under **Publications**. A single free printed copy can be obtained from the OSHA Publications Office, P.O. Box 37535, Washington, DC (202) 693-1888.

OSHA 3157, *Safety and Health for Woodworking*, describes the principal hazards of woodworking and the methods for controlling these hazards (**available in early spring**). The booklet is part of the *Small Business Safety Management Series* to assist employers in providing safe and healthful workplaces.

NIOSH

The National Institute for Occupational Safety and Health (NIOSH) publication on *Stress at Work* (No. 99-101) addresses stress-related problems in the workplace.

To order a copy of this publication, contact the National Institute for Occupational Safety and Health (NIOSH), 4676 Columbia Parkway, Cincinnati, OH 45226-1998. To receive other information about occupational safety and health problems, call (800) 35-NIOSH, or visit the NIOSH Home Page on the World Wide Web at www.cdc.gov/niosh.



The Lee Company, Florence, AL; General Electric Company's GE Plastics, Burkville, AL; and Kanzaki Specialty Paper, Inc., Ware, MA, advanced from *Merit* to *Star*.

General Electric Capital Rail Car Services, Sayre, PA, and Weyerhaeuser's Container Board Packaging Division, Amarillo, TX, are new to VPP *Merit*.

L.P.R. Construction Company, Loveland, CO, recently joined OSHA's VPP *Demonstration* program.

This brings the total participants to 397 sites in the Federal VPP: 325 in *Star*, 55 in *Merit*, and 17 in *Demonstration*.

For more information on OSHA's VPP, write the OSHA Directorate of Federal-State Operations, 200 Constitution Avenue, N.W., Room N-3700, Washington, DC 20210; or call (202) 693-2213. See also **Programs and Services** on OSHA's website at www.osha.gov. [JSHQ](#)

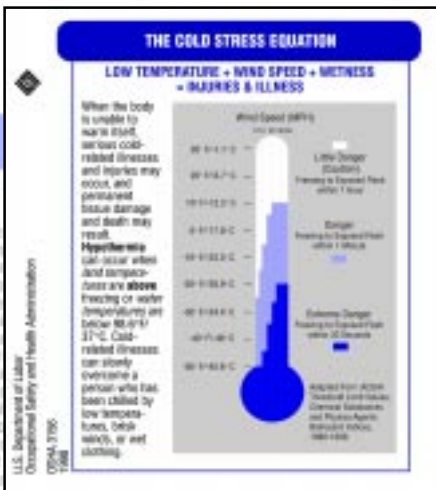
VPP Update

Recent additions to OSHA's VPP *Star* program include International Paper's Pineville Mill, Pineville, LA; Torcon, Inc. at Valley Hospital Project, Ridgewood, NJ; Union Camp Corporation, Washington, PA; and United Space Alliance's NASA Shuttle Logistics Depot, Cape Canaveral, FL.

ASEA Brown Boveri, Inc., (ABB) Air Preheater, Wellsville, NY, has now been in the *Star* program for 16 years.

Adair Foods Company, Kirksville, MO, has now been in the *Star* program for 4 years.

International Paper's Oswego Mill, Oswego, NY; Eaton Corporation, Kearney, NE; General Electric's GE Superabrazives, Worthington, OH; Lockheed Martin's Ocean Radar & Sensor Systems, Syracuse, NY; Mead Containerboard, Bridgeview, IL; and Milliken & Company's Unity Plant, LaGrange, GA, have now been in the *Star* program for 3 years.



U.S. Department of Labor
Occupational Safety and Health Administration
OSHA 3156
1988

MARK YOUR CALENDAR

On March 29-31, 1999, at the William A. Egan Civic and Convention Center in Anchorage, AK, the Alaska Safety Advisory Council will hold its 19th annual Alaska Governor's Safety and Health Conference. The Conference mission is to "provide a world-class occu-

pational safety and health conference affordable to workers, managers, and owners with the goal to change the workplace safety culture and ultimately achieve a workplace free from fatality, injury, and illness."

For more information, contact the Alaska Safety Advisory Council, Attention: Sherry Wright, P.O. Box 100139, Anchorage, AK 99510-0139, phone (907) 269-4922, or fax (907) 269-4950.

OSHA Training Institute Schedule

101 Safety Hazard Recognition for Industrial Hygienists

Features hazard recognition related to common industrial processes and the criteria for citation or referral to safety compliance officers. Includes electrical equipment, flammable liquids, compressed gases, welding, machine guarding, walking-working surfaces, materials handling, and construction.

Tuition: \$1,300
Dates: 5/11/99 - 5/21/99

121a Introduction to Industrial Hygiene for Safety Personnel

A shortened version of course 121 that focuses on the general concepts of industrial hygiene, including the recognition of common health hazards, such as air contaminants and noise, hazard evaluation through screening and sampling, and control methods for health hazards including ventilation and personal protective equipment.

Tuition: \$676
Dates: 4/12/99 - 4/16/99

202 Advanced Accident Investigation

Provides advanced information on accident investigation techniques and methods. Includes a review of sources of evidence and developing facts, findings, and conclusions.

Tuition: \$520
Dates: 4/13/99 - 4/16/99

203 Basic Electrical Principles

Covers basic principles of electricity, including Ohm's Law, series and parallel circuits, and adverse effects of electricity on the human body.

Tuition: \$520
Dates: 4/6/99 - 4/9/99

205 Cranes and Rigging Safety for Construction

Describes various types of mobile and tower cranes used in construction operations and provides information on crane operations, inspection, and maintenance.

Tuition: \$520
Dates: 3/30/99 - 4/2/99



206 Maritime Standards —

Features maritime operations, standards, and jurisdictional enforcement considerations. Longshoring includes vessel and equipment nomenclature and the application of the longshoring and marine terminal standards. Shipyards include vessel building, repair and breaking, and the application of the shipyard standards.

Tuition: \$1,300

Dates: 5/11/99 - 5/21/99

208 Cranes and Materials Handling for General Industry —

Discusses overhead cranes, hoists, and powered industrial trucks used in general industry as well as overhead and crane inspection and maintenance procedures.

Tuition: \$520

Dates: 5/18/99 - 5/21/99

222a Respiratory Protection

A shortened version of course 222 discusses the requirements for establishing, maintaining, and monitoring a respirator program. Includes terminology, OSHA and ANSI standards, NIOSH certifications, and medical evaluation recommendations.

Tuition: \$676

Dates: 3/29/99 - 4/2/99

223 Industrial Toxicology —

Focuses on the principles of toxicology as they relate to industrial processes. Includes recent toxicological data related to OSHA standards and current methods of toxicological testing as well as the chemical hazards encountered in the industrial environment.

Tuition: \$520

Dates: 4/5/99 - 4/8/99



225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders —

Provides an overview of ergonomic principles for the reduction of stresses and strains on the employee's body. Includes work physiology, vibration, anthropometry, cumulative trauma disorders, video display terminals, manual lifting, and temperature stress.

Tuition: \$520

Dates: 4/20/99 - 4/23/99

228 Recognition, Evaluation, and Control of Ionizing Radiation —

Teaches the student fundamental principles of ionizing radiation. Includes explanations of terminology, health effects, the OSHA ionizing radiation standard and other applicable standards, industrial sources, proper usage of radiation instruments, and control methods.

Tuition: \$988

Dates: 5/4/99 - 5/7/99



307 Safety and Health in Sawmills and Logging Operations

Introduces basic components of sawmill operations from log handling to finished products. Discusses hazards, proper controls, and applicable OSHA standards, including materials handling, electrical hazards, machine guarding, and health hazards.

Tuition: \$520
Dates: 4/6/99 - 4/9/99

302 Tunneling and Underground Operations

Focuses on the safety and health aspects of underground operations and the related OSHA standards. Introduces basic tunneling operations, from sinking the initial shaft to completion of the project.

Tuition: \$520
Dates: 4/13/99 - 4/16/99

304 Power Press Guarding

Teaches specific requirements of *Title 29 Code of Federal Regulations (CFR) 1910.217, Mechanical Power Presses*. Discusses in detail part- and full-revolution clutch mechanisms as well as related hazards and guarding methods.

Tuition: \$520
Dates: 4/20/99 - 4/23/99

306 Safety and Health for Grain Handling Operations

Describes the safety aspects of the grain handling industry, including study of the terms, processes, equipment, and mechanical and electrical safeguards pertaining to grain handling.

Tuition: \$520
Dates: 5/18/99 - 5/21/99

308 Principles of Scaffolding

Presents detailed information on the safety aspects of scaffolding from installation to dismantling. Includes built-up scaffolds, suspension scaffolds, and interpretation of related standards. Demonstrates installation and dismantling methods.

Tuition: \$520
Dates: 5/11/99 - 5/14/99

310 Applied Spray Finishing and Coating Principles

Focuses on the hazards associated with spray finishing and coating operations. Includes a review of industrial processes and related equipment and materials.

Tuition: \$520
Dates: 4/27/99 - 4/30/99

312 Hazardous Waste Site Inspection and Emergency Response for the Construction Industry

Increases knowledge of hazardous waste site operations, emergency response procedures, safety and health hazards, and enforcement issues for the construction industry.

Tuition: \$520
Dates: 4/27/99- 4/30/99

326 Health Hazards in the Construction Industry for Safety Personnel

Focuses on the recognition and evaluation of health hazards in the construction industry. Includes health hazards associated with abrasive blasting, asbestos, confined spaces, demolition, painting, roofing, silica, lead, and welding.

Tuition: \$520
Dates: 5/4/99 - 5/7/99

332 OSHA Overview for Physicians

Gives an overview of OSHA recordkeeping requirements, access to employee medical records, hazard communication, exposure to pathogens, tuberculosis guidelines, laboratory hazards, expanded health standards, and hearing conservation.

Tuition: \$468
Dates: 4/27/99 - 4/29/99

500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry

Focuses on developing safety and health programs in the construction industry. Uses OSHA standards to emphasize those areas in construction that are the most hazardous.

Tuition: \$676
Dates: 5/24/99 - 5/29/99

501 Trainer Course in Occupational Safety and Health Standards for General Industry

Teaches how the provisions of the *OSH Act* may be implemented in the workplace. Includes an introduction to OSHA's general industry standards and an overview of the requirements of the more frequently referenced standards.

Tuition: \$676
Dates: 5/3/99 - 5/7/99

521 OSHA Guide to Industrial Hygiene

Focuses on industrial hygiene practices and related OSHA regulations and procedures. Includes permissible exposure limits, OSHA health standards, respiratory protection, engineering controls, hazard communication, OSHA sampling procedures and strategy, workplace health program elements, and other industrial hygiene topics.

Tuition: \$676
Dates: 5/10/99 - 5/14/99

600 Collateral Duty Course for Other Federal Agencies

Teaches how the provisions of the *OSH Act*, Executive Order 12196, *29 CFR 1960*, and *29 CFR 1910* may be implemented in the workplace and how to effectively assist agency safety and health officers in inspection and abatement efforts.

Tuition: \$598
Dates: 5/3/99 - 5/7/99

601 Occupational Safety and Health Course for Other Federal Agencies

Designed for full-time federal agency safety and health officers or supervisors assigned responsibilities under Executive Order 12196 and *CFR 1960*.

Tuition: \$1,378
Dates: 3/22/99 - 4/2/99

To register for courses or to obtain a training catalog, write the OSHA Training Institute, 1555 Times Drive, Des Plaines, IL 60018; or call (847) 297-4913. See also **Training and Registration** on OSHA's website at www.osha.gov.



OSHA Training Institute Education Centers

The OSHA Training Institute also has a program for other institutions to conduct OSHA courses for the private sector and other federal agencies. These include Eastern Michigan University-United Auto Workers, Ypsilanti, MI, (800) 932-8689; Georgia Technological Research Institute, Atlanta, GA, (800) 653-3629; Great Lakes OSHA Training Consortium, St. Paul, MN, (800) 493-2060; Keene

State College, Manchester, NH, (800) 449-6742; Maple Woods OSHA Training Center, Kansas City, MO, (800) 841-7158; National Resource Center for OSHA Training, Washington, DC, (800) 367-6724; Niagara County Community College, Lockport, NY, (800) 280-6742; Red Rocks Community College and Trinidad State Junior College, Lakewood, CO, (800) 933-8394; The National

Safety Education Center, DeKalb, IL, (800) 656-5317; Texas Engineering Extension Service, Mesquite, TX, (800) 723-3811; University of California, San Diego, CA, (800) 358-9206; and University of Washington, Seattle, WA, (800) 326-7568.

For tuition rates and registration information, contact the institution offering the courses and see also OSHA's website.

201a Hazardous Materials

Location: Great Lakes OSHA Training Consortium	Dates: 4/27/99 - 4/30/99 5/4/99 - 5/7/99
Location: Red Rocks Community College and Trinidad State Junior College	Dates: 5/24/99 - 5/27/99
Location: The National Safety Education Center	Dates: 5/3/99 - 5/7/99
Location: University of Washington	Dates: 4/26/99 - 4/29/99

204a Machinery and Machine Guarding Standards

Location: Niagara County Community College	Dates: 4/26/99 - 4/29/99
Location: Texas Engineering Extension Service	Dates: 4/26/99 - 4/29/99
Location: The National Safety Education Center	Dates: 5/17/99 - 5/21/99

225 Principles of Ergonomics

Location: Eastern Michigan University-United Auto Workers	Dates: 4/26/99 - 4/29/99
Location: Keene State College	Dates: 5/24/99 - 5/27/99
Location: Maple Woods OSHA Training Center	Dates: 5/24/99 - 5/27/99
Location: Niagara County Community College	Dates: 5/3/99 - 5/6/99
Location: Red Rocks Community College and Trinidad State Junior College	Dates: 5/12/99 - 5/14/99
Location: Texas Engineering Extension Service	Dates: 4/12/99 - 4/14/99
Location: The National Safety Education Center	Dates: 5/24/99 - 5/26/99

226 Permit-Required Confined Space Entry

Location: Great Lakes OSHA Training Consortium	Dates: 5/5/99 - 5/7/99
Location: The National Safety Education Center	Dates: 4/6/99 - 4/8/99
Location: University of Washington	Dates: 4/5/99 - 4/7/99

309a Electrical Standards

Location: Eastern Michigan University-United Auto Workers	Dates: 5/10/99 - 5/13/99
Location: Maple Woods OSHA Training Center	Dates: 5/3/99 - 5/6/99
Location: National Resource Center for OSHA Training	Dates: 5/17/99 - 5/20/99
Location: University of Washington	Dates: 5/24/99 - 5/27/99

500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry

Location: Georgia Technological Research Institute	Dates: 4/19/99 - 4/23/99 5/24/99 - 5/28/99
Location: Keene State College	Dates: 4/12/99 - 4/16/99 5/3/99 - 5/7/99
Location: Maple Woods OSHA Training Center	Dates: 5/10/99 - 5/13/99
Location: National Resource Center for OSHA Training	Dates: 4/19/99 - 4/22/99 5/17/99 - 5/20/99
Location: Niagara County Community College	Dates: 5/17/99 - 5/20/99
Location: Red Rocks Community College and Trinidad State Junior College	Dates: 4/5/99 - 4/8/99 5/3/99 - 5/6/99
Location: Texas Engineering Extension Service	Dates: 4/12/99 - 4/16/99 4/19/99 - 4/23/99 5/3/99 - 5/7/99 5/10/99 - 5/14/99 5/24/99 - 5/28/99
Location: The National Safety Education Center	Dates: 4/5/99 - 4/9/99 5/10/99 - 5/14/99
Location: University of Washington	Dates: 5/10/99 - 5/13/99



Students of OSHA's machine guarding course at Southwest Education Center tour the NASA Johnson Space Center in Houston, TX.

501 Trainer Course in Occupational Safety and Health Standards for General Industry

Location: Eastern Michigan University-United Auto Workers	Dates: 4/19/99 - 4/23/99 5/17/99 - 5/21/99
Location: Georgia Technological Research Institute	Dates: 5/17/99 - 5/21/99

Location: Keene State College	Dates: 4/19/99 - 4/23/99 5/10/99 - 5/14/99
Location: Maple Woods OSHA Training Center	Dates: 4/12/99 - 4/15/99
Location: National Resource Center for OSHA Training	Dates: 4/5/99 - 4/8/99 5/3/99 - 5/6/99
Location: Niagara County Community College	Dates: 4/12/99 - 4/15/99 5/10/99 - 5/13/99
Location: Red Rocks Community State Junior College	Dates: 4/12/99 - 4/15/99 5/10/99 - 5/13/99
Location: Texas Engineering Extension Service	Dates: 4/5/99 - 4/9/99 4/19/99 - 4/23/99 5/17/99 - 5/21/99
Location: The National Safety Education Center	Dates: 4/19/99 - 4/23/99 5/3/99 - 5/7/99
Location: Red Rocks Community College and Trinidad State Junior College	Dates: 4/12/99 - 4/15/99 5/10/99 - 5/13/99
Location: University of California, San Diego	Dates: 4/12/99 - 4/15/99



502 Update for Construction Industry Outreach Trainers —

Location: Keene State College	Dates: 4/26/99 - 4/28/99
Location: Maple Woods OSHA Training Center	Dates: 4/26/99 - 4/28/99 5/24/99 - 5/26/99
Location: Niagara County Community College	Dates: 4/14/99 - 4/16/99
Location: Red Rocks Community College and Trinidad State Junior College	Dates: 5/17/99 - 5/19/99
Location: Texas Engineering Extension Service	Dates: 5/3/99 - 5/5/99
Location: The National Safety Education Center	Dates: 5/18/99 - 5/20/99
Location: University of California, San Diego	Dates: 5/5/99 - 5/7/99
Location: University of Washington	Dates: 4/14/99 - 4/16/99

503 Update for General Industry Outreach Trainers —

Location: Eastern Michigan University-United Auto Workers	Dates: 4/12/99 - 4/14/99
Location: Keene State College	Dates: 4/28/99 - 4/30/99
Location: Maple Woods OSHA Training Center	Dates: 5/17/99 - 5/19/99
Location: National Resource Center for OSHA Training	Dates: 4/12/99 - 4/14/99
Location: Niagara County Community College	Dates: 4/21/99 - 4/23/99

Location: Red Rocks Community College and Trinidad State Junior College	Dates: 5/19/99 - 5/21/99
Location: Texas Engineering Extension Service	Dates: 4/19/99 - 4/21/99
Location: University of California, San Diego	Dates: 5/10/99 - 5/12/99
Location: University of Washington	Dates: 4/19/99 - 4/21/99

510 Occupational Safety and Health Standards for the Construction Industry

Location: Georgia Technological Research Institute	Dates: 4/5/99 - 4/9/99
Location: Keene State College	Dates: 5/17/99 - 5/21/99
Location: Maple Woods OSHA Training Center	Dates: 4/19/99 - 4/22/99
Location: National Resource Center for OSHA Training	Dates: 4/20/99 - 4/29/99
Location: Niagara County Community College	Dates: 4/19/99 - 4/22/99
Location: Red Rocks Community College and Trinidad State Junior College	Dates: 4/19/99 - 4/22/99
Location: Texas Engineering Extension Service	Dates: 4/5/99 - 4/8/99 4/26/99 - 4/29/99
Location: The National Safety Education Center	Dates: 4/26/99 - 4/30/99 5/10/99 - 5/14/99
Location: University of Washington	Dates: 5/3/99 - 5/6/99

521 OSHA Guide to Industrial Hygiene

Location: Eastern Michigan University-United Auto Workers	Dates: 4/26/99 - 4/30/99
Location: Great Lakes OSHA Training Consortium	Dates: 4/6/99 - 4/9/99
Location: Maple Woods OSHA Training Center	Dates: 4/19/99 - 4/22/99
Location: Niagara County Community College	Dates: 5/24/99 - 5/27/99

600 Collateral Duty Course for Other Federal Agencies

Location: Keene State College	Dates: 4/5/99 - 4/8/99
Location: National Resource Center for OSHA Training	Dates: 5/3/99 - 5/6/99
Location: The National Safety Education Center	Dates: 4/19/99 - 4/23/99
Location: University of California, San Diego	Dates: 5/17/99 - 5/20/99 JSHQ

What's Next? Where Do We Go from Here?

by Anne Crown-Cyr



In 1998, OSHA accomplishments reflected a lot of activity and a new direction—cooperative partnership. So, what's ahead for OSHA? Recently, OSHA Assistant Secretary Charles N. Jeffress took time to answer some questions about his plans for the agency.

Q What are OSHA's top priorities for 1999 and beyond?

A As you know, we continue to move forward under our 5-year strategic plan to (1) reduce workplace injuries and illnesses, (2) change workplace culture to focus on safety, and (3) increase

public confidence in our efforts to achieve our mission. To accomplish these three primary objectives, OSHA will be focusing on strong enforcement, improved rulemaking, creative partnership, expanded education and outreach, and strategic management.

Q How will OSHA go about achieving these ambitious goals?

A We will continue to emphasize partnership and safety and health program management. We are looking for results and new strategies to reduce injuries and illnesses among American workers. In enforcement, for example, we traditionally have looked only for violations of OSHA rules. Our goal was to conduct a set number of inspections and cite for violations. Now our goal is to do whatever it takes to send every worker home whole and healthy at the end of every workday. This includes examining an employer's safety and health program and advising how to strengthen the program to reduce injuries and illnesses—a systems approach. Ensuring employee safety and health is an integral part of building a bridge or manufacturing a car, because it's doable and it's profitable—safety pays.

Q Does this mean that OSHA will be less of an enforcer and more of a partner in safety and health?

A It means OSHA must continue to enforce safety and health regulations to avoid accidents and fatalities while at the same time offering employers and employees the assistance they need to excel in workplace health and safety. These two aren't mutually exclusive. We want all employers to protect their workers. We'd like to find and help employers who need to improve. When we target OSHA interventions, we need to zero in on employers who most need our help—those with the highest injuries and illnesses. We'll still have strong enforcement to make sure that employers understand and abide by safety and health regulations, but we want to show them how to prevent accidents and injuries and maintain a safer workplace. So, we'll continue to emphasize the importance of safety and health programs through consultation, VPP,¹ technical assistance, and partnership.

Q What is OSHA doing to target its enforcement?

A Under our data initiative, we have collected establishment-specific injury and illness information from approximately 80,000 establishments throughout the nation. Using these data, in 1998, we targeted inspections to a pool of 3,400 employers in 99 industries with injury and illness rates at or above the national average for their industries. In 1999, we will continue this

focus on the most dangerous workplaces. We also will be revising the silica national emphasis program and expanding the lead in construction program to general industry to help increase worker protection in these areas.

Q What about partnerships? Will we be doing more in this area?

A We continue to seek partnerships in all parts of our program—enforcement, standards-setting, and education. We seek cooperation from businesses, labor unions, trade associations, and academia to leverage our resources across the board. For instance, we want to involve the regulated community in the standards development process well **before** writing the regulatory text of a proposal. We are doing this for metal working fluids through an advisory committee that will make recommendations based on the comments and concerns of our constituencies. We held many sessions with stakeholders in developing the safety and health programs and ergonomics proposals. And we will want to look at additional ways to develop and propose standards both through stakeholder participation and internal mechanisms.

“... OSHA will be focusing on strong enforcement, improved rulemaking, creative partnership, expanded education and outreach, and strategic management.”

— Charles Jeffress

¹ Voluntary Protection Programs. OSHA's VPP is a cooperative effort among labor, management, and government that requires worksites to have safety and health programs that exceed OSHA standards. For more information on this and other OSHA programs, visit the agency website at www.osha.gov.

“...we would like to see everything that we do—standards, enforcement, training, and education—result in a culture change for both employers and employees. We want to teach people to think and work safely.”

— Charles Jeffress

Q What are the hot regulatory issues for 1999?

A Our two major priorities for this year are ergonomics and safety and health programs. As you know, we set up a number of stakeholder meetings throughout the country to discuss and gather information on the “best practices” in ergonomics. We will have a proposal this year.² A safety and health program rule also is a priority because we believe that a good safety and health program is a fundamental obligation of every American business.

Q What about recordkeeping?

A Accurate data are critical for OSHA and for employers and employees. Reviewing workplace injury and illness data helps businesses identify and solve problems. We also use data to target interventions. So we want to make our recordkeeping forms, our definitions of work-related injuries and illnesses, and our forms’ instructions much clearer. We plan to publish new rules in late spring to take effect on January 1, 2000. That will give us the balance of 1999 to provide outreach and training for employers and employees on recordkeeping issues. We want to make sure everyone understands how to accurately record their on-the-job experience.

Q How will education and outreach tie into these goals?

A Ultimately, we would like to see everything that we do—standards, enforcement, training, and education—result in a culture change for both employers and employees. We want to teach people to think and work safely. So, we will continue with conferences, speeches, training, publications, and other products to get the message out. In addition, we will have special outreach campaigns for major issues like ergonomics and safety and health programs. To assist with this effort, President Clinton has proposed to the Congress funding to hire an OSHA compliance assistance specialist in every federal OSHA area office in the country. We want to put safety and health training within reach of every American business. [JSHQ](#)

*Cyr, editor of **Job Safety & Health Quarterly**, is a public affairs specialist in OSHA’s Office of Public Affairs, Washington, DC.*

² See article on pages 17-19 in this issue.

OSHA's Ergonomics Standard— A Work in Progress

An interview with David Cochran,
OSHA Special Assistant for Ergonomics

by Susan Hall Fleming



David Cochran, a professor of industrial engineering on loan to OSHA from the University of Nebraska, is the chief ergonomist on the team developing OSHA's ergonomics program standard.

Q How far along is OSHA in developing its ergonomics program standard?

A The agency has prepared a draft regulatory text for the standard and some explanatory information to accompany it. We have shared that draft with small business representatives as required by the *Small Business*

Regulatory Enforcement Fairness Act (SBREFA).¹ At the same time, because there has been extensive public interest in this issue, we made this early draft available on OSHA's ergonomics page on our website at www.osha.gov.

I want to emphasize that this is a *draft* document. It's not the final product, but rather a "work in progress." We will be making additional changes in the proposal in response to suggestions from the small business panel and our own ongoing analyses. In fact, even this early draft has been through more than 20 revisions within the agency as our team has sought to make it as simple and clear as possible. We plan to publish a formal proposal in the *Federal Register* late this summer.

Q Who does the proposal cover?

A The scope of the standard has been one of the most difficult issues OSHA has faced in developing this draft regulatory text. We know that more than 600,000 U.S. workers experience work-related

"We know that more than 600,000 U.S. workers experience work-related musculoskeletal disorders (MSDs) each year."

— David Cochran

musculoskeletal disorders (MSDs) each year.² And more than one-third of all lost-workday injuries and illnesses in the U.S. are related to overexertion or repetitive motion on the job.

When we began this process about 2 years ago, OSHA said the first phase would cover general industry. Further, the agency promised to focus on those areas where the risk is great and solutions are well understood. We want to be sure we zero in on those specific jobs where there are problems, but minimize the impact on companies where the risk of injury is low.

¹Enacted by the Congress on March 29, 1996 to help small businesses. See information on the Small Business Administration's website at www.sba.gov.

²Based on OSHA's analysis of Bureau of Labor Statistics' injury and illness data for 1996.



Lifting tasks need to be designed to avoid worker back and shoulder injuries. (Improper lifting shown in photo.)

Our data indicate that 65 percent of MSDs occur in two areas: manual handling and manufacturing production operations. Those we definitely want to cover. Employment in these areas accounts for only 25 percent of all private sector employees.

To address MSDs that occur beyond these two areas, OSHA is proposing to include workplaces whose employees experience one or more work-related MSDs after the effective date of the standard. This is not as proactive as we would like to be, but at the same time, this approach corresponds with good industry practice, and it avoids placing an extra burden on companies with no injured workers.

Q What are the next steps in developing the rules?

A Based on the comments we receive from the small business representatives, we will revise the draft regulatory text and develop a preamble and supplementary analyses. This package goes to the

Department of Labor for review and then on to the Office of Management and Budget (OMB). OMB review takes a minimum of 3 months. After any revisions necessary following OMB review, we will publish the proposal in the *Federal Register*.

The publication of the proposal in the *Federal Register* will open the public comment period; formal public hearings at several locations around the country will follow. Anyone can testify at these hearings and any witness can question other witnesses. OSHA plans an extensive effort to obtain public input on the proposal to develop the best possible standard.

Q Will there be more stakeholder meetings?

A We're not planning any additional stakeholder meetings at this time. We're making the draft text available as we move through the SBREFA process, and there will be ample opportunity for public input through the comment period following publication of the proposal. In addition, the public hearings offer a forum for a full, open discussion of all the issues surrounding protection of workers from MSDs. Later in the spring we hope to meet informally with companies that have instituted ergonomics programs following OSHA inspections to discuss their experiences.

Major Elements of an Ergonomics Program

- Management leadership and employee participation
- Hazard identification and information
- Job hazard analysis and control
- Training
- Medical management
- Program evaluation

Selected Resources on Ergonomics

From OSHA

These and other materials are available online under **Publications** and **Index** (*Ergonomics*) on OSHA's website at www.osha.gov.

- *Ergonomics Program Management Guidelines for Meatpacking Plants*, OSHA 3123
- *Ergonomics: The Study of Work*, OSHA 3125.
- *Preventing Work-Related Musculoskeletal Disorders*, OSHA Fact Sheet
- *Working Safely with Video Display Terminals*, OSHA 3092
- *Ergonomic Programs That Work* (video) (Available from the National Technical Information Service, National Audiovisual Center, for \$55. Phone (703) 605-6186 to order.)

From Others

- *Elements of Ergonomics Programs: A Primer Based on Workplace Evaluations of Musculoskeletal Disorders (MSDs)*, NIOSH Publication No. 97-117.
- *Musculoskeletal Disorders (MSDs) and Workplace Factors—A Review of Epidemiological Evidence for Work-Related MSDs of the Neck, Upper Extremities, and Low Back*. (Both publications available from the National Institute for Occupational Safety and Health, Centers for Disease Control at www.cdc.gov/niosh/pubs.html.)
- *Worker Protection: Private Sector Ergonomics Programs Yield Positive Results* (HEHS 97-163). (Available from the General Accounting Office's website at www.gao.gov.)
- *Work-Related Musculoskeletal Disorders: A Review of the Evidence* (Available from the National Academy of Sciences at www.nas.gov.)

Q What additional information is available from OSHA on ergonomics?

A OSHA has a wide variety of fact sheets, news releases and statements, publications, and background information available on its website, including the draft regulatory text and explanatory information. The agency offers links to other helpful ergonomics websites as well as ergonomics standards from states and foreign countries.

Two items available on the website may be especially helpful. One is OSHA's *Ergonomic Program Management Guidelines for Meatpacking Plants*, which describes an effective ergonomics program in detail. Another is the NIOSH publication, *Elements of Ergonomics Programs*. This is a primer on how to develop an ergonomics program and includes specific recommendations based on NIOSH health hazard evaluations for a variety of industries.

OSHA and the National Institute for Occupational Safety and Health are co-sponsoring a national ergonomics best practices conference in Houston, TX, March 9-11. Proceedings from that conference should be available on OSHA's website later this year.

To register or obtain more information on the upcoming ergonomics conference and pre-conference workshops, please contact the Institute of Industrial Engineers Customer Service, 25 Technology Park, Norcross, GA 30092-2988, (800) 494-0460 or (770) 449-0460.

For more information on ergonomics and other OSHA activities, visit our home page at www.osha.gov. **JSHQ**

Fleming is a public affairs specialist in OSHA's Office of Public Affairs, Washington, DC.

New Training Requirements to Save Lives and Dollars

by Edwin Bowers



Citing the potential savings in injuries, lives, and money, OSHA Administrator Charles N. Jeffress announced new government requirements for operators of fork lifts and other powered industrial trucks. The new standards call for new safety training requirements for drivers and precise recordkeeping by employers.

“An estimated 11 deaths and 9,500 injuries will be prevented and \$135 million in employer costs will be saved annually as a result of these new regulations,” Jeffress notes.

Workers use powered industrial trucks to carry, push, pull, lift, and stack or tier material. The purpose of the standards is to ensure that operators of these vehicles are properly trained in their use and understand potential hazards and how to prevent them. OSHA data show that, in 1997, 110 workers died and 95,000 were injured in accidents involving powered industrial trucks.¹

¹ See *Federal Register* 63(230): 66248, December 1, 1998.

The new standards, which will affect at least 1.5 million workers, cover operators in general industry and in the construction and maritime (shipyards, longshoring and marine terminals) industries. The standards do not cover vehicles used for earth moving or over-the-road hauling.

The dangers of powered industrial truck operations vary depending on the type used. For example, a counterbalanced high lift rider truck is more likely to be involved in a falling load accident than a motorized hand truck because it can lift a load much higher than a hand truck. The methods or means of preventing accidents and protecting an employee also vary for different types of trucks. For instance, to protect the driver of a rider truck in a tip-over accident, the operator should be trained to remain in the operator's position and to lean away from the direction of the fall to minimize the potential for injury.

The standards require a training program based on the trainee's prior knowledge and skill, types of powered industrial trucks he or she

will be using, hazards in the workplace, and the operator's demonstrated ability to safely handle a powered industrial truck. The employer must ensure that the employee is competent to operate a powered industrial truck, as demonstrated by successful completion of a training program and evaluation. Also, the employer must certify that the employee has been trained and evaluated.

The training must include formal instruction (e.g., lecture, discussion, interactive computer learning, videotape, written material); practical training (demonstrations performed by the trainer and practical exercises performed by the trainee); and evaluation of the operator's performance in the workplace. Also, sufficient evaluation and refresher training must be conducted to enable the employee to retain and use the knowledge and skills needed to safely operate the equipment. An evaluation of each operator's performance must be conducted at least every 3 years.



Photo on left: OSHA Assistant Secretary Charles Jeffress thanks team members for finalizing the powered industrial truck training standard. From left to right: Mike Moore and Richard Sauger, OSHA's Directorate of Safety Standards Programs; Assistant Secretary Jeffress (seated); Charles Gordon, OSHA project attorney; and William Montweiler, Executive Director, and Larry Borre, President, Industrial Truck Association.

Photo on right: OSHA and Industrial Truck Association officials gather in front of the Francis Perkins Building to commemorate the release of new safety training guidelines for industrial truck safety.

Refresher training is required if: (1) the operator is involved in an accident or near-miss incident; (2) the operator is observed operating the vehicle in an unsafe manner; (3) the operator, after evaluation, needs additional training; (4) there are changes in the workplace that could affect safe operation of the truck; or (5) the operator is assigned to a different type of truck.

Training allows the employer to make sure that employees have the skill and knowledge they need to do the jobs correctly and safely, thereby reducing the number of accidents that result in fatalities and serious injuries.

“OSHA listened carefully to the recommendations of experienced persons, in comments and at the

hearings, so that these new training requirements will substantially reduce deaths and serious injuries,” says OSHA project attorney, Charles Gordon.

Almost 1 million powered industrial trucks are in use in the industries covered by the OSHA standards. Of the estimated \$135 million in annual savings, \$83 million represents savings in direct costs such as medical expenditures, workers' compensation, and value of lost output. OSHA estimates another \$52 million annual savings in reduced accident-related property damage. The total estimated costs of compliance are \$16.9 million annually.²

² See *Federal Register* 63(230): 66263, December 1, 1998.

The new standards go into effect March 1. Training and evaluation of employees hired before December 1, 1999, must be completed by the December date. Training and evaluation of employees hired after December 1, 1999, must be completed before the employee is assigned to operate the equipment.

For more information on this standard and other topics, visit OSHA's website at www.osha.gov.

JSHQ

Bowers is a public affairs specialist in OSHA's Office of Public Affairs, Washington, DC.

State Programs Address Specific Workplace Hazards

The second in a series of articles on how state safety and health plans protect American workers.

Adapted from *Grassroots Worker Protection*, 1998 Report of the Occupational Safety and Health State Plan Association (OSHSPA).

The 25 states and territories operating state plan programs share a common goal—a safe and healthful workplace for every American worker. These state and territorial programs cover 40 percent of the nation’s work force by conducting enforcement inspections and providing consultative services. They also conduct free training and education programs to teach and encourage employers and employees to work in a safe and healthful manner.

States and territories may elect to develop their own unique occupational safety and health program. These “state plans” are approved and monitored by the federal Occupational Safety and Health Administration (OSHA), which provides up to 50 percent of an approved plan’s operating costs. A state plan program, including the job safety and health standards that employers must meet, has to be “at

least as effective” as federal OSHA standards and regulations. Benefits of a state plan include coverage for public sector (state and local government) employees, and the opportunity to promulgate unique standards or to develop innovative programs that address the types of hazards specific to each state’s workplaces.

Individual states and territories have promulgated standards addressing the specific hazards found in their local industry, often involving labor and management representatives in the process. Frequently, the regulatory process can work more quickly at the state level. Standards set by individual state plan programs have sometimes been a model and a forerunner of standards that are later adopted or expanded by federal OSHA at a national level. The following examples show how state plans and territories have enhanced the safety and health of America’s work force.



Agriculture

In 1983, *North Carolina* adopted a field sanitation standard covering migrant and seasonal farm workers in response to the promulgation of a federal standard. North Carolina's standard, however, provides coverage regardless of the number of employees and requires pre-occupancy inspection of all migrant labor camps. *Virginia's* field sanitation standard for agriculture ensures the availability of drinking water regardless of the number of employees. *Arizona* has a standard that bans the use of hoes with handles shorter than 48 inches. Since the rule went into effect in 1985, the short-handled hoe—which was common in the early 1980s and caused widespread back problems among agricultural workers—has almost become extinct. *California, New Mexico,* and *Wyoming* also have standards prohibiting the use of short-handled hoes.

Working with industry, labor, management and the state legislature, *Washington* changed its agriculture standards, providing the

same level of protection to farm workers as in other industries. Legislation in 1996 required the State Department of Agriculture and the Department of Labor and Industries to coordinate the adoption, implementation, and enforcement of a common set of agricultural worker protection standards relating to pesticides. Both agencies adopted the federal Environmental Protection Agency (EPA) standards for pesticides. Through a memorandum of understanding, these two agencies—along with the Washington Department of Health—coordinate workplace pesticide inspections. WISHA¹ has responsibility for enforcing the worker protection standards where an employer/employee relationship exists. The Department of Agriculture enforces all other components of the pesticide label.

Oregon enacted a law in 1995 establishing an inspection exemption program for small agricultural employers. By participating in

¹ Washington State Department of Labor and Industries, Industrial Safety and Health Program.



consultation and training activities sponsored by such entities as OR-OSHA,² insurance carriers, industry associations, university outreach programs, or private consultants, employers are exempt from routine scheduled inspections. The law established an Agricultural Advisory Committee that assists in reviewing the state-specific standards for the agricultural industry, and how they are administered. The State of Oregon returned registration of farm labor camps to OR-OSHA in 1995 and also transferred the administration of a farm worker housing tax credit program aimed at improving labor camp conditions.

Cold Weather Shelter

Because *Minnesota's* climate can adversely affect working out-of-doors at certain times during the year, Minnesota adopted a unique jobsite shelter standard in 1978 requiring employers to provide heated privies and appropriate shelters for employees to eat lunches and change clothing when working in cold weather.

Confined Space

In 1973, *Washington* developed a confined space standard covering all industries. *Maryland's* standard, adopted in 1976, also covers all workers. *Kentucky's* standard applies to construction as well as general industry operations. *Utah* developed confined space entry requirements for farming operations in 1987. Before OSHA adopted its 1993 permit-required confined space standard, *Virginia* had maintained confined space standards for the general, construction, and telecommunications industries since 1987. Virginia also adopted federal OSHA's confined space stan-

dard for general industry. In 1988, *Minnesota OSHA* (MNOSHA) adopted a confined space entry standard applicable to both construction and general industry, which classifies all confined spaces from Class I (the least hazardous) to Class III (the most hazardous). Class I permits are issued on an annual basis, and Classes II and III at the time of entry.



² Oregon Occupational Safety and Health Division, Department of Consumer and Business Services.

Construction

Nevada adopted a regulation requiring a preconstruction conference for certain high-hazard construction projects, and adopted the 1989 American National Standards Institute (ANSI) standard for steel erection safety. *Virginia's* construction sanitation standard assures that construction workers receive a level of protection similar to that provided to migrant and farm workers under the field sanitation standard. *Kentucky* adopted a bloodborne pathogens standard that applies

protective measures to blood exposures on construction sites as well as general industry locations.

Cranes and Derricks

In *Oregon*, certification is required for operators of cranes that are five tons or more that are used in construction. *Maryland* has a unique standard for personnel platforms suspended from cranes, derricks, and hoists in general industry.

Ergonomics

California adopted the first ergonomic standard in the nation, effective July 3, 1997. The regulation, which is legislatively mandated, applies to businesses with 10 or more employees. It does not impose an economic or regulatory burden on worksites where there are no reported problems, but is only triggered when at least two employees performing identical tasks have been diagnosed with repetitive motion injuries (RMIs) within 12 consecutive months. If that occurs, the employer must evaluate the affected worksite, control the exposures that cause RMIs, and provide training to employees. A copy of the standard is available on the Internet at www.dir.ca.gov/DIR/OS&H/OSHSB/Ergonomics.html. Cal/OSHA's Consultation Service is providing information and training to employers on how to comply with the standard and minimize work-related RMIs.

Although they do not have an ergonomic standard, *Minnesota* was one of the first states to examine and cite ergonomic problems in the workplace. They established an ergonomics team to conduct comprehensive inspections of selected facilities including a thorough review of injury and illness records, a complete walkaround



A state plan program, including the job safety and health standards that employers must meet, has to be “at least as effective” as federal OSHA standards and regulations.

inspection of the facility, and abatement recommendations. Minnesota’s current ergonomics special emphasis program for 1997-98 was nursing homes, with a goal of identifying and reducing occupational hazards common to nursing homes through education, outreach, and inspection. The ergonomics team developed written “Guidelines for Resident Handling in Long-Term Care Facilities” to assist health care employers in preventing/reducing the risk of musculoskeletal injuries. The team conducted outreach sessions for the industry during fall 1997. In 1998, the team began conducting random nursing home inspections to assess compliance with OSHA standards and the employers’ efforts to reduce the risk of musculoskeletal injuries.

North Carolina implemented a Cooperative Assessment Program for Ergonomics after conducting 40 inspections based on ergonomic-related complaints. The program allows employers to negotiate agreements resolving ergonomic hazards before citations are issued. The agreements preclude

the necessity of lengthy inspections yet provide the same assurance of abatement which would be achieved through a citation. The state has also taken a giant step toward reducing the incidence of cumulative trauma disorders through the creation of the Ergonomics Resource Center. The center supplements compliance activity which is often the most protractive method of eliminating ergonomic stressors in the workplace. In-plant consultative assistance, including education and training, helps reduce repetitive motion disorders among workers in a wide variety of occupations. The Ford Foundation and the John F. Kennedy School of Government at Harvard University recognized the center as a finalist in the 1996 Innovations in American Government Awards program. Currently, North Carolina has initiated the rulemaking process to develop its own state-specific ergonomics standard.

In 1995, *Oregon* established a unique worksite redesign program providing grants from workers’ compensation funding sources to

conduct research and development in public and private sector workplaces. This joint effort of the Workers' Compensation Division and OR-OSHA uses the ergonomic technical and prevention skills in OR-OSHA to assist employers in solving real workplace injury and illness problems in ways that can be shared with other employers in the same or related industries.

Fall Protection

Washington formed the Construction Advisory Committee with business, labor, and government members in 1988. The CAC helped produce an industrywide fall protection standard, embraced by all parties. In less than 3 years, compensable claims attributed to "falls from elevation" dropped significantly. The initial year's 19-percent reduction moved falls from elevation from the second largest category of compensable claims to third, decreasing the total of compensable claims by 10 percent overall, and demonstrating the significant impact of partnerships on workplace safety and health.

Oregon similarly involved stakeholders prior to rule adoption and established a common set of rules for all industries, with special alternatives for unique situations such as roofing. *Kentucky* promulgated unique standards for fall protection in general industry, not limited to construction. *North Carolina's* fall protection requirements prohibit most "free climbing" in the electric power industry, except for climbing wooden poles in specific situations.



Hazard Communication—Right-to-Know

Many states had right-to-know laws before OSHA implemented the Hazard Communication standard in 1984. Although the federal standard initially covered only manufacturing (and later expanded), in *Tennessee*, labor, management, Tennessee OSHA (TOSHA), and the Tennessee General Assembly cooperated to expand coverage to all workers. The standard requires initial and annual retraining of employees, information to be given to TOSHA and to the public upon request, and notification and warning to firefighters to allow better response to emergencies where hazardous chemicals are involved. TOSHA personnel visited all employers in Standard Industrial Classification (SIC) codes 20-39 who failed to submit chemical lists as required. With this additional effort, more than 98 percent of employers responded.

Minnesota's employee right-to-know law, adopted in 1983, covers more than just hazardous substances. It covers harmful physi-

cal agents, such as noise, heat, ionizing and non-ionizing radiation, and infectious agents. Minnesota has required training on all infectious agents, including bloodborne pathogens, since 1983. *Alaska's* hazard communication rules cover noise and radiation in addition to workplace chemicals, including eight hazardous physical agents. Alaska also publishes physical agent data sheets describing the hazards for employers. *Michigan* covers piping systems containing hazardous substances, and requires employers to post employee notices to advise where material safety data sheets (MSDSs) are kept, who to contact to review MSDSs, and who to notify when a new chemical hazard is introduced in the workplace. From its inception in 1988, *Iowa's* right-to-know legislation covered all sectors, including construction. It also covers right to know for the general public and in public emergency response. *California* maintains an information system that alerts employers and workers to the dangers of toxic substances in the workplace.

High Voltage

Vermont's standard for electric power generation, transmission, and distribution requires two qualified lineworkers whenever energized lines and equipment are involved. There are limited exceptions for work done in emergency situations and from bucket trucks. The standard also requires contractors to certify their lineworkers as qualified and to provide this information to utilities prior to starting work. The *Virginia Overhead High Voltage Line Safety Act* requires employers to work with the owners of overhead power lines to de-energize or guard powerlines against accidental contact while work is being conducted

around such lines. This standard also includes employee training requirements.

Lead

In 1983, *Maryland* adopted a comprehensive lead-in-construction standard, which is combined with information, education, and enforcement to protect construction workers. The state also requires laboratories to report high blood-lead levels. In 1991, *Utah* initiated rulemaking to include construction work in its existing lead standard, so that workers in the construction and general industries would have the same level of protection. That same year, the Na-

Individual states and territories have promulgated standards addressing the specific hazards found in their local industry, often involving labor and management representatives in the process.

State Plan Programs Covering Both Private and Public Sector

(21 states and two territories)

Alaska	North Carolina
Arizona	Oregon
California	Puerto Rico
Hawaii	South Carolina
Indiana	Tennessee
Iowa	Utah
Kentucky	Vermont
Maryland	Virgin Islands
Michigan	Virginia
Minnesota	Washington
Nevada	Wyoming
New Mexico	

State Plan Programs Covering Public Sector Only

(Private sector coverage provided by Federal OSHA)

Connecticut	New York
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States Covered by Federal OSHA

(29 states and the District of Columbia)

(Private sector only-The **OSH Act** does not provide the authority to cover public sector employees.)

Alabama	Missouri
Arkansas	Montana
Colorado	Nebraska
Connecticut	New Hampshire
Delaware	New Jersey*
District of Columbia	New York
Florida	North Dakota
Georgia	Ohio
Idaho	Oklahoma
Illinois	Pennsylvania
Kansas	Rhode Island
Louisiana	South Dakota
Maine	Texas
Massachusetts	West Virginia
Mississippi	Wisconsin

* State plan application in process.

tional Institute for Occupational Safety and Health (NIOSH) initiated a health hazard evaluation study of lead exposure among lead burners at a Utah construction site. The report findings, published in the *Morbidity and Mortality Weekly Report*,³ reaffirmed the need to protect workers in construction and general industry from the dangers of lead exposure. When federal OSHA promulgated a standard covering lead in construction in 1993, Utah adopted the federal rule.

Virginia has also adopted legislation and a regulation to monitor lead contractors' compliance with state and federal requirements for the safe removal and disposal of lead.

Logging

Because of the serious hazards found in the logging industry, *Michigan, Oregon, Washington, and Wyoming*, which have major logging operations, developed comprehensive logging safety rules in the early 1970s. In 1995, federal OSHA expanded its rules to apply to all logging operations instead of just pulpwood logging. In addition, *Alaska* has safety codes for highline, tractor, and helicopter-logging.

Off-Highway Vehicles

Recognizing that the hazards of off-highway vehicles exist in industrial settings as well as on construction sites, *Kentucky* adopted safety standards for off-highway motor vehicles and equipment used in general industry locations.

³ "Lead exposures among lead burners," *MMWR* 41(17):307, May 1, 1992; and U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health (NIOSH), *Preventing Lead Poisoning in Construction Workers, Hazard Alert*, Publication No. 91-116a, April 1992, 19 pp. (available online at www.cdc.gov/niosh/pubs.html.)



Petroleum

In response to local needs, several states with significant oil drilling operations adopted regulations regarding well drilling. *Utah* adopted standards in 1980 that cover all types of oil and gas well drilling and servicing. In response to local needs, *Wyoming* promulgated regulations in 1970 covering oil and gas well drilling and servicing, and expanded coverage in 1984 to include special servicing. *Alaska* also has developed unique safety codes for the petroleum industry.

Telecommunications

The number of towers erected has increased tremendously over the past several years due to use of cellular phones and pagers. Recognizing the need for specific rules/guidelines to address this unique industry, *Michigan* has established an advisory committee of employers and employees to consider draft rules for tower erection.

NOTE: This material is excerpted with permission from *Grassroots Worker Protection—How State Programs Help to Ensure Safe and Healthy Workplaces*, 1998 OSHSPA report produced by the Washington State Department of Labor and Industries' WISHA Services Division under the direction of Steve Cant, CIH, chair of the OSHSPA Board of Directors. Copies of the full report are available online at WISHA's website at www.wa.gov/lni/wisha/ and through links on OSHA's website at www.osha.gov. [JSHQ](#)

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NACOSH—What’s in a Name?

by Joanne Goodell

NACOSH, ACCSH, MACOSH, FACOSH! Gosh! What’s this bureaucratic lingo? More acronyms for sure, but these represent the committees that advise the Occupational Safety and Health Administration (OSHA) on myriad safety and health issues. FACOSH, the Federal Advisory Committee on Occupational Safety and Health, looks at issues specific to federal employers and employees; MACOSH, the Maritime Advisory Committee on Occupational Safety and Health, focuses on the maritime industry; and ACCSH, the Advisory Committee on Construction Safety and Health, deals with safety and health in the construc-

tion industry.¹ One committee, in particular, the National Advisory Committee on Occupational Safety and Health (NACOSH), looks at a broad range of policy issues from TB to hazard communication for workplaces in general industry.

When the *Occupational Safety and Health Act of 1970*² became law, it created several new agencies: The Occupational Safety and Health Administration (OSHA) within the Department of Labor (DOL); the National Institute for Occupational Safety and Health (NIOSH) within the Department of Health and Human Services (HHS), formerly the Department of Health, Education, and Welfare; and the Occupational Safety and Health Review Commission, an independent entity. The legislation also established NACOSH to “advise, consult with, and make recommendations to the Secretary of Labor and the Secretary of HHS.”

¹ See also, Jim Boom, “ACCSH—OSHA’s Construction Committee,” *Job Safety & Health Quarterly* 9 (4):37, Summer 1998.

² P.L. 91-596, December 29, 1970; as amended by P.L. 101-552, §3101, November 5, 1990.

“We look for people who are involved in occupational safety and health at both the company level and at the association level, so that individual members can represent not just their own safety and health experience but that of as many others as possible.”

—Frank Frodyma, Deputy Director
of OSHA’s Policy Directorate



OSHA Assistant Secretary Charles Jeffress (left) and NIOSH Director Linda Rosenstock respond to questions from committee members.

Under the *Federal Advisory Committee Act*,³ committees must be rechartered every 2 years, even though NACOSH is classified as a “statutory” advisory committee. Members serve 2-year terms, although it is quite common for members to be appointed to subsequent terms. The last reappointment of the committee took place in the fall of 1998, when the Secretary of Labor Alexis M. Herman reappointed seven members and appointed five new members.

A total of 12 members with expertise in occupational safety and health serve on NACOSH; 8 selected by OSHA and 4 by NIOSH. The membership consists of four public representatives (two selected by NIOSH), two management representatives, two labor representatives, two safety representatives, and two health representatives (both selected by NIOSH). The law specifies that one of the public representatives serves as the chair.

Over the years, the public has shown a lot of interest in serving on the committee or nominating others to do so. For example, OSHA received more than 600 nominations for membership to NACOSH in 1994. According to Frank Frodyma, Deputy Director of OSHA’s Policy Directorate, “The selection of committee members is a really difficult task because we try to represent all of industry—both large and small, employers and workers, health and safety professions, state plan organizations, academia, and the general public—with just 12 people of as diverse backgrounds as possible. We look for people who are involved in occupational safety and health at both the company level and at the association level, so that individual members can represent not just their own safety and health experience but that of as many others as possible.”

The committee usually meets four or five times a year in 1- or 2-day sessions announced in advance

and open to the public. In addition, smaller groups of committee members get together in informal work sessions to prepare issues to be presented before the full committee. The public is invited to submit written data, views, or comments for consideration by the committee. Because of the need to cover a wide variety of subjects in a short period of time, there is usually insufficient time on the agenda for members of the public to address the committee orally. Any such requests are considered by the chair, however, who determines whether time is available.

Both OSHA Assistant Secretary Charles Jeffress and NIOSH Director Linda Rosenstock are active in committee meetings, provide an overview of significant activities at both agencies, and respond to various questions from committee members, which often lead to lively discussions. Both leaders are actively involved in the planning of each of the meetings, and according to Jeffress, “With the many

³ P.L. 92-463, H.R. 4383, October 6, 1972.

complex issues facing OSHA each day, it helps to get continuing input from a group of people who are recognized as leaders in the various sectors of industry.” Usually, the committee meets in Washington, DC, but at the invitation of Dr. Rosenstock, it also has met at NIOSH’s new laboratory facilities in Morgantown, WV. There committee members toured the facilities and attended a NIOSH-sponsored National Occupational Injury Research Symposium.

Throughout its existence, NACOSH has used a variety of approaches to gather information upon which to base the development of policy recommendations to OSHA or NIOSH. For example, during one meeting where the primary focus was the development of a standard requiring safety and health programs, the committee convened four panels composed of experts representing employers, employees, professional associations, and the insurance industry to discuss their personal experiences with various types of safety and

health programs, forms of employee participation, and what the components of such a standard might be. Members then developed and submitted recommendations to OSHA for consideration.

In late 1995, NACOSH did an indepth review of OSHA’s Hazard Communication Program. NACOSH appointed a work group of four members and added ten specialists representing all facets of industry and of hazard communication. These people met in seven 2-day sessions to review OSHA’s program, and allow anyone in the public to address the committee and make recommendations for any changes or clarifications on the subject. The final report issued by the committee totaled nearly 200 pages and contained a number of recommendations, some of which could be implemented quickly and others that are dependent on actions such as international harmonization of standards.

NACOSH currently has work groups that are studying OSHA’s activities related to ergonomics, performance measurement, strategic planning, and are continuing to follow the development of a safety and health program standard. The committee also plans to form a work group to study OSHA’s standards development process after devoting more full committee meeting time to this subject.

For more information on NACOSH activities, or to find out when the next meeting will take place, visit OSHA’s website at www.osha.gov and select the **Subject Index**, or call the Directorate of Policy at (202) 693-2400, extension 31925. **JSHQ**

Goodell is OSHA’s designated official for NACOSH in OSHA’s Directorate of Policy, Washington, DC.



Committee members review agenda and define goals for their session. Seated from left to right: Bryan Hardin, NIOSH; Kathleen Rest, Committee Chair; and Joanne Goodell, OSHA.

NACOSH Committee Members

The current membership includes a past president of the American Society of Safety Engineers (ASSE); a labor commissioner from one of the “state plan states”; a representative of the Committee on Safety and Health (COSH) groups; representatives of major labor unions, one of whom has been heavily involved in the international harmonization of hazard communication; an employer representative who has been a leader in helping other organizations participate in OSHA’s Voluntary Protection Programs (VPP);* and an academic with expertise in comparative studies of occupational health programs including those of British Columbia, Romania, Poland, and the Netherlands.

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* For more information on VPP, see **Outreach** on OSHA’s website at www.osha.gov, or call OSHA’s Directorate of Federal-State Operations (202) 693-2213.

Millennium Bug Can Affect Workplace Safety and Health

Are you ready for the Year 2000? More importantly, is your technical equipment? On January 1, 2000, every computer—and every computer chip—in the U.S. needs to recognize that we're leaving the 1900s behind. Many need to be reprogrammed, since original coding often used only two digits for the year. This design flaw means that computers may not distinguish whether 00 means 1900 or 2000, which may lead to possible shutdowns, inaccurate data, and faulty calculations. Fixing the problem may be painstaking and labor intensive; not fixing it may be worse. Serious safety and health problems are among the many concerns facing employers, employees, and governments worldwide. OSHA recommends you take time now to address these issues.

What Can Go Wrong

Computer chips are embedded in all kinds of equipment. If you have machinery or production processes that are computer-controlled, this equipment could fail or malfunction after 1999 turns into 2000. Some businesses have computerized information on hazardous materials. Will you be able to access that in the year 2000? What about computer chips programmed to print out routine maintenance messages? Will they work? Or will a system component fail because it wasn't replaced at the proper time?

For example, a power generating station simulated changing the date for a boiler feedwater control loop. The date change caused the feedwater regulating valves to slam shut and initiated the boiler trip logic. If this had not been a test, the plant would have come to a screeching halt. In another example, following testing, a petroleum company realized its offshore rig would shut down because an embedded chip misunderstood the date change.

What You May Want to Evaluate

- | | | |
|---------------|-------------------------------------|--------------------|
| ✓ Controllers | ✓ Air monitoring devices | ✓ Security systems |
| ✓ Alarms | ✓ Hazard communication databases | ✓ Elevators |
| ✓ Lighting | ✓ Heating and air conditioning | ✓ Generators |
| ✓ Robots | ✓ Underground storage tank monitors | |

What You Can Do

- ✓ Check every system to identify time-sensitive logic controls.
- ✓ Evaluate to determine whether computer chips can handle the date change.
- ✓ Fix or replace equipment that could cause problems.
- ✓ Verify that the updated system works properly. [JSHQ](#)

Copies of this "Y2K" fact sheet are available online at www.osha.gov.

Eye and Face Protection for Operations that Create Exposure

1926.102(a)(1)

Rank in Frequency Cited: #19

Rule

Employees shall be provided with eye and face protection equipment when machines or operations present potential eye or face injury from physical, chemical, or radiation agents.

Intent

Approximately 22,000 lost work-time accidents in the construction industry in 10 states from 1985-1989 were due to eye injuries. Metal items (34.5 percent) and wood items (10.7 percent) were the most frequent sources of eye injuries.

The purpose of the standard is obvious—to reduce the number of eye and face injuries. The rule requires employers to provide eye and face protection when there are *potential* hazards to the eye and face related to physical, chemical, or radiation agents. The key word is *potential*. On very few construction sites would there be no potential for falling, flying, or moving objects. Sometimes pieces of debris break off, spring, or eject from objects that are usually intact. Once airborne, there is a potential for eye and face injuries. For example, when stripping wooden form work and a splinter breaks due to the force (energy) of the prying

operation, the splinter might be thrown in the direction of the employee's face. Although these types of events are not everyday occurrences, they can and should be expected because of the nature of construction work. Protection, therefore, must be provided.

Other standards in this Part include 1926.102(a)(2), which specifies that eye and face personal protective equipment (PPE) will meet requirements of ANSI Z87.1-1968 and 1926.102(a)(5), with Table E-1 as a guide to selecting the appropriate protection for listed operations. All spectacle-type glasses listed in Table E-1 require sideshields. A footnote in the table states that spectacles without sideshields are available only when there is possible frontal exposure. Most continuous operations would require sideshields.

Hazards

Struck by flying objects, particles, and chemicals. Probable eye injuries can range from blindness to minor irritation caused by foreign matter in the eye. Probable injuries to the face range from chemical burns caused by splashes to lacerations caused by flying objects.

(Among Other) Suggested Abatements

- Instruct first-line supervisors to continually audit employees to ensure they wear eye and face protection.
- Institute a formal discipline program in workplaces where a problem exists relating to employees not wearing PPE when required.
- Make the wearing of PPE, in accordance with company rules, a specific condition of employment. This has proven to be an effective tool for safety managers (based on conversations with safety managers.)

Selected Case Histories

OSHA's IMIS data¹ did not show violations of this standard contributing to the direct cause of a fatality/catastrophe, but there were numerous, severe lost work-time injuries.

Comments

(1) This rule requires employers to actually provide the eye and face protection to the employees.

(2) This standard was cited in 17 fatality inspections conducted by OSHA in 5 years. [JSHQ](#)

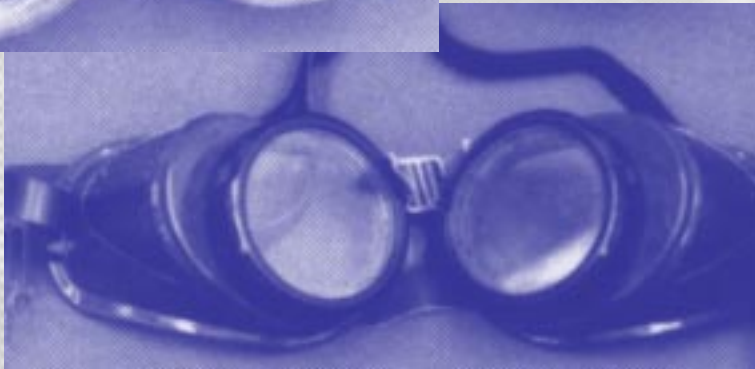
¹ Integrated Management Information Systems. Computerized data entry and information retrieval system designed to collect, process, retrieve, and communicate timely and accurate information on topics such as inspections, standards cited, and fatalities, to name a few.



VIOLATION

IN COMPLIANCE

Types of eye and face protection that are required depending on the operation.



Detach Here

Onsite Consultation Solid Counter Top Manufacturing Facility

From the U.S. Department of Labor
Occupational Safety and Health Administration *SafeWorks* No. 27

Site Survey

A small manufacturer/installer of polyester resin counter tops used primarily in residential new construction requested consultation assistance in dust controls for its manufacturing operations. Workers at the plant cut, shaped, glued, and polished rectangular slabs of resin before delivery to the construction site.

A variety of fixed and portable tools created the dust. The fixed location tools used to manufacture the counter tops—a horizontal belt sander, a table saw, a radial-arm saw, and a miter saw—were connected to an undersized and poorly designed local exhaust ventilation (LEV) system. The powered hand tools used to shape and polish the counter tops did not have any type of LEV and were responsible for most of the dust exposure. The company frequently used compressed air to blow off dust because of the heavy accumulation on the workpieces, which added to the airborne dust levels. To provide general dilution ventilation in the department, the company also used a 48-inch diameter wall fan.

With the wall fan operating, the consultant performed total dust monitoring that revealed concentrations exceeding 80 mg/m³ for employees forming and polishing the counter tops. The nuisance dust permissible exposure limit (PEL) for total dust is 15 mg/m³ based on an 8-hour time-weighted average. As an interim control, the employer provided respirators and eliminated using compressed air to blow off dust.



The consultant also evaluated the effectiveness of traditional types of engineering controls for this facility and found them unsatisfactory. Down-draft tables were determined to be unsatisfactory because of the large flat continuous surfaces that prevented effective control over most of the work piece. The consultant recommended not using a booth due to the odd shapes, heavy weight, and delicate handling requirements of the counter tops. Greatly increasing the general exhaust ventilation would not guarantee reducing exposures to within the PEL, and the large volumes of tempered air required to maintain comfort would increase heating costs substantially in cold weather.

Control Recommendations

The consultant proposed using low-volume/high-velocity (LVHV) source control ventilation attached directly to the powered hand tools.

The consultant helped locate suppliers of the equipment and performance characteristics for the selected system. The system selected

consisted of ten ceiling drops of 1.5-inch flex hoses, shrouds to fit over the dust generating portion of the tools with connections for the hoses, and a dust collector that was placed between the main duct and the special ultra-high pressure fan. Shrouds were available from the tool manufacturers. Vacuuming equipment adaptable to the system also was obtained eliminating the need to “blow” dust off work pieces.

The LVHV system is especially effective where dust is created at very high velocities—such as from belt sanders, routers, and orbital sanders—and worked well at this facility. Indraft velocities to the shrouds exceeded 10,000 feet per minute and virtually eliminated any visible dust from escaping into the workroom air. The average exhaust

volume for the portable tools was only about 100 cubic feet per minute.

Modifying the existing LEV system to include more effective hood designs and increase the exhaust volumes, resulted in improved dust controls for the fixed location tools.

Benefits

As a result of installing the LVHV system and other recommended controls:

- Dust exposures dropped to less than 1 mg/m³—a reduction of 99 percent.
- A respirator program was no longer needed.
- Work quality improved with no loss in production.
- Housekeeping costs were sharply reduced.

- Heating costs declined and employee comfort increased by not using the large wall fan in cold weather.

Source: Michael S. Mosher, CIH, Bureau of Consultative Services, North Carolina Department of Labor, Raleigh, NC. [JSHQ](#)

SafeWorks provides a brief summary of the results of an employer's request for workplace safety and health assistance. Such assistance can identify and help the employer correct workplace hazards, develop or improve an effective safety and health management system, or both. Small business employers can receive this assistance, without cost, under a consultation program funded largely by OSHA and administered by state agencies and universities. Contact the OSHA office in your area for additional information on the consultation programs, or visit OSHA's website at www.osha.gov.

Opening Doors to Ability

The American challenge for the 21st century is to become a nation in which all citizens have the opportunity for full employment. The ability of a diverse work force provides the framework to meet this challenge. Persons with disabilities want to be a vital component of the diverse work force.

We must not overlook the abilities of the 54 million Americans with disabilities. By “opening doors to ability,” employers gain the skills and talents of persons with disabilities.

For more information, contact the President's Committee on Employment of People with Disabilities, 1331 F Street, N.W., Washington, DC 20004-1107, or visit their website at www.pcepd.gov.





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