

JSHQ

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Assistant Secretary's Message



One of my top priorities as administrator of the Occupational Safety and Health Administration is strong, fair, and effective enforcement. Enforcement is the tool that undergirds others such as compliance assistance and partnerships.

The number of federal OSHA inspections has remained fairly steady in recent years. But this year we will conduct about 400 more inspections than in 2001. In 2003, we'll add 1,300 more inspections.

We are continually refining our targeting process to focus on the specific workplaces where workers are most likely to get hurt or sick. Each year, we survey about 80,000 employers in high-hazard industries to learn about their specific injury and illness experience.

Several months ago, we sent letters to more than 13,000 of the worksites we surveyed advising them that they had high injury and illness rates. Workplaces with eight or more injuries and/or illnesses per 100 workers received these letters. We suggested strategies employers might try to improve their safety and health effort, and offered our help through consultation or training and education.

We plan to inspect about 3,400 high-rate employers as part of our Site-Specific Targeting program.

Those with the highest rates are the prime candidates for these inspections. In addition, as part of a new national emphasis program, OSHA will inspect about 1,000 nursing or personal-care facilities. We are serious about driving down injuries and illnesses in our nation's workplaces. The place to focus inspections is with those who need to do a better job protecting their workers, and that's where we will begin.

But OSHA inspections must be more than checking off violations, writing up citations, and calculating penalties. This is an opportunity to create change. Every time we conduct an inspection we have a chance to take a negative situation and create a positive outcome. And that outcome is hazard reduction. We don't just want to show employers where they have gone wrong. We want to show them how they can do it right and sell them on the value of injury and illness prevention.

We all want to make a difference. We all want to ensure a safe workplace, and the employer has that primary responsibility. We need to make sure we take full advantage of the inspection opportunity as well as execute a strong and fair enforcement process. We need to make sure the employer has the opportunity to be successful in the future. If we do our job well, we won't need to return to an employer a second or a third time to cite the same violations, and the workers will have a safe and healthful place in which to work. An employer has a legal and moral responsibility to safeguard employees. That's a given. We have an obligation to use every tool in our toolbox to help the employer realize that goal.

Our front line—our first team in reducing injuries and illnesses—is composed of OSHA safety and health officers. Our first team needs to have the expertise, the credibility, and the authority to garner the respect of all employers and provide appropriate guidance to them on worker safety and health issues. The best way to

establish that expertise and enhance effectiveness and credibility is through training and professional certification. As you know, we are improving our initial training curriculum and continuous education efforts through the OSHA Training Institute. We also have a cross-agency team studying how we might more effectively value and foster professional certification as well as cover the costs associated with professional certifications.

I am often asked when talking to folks from outside the agency, what has been your biggest surprise since coming to OSHA? I tell them I never realized how many highly qualified and mission-driven folks we have in the agency. I just did not see the talent and the mission-driven focus we have as I see it now. We have a lot to be proud of, and the Secretary and the Administration have expressed their thanks for the great work we do and the results we achieve. The potential for even greater achievements is possible if we are to effectively use all the tools at OSHA's disposal. These tools are designed to involve, in one way or another, employers, employees, trade associations, labor unions, professional organizations, and other stakeholders to reduce injuries, illnesses, and deaths in the workplace. That is our mission, that is who we are, and we must join with all those who care about workplace safety and health to do everything we can to achieve it. [JSHQ](#)

A handwritten signature in black ink, appearing to read "JLH".

*John L. Henshaw
Assistant Secretary of Labor
for Occupational Safety and Health*

Q I work in a clinical laboratory and am concerned about the health hazards of chemicals I am exposed to. What protections do OSHA standards and regulations offer?

A Your concerns are justified. Hazardous chemicals present physical or health threats to workers in clinical, industrial, and academic laboratories. They include carcinogens, toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, and neurotoxins as well as agents that damage the lungs, skin, eyes, or mucous membranes. OSHA currently has rules that limit exposures to approximately 400 chemical substances.

OSHA's standard on Occupational Exposure to Hazardous Chemicals in Laboratories covers all workers using hazardous chemicals in laboratories. It requires employers to keep worker exposures at or below permissible exposure limits and to periodically measure these exposures if they suspect that they may be above specified thresholds. Employers also must develop and implement a written chemical hygiene plan for lab workers who use hazardous chemicals and provide information and training to help protect workers.

An updated OSHA Fact Sheet, *Hazardous Chemicals in Labs*, and OSHA Publication 3119, *Exposure to Hazardous Chemicals in Laboratories*, provide more in-depth information. Both are available on the agency website at www.osha.gov. Click on **Newsroom**.

Q I plan to open a new business soon and want to get off on the right foot regarding worker safety and health requirements. Where do I start?

A Starting a new business can be challenging, but you are already ahead of the game because you recognize that you have a legal obligation to protect your workers. OSHA standards and regulations

under the *Occupational Safety and Health Act (OSH Act)* require you to provide a workplace free from recognized hazards that could injure or kill your workers. As an employer, you must comply with these requirements, which include displaying OSHA's *You Have a Right to A Safe and Healthful Workplace* poster (OSHA 3165) or your state's equivalent, in a conspicuous spot so your workers know their rights and responsibilities under the law. For most types of businesses, you must maintain records of injuries and illnesses if you have 11 or more employees at any time. If you use hazardous chemicals in your workplace, you must inform workers about the dangers and train them in proper safeguards. It's also important for you to know that all businesses covered by the *OSH Act* are subject to inspection by federal or state compliance safety and health offices.

OSHA can help by explaining your federal regulatory requirements and assisting you as you create a safe and healthful workplace that conforms to the law. OSHA's Area Office staffs provide advice, education, and assistance for businesses that request their help. In addition, OSHA's onsite consultation service, offered in all 50 states, provides free safety and health assistance to businesses with 250 or fewer workers. OSHA also offers safety and health training, partnerships, and a variety of tools and publications to help you. For more information, see the new fact sheet, *OSHA Help for New Businesses*, at www.osha.gov. Click on **Newsroom**, then **Fact Sheets**.

Q I'm worried about an exposed high-voltage electrical wire at my jobsite that could hurt me or one of my coworkers. My supervisor doesn't seem concerned. What can I do?

A What you are describing sounds like an imminent danger—a workplace hazard that puts you at immediate risk of death or serious physical harm. An

imminent danger can be a safety hazard such as the exposed electrical wire at your site or an unstable trench. It may also be a health hazard such as toxic substances or dangerous fumes.

If you detect an imminent danger at work, you should notify your supervisor immediately and request corrective action. Also ask the supervisor to provide protection to you and your coworkers until the hazard is eliminated or controlled. If your employer does not take action, however, call the nearest OSHA office or the agency's toll-free number at (800) 321-OSHA (6742) and give details about the danger. If you request, OSHA will not reveal your name to your employer.

If the information you provide reveals a suspected imminent danger, a compliance safety and health officer will inspect your workplace, usually the same day you report the problem. If the inspection confirms the presence of an imminent danger, your employer must notify employees of the hazard and clear them from the imminent danger area. If the employer refuses to correct the hazard, OSHA may post an "Imminent Danger" notice and seek a temporary restraining order from the nearest federal district court requiring the employer to remove employees from the area.

For more information about imminent dangers and your legal rights when you report one or refuse dangerous work, see the new OSHA fact sheet, *Imminent Danger*, at www.osha.gov. Click on **Newsroom**, then **Fact Sheets**. [JSHQ](#)

What's Happening?

Bush Requests \$437 Million

The \$437 million budget requested by President Bush for OSHA in Fiscal Year 2003 includes a \$2.75 million increase in compliance assistance, outreach, and training activities. Under the President's proposal, OSHA will receive \$60.3 million for expanded outreach activities and compliance assistance, which includes training, information exchanges, and technical assistance to employers.

This also includes a \$250,000 increase for new computer-based outreach products such as the agency's "eTools," \$500,000 to increase technology-based training, and \$500,000 to improve compliance assistance training for OSHA's front-line staff.

The budget earmarks \$161.1 million for enforcement and maintains funding for state programs at \$89.8 million. It requests a \$1.5 million increase for state consultation programs and includes

\$14.2 million for the development, review, and evaluation of safety and health standards.

OSHA QuickTakes

E-News Memo A Big Success

OSHA's new *QuickTakes* electronic communication tool is proving to be a huge success. Just 1 month after OSHA's Office of Public Affairs launched the e-news memo, more than 9,000 readers had subscribed to receive it regularly by email. By the time its second issue was ready for release, the service had gone from monthly to biweekly.

QuickTakes contains a snapshot of OSHA's activities that support safety and health in the workplace, including news and announcements, background information, and other information of interest to stakeholders. The summaries often link to OSHA's website as well as other sites related to safety and health that provide additional information on specific items.

"*QuickTakes* delivers short and concise information on the agency's activities to safety and health stakeholders," says OSHA Administrator John L. Henshaw. "The e-mail, which comes directly to your electronic mailbox if you subscribe, covers just the highlights of important OSHA issues. Readers can then get additional information on a subject they would like."

Readers can receive the news memo by clicking on the *QuickTakes* icon on OSHA's homepage at www.osha.gov and following the subscription instructions. Readers who choose not to receive *QuickTakes* automatically may view it on OSHA's website.

WTC Worker Honored in Iowa

Peggy Peterson never imagined what kind of visibility her work at the World Trade Center site—and her interview with *JSHQ* about the experience—would bring her in her home state of Iowa. The senior industrial hygienist for the Iowa Division of Labor worked at the site from late November to early December teaching workers how to wear their respiratory protection properly. After returning to Iowa, she emailed the transcript of her interview with *JSHQ*, featured in an article in the Winter issue, to her boss, Commissioner of Labor Byron Orton. He, in turn, emailed the transcript to Iowa Governor Tom Vilsack.

What Peterson didn't expect was to be publicly saluted as a hero during

the governor's January 15 "Condition of the State" speech in Des Moines. Vilsack told the audience about Peterson's contributions at the World Trade Center and read several of her quotes from the *JSHQ* interview. Then, he invited Peterson to stand so she could be recognized, along with "thousands of other Iowa heroes, now and in the past, who have sacrificed and continue to sacrifice so much to protect the blessings of liberty."

"It was really overwhelming!" Peterson says of the experience. "I never expected all this reaction for just doing my job. I believe in job safety and health and the role OSHA plays, and I believe all inspectors feel the same way. This is the best job in the world!"



Peggy Peterson at the World Trade Center site, left, and with Iowa Governor Tom Vilsack.



National Safety Month Coming

June is National Safety Month, sponsored by the National Safety Council. This year's observance features four themes. The first week, June 2 to 8, focuses on driver safety. Week two, June 9 to 15, is dedicated to home, community, and environmental safety. The third week, June 16 to 22, is committed to emergency and disaster preparedness. The final week, June 23 to 29, focuses on workplace safety. For more information about NSC activities, visit the council's website at www.nsc.org.

Toll-Free Line Opens

OSHA recently began offering a staffed national toll-free line for employer and employee inquiries. The national office is funding the project, part of a Department of Laborwide Call Center established by Secretary of Labor Elaine L. Chao, to reduce the number of routine calls to OSHA field offices. The goal is to reduce time field offices spend on these calls so staffs can concentrate on assisting callers with complaints and technical questions.

Callers to the national toll-free line at (800) 321-OSHA who select the option for complaints or information will reach a live operator Monday through Friday between 8 a.m. and 4:30 p.m. in each time zone. Spanish-speaking operators also are available to callers during these hours.

Program Promotes Fall Prevention

A new special emphasis program aims to prevent falls at the workplace, particularly at construction sites, in the Southeast. OSHA's Atlanta Regional Office is conducting educational and outreach sessions and has dedicated nine compliance assistance specialists to help employers and employees recognize and prevent fall hazards. In addition, compliance officers specially trained to identify fall hazards and perform on-the-spot inspections are conducting



The OSHA Atlanta Regional Office is working with employers and employees to reduce fall hazards.

enforcement operations at worksites.

OSHA statistics show that falls caused 33 percent of all fatal workplace accidents during 2001 in Alabama, Florida, Georgia, and Mississippi. Of these, 70 percent occurred at construction sites. "Many of these lives could have been saved," says Cindy Coe, OSHA's Atlanta Regional Administrator, "if a means of fall protection had been provided for these workers."



ASSE Conference Slated for June

This year's annual American Society of Safety Engineers Professional Development Conference and Exposition, "Safety 2002," is slated for June 9 to 12 in Nashville, TN. OSHA Assistant Secretary John L. Henshaw will join John Walsh, host of America's Most Wanted, as headline speakers. The conference offers safety, health, and environmental professionals the opportunity to learn about challenges facing the profession, improve their professional skills and knowledge, and contribute to the field's professional discourse. The conference also offers a valuable source of continuing education and certification maintenance credit for safety, health, and environmental professionals. For more information, visit www.asse.org or call (847) 699-2929.

NIOSH Sets SCBA Policy

The National Institute for Occupational Safety and Health (NIOSH) recently began a new program to approve self-contained breathing apparatuses, or SCBA, for use by firefighters and other first responders after terrorist attacks. An SCBA is a type of respirator that

provides air to users from a pressurized supply cylinder or tank carried on the back.

Approvals will be based on positive results from rigorous tests on sample units submitted to NIOSH by manufacturers, and from stringent evaluation of manufacturers' quality-control practices, technical specifications, and other documentation. These positive results will demonstrate that the device provides the required level of protection against chemical, biological, radiological, and nuclear agents. For more information, visit the NIOSH website at www.cdc.gov/niosh/homepage.html.

VPPPA Names New Director

Paul M. Villane is the new executive director of the Voluntary Protection Programs Participants' Association. Villane has been involved with OSHA's VPP programs since 1989 and has been in leadership positions with the VPPPA since 1991, serving 8 years on the National Board of Directors. He recently retired as Corporate Safety Professional with St. Louis-based Solutia after 37 years of service with the company. Villane succeeds Lee Anne Jillings, VPPPA's executive director for more than 7 years.

HIB Offers Cadmium Warning

A new OSHA *Hazard Information Bulletin* warns of potential cadmium dust exposure for employers and employees who repair or refurbish gas meters. The bulletin warns that cleaning the threaded male gas inlet and outlet fitting on gas meters, called "ferrules" or "spuds," with high-speed rotating wire brushes may release cadmium dust.

It recommends that employers at gas meter repair shops determine whether meters being worked on are plated with cadmium, and if so, that they determine if workers are exposed



NIOSH will now test self-contained breathing apparatuses for firefighters and other first responders after terrorist attacks.

to airborne cadmium concentrations above the OSHA action level. If cadmium levels exceed recommended levels, it recommends engineering and work practice controls to reduce exposures.

The full text of the bulletin and OSHA's cadmium standard is available on the OSHA website at www.osha.gov. Click on **H** on the index line, then **Hazard Information Bulletins**.

Hayes Joins NACOSH

Ron Hayes recently accepted a position on the National Advisory Committee on Occupational Safety and Health. A long-time advocate of workplace safety, Hayes will advise the secretaries of Labor and Health and Human Services on occupational safety and health programs. He fills the public representative position on NACOSH most recently filled by Byron Orton, the Labor Commissioner of Iowa.

NACOSH met in Washington, DC, in mid-March to discuss, among other agenda items, OSHA's enforcement efforts, compliance assistance, and regulatory issues.

NIOSH Releases New Video

A new NIOSH video takes viewers through the steps to develop a respiratory protection program, with emphasis on tuberculosis in health-care facilities. NIOSH video #215, *TB Respiratory Protection: Administrator's Review*, covers risk assessment, standard operating procedures, respirator use, and training. Principles discussed in the video are applicable to other settings that require respiratory protection programs. The video is available by contacting the NIOSH video library at rlw3@cdc.gov or by calling (800) 35-NIOSH.



A new video focuses on preventing tuberculosis in health-care facilities.

New and Recently Reapproved VPP Members

Federal Program

New Star

Montenay Energy Resources, York, PA
Atofina Chemicals, Axis, AL
Sherwin-Williams, Olive Branch, MS
Equistar Chemicals, Tuscola, IL
Marshall Logging, Inc., Antigo, WI
ALCOA Rockdale Power Plant, Rockdale, TX
Baxter Renal Care, Mountain Home, AR
Eaton Fluid Power-Global Hose, Mountain Home, AR
Entergy Services, Inc.'s Louisiana Power and Light, South River Bend Station, St. Francisville, LA
Entergy Services, Inc.'s Louisiana Power and Light, Waterford 3, Killona, LA
General Electric Aero Energy Products, Houston, TX
General Electric Aeroderivative and Package Service, Houston, TX
Goodyear Tire and Rubber, Bayport Chemical Plant, Pasadena, TX
NASA JSC White Sands Testing Facility, Las Cruces, NM
Honeywell White Sands Testing Facility, Lac Cruces, NM
Motorola, Ft. Worth, TX
Valero Refining, Texas City, TX

17-Year Star

E.I. DuPont de Nemours and Co., Inc.'s Corpus Christi Plant, Ingleside, TX

14-Year Star

Kerr-McGee Corporation's Soda Springs Spec. Chemicals, Soda Springs, ID

8-Year Star

Eastman Chemical Co., Longview, TX

7-Year Star

Georgia Pacific Corp.'s Port Hudson Operation, Zachary, LA

6-Year Star

Weyerhaeuser Company, Barnesville, GA

5-Year Star

J.R. Simplot Company, Conda Pump Station, Soda Springs, ID

4-Year Star

General Electric, Elano Dayton Complex, Dayton, OH

3-Year Star

IP Putnam Container Plant, Putnam, CT
Pratt and Whitney, North Berwick, ME
BAE Control Systems, Johnson City, NY
Georgia-Pacific, Plattsburg, NY
Exxon-Mobil Chemical Company's Films Division, LaGrange, GA
Georgia Pacific Corporation's Resins Plant, Taylorsville, MS
Monsanto NutraSweet Kelco Co., Augusta, GA
Occidental Chemical Corporation, Mobile, AL

Merit to Star

Lozier Wire Products, McClure, PA

New Merit

General Electric International, Buffalo Service Center, Tonawanda, NY
Aeroquip Inoac Atlanta Plant, Atlanta, GA
Kennametal, Orwell, OH
Solvay Intertox, Deer Park, TX
Solvay Polymers, Deer Park, TX
Frito-Lay, Topeka, KS
Weyerhaeuser, St. Joseph, MO
Deaconess Billings Clinic and Aspen Meadows Retirement Community, Billings, MT

Continued Merit

Walker Manufacturing, Seward, NE

State Plans

Star

Bridgestone/Firestone South Carolina, Graniteville, SC
GE Lexington Lamp, Lexington, KY
Marvin Windows and Doors, Ripley, TN
Milliken and Company, Sycamore Transportation/Distribution, Clinton, SC
Ah-Gwah-Ching Center, Ah-Gwah-Ching, MN
Ernest and Julio Gallo Winery, Livingston, CA
Georgia-Pacific, Golden Kraft, La Mirada, CA
International Paper, Visalia, CA
Pratt and Whitney Space Propulsion Systems, San Jose, CA

As of February 28, 606 sites were participating in the Federal VPP: 544 in Star, 59 in Merit, and 3 in Demonstration. In addition, 213 sites were participating in state VPPS: 206 in Star and 7 in Merit.

New Partnerships

OSHA and VA Partner

OSHA and the Veterans Affairs Medical Center in Cheyenne, WY, have entered into a new partnership to increase safety awareness and reduce workplace injuries among nursing home workers at the facility. The partnership agreement focuses on ergonomic hazards and workplace violence.

As part of the agreement, OSHA's Denver Area Office is producing a Nursing Home Safety and Health CD-ROM that incorporates all OSHA information related to nursing homes and will participate in safety and health training sessions for workers in the center's nursing home care unit.

If successful, the partnership concept may extend to other Department of Veterans Affairs nursing homes in Wyoming, Colorado, and Utah.



OSHA is partnering with the Veterans Affairs Medical Center in Cheyenne, WY, to protect nursing home workers at the facility.

Department of Veterans Affairs Photo by Marilyn Carlson

OSHA Enters Highway Partnership

OSHA has entered into a partnership with Yonkers Contracting, Inc., and the Mount Sinai School of Medicine to ensure the safety and health of workers during a highway construction project near Yonkers, NY. The project involves the reconstruction of the Interstate 287/87 interchange of the New York Thruway.

The partnership's goal is to reduce employee exposure to airborne concentrations of silica and to encourage construction contractors in Westchester County, NY, area to improve their safety and health

performance. Mount Sinai School of Medicine will provide technical assistance in developing the silica control and surveillance program.



OSHA, Holder Sign Pact

Holder Construction Group of Atlanta, GA, has signed a partnership agreement with OSHA to address hazards associated with the construction of two buildings for the State Farm Insurance Company in Greeley, CO. The \$40 million project is expected to last 16 to 18 months and employ some 900 workers. Herb Gibson, OSHA Area Director in Denver, sees the Greeley partnership as an opportunity for the project's stakeholders to demonstrate "a zero-accident culture." He says the pact provides a unique vehicle to train local construction workers for future projects.

DOL Forms Anthrax Partnership

OSHA, the Laborers International Union, and other government entities are working together to develop a training curriculum for the cleanup and removal of anthrax and biohazards. The Department of Labor's Employment and Training Administration awarded \$208,650 to the Laborers as a first step in the training partnership.

The laborers' certified hazardous waste workers will use the new curriculum to upgrade their skills and fine-tune the training process. After pilot tests are complete, other organizations, including 12 OSHA Training Institute Education Centers and state and local One-Stop Centers, will use the curriculum to train workers in the removal of biochemical agents. The final training curriculum will include training manuals, CD-ROM and web-based curricula, a PowerPoint presentation, and other training tools.



A new anthrax partnership was launched in response to the anthrax-tainted mail attacks.

MIOSHA Partners for Auto Safety

The Michigan Occupational Safety and Health Administration (MIOSHA) has formed a partnership with the United Auto Workers Union, Ford Motor Company, and Visteon Corporation to help improve worker health and safety at 17 Ford and 8 Visteon facilities in Michigan. The partnership's goals are to reduce injuries and illnesses at each location and to create a proactive safety and health culture that stresses cooperation.

Michigan is the first state that administers its own OSHA-approved safety and health plan to sign a partnership with the UAW, Ford, and Visteon. Federal OSHA signed a formal partnership agreement with the UAW, Ford, and Visteon in November 2000. That agreement covers 21 Ford and 2 Visteon plants in federal OSHA

states and addresses hazards specific to the automotive industry.

Under the Michigan agreement, an 11-point set of guidelines will provide more focused inspections. The guidelines address hazards specific to the automotive industry and include confined spaces, skilled trades hazards, maintenance vehicles, chemical safety, energy control and power lockout, ergonomics, noise control and hearing conservation, heat stress, powered material-handling vehicles, machine guarding, and personal protective equipment.

"This agreement is a proactive effort to further promote health and safety in our plants," says James Patton, UAW co-chair of the National Joint Committee on Safety and Health. "With this partnership, we also have the opportunity to focus attention and greater recognition to issues of specific concern at each plant." [JSHQ](#)



A new partnership is designed to help protect Michigan auto workers.
Photo courtesy of Ford Motor Company

Secretary Chao on Workplace Safety and Health

Secretary of Labor Elaine L. Chao shares her views about protecting workers.

JSHQ: Accident rates and illness on the job continue to decline. This is great news. Is success in reach?

Secretary Chao: It's true that for the 8th year in a row the Bureau of Labor Statistics has reported a drop in injuries and illnesses. The new rate is actually the lowest on record—at 6.1 per 100 workers. That said, no accident or fatality is acceptable. As every worker on the job, regardless of industry or occupation, must be protected and kept from harm, we must remain vigilant.

My goal is actually to work even harder to bring these numbers down, and to do it by expanding employer outreach and relying on effective and fair enforcement. Last year, for example, we specifically centered on a number of key industries to help them reduce injuries and illnesses—and it worked. Food processing, nursing homes, shipyards, construction, and logging all witnessed a decline in injuries and illnesses. Across the board, we also saw a decline in two major work-related hazards—exposure to silica and amputations.

Overall, the trends are moving in the right direction. Employers, workers, and professional trade associations all share in the credit. OSHA couldn't have achieved this without their support and "sweat equity."

We can honestly say that we're creating the safest workplaces in the world. Maintaining this momentum will be one of OSHA's major challenges throughout the decade.

JSHQ: Where was OSHA during September 11?

Secretary Chao: When it came to responding to the challenges of the terrorist attacks on our nation, OSHA was definitely in the front lines. Just hours after the attack on the World Trade Center towers, our inspectors were on the scene at Ground Zero, risking their own lives to ensure the safety of rescue workers at the site.

We distributed more than 120,000 respirators and showed rescue and construction workers how to properly use them. We also took more than 5,000 bulk and air samples to help assess health hazards and risks. More





than 1,000 federal and state OSHA staffers were on rotation in New York City to provide vital round-the-clock safety and health monitoring.

And when terrorists struck again, this time through anthrax-tainted mail, we also quickly spun into action. Our people worked with the U.S. Postal Service and the U.S. Senate to help decontaminate post office facilities and the Hart Senate Office Building. Because of the ongoing threat, we also reached out to the postal unions and forged an innovative partnership with the Laborers International Union to create new biohazard abatement training. And to further educate and train, we now provide online resources to help both employees and employers assess risk, identify appropriate protective equipment, and create safe work practices.

Homeland security will be at the top of our agenda for some time. The war on terrorism will be a long one, and it will continue to affect the way we live and work. As President George W. Bush said, "This is a war we must fight and win." OSHA is and will remain a key player in that war and protecting the homeland from various threats.

JSHQ: Speaking of the terrorists attacks, what's the situation at Ground Zero?

Secretary Chao: The excavation work at the site seems to be in the final stages, but it continues to be a very perilous task. I am proud to report that after nearly 3 million work hours, only 35 workers at the World Trade Center recovery site suffered injuries that resulted in lost workdays, and thankfully, none of their injuries were life-threatening. This equates to a Lost-Workday Injury and Illness rate of 2.3—about one-half the rate for specialty construction, which includes demolition.

Secretary of Labor Elaine L. Chao is President George W. Bush's top advisor on worker protection and other labor issues.

White House photo by Eric Draper

This is a phenomenally low rate given the extraordinary circumstances, and reflects the tremendous effort of everyone involved and the value of the partnership between OSHA, contractors, unions, government agencies, and others. I am eternally grateful that no worker fatalities have been reported. To lose any more lives at the World Trade Center would truly compound this national tragedy.

The World Trade Center disaster site workers deserve the best protection we can offer—and together, we're successfully doing it. This is a significant achievement.

JSHQ: Why do you believe your new ergonomics plan will work?

Secretary Chao: The new plan offers a win-win approach to protecting workers from ergonomic injuries. It's a balanced and comprehensive plan that combines four important components: industry-specific guidelines, tough enforcement measures, workplace outreach, and advanced research. It also includes dedicated efforts to protect Hispanic and other immigrant workers, a population that is particularly vulnerable to ergonomic injuries.

The plan gives the vast majority of employers who want to do the right thing to protect their workers the tools to do so. At the same time, it cracks down hard on the bad actors who don't live up to their legal and moral responsibilities to protect their workers. It gives workers the protections they need and deserve without being overly burdensome to business.

What I particularly like about the plan is that it's something we can implement now—not after months or even years of legal appeals and court decisions. This plan is a major improvement over the rejected old rule because it will prevent ergonomic injuries before they occur and reach a much larger number of at-risk workers. It's the best way to achieve our goal of reducing



Secretary Elaine L. Chao, left, swears in John L. Henshaw, second from right, as the new OSHA Administrator. With them is Henshaw's wife, Jane, second from left, and daughter, Shannon, right. Photo by Jennifer Jacobson

ergonomic injuries in the workplace in the shortest possible time frame.

JSHQ: Is OSHA moving away from the more traditional enforcement activities? In short, relying more on the “carrot” than on the “stick”?

Secretary Chao: Let there be no misunderstanding: OSHA's number

one priority remains full, effective, and fair enforcement of worker protection laws. In 2001, we conducted nearly 36,000 inspections, with our compliance officers citing some 80,000 violations with proposed penalties of \$82 million. For 2003, we actually have a goal of pursuing more OSHA enforcement actions than in recent memory—to nearly 38,000.



Secretary Elaine L. Chao works with a wide range of stakeholders. Here, she chats with OSHA Deputy Administrator R. Davis Layne, standing, and Advisory Committee on Construction Safety and Health members in her office. Photo by Donna Miles

But enforcement is one side of the coin when it comes to protecting workers. The other is compliance assistance, emphasizing communication and education. Increased compliance assistance means fewer violations, and that translates into fewer injuries and healthier workers. To help drive compliance assistance throughout the workplace, we've developed a number of exciting initiatives.

First, we're relying on new telecommunications channels to get the word out. Last fall, for example, we made our new recordkeeping rule, along with training, available online. We even made a satellite broadcast on the rule available to over 3,500 sites.

Second, we're expanding our outreach to those traditionally overlooked—mainly small business owners. Last year we held meetings with over 27,000 small businesses, and more than half-a-million employers and employees turned to us for safety and health training.

Third, we're increasing the number of both our strategic and our premier partnerships. Last year alone, we witnessed a 60-percent growth in our strategic partnerships, with over 10,000 employers now participating. Our premier Voluntary Protection Programs (VPP) also grew, now encompassing over 180 industries with close to half-a-million employees. These workplaces continue to maintain injury and illness rates more than 50 percent below the national average for their industries. This is a great accomplishment.

JSHQ: As you mentioned earlier, the accident rate is going down, but it seems to be rising among immigrants, especially among Hispanic construction workers. What's happening?

Secretary Chao: The fatality rate among Hispanic workers deeply troubles me. I am concerned that Hispanics are more likely than others to be injured on the job because their



Secretary Elaine L. Chao credits the World Trade Center partnership for helping keep injury rates at the site low. Here she joins Edward J. Malloy, left, president of the Building and Construction Trades Council of Greater New York, and Louis J. Coletti, chairman and chief operating officer of the Building Trades Employers Association, in signing the World Trade Center partnership agreement. Photo by Shawn Moore

English is limited or they don't get safety tips or instruction in Spanish. These workers comprise 11 percent of the workforce and yet have a 14 percent fatality rate. These workers comprise 11 percent of the workforce and yet have a 14 percent fatality rate.

To meet this challenge head on, we're working double time in reaching out to Hispanic workers and employers in construction and other key trades. We're translating documents and holding construction safety courses in Spanish. In Forth Worth, Texas, OSHA is actually developing a workplace safety billboard in Spanish. We're also linking up with Hispanic and community-based organizations and groups and pursuing a number of creative partnerships.

We've created a special toll-free 24-hour helpline with Spanish speakers to answer questions and take inquiries. We've even expanded our outreach into cyberspace by launching a new OSHA Spanish website that will offer one-stop service for Spanish-speaking employers and employees.

And for employers who willfully disregard worker protections, we will take aggressive action—as we did recently against three New York contractors whose improperly erected scaffolding resulted in the deaths of several Hispanic and other workers.

We are committed to ensuring that all workers are provided safety and health protections. [JSHQ](#)

OSHA Reaches Out to Hispanics About...

Seguridad y Salud en el Trabajo (Safety and Health on the Job)



OSHA is working to reduce injuries and illnesses among Hispanic workers, who make up a significant percentage of the workforce in high-hazard industries such as construction.

Hispanic or Latino workers suffered a disproportionate number of workplace deaths in 2000, OSHA Administrator John L. Henshaw recently told the Senate Subcommittee on Employment, Safety, and Training. Henshaw reported that although they represent 10.7 percent of the workforce, they experienced 13.8 percent of workplace fatalities—most likely because so many Hispanics or Latinos work in the more dangerous industries.

For example, Hispanics or Latinos comprise almost 15 percent of

construction employment, well above their representation in the workforce overall, Henshaw told Congress. The construction industry accounts for about 7 percent of all employment, but 20 percent of fatalities.

Henshaw says OSHA is committed to helping employers reduce fatalities among Hispanic or Latino workers. He says the agency is using its entire complement of tools provided by the *Occupational Safety and Health Act* to address workplace hazards: enforcement, training, information, and compliance assistance.

In addition to translating many publications into Spanish, Henshaw says OSHA is reaching out to Spanish-speaking workers through the following initiatives:

- Establishing an Hispanic Workers Task Force to pursue creative solutions to improve the agency's outreach to and prevent fatalities among Hispanic workers;
- Using OSHA's toll-free telephone number at (800) 321-OSHA for emergency reporting by Spanish-speaking individuals;
- Initiating a national clearinghouse for training programs in Spanish that includes videos, written publications, and other training materials;
- Creating a Spanish-language website for employees and employers (see sidebar);
- Compiling a list of fluent Spanish-speaking employees that includes 119 in Federal OSHA, 38 in states and territories with OSHA-approved safety and health plans, and 22 in onsite consultation agencies; and
- Strengthening OSHA offices' contacts with police and emergency responders to ensure that OSHA receives referrals when an injury is work-related.

Henshaw says OSHA's outreach to the Hispanic community extends to the regional level, where several OSHA regions have developed programs specific to their areas' needs.



OSHA's national, regional and area offices are helping get the word out to Hispanic workers about workplace safety.

For example, OSHA has worked closely with churches and community organizations in New York and New Jersey representing immigrants. In Central New Jersey, OSHA has worked with the Puerto Rican Congress, attending its annual conference and providing literature and information about the agency. Also in New Jersey, OSHA has participated in an informal agreement begun in 1995 between the Archdiocese of Newark, the Department of Labor's Wage and Hour

Division, and Union of Needletrades, Industrial, and Textile Employees to address health and safety conditions as well as pay and benefits for workers in the apparel trades. OSHA also contributed material to curricula developed and presented to every middle and high school student in the Newark, NJ, Archdiocese.

In Florida, where many Hispanics work in the construction trades, OSHA developed the Construction Accident Reduction Emphasis, or CARE, program in March 1999, as well as local emphasis programs focused on preventing falls and overhead power line accidents. In addition, OSHA has distributed a variety of educational tools written in Spanish, including a poster depicting the four major construction hazards, a pocket card explaining the dangers of working with overhead power lines, and a pamphlet on ways to eliminate excavation hazards. OSHA teamed with Florida's consultation agency, which provides free safety and health advice to smaller businesses, to offer two 10-hour construction classes in the Fort Lauderdale area. OSHA met with various organizations of Hispanic workers to emphasize the extremely high number of construction fatalities in southern Florida. The results have been impressive. Between 1998 and 2000, the number of falls decreased by one-third, and fatalities caused by contact with overhead power lines dropped 60 percent.

In Fort Worth, TX, OSHA has provided a 10-hour course on construction safety, conducted in Spanish, and developed a movable workplace safety billboard in Spanish, which is being displayed throughout the area. The Fort Worth Area Office also worked with the Hispanic Chamber of Commerce to coordinate courses in Spanish for a safety seminar. OSHA's Houston-North Area Office uses Spanish-speaking compliance officers to interpret employee complaints and interact with Hispanic workers, particularly on construction inspections. The Dallas Area Office has worked with the Mexican Consulate to train Hispanic

workers, conducting 8-hour seminars on the leading causes of construction fatalities for Hispanic contractors and their subcontractors.

In addition, OSHA's Regional Office in Kansas City, MO, has translated the *Fall Protection Pocket Guide* and other safety cards into Spanish and maintains a library of training videos in Spanish that address hazards such as lead exposure and bloodborne diseases as well as lockout/tagout procedures.

OSHA's Regional Office in San Francisco, CA, maintains toll-free complaint and technical assistance lines at (800) 475-4020 and (800) 475-4019, respectively, that provide information to workers, not only in English and Spanish, but also in Korean and Tagalog.

Henshaw told Congress that these are just examples of OSHA's outreach, education, and training programs for immigrant workers. He says OSHA's Hispanic Task Force is compiling information on these and other regional and area office programs so field offices can share information as they develop programs tailored to their geographic areas' specific needs.



This flyer, distributed by OSHA's Atlanta Regional Office, also tells Hispanic workers how to contact the nearest OSHA area offices for information or help.



OSHA distributes its Job Safety and Health poster in Spanish so Hispanic workers know their right to a safe and healthful workplace.

¡Bravo!

OSHA Launches Spanish Website

A new Spanish-language webpage on OSHA's Internet site provides workplace safety and health information to Spanish-speaking employers, America's largest group of minority business owners, and employees. The page provides an overview of OSHA and its mission, worker and employer rights and responsibilities, a list of resources for employers and workers, and highlights from the agency's extensive website. It tells how to file complaints electronically in Spanish and offers one-stop service for Spanish-speaking employers and employees. Additional information will be added in the months to come. The page is posted at www.osha.gov.

"Job safety and health depends on employees and employers knowing what they must do to ensure workplace protections," says Secretary of Labor Elaine L. Chao. "That starts with understanding vital, basic information about preventing injuries, illnesses, and fatalities. Though our new Spanish page, millions more

employers and workers in this country will have access to information they can use to make their workplaces safer."

According to the Bureau of Labor Statistics, in 2000 the fatality rate for Hispanic workers climbed by more than 11 percent, while deaths for all other groups declined. OSHA is concerned about the safety of Spanish-speaking workers and has established an ongoing effort to reach across language barriers to employers and workers to reduce injuries, illnesses, and deaths on the job.



Not all Latino and Hispanic employees are immigrants, Henshaw acknowledged, but they do make up the largest single group of America's immigrant employees. Quoting Secretary of Labor Elaine L. Chao, who has called immigrants "the dreamers who come to America for a new start and a better future," Henshaw said, "We have a responsibility to protect these individuals from on-the-job dangers.

"I can assure you," he told Congress in summary, "OSHA will continue to enhance our programs and use all of the tools provided by law to protect immigrant workers and all other employees in this nation." JSHQ

Editor's Note: This is the first in a series about new and ongoing OSHA initiatives to improve workplace safety and health among Hispanic workers. The staff invites submissions from OSHA Regional and Area Offices, state offices, and consultation projects.



Compliance Assistance Specialist Vergie Bain in OSHA's Fort Lauderdale, FL, Area Office, left, speaks with a Venezuelan woman about job safety and health.

Photo by Luis Santiago

OSHA and HCA Form Alliance

OSHA and the Hispanic Contractors of America, Inc., have joined forces to promote safe and healthful working conditions for Hispanic construction workers. The goal of the new alliance is to help reverse the increasing number of Hispanic worker deaths from construction-related accidents.

Working together through the alliance, OSHA and the HCA aim to increase Hispanic construction contractors' knowledge of safe and healthful work practices and compliance with OSHA's safety and health standards and regulations. They also hope to increase access to safety and health training resources and related materials in Spanish for construction employers and employees who are not fluent in English.

Both organizations acknowledge that access to training and information about safe work practices may be more limited for

Spanish-speaking construction employees and employees than for native English speakers. To bridge this language barrier and other potential gaps in access, OSHA and the HCA will work together to do the following:

- Identify existing and stimulate the development of new publications and audiovisual and other reference materials for Hispanic construction employers and employees;
- Seek opportunities to jointly exhibit and disseminate safety and health information at conferences, events, community-based activities, and through electronic media;
- Work with community and faith-based organizations and other leadership groups to build safety and health awareness within the Hispanic community;
- Encourage bilingual individuals in construction to take the OSHA train-the-trainer course on

occupational safety and health standards for the construction industry, so they qualify to teach Hispanic workers the OSHA 10- and 30-hour construction safety and health outreach courses in Spanish; and

- Promote and encourage participation in the OSHA cooperative programs such as compliance assistance, consultation, and mentoring among HCA members.

"This alliance will greatly expand OSHA's reach in our effort to provide safety and health information and training to Spanish-speaking workers and employers," says OSHA Administrator John L. Henshaw. "We wanted to join with others who share our concern and are committed to reducing injuries and illnesses among Hispanic workers. I am delighted that HCA wants to work with us." JSHQ



OSHA Administrator John L. Henshaw, center celebrates the new Hispanic partnership with Jerry Adriano, executive director of Hispanic Contractors of America, Inc., left, and Paul Rodriguez from the U.S. Hispanic Chamber of Commerce. Photo by Shawn Moore



Protecting Workers from Ergonomic Injuries

OSHA's comprehensive plan features targeted guidelines and tough enforcement.

OSHA's recently unveiled ergonomics plan offers a comprehensive, practical approach to reducing ergonomic injuries that, according to OSHA Administrator John L. Henshaw, "we can put to work now—and that will reduce injuries now." The plan combines industry-specific guidelines, tough enforcement measures, outreach, research, and dedicated efforts to protect Hispanic and other immigrant workers.

"Musculoskeletal disorders (MSDs) are serious injuries, and we are committed to reducing the pain and suffering that occur from workplace injuries," says Henshaw. "This comprehensive plan is the best approach to achieve immediate results."

"Our goal is to help workers by reducing ergonomic injuries in the shortest possible time frame," agrees Labor Secretary Elaine L. Chao. "This plan is a major improvement over the rejected old rule because it will prevent ergonomics injuries before they occur and reach a much larger number of at-risk workers."

The new plan reflects input from a wide range of stakeholders, including organized labor, workers, medical experts, and businesses. Over the last year, the Department of Labor conducted three major public forums around the country and met with scores of stakeholders, collecting hundreds of sets of written comments

and taking testimony from 100 speakers. OSHA analyzed and evaluated the comments and recommendations, studied the options, and researched the alternatives.

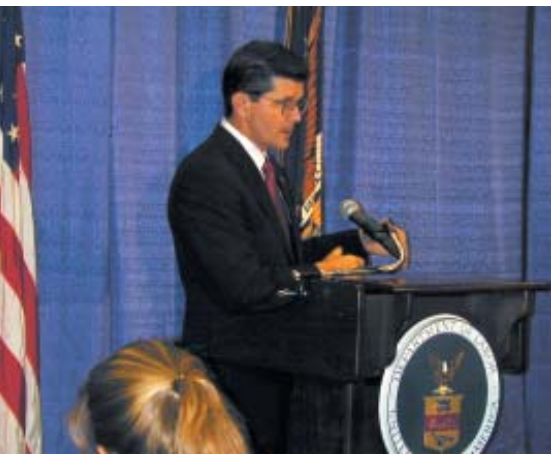
Guidelines

Henshaw says OSHA will work with various stakeholders and develop industry- and task-specific guidelines that ensure prevention, flexibility, and feasibility. "We can move forward rapidly on this and we will have guidelines this year," he says.

OSHA will target industries and tasks where Henshaw says "we can have the quickest and most effective results." The agency will begin its efforts by focusing on industries and tasks associated with ergonomic injuries and for which successful strategies are known. "Real-life solutions come from real-life experience," notes Henshaw.



The new plan is expected to help further reduce the decrease in musculoskeletal injuries, including carpal tunnel syndrome.



OSHA Administrator John L. Henshaw unveils the ergonomics program.
Photo by Stan Hankin

This approach, he believes, will offer employers and workers the flexibility they need to tailor recommendations and best practices to their workplaces.

“We know that one size does not fit all, and this provides the flexibility needed to reduce injuries,” Henshaw says.

Enforcement

The Department of Labor will develop an ergonomics enforcement plan coordinating inspections with a legal strategy designed for successful prosecution. The department will place special emphasis on industries with serious ergonomic injuries. OSHA and DOL attorneys will build on experience where they have had success under the *Occupational Safety and Health Act’s* General Duty Clause.

For the first time, OSHA will have a successful enforcement strategy designed from the start to target ergonomics violations. In addition, Henshaw says the agency will have special ergonomics teams that work closely with DOL attorneys and hand-picked experts “to crack down on bad actors.”

Outreach and Assistance

OSHA plans to offer assistance to workers and businesses, particularly small businesses, to help them address ergonomics in the workplace. The

agency will offer advice and training on industry- and task-specific guidelines it develops and help on how to develop an effective ergonomics program.

In addition, OSHA will provide a wealth of materials on its website, support development of ergonomic training materials and training sessions, and make ergonomics training available through the 12 Education Centers around the country. The new plan includes a specialized focus to help Hispanic and other immigrant workers, many of whom work in industries with high ergonomic injury rates.

OSHA also plans to develop new recognition programs to highlight the achievements of worksites with exemplary or novel approaches to ergonomics.

Finally, the agency will provide its compliance officers with training on ergonomic hazards and abatement methods. It will designate 10 regional ergonomics coordinators who will be involved in enforcement, outreach, and assistance.

Research

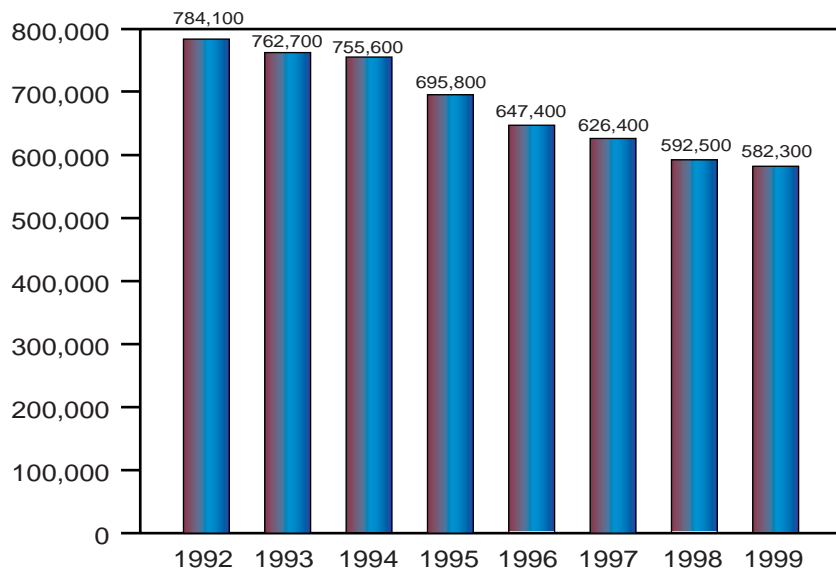
The new plan includes an important research component because, Henshaw says, “We want to use the best available science in all that we do.” He says information from the National Academy of Sciences and from OSHA’s ergonomics forums made it clear that many gaps remain.

OSHA will establish a national advisory committee, representing a broad range of experts, to advise the agency on gaps in ergonomics and

Goals of the Plan

- Decrease ergonomic hazards.
- Reduce injuries and illnesses.
- Ensure flexibility and encourage innovation.
- Help employers prevent MSDs.

Building on Proven Success: Decline in Ergonomic-Related Injuries Involving Days Away from Work, 1992-1999



Source: Bureau of Labor Statistics

OSHA's Plan

- Industry- and task-specific guidelines
- Enforcement
- Outreach and assistance
- Research

effective prevention techniques. In concert with the National Institute for Occupational Safety and Health, the committee will help OSHA serve as a catalyst to expand current research on the subject.

Henshaw says the new plan is designed to accelerate an encouraging workplace trend as quickly as possible. "Bureau of Labor Statistics' data show that musculoskeletal disorders are already on the decline," he says. "Thousands of employers are already working to reduce ergonomic risks without government mandates. We

want to work with them to continuously improve workplace safety and health. We will go after the bad actors who refuse to take care of their workers."

The new plan was announced barely a year after Congress rejected the previous administration's ergonomics rule. That rule was denounced broadly as being excessively burdensome and complicated.

For more information visit OSHA's website at www.osha.gov.

Frequently Asked Questions

What is an "ergonomic injury"?

Ergonomic injuries often are described by the term "musculoskeletal disorders" or "MSDs." This refers to injuries and illnesses that affect the musculoskeletal system; there is no single diagnosis for MSDs.

Input from recent ergonomics forums demonstrated the wide variety of opinions on how OSHA should define an ergonomic injury and that the definition depends on the context. As OSHA develops guidance material for specific industries, the agency may narrow the definition as appropriate to address the specific workplace hazards covered. OSHA will work closely with stakeholders to develop definitions for MSDs as part of its overall effort to develop guidance materials.

Are all MSDs work-related?

No. MSDs can and do develop outside the workplace. Determining whether any particular MSD is work-related may require taking a careful history of the patient and the illness, conducting a thorough medical examination, and characterizing factors on and off the job that may have caused or contributed to the MSD.

How do you expect OSHA's guidelines to reduce injuries and illnesses related to MSDs?

Injuries and illnesses related to MSDs have declined consistently during the last 10 years, even without a standard addressing them. Guidelines such as OSHA's *Meatpacking Guidelines* and voluntary industry efforts have been successful in reducing the injury and illness rates for these disorders. For example, on a national basis, lost-workday rates for carpal tunnel injuries declined 39 percent from 1992 to 1999. Similarly, rates for strains and sprains with days



OSHA's new plan is designed to protect workers from a wide range of ergonomic injuries, including these that result from repetitive motion. Photo courtesy of Alaska Seafood Marketing Institute

away from work also have declined by 39 percent, and rates for back injuries have dropped 45 percent.

In the meatpacking industry, with industry-specific guidelines and focused OSHA enforcement, rates of carpal tunnel injuries with days away from work have dropped 47 percent from 1992 to 1999. At the same time, rates of strains and sprains with days away from work have gone down 61 percent, and rates for back injuries have decreased by 64 percent. OSHA expects that industry- or task-specific guidelines will reduce injuries and illnesses further.

What is a guideline and how does it differ from a standard?

A guideline is a tool to help employers recognize and control hazards. It is voluntary. Failure to implement a guideline is not itself a violation of the General Duty Clause of the *Occupational Safety and Health Act*. Guidelines that OSHA develops will help employers identify ergonomic hazards in their workplaces and implement feasible measures to control them.

Guidelines are more flexible than standards. They can be developed quickly and can be changed easily as new information becomes available with scientific advances. Guidelines make it easier for employers to adopt innovative programs to suit their workplaces, rather than inflexible, one-size-fits-all solutions to issues that may be unique to the industry or facility.

What if I am an employer in an industry for which OSHA does not develop industry-specific guidelines?

Even if there are no guidelines specific to your industry, as an employer you still have an obligation to keep your workplace free from recognized serious hazards, including ergonomic hazards. OSHA will cite for ergonomic hazards under the General Duty Clause or issue ergonomic hazard letters where appropriate as part of its overall

enforcement program. OSHA encourages employers to implement effective programs or other measures to reduce ergonomic hazards and associated MSDs. A great deal of information is currently available from OSHA, NIOSH, and various industry and labor organizations on how to establish an effective ergonomics program, and OSHA urges employers to use these resources.

What will the OSHA enforcement program entail?

OSHA will conduct inspections for ergonomic hazards and issue citations under the General Duty Clause and issue ergonomic hazard alert letters. The agency will conduct follow-up inspections or investigations within 12 months of certain employers who receive ergonomic hazard alert letters.

OSHA has been assessing MSD-related issues in complaints, referrals, and targeted inspections. The agency will continue to evaluate the findings of its inspections and issue General Duty Clause citations or hazard alert letters for ergonomics hazards as necessary. OSHA will do the same when responding to worker complaints.

In addition, OSHA has initiated a national emphasis program in the nursing home industry to guide inspections of nursing homes and to focus significant effort on addressing ergonomic hazards related to patient lifting.

OSHA will conduct specialized training of appropriate staff on ergonomic hazards and abatement methods and designate 10 regional ergonomic coordinators to be involved in enforcement and outreach. [JSHQ](#)

Partnering for Shipbuilding Safety



by Mark Briggs

OSHA recently entered into partnership with the shipbuilding industry. First Wave Marine, Inc. and Bollinger Shipyards, Inc. became the first Shipbuilders Council of America (SCA) members to partner with OSHA since the council signed a partnering agreement last spring. That agreement, limited to the Houston area, is designed to encourage shipbuilders to increase safety and health awareness and reduce injuries and illnesses.

Under terms of the partnership agreement, the companies' yards will conduct biweekly inspections and report the results to SCA each quarter. The council, in turn, will forward the compiled results to OSHA. This will enable OSHA to concentrate its resources on problem worksites rather than those that have demonstrated effective safety and health programs. "We're working together to get lower illness and injury rates," says John B. Miles, Regional Administrator for OSHA's Dallas Regional Office. "We won't come in and spend their time and ours on inspections, but we will cooperate with training."

First Wave president and chief operating officer Grady Walker says that because "Historically, shipyards have not distinguished themselves in safety, we've had to prove that we hold

ourselves to a higher standard." He hopes the new agreement will help the company maintain its position as an industry leader in safety.

"The health and safety of our people has always been of paramount importance to us," agrees Bollinger Chief Operating Officer Walter Berry. "Our goal of zero incidents requires teamwork like the Strategic Partnership Program combined with relentlessly pursuing the elimination of unsafe actions and conditions."

OSHA targeted the shipyard industry as one of the five most

dangerous industries and, as a result, increased inspections at shipyards. The targeting appears to be paying off. During the past 3 years, shipyard injuries have dropped significantly. SCA President Allen Walker credits cooperative efforts such as the partnership for encouraging safer shipyards and says the pilot project is likely to lead to a nationwide agreement. [JSHQ](#)

Briggs is a compliance assistance specialist in OSHA's Houston Area Office.



Celebrating the shipbreaking partnership are, from left, Terry Guidry, Bollinger Shipyards, Inc.; John Miles, OSHA Dallas Regional Administrator; John Lawson, OSHA Area Director for Houston North; Jess McCluer, Shipbuilders Council of America; Ray Skinner, OSHA Area Director for Houston South; and Grady Walker, First Wave Marine, Inc. Photo courtesy of Shipbuilders Council of America



Photo by Michael Carpenter



Photo by courtesy of VSE Corporation

Reducing Shipbreaking Hazards

OSHA's new national emphasis program focuses on reducing or eliminating workplace hazards in shipbreaking operations. Shipbreaking is the process of dismantling an obsolete vessel's structure for scrap or disposal. Conducted at a pier, drydock, or dismantling slip, it includes a wide range of activities, from removing all gear and equipment to cutting down and recycling the ship.

Shipbreaking is one of the most dangerous work activities in the maritime industry, according to Steve Butler, Chief of OSHA's Division of Maritime Compliance Assistance. This is due to the structural complexity of the ships and the many environmental, safety, and health issues involved. Hazardous exposures include asbestos, polychlorinated biphenyls (PCBs), lead, hazardous

material and chemicals, excess noise, and fire. Butler says OSHA's national emphasis program gives guidance to OSHA field offices and state consultation programs providing assistance to employers engaged in shipbreaking operations and sets up a data reporting and collection system for injuries and accidents related to all shipbreaking activities nationally. It also initiates scheduled OSHA inspections of the Navy and Maritime Administration shipbreaking operations and encourages OSHA field offices to establish or continue local emphasis programs for other shipbreaking operations.

"This national emphasis program presents a comprehensive, multi-pronged approach to reduce or eliminate accidents and injuries within the shipbreaking industry," says Butler. [JSHQ](#)



Photo by Michael Carpenter



Photo by Michael Carpenter

Hazardous Work Activities

- Entry into confined, enclosed, and other dangerous atmospheres.
- Paint removal.
- Metal cutting and disposing.
- Powered industrial truck operations.
- Work on elevated surfaces.
- Bilge and ballast water removal.
- Oil and fuel removal and tank cleaning.
- Removal and disposal of ship's machinery.
- Operations involving cranes, gear, and material handling equipment.
- Cutting and welding operations and use of compressed gas.
- Activities involving scaffolds, ladders, and working services.

Safe Work Practices

- Provide adequate worker training.
- Use proper personal protective equipment.
- Follow fire protection measures.
- Arrange availability of appropriate emergency response, rescue, and first-aid personnel and services.



Photos above and below by courtesy of VSE Corporation



Clockwise from upper right: Asbestos worker boards a vessel being scrapped, large section is lifted from a ship for further scrapping ashore, last engine-room section is removed from a ship at drydock, fire watch controls fire hazards during metal-cutting operations, former Navy vessel arrives at the pier for shipbreaking, and prominently placed signs warn workers of hazards.

Remembering Alice Hamilton

OSHA looks back in time to honor a pioneer in worker safety and health.

by Fatima Pashaei

It was 1916, and two men stood waiting for a train at a New Jersey railway station. One man's cheekbones were stained with streaks of orange and his hair and eyebrows were bright yellow. His partner had a similar look, with bright yellow spots staining his face and bright orange hair, eyebrows, and fingernails. "Look at the canaries," someone whispered from the crowd of travelers gathered around the two comic figures.

In reality, the situation of the two "canaries" was far from humorous. These men had been involved in producing picric acid in the Canary

Islands. In a large open shed, they poured carbolic acid into nitric acid to form picric acid, an explosive the military used during World War I. Orange smoke would rise from the mixture, coloring men various shades of orange and yellow, then sinking and spreading over the ground. As the smoke spread, men scurried out of

their sheds, choking and gasping for air. Once they inhaled the noxious fumes into their lungs, breathing became extremely difficult. In some severe cases, men choked and died.

This was just one example of the nightmarish world of workers during the industrial era in the United States. During the late 19th and early 20th



Chicago's Hull House became a center for social change, especially in worker safety and health issues. Photo courtesy of Chicago Historical Society

centuries, rapid industrialization transformed large U.S. cities, especially those with scores of unemployed people willing to work long hours for low wages. The industrial workforce comprised large populations of eager and undemanding immigrants who easily met the industrial establishments' demand for manpower. As a result, industry and cheap labor formed an unhealthy alliance.

As industries expanded, incidents of sick and injured industrial workers skyrocketed. A startling number of work-related ailments—rheumatism, pneumonia, carbon monoxide poisoning, and lead poisoning, among them—crept into the lives of the working class. These were just a few of the silent killers that lurked in the shadows of industrial workplaces.

Industrial workplaces became hazardous breeding grounds for disease, and the poor working class had no choice but to accept the inherent dangers on the job. Mechanical accidents, exposures to hazardous chemicals and toxic fumes, and irresponsible industrial practices were daily occurrences.

One implicit law seemed to govern the lives of working men and women in the industrial era: the law of Social Darwinism, better known as “survival of the fittest.” Employers considered their workers to be expendable and had carte blanche to fire sick or injured workers, send them home with no wage compensation, and replace them with stronger, healthier workers. Neither employers nor the federal or state governments were prepared to take responsibility for or find a solution to the spiraling epidemic of workplace diseases and injuries.

It was not until the early 1900s that Dr. Alice Hamilton formed a movement to regulate industrial working conditions in the United States. Hamilton, a renowned scientist and social activist, is considered the founder of occupational medicine.



Alice Hamilton was a pioneer for worker safety and health protections. Photo courtesy of National Archives and Records Administration

After graduation from medical school at the University of Michigan in 1893, Hamilton conducted research in bacteriology and pathology at the Johns Hopkins University in Baltimore. She became a professor of pathology at Northwestern University Women's Medical School in Chicago in 1897. That was the year she moved into Jane Addams' famous Chicago settlement house, known as Hull House, and found her life's calling. There, Hamilton spent more than 20 years serving the working poor and witnessing what she called "the unprotected, helpless state of working men who were held responsible for their own safety."

In her 1943 autobiography, *Exploring the Dangerous Trades*, Hamilton writes of her experience at Hull House: "Living in a working-class quarter, coming in contact with laborers and their wives, I could not fail to hear tales of the dangers that

working men faced, of cases of carbon-monoxide gassing in the great steel mills, of painters disabled by lead palsy, of pneumonia and rheumatism among the men in the stockyards."

Hull House functioned primarily as a refuge for the poor. For progressive thinkers such as Hamilton, however, it served as a mecca for social activism and a forum for social change, especially in worker safety and health issues.

In 1910, the Illinois governor offered Hamilton the opportunity to take the lead in recognizing, investigating, and addressing safety and health concerns in the workplace for the state's newly established Occupational Disease Commission. Hamilton, the commission's managing director, launched a yearlong, statewide survey of industrial poisons.

To conduct the survey, Hamilton assumed the role of a detective. She searched for answers to questions that had long gone unanswered about

industrial poisons, in particular, lead poisoning. She combed poor working-class neighborhoods, visited sick workers in their homes, read hospital records, and spoke with doctors, priests, and apothecaries. She met with labor organizers, inspected factories, and suggested safer health and safety practices to managers. In all, Hamilton visited more than 300 industrial establishments and discovered more than 70 industrial practices that exposed workers to lead poisoning.

With the publication of Hamilton's *Survey of Occupational Diseases* in 1911 came the passage of an Illinois law that provided compensation for workers suffering with industrial diseases caused by poisonous fumes, gases, or dusts. The law resulted in sweeping reforms in the Illinois industries. At the insistence of insurance companies, industrial factories swiftly implemented preventive measures in the workplace because compensation laws



Hamilton's work at the Pullman Company in Chicago resulted in a dramatic decrease in lead poisoning among painters.

Photo courtesy of Chicago Historical Society



Hamilton became a crusader for the rights of workers like those in this early 1900s garment shop.

covered industrial diseases. Several other states, industrial and non-industrial, passed similar workers' compensation laws.

Hamilton's investigative work for the commission received nationwide attention and praise. Thus, it came as no surprise to Hamilton when, in 1911, Charles O'Neill, Commissioner of Labor in the U.S. Department of Commerce, asked her to take her research to a national level. (The Labor Department did not exist until 1912). O'Neill offered Hamilton no salary.

Working without pay, she traveled the country for the next 10 years investigating hazards posed by exposure to arsenic, lead dust (among smelters and bathtub enameleds), white lead (among painters), mercury (among hat manufacturers), organic solvents, nitric acid (among workers involved in explosives production), and radium (among watch dial manufacturers). She also investigated the effects of air hammers on stonecutters and of jackhammers on miners.

As a federal agent, Hamilton had no authority to enter any establishment without permission. Traveling from state to state, she relied solely on employers' cooperation to conduct her industrial hazards studies. In a sense, Hamilton became the first volunteer OSHA inspector.

Hamilton's work helped bring about reforms in what she called "the dangerous trades." The factories and companies she visited underwent dramatic transformations under her advice and direction. Among them was the Pullman Company which, when Hamilton visited it in 1912, employed 489 painters—109 of them with plumbism, or lead poisoning. She went to Mrs. Joseph T. Bowen, the head of the company and a major stockholder, to report her findings. Her complaint about the company's excessive use of lead paints met with immediate results. In the large factory, the company equipped its medical departments with modern facilities that provided employees immediate medical care. By the end of 1913, the lead industry had practically eliminated the use of lead paint. Consequently, the Pullman Company experienced a dramatic decrease in incidents of plumbism that year—only 3 cases among 639 workers.

Hamilton's profound concern for the well-being and safety of workers often met with opposition. She said many viewed her work in industrial medicine as "tainted with socialism or with feminine sentimentality for the poor." Yet, despite overwhelming criticism, in 1919 Hamilton became an assistant professor of industrial medicine and the first woman faculty

member at the prestigious all-male Harvard Medical School.

In 1935, Secretary of Labor Frances Perkins asked Hamilton to become a consultant for the U.S. Department of Labor. Hamilton worked tirelessly with the department to help implement worker compensation laws and enforce safer working conditions. At age 66, she continued to conduct surveys, attend conferences, testify at hearings before Congress, and bring the department's attention to pressing worker safety and health issues.

During the late 1930s, Hamilton embarked on a dangerous investigation of carbon disulfide poisoning among workers in the new viscose rayon, or artificial silk, industry. The poison attacked the workers' central nervous systems and caused mental disease, vision loss, and paralysis in many. The results of Hamilton's rayon survey helped lead to the passage of Pennsylvania's first workers' compensation law.

Hamilton's work in the field of occupational medicine and her relentless pursuit of worker rights and safe and healthful workplaces has inevitably saved thousands of lives. Unfortunately, she did not live to see her efforts come to fruition. Hamilton died in her home at age 101, just 3 months before then-President Richard Nixon signed the *Occupational Safety and Health Act of 1970* into law.

Hamilton's legacy lives on through the Occupational Safety and Health Administration. Her notion that workers are entitled to safe and healthful working conditions sparked numerous reforms in the workplace. It was an idea, rather radical for her time, that Hamilton stood by and advocated throughout her life. Today, it serves as the philosophy behind U.S. occupational safety and health laws.

JSHQ

Pashaei, a communications major at George Washington University, served as a summer intern in OSHA's Office of Public Affairs.

Flying High for Safety



Delta Air Lines is the first commercial airline to join OSHA's Voluntary Protection Programs.

by Lance Lamberton

Delta Air Lines is working to ensure that the workers who keep the aircraft flying safely have safe and healthful work environments.

Photo courtesy of Delta Air Lines

Safety has always been the number one focus at Delta Air Lines and that should come as no surprise. As the third-largest commercial carrier in the United States, transporting more than 100 million passengers each year to destinations throughout the world, Delta's management team knows that the company's success or failure rests more on its safety record than anything else. Mac Armstrong, senior vice president for the Air Transport Association and Delta's former executive vice president, says, "Safety is a pass/fail item, in that if you fail at safety, the other stuff doesn't matter."

The most obvious and visible measure of safety performance for an airline is transporting passengers and

crew from point A to point B without incident. Less visible, but no less important, is the safety of workers who maintain, repair, and overhaul those planes and who play such a critical role in ensuring the safety of the flying public.

Traditionally, Delta Air Lines has done a very good job in its 75-year history of providing for the health and safety of its workers. Its culture encourages and fosters continuous improvement, so when Delta began looking for additional ways to improve its safety performance, it gave a good, hard look at OSHA's Voluntary Protection Programs (VPP), and decided the programs were a winner.

Delta assembled its VPP team in June 1999 to review the VPP

requirements and assess the airline's readiness for the program in the Engine, Component, and Ground Support Equipment Maintenance operating units within the company's Technical Operations Division. The first task was to evaluate Delta's employee safety and health policies and procedures in accordance with VPP criteria. The four main elements of this review were management commitment and employee participation, worksite analysis, hazard prevention and control, and safety and health training.

Upon completing this review, the VPP team made recommendations for improvement and put several action plans into place. One was to educate all personnel about VPP. Another was to add all the VPP elements to a safety business plan to ensure leadership commitment and employee involvement. The team developed and implemented hazard reporting and tracking, along with a safety and health performance plan. And finally, how well the business plan and its performance objectives were met was made a part of each team member's performance evaluation for calendar year 2000.

“Safety is a pass/fail item, in that if you fail at safety, the other stuff doesn't matter.”

After implementing these action plans, Delta prepared and submitted its VPP application to OSHA in April 2000. An OSHA VPP onsite review followed in May 2000. During the review, OSHA's assessment team verified that Delta's Engine, Component and Ground Support Equipment Maintenance operating units had met the entry-level standards. In the ensuing months, the three operating units identified and worked on longer-term issues such as effective contractor safety management and emergency response procedures.

After Delta had addressed these items, OSHA granted the operating



R. Davis Layne, OSHA Deputy Administrator, left, presents a VPP plaque to Delta Chief Operating Officer Frederick Reid. Photo courtesy of Delta Air Lines

The direct involvement of Delta's frontline employees was key to achieving VPP status.

units VPP Merit status in January 2001, making Delta the first major commercial airline to apply for and receive this distinguished recognition. In May 2001, OSHA's then-Acting Assistant Secretary, Davis Layne, presented the Merit flag to Delta at a celebration in Atlanta's maintenance facility. Thousands of cheering maintenance technicians participated.

In making the presentation, Layne said, "Delta's Technical Operations Division has shown that it can deliver top-notch maintenance on a large fleet of commercial aircraft while preserving the well-being of its employees. Technical Operations is a model for others who want to improve their safety and health programs."

Key to achieving Merit status for such a large workforce was the direct involvement of Delta's frontline employees. According to Delta's chief operating officer, Frederick Reid, "Implementation of VPP is a bottom-up, not a top-down process. It is our frontline employees and their involvement that has made it possible for us to come this far. Reid says the management role is limited to that of an enabler and facilitator, "someplace where the front line can go to eliminate roadblocks and barriers to implementation." But he says it is the employees who actually do the work



Members of Delta's VPP implementation team are, from left, Joe Murzynsky, David Warren, Terry Gober, Kimball Richard, Greg Arbise, and Ed Thompson. Photo courtesy of Delta Air Lines

of maintaining the planes and identify what needs to be done to improve upon the company's workplace safety performance."

This direct employee involvement and a bottom-up approach to safety issues proved critical to overcoming the biggest challenge faced by Delta: the sheer size of the operation and the number of potential hazards faced on any given day. As pointed out by Delta's VPP team leader, Joe Murzynsky, "There are well over 2,300 employees in the three departments that have earned Merit status. They work in a 24-hour-a-day, 7-day-a-week facility with 12 maintenance bays in three different hangars, maintaining a fleet of 575 aircraft and a huge array of ground support. In that environment, we have identified more than 1,000 workplace hazards that run the gamut from noise, fumes, spills, falls, and electricity to ergonomic hazards such as repetitive motion, lifting, pushing, pulling, and bending.

"Getting an operation that size to make significant change is like changing the course of an ocean liner," says Murzynsky. "Yet that is exactly what we have done by involving the folks who will be most directly affected in a positive way by the changes."

Thanks to VPP, Delta has been able to document and track these identified hazards, which in turn has allowed the company to reinforce safe work actions and identify proper policies and procedures for the performance of each job. Although it is still too early to provide any definitive measure on how much safer Delta's Technical Operations Division is as a result of VPP, Jim Maucere, Delta's vice president of Base, Engine, and Component Maintenance is optimistic. "Over the past few years, we have reduced workplace injuries by 41 percent from 1996 to 2000," Maucere says. "With the implementation of VPP, I look forward with confidence to those numbers continuing to come down until Delta becomes the standard for workplace health and safety in the airline industry."



Delta employee Van Kale, left supervises Mick Wagner, a worker in the hydraulic component shop, to ensure he wears proper personal protective equipment.

Photo courtesy of Delta Air Lines

Following the lead of Engine, Component and Ground Support Equipment Maintenance operating units earning Merit status, another Delta operating unit has stepped up to the plate. In August 2001, an OSHA assessment team announced that it was recommending Merit status for Base Maintenance, an operating unit with 2,700 employees in Atlanta. The goal is for all operating units in Delta's Technical Operations Division to achieve Merit status, and eventually Star status. Given the enthusiasm and commitment already exhibited, they are well on their way.

JSHQ

Lamberton is the Manager of Corporate Communications for Delta's Technical Operations Division in Atlanta.

Preventing A

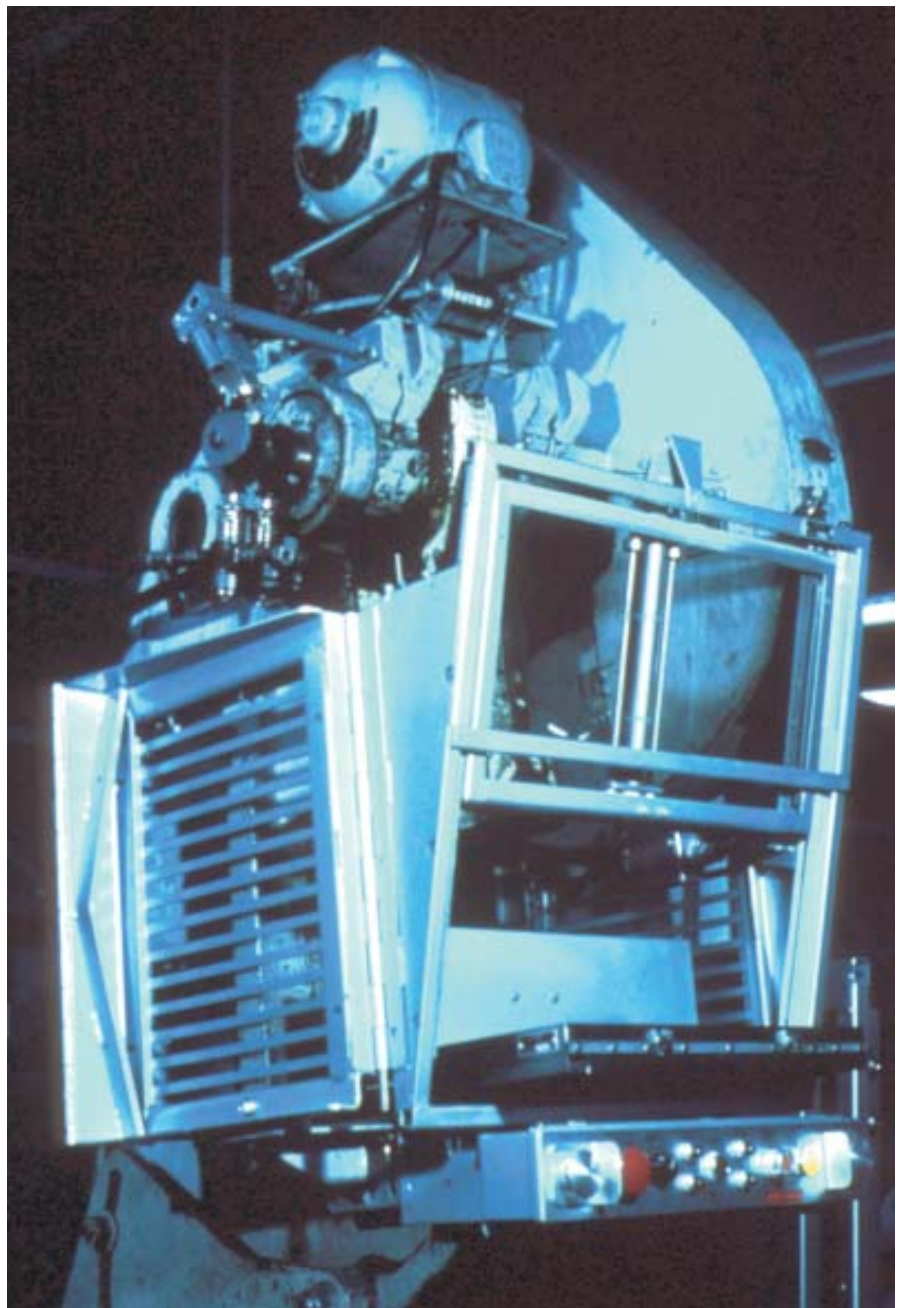
OSHA's national emphasis program is helping reduce

Last summer, a worker at a Georgia aerosol manufacturing company used his feet to tamp down cardboard inside a compactor's loading chamber while the machine was still running. As the compactor's horizontal ram entered the chamber to finish flattening the material, the cardboard "grabbed" the man's feet and immobilized him, and the ram severed both of his legs.

OSHA investigators discovered that this company did not enforce its lockout procedure, which would have made the compactor inoperable before workers enter the receiving chamber. Investigators also found that management knew that workers bypassed the two-hand control used to activate the compactor by taping down the control buttons, but did not take corrective action. The result was an ideal environment for amputations.

Amputations are among the nation's top three severe workplace injuries and illnesses, and most are not repairable through surgery. Among major industry divisions, amputations are most frequent in the manufacturing sector, followed by construction and the retail trade. More than half of these victims require 18 days or more away from work to recuperate.

Data from OSHA, the National Institute for Occupational Safety and Health (NIOSH), and the Bureau of Labor Statistics (BLS) indicate that presses, saws, shears, slitters, and slicers cause the most amputations. Maintenance and jam-clearing also contribute to these injuries.



A gate and physical guards provide barriers to hazardous areas and machine components.

Amputations

these maiming injuries in the workplace. by Fred Walters



Machine guards on a power press protect a worker from amputations and other injuries.

“Amputations are among the most crippling on-the-job accidents, and may occur when employees use unguarded or inadequately safeguarded machinery,” says Long Loo, a safety engineer in OSHA’s Technical Support Directorate.

Although any mechanical motion is potentially hazardous, rotating, reciprocating, cutting, punching, shearing, and bending motions are the most frequent causes of amputations. Amputations can occur at points of operation, where a machine performs work on material; in mechanical power-transmission components such as pulleys, belts, chains, and gears; and in other moving parts.

In spite of the many potential hazards for workplace amputations, current BLS data show that, between 1994 and 1999, nonfatal amputations in private industry decreased by more than 18 percent, from 12,222 to 9,985. Between 1992 and 2000, combined fatal amputations in both the private and public sectors declined from 27 to 18, or just over 33 percent.

OSHA Administrator John L. Henshaw says this demonstrates that amputations are preventable. He says the agency’s new national emphasis program on amputations, launched last November, is committed to continuing this downward trend. This initiative expands the scope of the existing program covering all types of power presses as well as saws, shears, slicers, and slitters. “Operating this type of equipment can be very dangerous. Injuries involving these machines too often result in a fatality

or permanent disability,” says Henshaw. “This new program will help us identify and guard against the workplace hazards that are likely to cause amputations.”

The best way to reduce the risk of amputation in the workplace is by using machine guards and safety devices and following lockout/tagout procedures. Guards act as physical barriers to hazardous areas and machine components. In addition to being secure, strong, and tamper-proof, they should not block the machine operator’s view. Safety devices prevent worker contact with points of operation during the hazardous portion of a machine’s cycle and may replace or supplement guards. These devices keep operators from reaching into moving machine parts or stop the machine cycle when the operator’s hands get too close to the machinery.

Dr. John R. Etherton, a research safety engineer with NIOSH’s Division of Safety Research, says amputations are preventable and that preventing them is everyone’s job—management’s as well as workers’. “Management should recognize the risk to their workers who operate

Safety Tips at a Glance

- Use machine guards as physical barriers to hazardous areas and machine parts.
- Use safety devices to prevent contact with points of operation.
- Enforce lockout/tagout procedures to safeguard employees from unexpected equipment startups or energization.

hazardous machinery and analyze their operating systems, particularly the specific tasks involved, to develop appropriate safeguards that will reduce that risk,” he says. “Management should also include machine operators and maintenance personnel when developing and applying these safeguards and protective measures, because these workers are more familiar with the machines they use and the tasks they perform.”

Etherton says a systematic approach to putting protective measures in place could have a

significant impact on reducing these injuries. “Safeguards and methodologies are available for virtually every hazardous task. Ensuring that guards and safety devices are installed on machines—and not bypassed by workers—is a critical supervisory responsibility,” he adds. “Ultimately, it is incumbent on management to create workplaces that are free from amputation hazards by marshaling all the forces needed to make machine safety happen.”

For more information about amputations, visit the OSHA website at www.osha.gov. Click on **Newsroom**, then **Publications**. The site offers a new OSHA publication, *Safeguarding Equipment and Protecting Workers from Amputations* (OSHA 3170) and a new fact sheet, *Amputations*, as well as two related publications, *Control of Hazardous Energy (Lockout/Tagout)*, OSHA 3120; and *Concepts and Techniques of Machine Safeguarding*, OSHA 3067. A new electronic Compliance Assistance Tool is expected to be released later this year. [JSHQ](#)

Walters is a writer-editor in OSHA’s Office of Public Affairs in Washington, DC.



OSHA’s new publication, *Safeguarding Equipment and Protecting Workers from Amputations*, supports the national emphasis program.



Physical guards keep operators from reaching into moving machine parts.

Measuring Success at CTC

OSHA's Cincinnati Technical Center is not just about repair and calibration anymore.

by Robert Williams



Mention OSHA's Cincinnati Technical Center (CTC) and what comes to mind? The Cincinnati, Ohio-based center has long been thought of simply as a maintenance facility, but those days are gone.

Although its main focus is still on servicing OSHA's industrial hygiene and safety instruments, the center also provides a wide range of other services to customers both inside and outside the agency. CTC, reorganized in 2000, now consists of two main areas: engineering support and program support. The center also maintains an advanced information systems support area for its internal administrative functions.

Safety instruments and the industrial hygiene field have changed remarkably within the past 15 years. Today, safety and health instruments are more precise, have more complex electronic circuits, perform more functions, and are based on more sophisticated operating principles than ever before.

The personal sampling pump, for example, once had three simple components: a motor, pump mechanism, and battery pack. Now,

it contains several circuit boards packed with miniaturized surface-mounted components that are controlled by a microprocessor. Servicing the pumps once involved only a simple cleaning and replacement of a few expendable components. Now, service technicians use a computerized system to test flow stability, battery voltage, and motor current, while varying the load on the pump.

CTC's engineering support crew services technical equipment sent in from the field offices, but also designs calibration systems and specialized test equipment, researches and solves equipment operation problems, and conducts technical studies.

The technicians have extensive backgrounds in operating, testing, calibrating, and repairing technical equipment. During the past 5 years, CTC has serviced an average of 9,600 pieces of equipment a year from both federal OSHA offices and state consultation offices. About one-third of the equipment needed some type of repair—something as simple as replacing the sensor or battery pack or as complex as rebuilding a pump

Program Manager Judy McMeeking fills a request from the field for equipment to perform field inspections. Photo by Ray Feldman



Electronics Engineer Ray Feldman conducts electromagnetic susceptibility tests on field equipment. Photo by Robert Williams

stack or troubleshooting an electronic circuit control board.

CTC typically services this equipment at a fraction of the cost that manufacturers and other calibration facilities would charge. The center records a history of all service information to use when analyzing requirements for parts and supplies, determines the useful life of

the equipment, and supports contested court cases regarding equipment monitoring.

Industrial hygiene instruments often have accuracies of 95 percent or better, so calibration requirements are more stringent than ever, demanding precisely controlled conditions. Variables such as temperature and pressure must remain

stable to ensure accurate measurements, whether for a concentration of a substance, a noise level, or another parameter. The CTC staff designs and builds its own systems to calibrate OSHA's instruments.

CTC's engineers have broad knowledge in industrial hygiene and safety instruments and equipment. They develop calibration systems and procedures for servicing OSHA's field equipment. They also help OSHA's field staff solve equipment problems and conduct other technical studies on safety and health measurement instrumentation. CTC also evaluates new equipment being considered for OSHA use and develops protocols to test this new equipment to verify that it works properly and meets OSHA's inspection needs. This can include testing instruments in varying environmental conditions, such as extreme temperature and humidity, as well as checking for problems when

CTC Support Programs

The *Agency Expendable Supplies Program (AESP)* provides OSHA field offices with a veritable "one stop" shopping service of more than 430 supply items available for performing field inspections. Offices place an order with the center for items they need, and the staff ships the order, sometimes by overnight delivery, if necessary. This program saves time and money for the entire agency, since field offices do not have to research supplies or locate sources. CTC also negotiates better pricing with the suppliers due to the large quantity of items it buys.

The *Agency Loan Equipment Program (ALEP)* allows field offices to borrow more than 250 pieces of equipment. This equipment is typically unique or expensive, and most offices within OSHA would use it enough to justify purchasing it for

themselves. The loaned equipment also could be a replacement while the office's own equipment is being serviced. CTC purchases and maintains all loan program equipment for field offices to borrow as needed.

The *Agency Technical Equipment Procurement Program (ATEPP)* is another "one-stop" shop for technical equipment. Through ATEPP, the center coordinates and consolidates the once-a-year purchase of technical equipment for field offices. CTC researches equipment to find the best products and works with manufacturers to get the best quantity discounts. This saves the field offices time and effort and ensures that they use comparable equipment for compliance inspections. Each office chooses the equipment it needs and orders it from CTC during the ATEPP ordering period. CTC does all the rest, including making sure each item operates properly and recording it in

the inventory database before shipping it to the customer.

The *OSHA Property Management Inventory System (OPMIS)* manages and maintains equipment information for all OSHA offices and provides a variety of reports for internal property management. CTC developed the OPMIS database, which tracks more than 46,500 property items worth more than \$25 million.

OSHA offices use the OPMIS system to conduct annual physical property inventories for technical, automated data processing, and mission-sensitive equipment. CTC designed and developed additional software using barcode readers to save users time and resources during the process. Inventories that once took from 2 to 4 weeks can now be done in 1 week or less.

In addition, OPMIS provides the *Technical Equipment Age Distribution Report*, which supplies field offices

the equipment is subjected to electromagnetic fields such as radiofrequency transmissions.

CTC has been a leader in the movement to get manufacturers to protect and shield their equipment from electromagnetic fields that could cause inaccurate readings and potentially put workers in danger.

The CTC staff identified interference from nonionizing radiation as the cause. More evaluation showed that the problem was common with many industrial hygiene and safety instruments but could be corrected relatively inexpensively. The industrial hygiene and safety instrument industry, however, was not convinced. Only after many demonstrations of the problem and solutions did instrument manufacturers acknowledge the problem and correct it by modifying their instrument designs. Frequently, the center staff uncovers defects in the instruments it evaluates, alerts

manufacturers, and suggests how to eliminate them. The center continues to work with many of the equipment manufacturers to incorporate new features or modify existing equipment to better meet OSHA's needs.

CTC also advises OSHA's other directorates on equipment purchases. Its engineers serve as representatives on various national standards-setting committees, including one concerning nonionizing radiation and its effects on industrial hygiene instruments. Participation in this and other committees helps ensure that the agency's interests are considered during standards development.

CTC provides vital equipment operating information to the federal field offices, national offices, and OSHA state consultation program offices. The center also works with state plan offices concerning technical equipment needs and servicing systems.

The Program Support staff purchases supplies and equipment for use in compliance inspections, ships to area offices, and manages the property inventory databases through several programs. (See sidebar.)

CTC has evolved over the past decades from an instrument repair facility to one of the nation's best engineering centers with expertise in industrial hygiene and safety instruments. The center's accomplishments in advancing this field continue to expand its reputation as a source of state-of-the-art engineering expertise. Along with its field support programs, the center offers unmatched service to its customers in support of OSHA's mission. [JSHQ](#)

Williams is the director of the Cincinnati Technical Center.

with vital information concerning their technical equipment, including what they own, how many, and the equipment's age. This information helps field offices project equipment needs.

The *Agency Excess Equipment Program (AEEP)* enables field offices to turn in excess technical equipment so CTC can share it with other OSHA offices. If a field office requests a piece of equipment that has been turned in through the program, CTC checks it for proper operation and calibrates it before sending it to its new owner. As a result, the requesting field office gets the technical equipment it needs at no cost.

Current information for these support programs, including catalogs of expendable and loan items, excess equipment list, and a user's manual for OPMIS, is available on the CTC Limited Access Page under **CTC**. The site includes technical

information and guidance, including summary notes from past Compliance Officers Forums on Equipment Evolution and field service memos.



Engineering Technician Harry Rollyson calibrates an air sampling pump at an automated pump calibration station. Photo by Ray Feldman

OSHA Training July - September 2002

Eastern Michigan University— United Auto Workers Ypsilanti, MI (800) 932-8689

201A Hazardous Materials—August 1 (online), September 1 (online)
204A Machinery and Machine Guarding Standards—August 5-8 (Livonia, MI)
222A Respiratory Protection—August 19-22 (Livonia, MI)
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—August 1 (online); August 19-21 (Livonia, MI)
226 Permit-Required Confined Space Entry—August 1 (online); September 9-11 (Livonia, MI)
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—August 1 (online); September 16-19 (Livonia, MI)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—August 19 (online); August 12-15 (Findlay, OH); September 23-26 (Livonia, MI)
502 Update for Construction Industry Outreach Trainers—August 1 (online); September 16-18 (Livonia, MI)
503 Update for General Industry Outreach Trainers—August 1 (online); September 23-25 (Livonia, MI)
510 Occupational Safety and Health Standards for the Construction Industry—August 1 (online)
521 OSHA Guide to Industrial Hygiene—July 29-August 1 (Livonia, MI); August 1 (online)
600 Collateral Duty Course for Other Federal Agencies—August 1 (online)

Georgia Tech Research Institute Atlanta, GA (800) 653-3629

201A Hazardous Material—August 26-30
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—September 24-27

301 Excavation, Trenching, and Soil Mechanics—July 30-August 2
311 Fall Arrest Systems—September 24-27
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—July 8-12 (Clearwater, FL); August 12-16 (Nashville, TN); September 9-13 (Jacksonville, FL)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 8-12 (Clearwater, FL); August 12-16 (Nashville, TN); September 16-20
502 Update for Construction Industry Outreach Trainers—July 23-25
521 OSHA Guide to Industrial Hygiene—August 19-23

Great Lakes OSHA Training Consortium Minneapolis, MN (800) 493-2060

222A Respiratory Protection—August 21-23
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—July 22-24 (Cincinnati, OH)
226 Permit-Required Confined Space Entry—July 22-24 (Cincinnati, OH); August 6-8
301 Excavation, Trenching, and Soil Mechanics—August 20-22 (Cincinnati, OH)
309A Electrical Standards—July 23-26 (Cincinnati, OH)
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—August 19-22 (Cincinnati, OH)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—August 19-22 (Cincinnati, OH); September 16-19
502 Update for Construction Industry Outreach Trainers—August 6-8 (Cincinnati, OH)
503 Update for General Industry Outreach Trainers—August 7-9 (Cincinnati, OH)

Keene State College Manchester, NH (800) 449-6742

201A Hazardous Materials—September 9-12
309A Electrical Standards—July 15-19
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—July 22-26 (Groton, CT); August 19-23 (North Haven, CT); September 16-20
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 8-12, August 26-30 (New Haven, CT); July 15-19 (Auburn, ME); July 22-26, August 12-16 (Manchester, NH); September 16-20 (Springfield, MA)
502 Update for Construction Industry Outreach Trainers—July 8 (online); August 19-21 (Groton, CT)
503 Update for General Industry Outreach Trainers—July 10 (online); August 21-23 (Groton, CT)
510 Occupational Safety and Health Standards for the Construction Industry—July 15-19 (New Haven, CT)

Metropolitan Community Colleges- Business and Technology Center Kansas City, MO (800) 841-7158

204A Machinery and Machine Guarding Standards—July 8-11
222A Respiratory Protection—August 19-22
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—September 23-26
226 Permit-Required Confined Space Entry—July 22-24
301 Excavation, Trenching, and Soil Mechanics—August 26-29
309A Electrical Standards—August 5-8
311 Fall Arrest Systems—July 15-18; September 9-12
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—August 12-15

501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 22-25; September 9-12
502 Update for Construction Industry Outreach Trainers—September 23-25
503 Update for General Industry Outreach Trainers—August 26-28
510 Occupational Safety and Health Standards for the Construction Industry—September 16-19

**National Resource Center
for OSHA Training
Washington, DC
(800) 367-6724**

225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—September 16-19 (Silver Spring, MD)
309A Electrical Standards—August 19-22 (Silver Spring, MD)
311 Fall Arrest Systems—September 16-19 (Silver Spring, MD)
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—July 8-11 (Philadelphia, PA); August 28-31 (Silver Spring, MD); September 3-6

(Morgantown, WV); September 23-26 (Wilkes-Barre, PA)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 15-18, September 23-26 (Silver Spring, MD); September 3-6 (Pittsburgh, PA); September 9-12 (Wilkes-Barre, PA); September 17-20 (Richmond, VA)
502 Update for Construction Industry Outreach Trainers—September 9-11 (Silver Spring, MD)
503 Update for General Industry Outreach Trainers—July 8-10 (Silver Spring, MD)
521 OSHA Guide to Industrial Hygiene—August 12-15 (Silver Spring, MD)

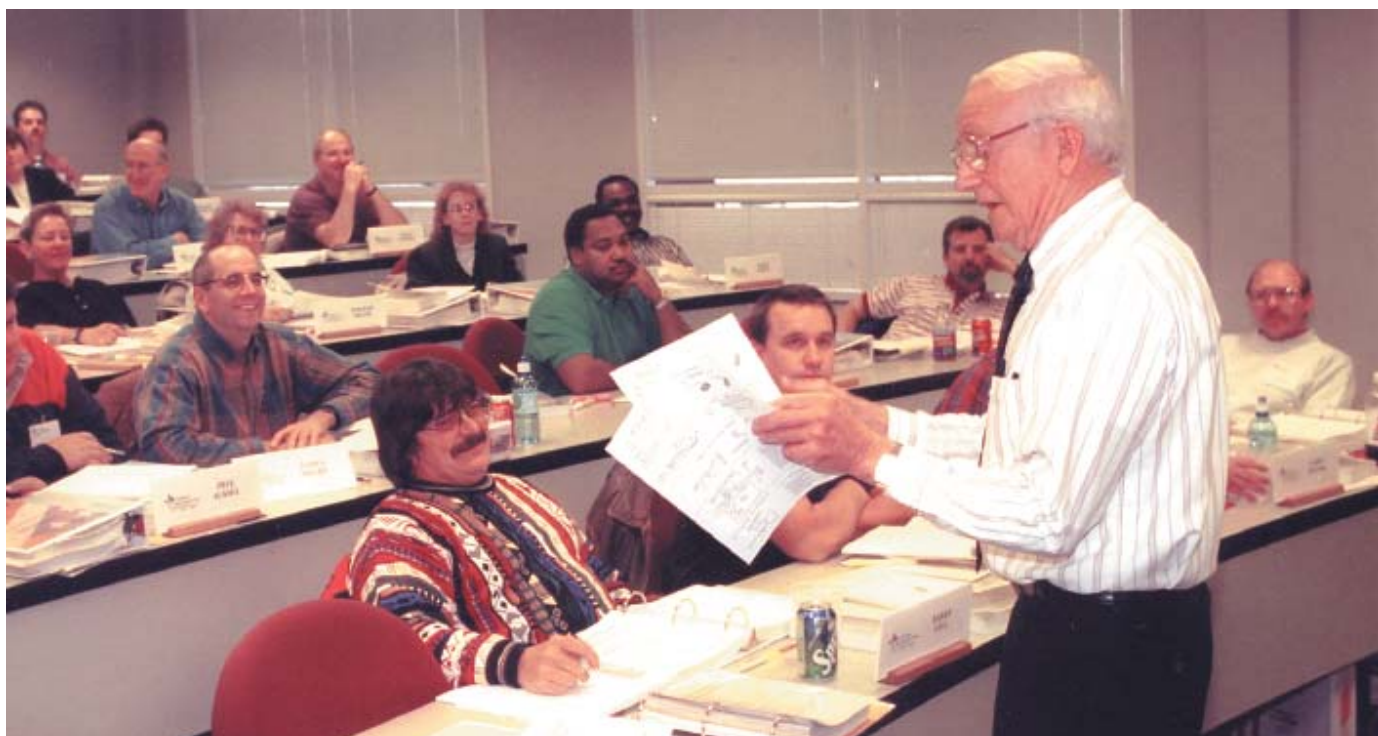
**National Safety Education Center
DeKalb, IL
(800) 656-5317**

225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—July 9-11 (Decatur, IL)
226 Permit-Required Confined Space Entry—July 9-11 (Hillside, IL); August 6-8 (Itasca, IL)

301 Excavation, Trenching, and Soil Mechanics—September 10-12 (Hillside, IL)
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—August 19-23, September 16-20 (Hillside, IL)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 15-18 (Naperville, IL); September 16-20 (Itasca, IL); September 6-October 4 (Interactive TV Multipoint)
502 Update for Construction Industry Outreach Trainers—August 27-29 (Hillside, IL)
503 Update for General Industry Outreach Trainers—July 23-25 (Itasca, IL)

**Niagara County Community College
Lockport, NY
(800) 280-6742**

204A Machinery and Machine Guarding Standards—August 20-23
222A Respiratory Protection—September 23-26
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and



*An instructor at the National Safety Education Center teaches one of seven courses to be offered this summer through the center.
Photo courtesy of National Safety Education Center*

Nerve Disorders—September 16-19
301 Excavation, Trenching, and Soil Mechanics—September 30-October 3
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—August 12-15
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 8-11, August 5-8, September 9-12
600 Collateral Duty Course for Other Federal Agencies—July 15-18

**Red Rocks Community College—
Trinidad State Junior College
Lakewood, CO
(800) 933-8394**

204A Machinery and Machine Guarding Standards—July 30-August 2
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—July 22-24
226 Permit-Required Confined Space Entry—August 26-28
301 Excavation, Trenching, and Soil Mechanics—September 4-6
309A Electrical Standards—August 27-30
311 Fall Arrest Systems—September 23-25
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—July 8-11, August 5-8, September 9-12
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 15-18, August 12-15, September 16-19
521 OSHA Guide to Industrial Hygiene—July 8-11
600 Collateral Duty Course for Other Federal Agencies—July 29-August 1

**Texas Engineering Extension Service
Mesquite, TX
(800) 723-3811**

201A Hazardous Materials—July 22-26
222A Respiratory Protection—August 26-29
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—July 22-24 (Austin, TX); September 16-18

226 Permit-Required Confined Space Entry—August 20-22
309A Electrical Standards—September 9-13 (Norman, OK)
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—July 15-19, August 26-30, September 23-27 (Houston, TX); August 12-16 (Mesquite, TX); September 16-20 (West Memphis, AR); July 29-August 2 (online)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 8-12 (Austin, TX); July 8-12 (Corpus Christi, TX); July 15-19, August 5-9, September 9-13 (Mesquite, TX); July 22-26, September 23-27 (San Antonio, TX); August 12-16 (Houston, TX);
502 Update for Construction Industry Outreach Trainers—July 23-25, August 6-8 (Houston, TX)
503 Update for General Industry Outreach Trainers—July 30-August 1 (Houston, TX)
510 Occupational Safety and Health Standards for the Construction Industry—July 8-11, August 19-22 (Houston, TX); July 15-18 (Little Rock, AR); August 5-8 (Mesquite, TX)
521 OSHA Guide to Industrial Hygiene—August 19-22
600 Collateral Duty Course for Other Federal Agencies—July 29-August 2 (Norman, OK)

**University of California
San Diego, CA
(800) 358-9206**

222A Respiratory Protection—September 30-August 3
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—September 30-October 3
226 Permit-Required Confined Space Entry—August 5-7
309A Electrical Standards—September 9-12
500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry—July 22-25, September 16-19

501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 15-18 (Los Angeles, CA); July 29-August 1, September 9-12 (San Diego, CA); September 23-26 (San Francisco, CA); September 30-October 3 (Honolulu, HI)
502 Update for Construction Industry Outreach Trainers—September 25-27
510 Occupational Safety and Health Standards for the Construction Industry—August 19-22
600 Collateral Duty Course for Other Federal Agencies—August 12-15

**University of Washington
Seattle, WA
(800) 326-7568**

222A Respiratory Protection—August 12-14
225 Principles of Ergonomics Applied to Work-Related Musculoskeletal and Nerve Disorders—July 23-25 (Portland, OR)
226 Permit-Required Confined Space Entry—July 15-17
311 Fall Arrest Systems—July 30-August 2 (Anchorage, AK)
501 Trainer Course in Occupational Safety and Health Standards for General Industry—July 8-11 (Portland, OR)
502 Update for Construction Industry Outreach Trainers—September 23-25
503 Update for General Industry Outreach Trainers—September 9-11
510 Occupational Safety and Health Standards for the Construction Industry—August 19-22 (Portland, OR)
521 OSHA Guide to Industrial Hygiene—August 26-29
600 Collateral Duty Course for Other Federal Agencies—August 5-8

Course dates are subject to change. For tuition rates and registration information, contact the institution offering the courses or visit OSHA's website at www.osha.gov.

Solvent Exposures: Results of an OSHA Inspection

Accident Type	Fall
Weather	Clear/cold
Type of operation	New building construction
Crew size	5
Competent person on site?	Yes
Safety and health program in effect?	Partially
Worksite inspected regularly by employer?	Occasionally
Training and education provided?	Yes
Employee job title	Iron workers
Age/sex	45/male
Experience at this type of work	20 years
Time on project	1 week

Mattress Manufacturer

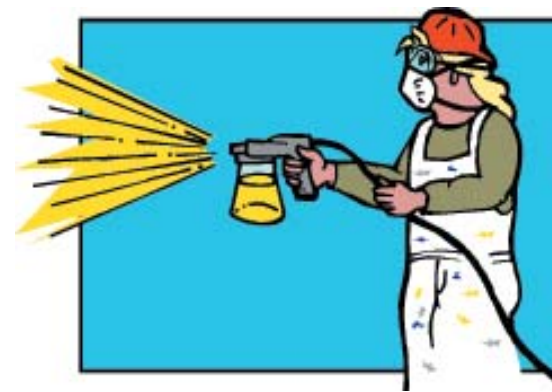
During a recent site-specific targeting inspection at a mattress manufacturing plant, screening tools used by an OSHA industrial hygienist indicated levels of methylene chloride above 250 parts per million (ppm) while employees were using an adhesive glue to join layers of foam. This particular glue contained approximately 60 percent methylene chloride. Overexposures have been linked to cancer in humans and may cause central nervous system disorders, severe skin and eye irritation, and aggravation of pre-existing liver and heart disorders. Methylene chloride is a pleasant aromatic liquid, noticeable at levels between 25 and 300 ppm and is the primary component in blowing agents used in foam manufacturing and as an adhesive in the bedding industry. OSHA's standard for methylene chloride—*Title 29 of the Code of Federal Regulations, Part 1910.1052*—has a permissible exposure limit (PEL) of 25 parts per million (ppm) of air for an 8-hour time-weighted average (TWA). The standard also has an action level of 12.5 ppm and a 15-minute short-term PEL of 125 ppm.

Deficiencies Found

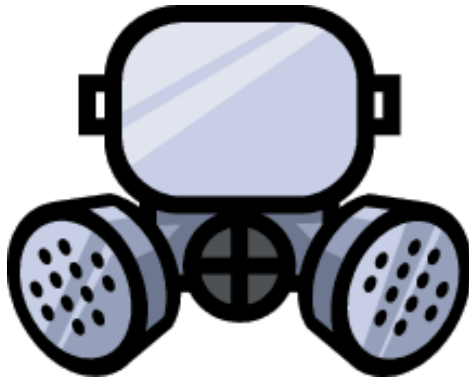
The industrial hygienist found that the manufacturer had not conducted the initial monitoring required by the OSHA methylene chloride standard. The two potentially exposed employees were not wearing any personal protective equipment (PPE) such as respirators, aprons, gloves, or safety glasses and had not been trained on the hazards associated with methylene chloride use, even though the employer had the Material Safety Data Sheet onsite. In addition, the employer had no written hazard communication program. The employer also had not addressed other sections from the standard such as regulated areas, medical surveillance, engineering/administrative controls, and hygiene. Based on the screening results, the industrial hygienist performed personal monitoring on both exposed employees.

Industrial Hygienist's Analysis

The OSHA industrial hygienist measured worker exposure to methylene



Detach Here



chloride using screening and area and personal monitoring. The methylene chloride exposures were found to be greater than the 8-hour TWA PEL, so OSHA issued citations for the following:

- Exceeding the 8-hour TWA PEL;
- Making no initial determination of exposure levels;
- Having no established regulated areas to identify areas where exposures exceed the action level;
- Having no engineering/administrative controls;
- Using no respirators;
- Using no PPE;
- Providing no medical surveillance; and
- Having no employee training program.

Solutions and Results

The OSHA industrial hygienist explained the requirements of the methylene chloride standard and provided OSHA material to help the employer take effective abatement measures. The industrial hygienist also explained free services offered by the OSHA onsite consultation service and encouraged the employer to take advantage of these services.

Additional Benefits

The following items briefly describe ways to address items within 29 CFR 1910.1052 and help prevent overexposures to methylene chloride.

- Review chemicals used at your facility, particularly the Material Safety Data Sheets, to determine if any of your chemicals contain methylene chloride.
- Perform personal air monitoring to determine employee exposures to methylene chloride.
- Implement engineering controls such as installing exhaust ventilation or using other controls where feasible.
- Establish regulated potential exposure areas.

- Provide supplied-air respirators as required by the standard.
- Evaluate the use of PPE to prevent skin contact with methylene chloride.
- Establish a training program for affected employees.
- Set up a medical surveillance program for affected employees.
- Consider substitution to another, less toxic chemical.

OSHA Publication 3144, *Methylene Chloride*, provides an overview of the OSHA methylene chloride standard. It is available on the OSHA website at www.osha.gov. Click on **Newsroom**, then **Publications**. For additional information about OSHA enforcement standards and consultation programs, contact the OSHA regional or area office in your area or visit the agency website. [JSHQ](#)

This SafeWorks was submitted by Carlos Reynolds, an industrial hygienist in OSHA's Oklahoma City Area Office.

OSHA provides workplace safety and health assistance to help employers identify and 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 regional office in your area for additional information on the consultation program, or visit the agency's website at www.osha.gov.