

Reflections on OSHA's History



U.S. Department of Labor
Occupational Safety and Health Administration
January 2009

OSHA 3360

P R E F A C E

OSHA has a remarkable 37-year history of protecting the safety and health of the nation's working men and women. The agency has helped to save many thousands of lives and reduce occupational injury and illness rates by more than half during its existence. Clearly, OSHA's success is greatly attributed to the hard work and dedication of its past and present employees. There are some OSHA employees who have worked in the Department since the beginning of the agency and possess a rich personal understanding of how the agency has transformed itself over the decades.

Therefore, in an effort to ensure an even greater understanding and appreciation of OSHA's past and present, a group of individuals from within the agency volunteered to prepare this document which highlights many of the agency's historical origins and progress from an insider perspective. It is important to retain as much of the institutional knowledge as possible for the benefit of future generations of OSHA staff.

Reflections on OSHA's History is the result of this group's diligent research, interviews and collective insight into the history behind the Department of Labor's establishment of OSHA and its subsequent efforts to accomplish its mission of saving lives and assuring safe and healthful workplaces.

You are invited to read *Reflections on OSHA's History* to learn more about OSHA and how it has evolved over the years. It is vital for an organization to know its past in order to successfully move itself forward into the future.

Throughout this publication we feature facts and quick quizzes to test your knowledge of people and major events in OSHA history.

Good luck! Answers appear on pages 58-60.

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Setting the Foundation of Occupational Safety and Health

The American public puts a high value on having safe and healthful workplaces as part of the nation's dynamic economy. OSHA – the Occupational Safety and Health Administration – is known throughout the country as “The Resource” for occupational safety and health issues. But the OSHA that exists today is the product of a long evolution from a 19th century economy in which occupational safety and health was not the priority it is today.

Massachusetts passed the nation's first safety and health legislation in 1877, requiring the guarding of belts, shafts, and gears, protection on elevators, and adequate fire exits in factories. By 1890, nine states provided for factory inspectors, 13 required machine guarding, and 21 made limited provision for health hazards.

In 1903, the U.S. Bureau of Labor began publishing graphically detailed studies of occupational fatalities and illnesses in the dusty trades, as well as other safety and health topics.

FACT

In 1910, the Bureau of Labor published a study by John B. Andrews on phosphorus necrosis (“phossy jaw”), a disfiguring, sometimes fatal disease of the jawbone suffered by employees in the white phosphorus match industry. This shocking study led the U.S. to place such a high tax on phosphorus matches that the industry nearly collapsed. In 1911, a method was developed to use sesquisulfide of phosphorus to produce matches, eliminating the hazard.

Dr. Alice Hamilton, considered the founder of industrial medicine in America, worked as a special investigator for the Bureau of Labor until 1921. Hamilton traveled around the country visiting lead smelters, storage battery plants, and other types of workplaces. In 1911, she published a study of the white lead industry that was the first of a series of Bureau of Labor reports known as the “Federal Survey.” Hamilton’s work led Illinois to establish laws requiring job-related safety measures. By the late 1930s, all states had such laws.



Dr. Alice Hamilton

QUICK QUIZ

What Cabinet Department was in charge of the U.S. Bureau of Labor?



William B. Wilson

The bill establishing the Department of Labor was signed on March 4, 1913, by President William Howard Taft, the defeated and departing incumbent just hours before Woodrow Wilson took office. Although Taft had misgivings about creating a new Cabinet-level Department, he realized that the new Congress and new President would surely reenact it if he did exercise a veto. Woodrow Wilson’s appointee as the first Secretary of Labor was **William B. Wilson** (no relation),

Secretary-Treasurer of the United Mine Workers of America and later a Congressman who led the legislative drive that created the Department of Labor.

In 1933, President Franklin D. Roosevelt selected **Frances Perkins** to be the new Secretary of Labor; she became the first woman to serve as member of the Cabinet. Perkins brought to the Labor Department extensive experience in occupational safety and health with the State of New York. To help assure that workplaces would be “as safe as science and law can make them,” Perkins created the Bureau of Labor Standards in 1934. This was the first permanent federal agency established primarily to promote safety and health for working men and women. The bureau also helped state governments improve their administration of workplace safety and health laws and raise the level of their protective legislation. The Department’s activities related to occupational safety and health would later move from the responsibility of the Bureau of Labor Standards to a newly created agency, OSHA.



Frances Perkins

FACT

Secretaries of Labor Elaine L. Chao and Frances Perkins both graduated from Mount Holyoke College in South Hadley, Massachusetts.

Reflections from the 1970s
Early Years of OSHA



President Richard M. Nixon signs *OSH Act*

The **Occupational Safety and Health Act** was signed into law on December 29, 1970, by President Richard M. Nixon, culminating nearly a

century of endeavors by the states and the federal government to mitigate the vulnerabilities of employees exposed to hazards of the industrial age.

Enactment of the Williams-Steiger *Occupational Safety and Health Act (OSH Act)* was preceded by vigorous debate that began during the Johnson Administration among government, business and organized labor over the extent to which federal authority would set and enforce workplace safety and health standards. The Act became effective on April 28, 1971, now the official “birthday” of the Occupational Safety and Health Administration, the Review Commission, and NIOSH. That same month, **George Guenther**, the head of DOL’s Bureau of Labor Standards, became the first Assistant Secretary of Labor for Occupational Safety and Health, and served until 1973.



George Guenther

QUICK QUIZ

Who was Secretary of Labor when George Guenther became head of OSHA?

That first year was a fast-paced period for the fledgling agency, devoted to establishing OSHA as a viable organization to administer and enforce the Act. The initial standards package, published in the *Federal Register* on May 29, 1971, included many existing federal standards, national consensus standards for general industry, construction, maritime, and other industries. The effective date for the standards was August 27, 1971. This provided a 90-day grace period to enable previously non-covered employers to familiarize themselves with the standards and to become compliant with the new requirements.

FACT

When Congress was considering the *OSH Act* in 1970, approximately 14,000 occupational fatalities were being reported each year as well as 2.5 million job-related disabilities and 300,000 new cases of job-related illnesses.

OSHA's leadership focused on recruiting and training an effective compliance officer staff in a decentralized field structure consisting of 10 regional offices, 49 area offices and 2 maritime district offices in major cities across the nation. Efforts began to educate employers about compliance requirements, while also targeting enforcement resources on high hazard industries.

QUICK QUIZ

How can you say thank-you to the staff of the area office that is farthest away from OSHA's national office?

During OSHA's start-up phase, the agency targeted its enforcement resources on a "worst case first" approach, emphasizing the investigation of catastrophic accidents and compliance in the most dangerous and unhealthful industries and workplaces. These efforts were supplemented with new education and recognition programs to promote safe and healthful workplace practices.

FACT

The first five industries targeted by OSHA for safety hazards were marine cargo handling, roofing and sheet metal work, meat and meat products, miscellaneous transportation equipment (primarily mobile homes) and lumber and wood products. Five health hazards were also targeted: asbestos, lead, silica, carbon monoxide and cotton dust.

On January 17, 1972, the OSHA Training Institute (OTI) was established to train OSHA compliance officers and stakeholders on safety and health topics. The first standard promulgated was for asbestos fibers on June 2, 1972, which lowered the permissible exposure limit (PEL) for employees to 2 fibers per cubic centimeter (cc).

Later that year, the first three States Plans approved to administer their own OSHA programs were South Carolina, Montana, and Oregon. In these early years, it was anticipated that the majority of states would form their own state OSH programs.

FACT

The OSHA Training Institute was located at the end of a runway at O'Hare Airport in Chicago in the 1970s.

Around this same time, OSHA's information management system began to take shape. All agency case files were paper-based, including complaints and citations. Inspectors transferred inspection notes onto carbon-set logs. Logs were bundled by OSHA area offices and mailed each week to the national office, where the information was entered by a keypunch operator to a punch card which was run through the Department of Labor's mainframe computer system.

QUICK QUIZ

How many columns of numbers were in a standard punch card?

A New Agency Takes Shape



John H. Stender

By April 10, 1973, OSHA had a new assistant secretary when **John H. Stender** was confirmed as the successor to George Guenther. Stender, an official of the Boilermakers Union and a representative in the Washington state legislature, had a unique understanding of workplace hazards, having lost part of his hearing from exposure to noise while working inside of boilers.

QUICK QUIZ

The Labor Secretary who nominated John Stender was also a union official. Can you name him?
Name the labor organization he led.

As the agency continued to gain experience, emphasis was placed on strong enforcement and standards development. In April 1973, OSHA issued an emergency standard for a group of pesticides; however, it was vacated by a court and no permanent standard was issued following this legal challenge. More successful was a standard for vinyl chloride, issued in 1974 when a virtual epidemic of liver cancer suddenly became evident among exposed employees. In January 1975, a proposal was issued for a permanent standard for another carcinogen, inorganic arsenic. In October 1974, OSHA proposed a somewhat toughened revision of its consensus standard on noise, stemming from work done earlier.

Meanwhile, inflationary pressures were growing in the U.S. economy, and criticism was mounting that environmental, occupational safety and health, and consumer protection rules had become excessively burdensome, adding to inflation. Emerging court decisions and other factors began complicating the standard-setting process. Although these factors affected the pace at which standards could be promulgated, they provided mechanisms for ensuring a robust final rule – balanced between “quality” and “speed.”

QUICK QUIZ

In November 1974, President Ford issued an order requiring a new type of analysis for most proposed regulations, including those on job safety and health. What were these new requirements called?

Internal Operations and Policies

Some of the more significant regulatory actions OSHA took in the second half of the 1970s were the issuance of proposed new standards for coke oven emissions and airborne lead. Additionally, in 1978, OSHA issued a cotton dust standard, one of the most controversial standards ever issued by the agency. Both labor and industry were at odds with OSHA over the 1978 standard, resulting in ongoing debate through the early eighties. OSHA also issued several proposals for health standards, including plans to regulate asbestos, beryllium and a number of industrial chemicals.

In December 1975, **Morton Corn** was sworn in as the new head of OSHA. Corn was a professor of occupational health and chemical engineering at the University of Pittsburgh, and he came to OSHA with special expertise in health, extensive experience as a consultant with management and organized labor, significant professional credentials, and a record of active participation in national and international health organizations. Assistant Secretary Corn focused on regulatory reform and working with concerned stakeholders to involve them in the standards-setting process, from start to finish. Corn reasoned that the final standards and regulations would receive greater acceptance and compliance once promulgated since input from varied stakeholders was considered throughout the process.



Morton Corn

QUICK QUIZ

What non-DOL agency did Morton Corn court to improve its relations with OSHA? Why?

In January 1976, national media attention was given to a pesticide manufacturing plant in Hopewell, VA where employees fell ill from exposure to a chemical called kepone. Twenty-nine employees were hospitalized with nerve damage. At Congressional hearings, it was revealed that an employee had tried to file a health complaint; however, the case was treated as a matter of job discrimination since the employee had been fired and neglected to follow-up on the health complaint aspect of the complaint.

This case in Hopewell, VA added to the agenda of OSHA reform, particularly in raising the professional capabilities of the agency by hiring highly qualified inspectors and improving the qualifications and competence of those already on the OSHA staff through special training programs. To address and improve OSHA's ability to provide reliable technical information needed to enforce complex safety and health standards, including exposure to chemicals such as kepone, the Technical Data Center was established to answer questions from inspectors in the field who need to make timely and prudent decisions based on up-to-date information. Additionally, the agency underwent a significant reorganization to create special divisions for safety standards, health standards, technical support, and enhanced training efforts.

FACT

CSHOs first began to use standardized enforcement inspection forms in 1976. To help improve management of the inspection process, OSHA also deployed Olivetti word processors that year.

Directing Common Sense Priorities

On March 11, 1977, [Eula Bingham, Ph.D.](#) was nominated as Corn's successor to lead the agency. Bingham, an occupational health scientist from the University of Cincinnati, was an authority on occupational disease and on cancer-causing substances. She also served on numerous national advisory committees.



Eula Bingham, Ph.D.

Prior to her nomination, Bingham was personally interviewed in the White House by President Carter, who early in 1977 had told a town hall meeting of DOL employees that he wanted to appoint a woman to head OSHA. The announcement drew a round of applause.

Bingham's tenure focused on three key priorities: (1) dealing with serious health hazards; (2) assistance for small businesses; and (3) simplifying safety rules. To accomplish these priorities, several actions were implemented.

During 1977, OSHA redirected its resources so that 95 percent of its inspections could be focused on the industries with the most serious health and safety problems. The agency endeavored to accelerate the process of adopting new health standards and augmented the capabilities of its health inspection staff. The intent was to raise the profile and effectiveness of its health enforcement and compliance efforts.

To support small businesses, several steps were taken such as the creation of a special assistant position to oversee OSHA's small business program. In 1977, two years after the free consultation program had been instituted, the agency increased funding levels to states from 50 to 90 percent of the cost to administer the program and help small businesses in high hazard industries comply with OSHA requirements. That same year, OSHA proposed to exempt employers with ten or fewer employees from recordkeeping requirements of the *OSH Act*.

QUICK QUIZ

How many businesses participated in OSHA's free consultation program in its first 30 years?

Finally, the third priority of simplifying safety rules included OSHA's evaluation of more than 1,000 consensus standards to revise unclear ones and eliminate those deemed unnecessary or irrelevant. The effort, referred to as the "Standards Deletion Project," began in 1977 to eliminate trivial

safety requirements such as the much ridiculed ‘split toilet seat rule.’ As a result, changes to more than 900 safety rules were made and some reorganization was completed to separate construction and general industry standards. This made it easier for stakeholders to use and reference the safety and health standards.

Changes in Enforcement

The late 1970s saw some changes which impacted enforcement activities. For example, stronger enforcement imposed greater penalties for serious violations and eliminated the use of non-serious or minor violations. Additionally, the Supreme Court decision in the *Barlow* case impacted the agency. The court’s decision stated that employers could request search warrants from OSHA inspectors prior to being allowed access to the work site. The Supreme Court’s decision stemmed from a 1977 federal case in Idaho that ruled in favor of plumbing and heating contractor, Ferrol Barlow, for refusing to allow an OSHA inspector entry without a search warrant. Nonetheless, the pursuit of strong enforcement continued and the agency had several major cases with record-setting fines and penalties.

QUICK QUIZ

What was the original maximum amount specified by the *OSH Act* for a serious and other-than-serious violation?

What was the original maximum penalty for a willful violation?

U.S. Steel’s South Works: In August 1977, OSHA conducted a six-month inspection of U.S. Steel’s South Works facility in Chicago. The inspection resulted in 72 serious violations and 100 other violations. At the time, the proposed penalties of \$125,900 were the largest in the agency’s history.

Texaco Port Arthur Refinery: In March 1978, OSHA began an inspection that lasted longer than 6 months and resulted in 122 violations with proposed penalties of \$228,700.

Newport News Shipbuilding and Dry Dock Company: In August 1979, the agency responded to complaints at the 470-acre Virginia-based shipyard that employed 22,000 employees, but was denied entry despite having a search warrant. A federal judge allowed the inspection to proceed. Twelve inspectors conducted a three-month investigation, resulting in 617 citations, including 54 willful and 473 serious violations, with a record-setting proposed penalty of more than \$786,000.

FACT

By 1995, Northrop Grumman Newport News Shipbuilding had vastly improved its safety and health record, earning membership in OSHA's prestigious Voluntary Protection Program. At that time it was the only shipyard and the largest plant in the U.S. to be admitted into VPP, according to the *Virginian-Pilot* newspaper.

In 1979, the agency began seeking criminal prosecution for willful violations which resulted in an occupational fatality. With tougher enforcement actions, the number of cases employers contested began to greatly increase. The rate of contested cases doubled from six percent of all cases to 12 percent in 1977, and increased further to 21 percent by 1979. This resulted in a sharp workload increase for the agency. In an attempt to reduce the burden of such appeals, procedural changes were made that allowed OSHA Area Offices to negotiate settlements with employers before cases were brought to the Occupational Safety and Health Review Commission.

A number of steps were taken in the late 1970s to bolster OSHA's enforcement program such as providing more health hazard training to inspectors, the recruitment of industrial hygienists, and training college graduates with scientific degrees to become health inspectors.

FACT

To improve internal processes, new enforcement forms (e.g., sampling forms) were developed in 1978. The next year, the IBM Display Writer Word Processor with some database functionality and enhanced reports came into use for better data management practices.

Another important emphasis during the 1970s was ensuring that employees' safety and health rights were protected, including the right to file a complaint with OSHA. In 1977, a new rule required employers to compensate employees for participating in the OSHA inspection process. OSHA also strongly supported employees' "right to know." The process of developing hazard communication rules began with proposals which required chemical manufacturers to provide warning labels for hazardous materials and to give employees the right to access their medical records.

OSHA officials found themselves expending significant resources to deal with complaints which detracted from some of the targeted inspection activities. This trend was an unintended consequence of the 1975 Kepone case in Hopewell, VA, which involved the misinterpretation of a complaint. To rectify the situation, the agency instituted a new policy in 1979 that required evaluation of complaints received and allowed local agency offices to adjust their response based on the severity of the hazard.

Other major events in this time period included:

Willow Island, W.VA accident: Scaffolding collapsed at a power plant's cooling tower construction site in Willow Island, West Virginia in 1978, causing the death of 51 employees. The incident brought OSHA's inspection efforts into question. However, an independent investigation by the National Bureau of Standards found that the agency had indeed warned the employer in an earlier inspection about problems with the scaffolding on the worksite.

Strengthening of federal employees' safety and health programs: In 1978, as a result of rising occupational injury rates, the President's Interagency Task Force recommended that federal employees' safety and health programs be strengthened. Executive Order 12196 extended many of the protections provided by the *OSH Act* to federal employees.

FACT

More than 30,000 employees of the U.S. Congress are protected by OSHA standards under the *Congressional Accountability Act*, which was enacted in 1995. The CAA is administered and enforced by the Office of Compliance, an independent, nonpartisan agency.

“New Directions” training and education grants: An accomplishment of the late 1970s was the creation of the “New Directions” program to help grantees find solutions to safety and health issues and disseminate this knowledge by training employers and employees. OSHA earned the support from key Congress members and received funding for the grants, for which trade associations, unions and educational institutions were eligible to apply.

QUICK QUIZ

What is the official name of OSHA’s training grants program today?

Regulatory Reform Trends of the 1970s

In 1977 and 1978, concerns about over-regulation prompted President Jimmy Carter’s administration to call for economic analyses of federal regulations, including OSHA standards, and for the consideration of alternative methods of regulation. Starting in 1977, agencies were required to publish semiannual lists of upcoming regulations and certify that each major rule adopted followed the least economically burdensome approach possible.

Later, measures to eliminate safety standards were proposed, including the adoption of economic incentives in lieu of safety standards. Opposition from organized labor arose and the focus changed to explore ways to supplement, not replace, safety rules, such as educational and information services as well as some use of incentives. By the late 1970s, rising inflation and the nation’s economic situation played a significant role in furthering regulatory reform efforts to reduce the costs of compliance with federal rules. Legislative attempts to limit OSHA also mounted steadily and peaked in 1980.

FACT

In 1979, Senator Richard Schweiker of Pennsylvania sought to exempt from safety inspections all employers, large or small, regardless of industry, who had good safety records. (They would still have to conform to OSHA regulations and be subject to health inspections). Schweiker originally supported the Act, but believed Congress had mistakenly cast the Labor Department as a “policeman” for all the nation’s workplaces. He hoped to focus enforcement on the smaller number of workplaces where it was necessary, stimulating cooperation and voluntary compliance in the rest. Labor unions objected that his proposal would dilute enforcement. It was defeated in 1980.

Early Perspectives on State Plans

As OSHA began operations in 1971, the agency aimed to decentralize federal programs by extending greater control to states and local governments. Through 1976, 24 of the 56 states and territories had established OSHA-approved programs.

QUICK QUIZ

How many states and territories currently operate approved OSHA plans?
Which State Plan most recently received final approval?

November and December 1972: The first approved State Plans were South Carolina, Montana and Oregon.

March 1977: OSHA published regulations that allowed State Plans to cover public employees only (state and local government). By 2008, four states and territories operate State Plans covering only public employees.

October 1978: The first public employee-only State Plan was created when Connecticut withdrew its full plan and was approved to operate a plan covering public sector employees only.

January 1978: In the staffing “benchmark” decision *AFL-CIO v. Marshall* the U.S. Court of Appeals for the District of Columbia ruled that the *OSH Act* requires states to provide sufficient compliance personnel for a “fully effective” program, rather than a program “at least as effective as” the federal, as a condition for final State Plan approval. In response to the court decision, OSHA established compliance staffing “benchmarks” in 1980 with support from the AFL-CIO.

FACT

In November 1979, OSHSPA was established. After several years of informal meetings, the Occupational Safety and Health State Plan Association (OSHSPA) adopted formal bylaws.

Health Standards and Key Issues

Asbestos: On June 2, 1972, OSHA issued an asbestos standard which lowered the permissible exposure limit (PEL) for employees to 2 fibers per cubic centimeter (cc). After much controversy among various stakeholders, the standard was revised in 1983 and OSHA issued an Emergency Temporary Standard (ETS) to lower the PEL to 0.5 fiber/cc. The ETS was vacated by the courts in 1984.

Cotton Dust: A cotton dust standard was issued by OSHA in June 1978. It was one of the more controversial standards issued by the agency generating ongoing debate over the standard and OSHA’s rulemaking procedures.

FACT

The federal government first regulated cotton dust in 1968 under the *Walsh-Healy Act*, which applied to government contractors. This early standard limited exposure to 1,000 micrograms per cubic meter of air averaged over an 8-hour workday. The standard OSHA set in 1978 established PELs over an 8-hour period of 200 mcg/m for yarn manufacturing, 750 mcg/m for slashing and weaving operations, and 500 mcg/m for all other cotton industry processes.

Vinyl Chloride: In January 1974, B.F. Goodrich Company revealed that employees at its plant had developed and died from cancer caused by exposure to vinyl chloride. In April 1974, OSHA issued an emergency standard for vinyl chloride and in October 1974, a permanent standard was issued.

Inorganic Arsenic: The Dow Chemical Company and Allied Chemical revealed the hazardous cancer-causing effects of arsenic. In January 1975, OSHA proposed a standard for arsenic that covered 1.5 million employees. In May 1978, a permanent standard was announced.

Lead: In November 1978, a new lead standard was announced to protect an estimated 100,000 employees.

FACT

A Cooperative Assessment Program (CAP) was established to work with the lead smelting and battery manufacturing industries to assist them in meeting the engineering control requirements of the lead standard. The Permissible Exposure Level for lead had dropped from 200 mg/m³ to 50 mg/m³. Many OSHA compliance officers received training in lead smelting operations at a large lead smelter in Louisiana. Some may still have their lead paperweights to prove it!

Benzene: OSHA issued an emergency standard for benzene in April 1977, based on reports that the substance causes leukemia. This is the first standard for which the agency included an information booklet and a set of guidelines to supplement and explain the rule. The final benzene standard was issued in February 1978. The 5th Circuit Court of Appeals vacated the standard and the U.S. Supreme Court upheld that decision in 1980. Following a repetition to OSHA, a new standard was ultimately promulgated in 1987.

DBCP: An Occidental Petroleum Plant in California manufacturing DBCP (Dibromochloropropane) brought potential reproductive health issues for exposed employees to OSHA's attention. In November 1977, a proposed permanent standard for DBCP was issued by the agency. A final standard was issued in March 1978.

Acrylonitrile: An emergency standard was established in January 1978 with a final standard in effect in November 1978 which was based on information provided by the Manufacturing Chemists Association and DuPont, indicating that acrylonitrile has carcinogenic effects on exposed employees.

Carcinogens: In January 1974, OSHA issued a final rule for 14 carcinogenic substances.

Coke Oven Emissions: OSHA issued a coke oven standard in October 1976. It was the first health standard to set forth detailed mandatory engineering controls.

Generic Cancer Policy: In a departure from the “one substance” at a time approach to rulemaking, in January 1977, OSHA published a preliminary draft proposal for a generic cancer standard. The proposal defined several classes of cancer-causing substances.

Noise: OSHA proposed a new standard in October 1974 which retained the PEL from the original “1091” consensus standard, but required the use of engineering controls in lieu of personal protective equipment. After much opposition from both labor and industry, a “hearing conservation program” was announced by the agency in the 1980s.

QUICK QUIZ

What was the name of the video series that was periodically distributed to OSHA staff? How was it formatted and distributed in the field?

Reflections from the 1980s **An Expanded Focus**

The 1980s included the tenures of four Assistant Secretaries for OSHA: **Thorne G. Auchter, Robert A. Rowland, John A. Pendergrass and Gerard (Jerry) Scanell.**



Thorne G. Archter

Auchter previously served as the chief safety and health officer for his family's Florida-based construction firm. His recess-appointed successor, Rowland, was an attorney and had joined OSHA following a three-year tenure as the Chairman of the Occupational Safety and Health Review Commission. The seventh Assistant Secretary of Labor, Pendergrass, worked in the area of industrial hygiene in the private sector prior to joining OSHA in 1986. Prior to becoming the eighth assistant secretary, Scannell served in several other



Robert A. Rowland



John A. Pendergrass



Gerard (Jerry) Scannell

capacities within the Department of Labor including director of the Office of Federal Agency Safety and Health Programs and director of the Office of Standards.

In the 1980s, OSHA expanded its focus in an effort to pursue its mission while also minimizing the regulatory burdens being placed on American businesses. The agency also began to rely more on computers to track its activities and provide a more efficient means to track accountability.

QUICK QUIZ

During the 1980s OSHA was moving away from electric typewriters and a carbon copy paper system to a Unix-based computer system that ran on 1MB of RAM. What was the name of the computer system? How much storage capacity did it have?

OSHA's goal was to provide a balance of enforcement, education and training, standard setting, and consultation activities. As a result of the agency's focus on compliance and cooperation, the 1980s became a decade of more efficient standards, improved technology, and expansion of educational and cooperative activities.

Recordkeeping: A Front-Burner Issue

In October 1981, OSHA decided to tie its inspection procedures in high-hazard manufacturing establishments to "lost workday incident rates" (LWDI) recorded on employer-maintained logs. The policy was intended to further focus the agency's inspection resources on hazardous workplaces where injuries and illnesses were most likely to occur.

The records review policy directed field staff to calculate the LWDI rate as a key component of targeted safety inspections of general industry workplaces.

Because an employer with injury rates at or below the national or industry average would be exempted from programmed inspection, the accuracy of injury and illness recordkeeping became a particularly sensitive issue during the tenures of Assistant Secretaries Auchter and Pendergrass. In 1986, OSHA first imposed instance-by-instance citations to significantly raise penalties for Union Carbide's plant in Institute, West Virginia, where numerous instances of falsification of injury records were discovered. Later, this case became the basis for OSHA's egregious citations policy.

QUICK QUIZ

What memorable quip was uttered by Secretary of Labor William Brock at a 1986 press conference to describe allegations that Union Carbide asked employees to sniff for gas leaks?

Throughout the 1980s, OSHA issued record-setting penalties for employers who, the agency alleged, had willfully under-recorded injuries and illnesses. To ensure that employers were keeping accurate employee injury and illness

records, OSHA instituted new requirements. The strategy further evolved as the agency learned more about how the recordkeeping policy worked in the field, and eventually OSHA found that fewer recordkeeping inspections were necessary.

QUICK QUIZ

Prosecution under Section 17(g) of the *OSH Act* involves what type of violation?

Standards Process

OSHA's method for standard-setting during the 1980s was greatly influenced by the strategy of including collaboration and cooperation with and education for employers and employees, rather than an enforcement-only approach to assuring safety and health in the workplace. As a result, the trend towards performance-based standards became increasingly utilized over this time period.

FACT

In a move that Assistant Secretary Auchter termed "a prime example of what President Reagan means when he says we should 'reduce the unnecessary regulatory burden,'" OSHA rescinded its ban on the use of latch-open devices on pump nozzles at self-service gas stations.

Catastrophic Accidents and Major Issues

Bhopal, India: The chemical release in Bhopal, India of methyl isocyanate (MIC) in 1984 killed thousands of people and led to an OSHA review of all chemical companies in the U.S. that had similar chemical processes. In January and February of 1985, OSHA inspected all four such facilities in the U.S. which processed MIC. The agency's findings during the inspection of the only plant that actually produced MIC, Union Carbide's facility in Institute, West Virginia, became the basis for OSHA's egregious penalty policy, with proposed penalties that totaled almost \$1.4 million. A major issue in this case was

falsification of injury records which were cited on an instance-by-instance basis.

Exxon Valdez: The case of the Exxon Valdez in 1989 involved the catastrophic release of many thousands of barrels of crude oil along the Alaskan coastline. The environmental devastation the accident caused was immense. Federal OSHA responded by sending members of the Health Response Team along with other OSHA staff to assist Alaska's OSHA program in monitoring the cleanup activities of some 11,000 emergency response workers who came to the shores of Prince William Sound from all over the United States.

QUICK QUIZ

Name the OSHA industrial hygienist who led the agency's on-site response to the Exxon Valdez oil spill.

L'Ambiance Plaza: Another major accident occurred in Bridgeport, Connecticut in 1987, where OSHA responded to the collapse of the L'Ambiance Plaza building which was under construction. The probable cause of the collapse was determined to be loss of support at a lifting jack in the west tower during placement of a package of three upper level floor slabs. All the floor slabs fell, trapping the employees involved in the lifting operation and those on lower floors engaged in other phases of the construction.

Based on its preliminary review of findings about the collapse, OSHA issued a Standard Interpretation requiring construction firms not to engage in lift-slab operations until they could assure that every component of the lifting system is in conformance with ANSI standards. They were also required to have a progressive failure analysis conducted by a qualified engineer to determine what temporary and/or permanent supports would be needed during the construction process to prevent another collapse from occurring.

Fireworks: Due to several fireworks manufacturing explosions resulting in multiple fatalities, OSHA formed a partnership with the Bureau of Alcohol,

Tobacco and Firearms in 1985. This relationship included training of a number of OSHA compliance staff in fireworks safety and an emphasis program to inspect all fireworks manufacturers in the U.S. This action helped to dramatically reduce the reoccurrence of fires/explosions in this industry.

FACT

On June 22, 2004, OSHA formed an Alliance with the American Pyrotechnics Association to reduce and prevent accidents involving the manufacturing, transportation, storage, sale, and handling of commercial display fireworks and consumer fireworks and the use of commercial display fireworks. It was renewed in 2006.

Meatpacking: In 1988, OSHA took steps to address problems in the meatpacking industry which ranked among the more hazardous industries for several years. Inspections were conducted at the IBP plant in Dakota City, Nebraska, and the John Morrell facility in Sioux Falls, South Dakota. The agency issued egregious citations based on exposure to cumulative trauma disorders at both plants, focusing on carpal tunnel syndrome and repetitive motion injuries. IBP's citations were proposed at \$3.1 million and Morrell's at \$4.33 million. OSHA was assisted by NIOSH experts at the John Morrell inspection. These inspections prompted OSHA to establish a task force to develop meatpacking guidelines. An OSHA publication was produced in 1988.

State Plan Activities in the 1980s

During the 1980s, the State Occupational Safety and Health Plans that had been granted preliminary approval from Federal OSHA gradually obtained final approval, thus ensuring that they could become fully independent in protecting their states' employers and employees from occupational hazards.

States and territories granted final approval during the decade included the Virgin Islands, Hawaii, Alaska, Arizona, Iowa, Indiana, Kentucky, Maryland, Minnesota, North Carolina, South Carolina, Tennessee, Utah, Virginia, and Wyoming. In 1984, New York's state plan for public employees only was approved.

QUICK QUIZ

What state, as a budget-cutting measure in 1987, began the process of withdrawing its state OSHA plan?

As the relevant states gained final approval for their plans, the states also took advantage of some of the technology and tools developed by Federal OSHA. Between 1982 and 1984, states joined OSHA's Integrated Management Information System (IMIS), and in 1986, a funding formula was established to complement and support State Plans' efforts to continue operations.

During the 1980s, many State Plans found that the performance benchmarks established as a response to the *AFL-CIO v. Marshall* case were too high, making it difficult for them to find enough qualified personnel. As a result, twelve State Plans sought and received revision of these benchmarks in 1985, with final approval in 1988: Arizona, Iowa, Indiana, Kentucky, Maryland, Minnesota, North Carolina, South Carolina, Tennessee, Utah, Virginia, and Wyoming.

*Regulatory Strategy, Legislative Actions and
Court Decisions Affecting OSHA in the 1980s*

The political environment of the 1980s heavily affected OSHA policy and strategy. In addition, federal legislation and judicial decisions had an impact on the OSHA standard-setting process and the enforcement policies it followed.

One of the programs that shaped OSHA's goals during the Reagan administration was the President's Regulatory Relief Plan, detailed in Executive Order 12291, issued in January 1981. Because many businesses had criticized OSHA for imposing excessive regulatory burdens, OSHA was among the agencies targeted by this plan.

QUICK QUIZ

In early 1981, Vice President George H.W. Bush listed 27 federal regulations for particular review. Three were OSHA standards. Can you name them?

As a result of the Regulatory Relief Plan, OSHA Assistant Secretary Auchter emphasized the importance of compliance assistance and employer education in ensuring that all OSHA performance standards were met. In addition, the Executive Order reinforced the importance of economic analysis in the standard-setting process. This order led to an intensive review of OSHA safety standards that began in 1981.

Another goal of the Regulatory Relief Plan was reducing the size and cost of government, which led to moderate budget and employment reductions for OSHA during the early 1980s. In 1983, the agency opposed the additional proposed budget cuts, arguing that OSHA needed adequate funds to continue its balanced mix of activities.

FACT

Even before he became OSHA's Assistant Secretary, Thorne Auchter sought to counter concerns in Congress that OSHA imposed so much of a regulatory burden that it should be eliminated altogether. In a private meeting during his confirmation hearings, Sen. Orrin Hatch (R-Utah) warned Auchter that he was considering proposing legislation that would dissolve OSHA. Auchter persuaded Hatch to hold off on such legislation for a year; his efforts during that year in improving the agency's efficiency and effectiveness proved successful.

There were a number of judicial decisions during this decade that affected OSHA standards, starting with 1980 ruling in *Whirlpool Corp. v. Marshall* in which the Supreme Court affirmed employees' rights to refuse to perform tasks when they have a reasonable apprehension over the serious safety and/or health effects of performing the dangerous work.

Other court decisions challenged existing OSHA standards. In 1980, the 11th Circuit Court of Appeals vacated OSHA's benzene standard of 1978. In July, the U.S. Supreme Court ruled that OSHA had failed to prove that the standard remedied a "significant risk."

The 1981 case, *Donovan v. A.A. Beiro* tested the effectiveness of the Regulatory Relief program, challenging the standard which regulated employee exposure to hazardous cotton dust. The court upheld the cotton dust standard despite concerns from OSHA that it did not pass a rigorous economic analysis.

FACT

In 1983, Hard Hat Mack was the hero of a video game marketed by a California firm. To win the game, the player had to save Mack from all sorts of hazards on a construction site, one of which was OSHA!
(It is still sold on eBay.)

In 1984, court cases challenged the noise and arsenic standards; the arsenic standard was upheld, but the court vacated an amendment to the noise standard that would have required employers whose employees were exposed to noise to implement hearing conservation programs.

The United Steelworkers of America v. Auchter decision upheld OSHA's hazard communication standard, but required OSHA to amend the standard to include employees in all sectors, not just manufacturing.

Legislative actions in the Congress during the 1980s also had significant impact on OSHA's agenda. Numerous hearings in the House of Representatives exerted a great deal of pressure to expedite a Hazard Communication standard, which was finalized in 1983.

The *Motor Carrier Safety Act of 1984* also had an impact on OSHA by extending its anti-discrimination protection to employees engaged in health and safety activities of interstate bus drivers.

The *Superfund Amendments and Reauthorization Act* in 1986 required OSHA to issue regulations to provide employees engaged in hazardous waste operations with protection equivalent to that provided by the Environmental Protection Agency. The following year, OSHA participated in the debate over the *High Risk Occupational Disease Notification and Prevention Act*, arguing that the goals of the Act would be best met through compliance with OSHA's existing Hazard Communication standard.

Special Initiatives: Cooperative Programs

OSHA participated in a number of special projects aimed at enhancing the safety and health of employees. The goal was to provide a balanced approach of enforcement, education and training, standard-setting, employee-employer cooperation, and consultation activities.

Cooperative programs take center stage

The *OSH Act* spelled out the full range of tools available to the agency to assure the safety and health of employees. The agency began to more fully utilize the broad mix of available tools beyond just enforcement. The Consultation Program was one such example.

FACT

The origins of today's SHARP program stem from a 1982 experimental program for exemption from general scheduled inspections. Employers who requested and received a consultative visit would not receive a duplicative inspection by Federal OSHA inspectors.

Employers' use of the free consultation program increased. The program included, for the first time, a one-year programmed inspection exemption for employers who participated in a comprehensive consultation visit – provided that any identified hazards were abated. Beginning in 1982, OSHA's consultation program began to change its focus from the correction of

specific workplace hazards to a concern for the effectiveness of the employer's total management system for ensuring a safe and healthful workplace. This shift also gave rise to other important initiatives such as compliance assistance, training, and education as part of the total safety and health management system.

FACT

The Navajo Indian Nation and OSHA signed an agreement in 1982 that provided job safety and health consultation for employers operating on the Navajo Nation's Tribal Lands.

As part of the agency's new focus on pursuing cooperation with stakeholders, on July 2 1982, the agency established the Voluntary Protection Programs (VPP) to recognize workplaces with exemplary safety and health management systems. Initially the program had three participation levels: Star, Try and Praise. (Try would later be renamed Merit.)

FACT

VPP had its origins in the State of California's 1979 experiment at a nuclear power construction site at San Onofre. That year, oversight of safety and health at the facility was given to a joint labor-management committee. OSHA identified what it believed was the key to the success of the California experiment: the company's effective implementation of a system to detect and resolve workplace safety and health issues.

The Voluntary Protection Programs (VPP) depend heavily on employee participation as well as a systematic hazard identification and problem resolution process. By the end of 1983, there were 25 sites in VPP. In the following year, responsibility for administering VPP was transferred from what was at the time the Directorate of Policy to the Directorate of Federal and State Operations. By the end of the decade, there were nearly 100 VPP-approved sites in the program.

FACT

On July 9, 1982, OSHA awarded the first VPP approvals to three "Praise" sites operated by Ortho-Clinical Diagnostics in New Jersey, Massachusetts, and New York, and by October 26, 1982, OSHA awarded the first VPP Star approval to ABB Air Preheater in Wellsville, N.Y.

Drawing on its experience with the VPP, in January 1989, OSHA issued its *Safety and Health Program Management Guidelines* to direct attention to safety and health management as an effective way of improving workplace safety and health and protecting employees.

More changes in programs and priorities

Another important innovation during this period was the establishment of the Nationally Recognized Testing Laboratory (NRTL) program. Prior to 1988, OSHA relied on just two laboratories for testing and certifying that specific products were safe for use in the workplace. The agency officially established the NRTL program to allow specifically recognized private organizations to test and certify equipment for safety prior to use in the workplace. The program allows any private organization to apply for recognition as an NRTL; however, recognized organizations must be independent of manufacturers and end users of the tested and certified products.

QUICK QUIZ

For how many different types of products does OSHA require NRTL approval?

The first edition of the *OSHA Technical Manual* (OTM) was published in 1989. Its objectives included improving OSHA's training and increasing inspection efficiency and thoroughness by improving CSHOs' pre-inspection preparation time.

That same year, the U.S. Department of Energy (DOE) requested assistance from OSHA in performing safety assessments at its nuclear facilities. OSHA's

main role on these teams was to function as consultants, assisting DOE in the identification of occupational safety and health hazards (excluding radiological hazards) at government-owned, contractor-operated nuclear facilities. In addition, OSHA provided evaluation of contractor responsibilities for occupational safety and health issues at these facilities. The joint effort resulted in the signing of a Memorandum of Understanding in 1992 in which OSHA agreed to continue to provide a wide range of technical assistance to DOE as it sought to redefine its safety and health programs.

Changes in OSHA Technology During the 1980s

OSHA's increased efficiency during the 1980s was due largely to advances in information technology, which created essential new tools for managing the activities of area offices and tying in the activities of these offices with their performance.

With the launch of the IMIS system, OSHA was able to eliminate many data entry redundancies and thereby reduce the incidence of errors in the system. IMIS also increased reporting capabilities and allowed cases to be easily tracked from complaint, to inspection, to citation, to abatement – seamlessly! By the end of the decade, State Plan States and consultation activities were able to use the IMIS relational database.

QUICK QUIZ

What does the acronym "IMIS" stand for?

Other technological improvements at OSHA included the introduction of the Technical Information Retrieval System (TIRS), operated and maintained by OSHA's Technical Data Center at the national office. TIRS was developed to effectively and efficiently manage the huge quantity of paper, maintain file integrity, facilitate the retrieval of information and minimize space/storage requirements of OSHA's dockets.

Spotlight on:
**The OSHA Training Institute, Education Centers
and Outreach Training Program**

From its earliest days, OSHA encouraged training as an essential ingredient in our nation's efforts to maintain safe and healthful workplaces, and through the decade of the 1990s the OSHA Training Institute (OTI) remained the agency's primary training provider, offering more than 100 short-term courses and seminars covering OSHA standards, policies, and procedures. Its primary responsibility was to train federal and state compliance officers and State consultation staff, although its courses were also provided to private sector employers and employees, and federal personnel from agencies other than OSHA on a space-available basis.

By the early 1990s, the OTI faced a supply vs. demand dilemma. Requests for training from compliance officers, consultation staff, other federal agencies and the private sector had increased beyond the OSHA Training Institute's capacity, but its available resources had not kept pace. As the number of students from enforcement agencies or consultation staffs increased, training opportunities for private sector and non-OSHA federal personnel remained static or decreased.

In order to meet the increased demand for its courses, the OSHA Training Institute developed a pilot project authorizing nonprofit safety and health training organizations to conduct the courses most requested by the private sector and other federal agencies. The first four OSHA Training Institute Education Centers were selected in a national competition. The pilot was so successful that additional competitions were announced in 1993 and 1994 and led to the establishment of at least one OTI Education Center in each of OSHA's Regions. The OTI Education Centers receive no funding from OSHA and sustain their programs by charging tuition and other fees. By 2007, the number of OTI Education Centers had increased to 28 and more than 150,000 students were trained. The OTI Education Centers continue to be an

integral part of the agency's compliance assistance efforts, offering 30 courses and seminars to populations who would not otherwise have an opportunity to attend OSHA occupational safety and health training programs.

OSHA Outreach Training Program

OSHA's primary initiative for educating employees who work in construction or general industry about the basics of hazard recognition and avoidance is the Outreach Training Program. Utilizing a train-the-trainer approach, the program was established in the early 1970s as a way to promote the newly created agency and provide workplace safety and health training. Those who successfully complete one of the required OSHA Training Institute courses are authorized to conduct 10- and 30-hour training programs in construction or general industry and to give cards provided by the OSHA Training Institute to their students.

To become authorized, trainers must successfully complete either the #500 Trainer Course in Occupational Safety and Health Standards for the Construction Industry or the #501 Occupational Safety and Health Standards for General Industry. In addition, trainers must attend an updated course every four years to maintain their authorization. The required train-the-trainer courses are available from the OSHA Training Institute and all OSHA Training Institute Education Centers.

Establishment of the OTI Education Centers had a great impact on the growth of this program through the 1990s and to the present by increasing the number of available trainer courses and thereby the number of authorized trainers. In FY 1992, outreach trainers trained fewer than 50,000 employees; in FY 2007 more than 520,000 were trained.

Spotlight on:
Information Technology

The 1990s saw dramatic changes in the way OSHA staff across the agency conducted its work. When the decade began, there were a few PCs in the National and Regional Offices. The clerical staff in the OSHA Area Offices used terminals to access a small Unix server to generate citations and run reports. By the end of the decade, virtually everyone had a Windows-based PC at their desk with access to e-mail and the Internet.

Office automation

As the 1990s began, it was evident that OSHA had fallen behind in automation support for office operations. The Altos computer was a cutting-edge technology when it was installed in the mid-1980s, but did not offer the tools available with newer available equipment. In 1992, OSHA purchased NCR computers to dramatically upgrade the office automation capabilities in the field.

The NCR equipment was the first computer most OSHA staff had ever used. It upgraded the agency's software to include a suite of products judged to be the best in each category at that time: WordPerfect, Lotus123, and the database continued to run on Informix.

There was significant resistance to the new equipment and the emerging expectation that CSHOs would now enter their own forms into the IMIS and do other "clerical" work. The agency dealt with the resistance by making the use of the system optional. Some staff were anxious to learn the new technology while others were won over as they saw their peers effectively use the system to improve their efficiency.

In addition to the new NCR, some area offices began to purchase laptop computers. Region VIII developed a "Robo-CSHO" application for the new technology that could be taken on the road with a portable printer, allowing

CSHOs to issue citations on site. This character-based application only included the basic inspection forms (OSHA-1 and 1B), but it laid the foundation for the idea that a portable application could help CSHOs better document cases by providing technical information at their fingertips, eliminate duplication of effort in documenting cases, and ultimately, achieve abatement sooner. It became the foundation for all future CSHO applications and the Occupational Safety and Health Response Application (OSHRA) developed as part of the Hurricane Katrina response.

Assistant Secretary **Joe Dear** sought to modernize the information technology tools available to agency staff. In 1995, Dear made funds available to provide PCs for everyone in the agency. A pool of shared laptops was also provided to each Area Office. At the same time, the agency started work to provide networking and e-mail access to everyone.

Over the next four years, the agency worked to expand networking and Internet capabilities to all staff. In the Area Offices, the first step was to use the NCR as a file server with Z-Mail. Regional Office staff was added to the Department's Executive Computer Network (ECN), and in the national office, a few people were connected to the ECN. When the decision was made to expand access to everyone, OSHA decided to move off the ECN and establish its own Microsoft network.

By early 1997, everyone in the agency had e-mail, but there was a patchwork of different networks and e-mail programs which made it challenging to get all the different systems to work together. That year, OSHA began a conversion of all the offices to a Windows-based network, called the OSHANet. Every office had a server that could run independently of the rest of the network and every site was connected in a Wide Area Network (WAN) by a connection to the Internet. By the end of 1998, the conversion to OSHANet was complete and the first version of remote access was available.

Technical information and the Internet

In the early 1990s, OSHA's Salt Lake Technical Center made its safety and health technical information databases available to OSHA staff via a dial-up connection. From 1992 through 2003, OSHA produced a quarterly CD-ROM of this information to assist employers. At its peak in the late 1990s, the CD had over 16,000 quarterly subscribers and was the #1 subscription CD sold by GPO. It was discontinued in 2003 with the growth and accessibility of the Internet.

OSHA's Internet presence began in the mid-1990s. The OSHA homepage provided information about the Assistant Secretary, general information on OSHA and its programs, daily updates of new information and services, news releases, speeches, available training and print and electronic publications. It also linked to the OSHA Computerized Information System (OCIS) home page that included regulations with direct links to interpretations as well as program and technical information. In 1998, access to the IMIS data was added. In addition, to support reinvention and its new phone and fax complaint process, the agency added a new "Employee Page" on the Internet intended for use by those whose workplaces are covered by the *OSH Act*. It included an electronic complaint feature that delivered the complaint forms directly to Area Offices via the complaint mailbox.

IMIS and Forms, Forms, Forms

IMIS also changed in the 1990s. At the beginning of the decade, clerical staff entered data from paper forms completed by the compliance staff. They ran reports and gave them to managers who tracked office activity.

The installation of the NCR with terminals on everyone's desk began to change the way the local offices ran. CSHOs began to enter their own case file data and administrative staff focused on other aspects of data entry, tracking activities, and finalizing citations.

The IMIS already included all the basic inspection-related forms, but changes were on the way. In 1996, the Program Activity Report, OSHA-31, was changed to capture the detailed time spent on all field activity rather than just

inspections, and in 1998, the Internet-based Compliance Assistance Log was added to allow Regional Offices and Area Directors to report their compliance assistance activities and associated time.

While the OSHA-31 might have been viewed as a burden to CSHOs, in the same year automatic penalty calculation software was added to the IMIS to make the CSHO's job easier. Two additional innovations were the modification of the OSHA-1 Inspection Report to collect employers' OSHA-200 logs and associate inspections with strategic plan goals, and the addition of Optional Information coding that enabled the linking of inspections of different employers at a single construction site.

The IMIS on the NCR was expanded to collect the information on the Fat/Cat Report (OSHA-170) and a new form, the Intervention (OSHA-55). In addition, the first incarnation of a Program Evaluation Program was added to collect information on employers' implementation of safety management systems.

One of the strengths of the IMIS system was its ability to create and track a separate case file for each inspection. The system, however, had one annoying feature: CSHOs had to use a pre-printed form to retrieve a unique IMIS number, even when they used the computer to create the originals of their forms. This problem was fixed by 1996.

As the end of the decade neared, the agency began looking toward the next generation of information technology tools. Work began on putting aspects of the IMIS up on the Web. The Compliance Assistance Log was among the first. It used a Web screen to send data directly to the host database stored on a mainframe computer.

An early version of Web-based Intervention (OSHA-55) and Program Activity Report (OSHA-31) forms were ready to deploy. Studies were underway to replace the NCR with a Web-based application that would eliminate the local data server and allow access to the IMIS from anywhere.

Y2K

At the beginning of the 1990s, no one was aware that there was an enormous technology problem looming at the end of the century.

When first developed, computer programmers based date calculations on the 20th century. As we moved into the decade, programmers became aware that systems could not calculate dates after December 31, 1999. The world began a race to address this critical flaw and it dominated the second half of the decade.

OSHA invested significant resources upgrading software to deal with this challenge. On the NCR, programs were written to add 7 years to every date so that the day of the week and the date agreed. The NCR still uses this “trick” to store and process dates correctly. Other software could not be “tricked” into the correct date and had to be replaced with more up-to-date software.

All the hard work was successful; the new millennium dawned and OSHA’s IT systems continued to run without incident.

Reflections from the 1990s

From Regulatory Reform to Reinvention

Regulatory reform had been a maxim of the federal government in the 1980s, and as a new decade dawned, the shift in presidential administrations brought with it a new buzzword: “Reinvention.” In 1993, the newly confirmed Secretary of Labor, Robert Reich turned to Assistant Secretary **Joseph Dear**, previously the director of the Washington State Department of Labor and Industries, and asked him to come to “the other Washington” as OSHA Administrator “to reinvent OSHA and make it more effective.”



Joseph Dear

Dear formed a “National Reinvention Steering Team” to respond to the goals laid out for federal agencies by the *Government Performance Results Act of 1993*. Dear also laid the foundation for a cooperative regulatory approach and opened the rulemaking process to stakeholders affected by proposed standards, in the hope that the openness would enable stakeholders to agree on general principles so that comments during the formal rulemaking would be more focused. Rather than have disputes over what would be covered, Dear sought more refined input on technical aspects of proposed rules.

Taking this openness a step farther, under the *Negotiated Rulemaking Act*, OSHA created the Steel Erection Negotiated Rulemaking Advisory Committee in 1995, comprised of contractors, labor and government representatives, and asked it to develop and write a standard agreeable to all parties. The first consensual proposed rule was released by the committee two years later, in 1997.

Omnibus Budget Reconciliation Act of 1990

OSHA penalties increased dramatically after passage of the *1990 Omnibus Budget Reconciliation Act*. The Act increased the maximum penalty for violations seven-fold and imposed a minimum proposed penalty of \$5,000 for willful violations. The maximum allowable civil penalty became \$70,000 for each willful or repeated violation; \$7,000 for each serious or other-than-serious violation as well as \$7,000 for each violation of the posting requirements and \$7,000 for each day beyond a stated abatement date for failure to correct a violation.

These new penalty levels applied to citations issued for inspections begun after March 1, 1991. Proposed penalties peaked at almost \$96 million in FY 1994, declined to about \$49 million in FY 1996, and then rose to the \$60-\$70 million range in subsequent years. When penalties per violation were reviewed, it was found that the *Omnibus Budget Reconciliation Act of 1990* had the largest dollar impact on willful violations. Prior to the legislation, the highest average penalty was about \$9,400 in FY 1987. Subsequent to the

legislation, the average willful penalty ranged from \$12,000 to \$28,000. Through the 1990s, the average penalties for serious, repeat, and failure to abate violations were about three to four times higher under this new law.

In anticipation of a dramatically higher contest rate, each of the regions met with their respective OSHA counsels to develop joint proposals for case development and handling. The goal of these “treaties” was to limit the number of cases to be handled by the Regional Solicitor’s office; to assure, so far as possible, that cases selected for litigation were fully developed and appropriately issued; to maximize the deterrent impact of OSHA’s penalties; and to expeditiously secure abatement of hazards. These “treaties,” initially developed in 1991 and later revised in 1994, still serve as the guiding principle for OSHA’s working relationships with the Solicitor’s office and resulted in both parties working toward a common goal.

OSHA’s reinvention path leads from Maine 200 to the Cooperative Compliance Program (CCP) to Site-Specific Targeting (SST).

In response to criticism that OSHA was too confrontational with employers, OSHA undertook a reinvention process in the mid 1990s that included a “cooperative partnership” approach to achieving compliance with health and safety standards. This strategy, coupled with traditional enforcement programs, used penalty reductions and other incentives for employers making a good faith effort to protect employees. This reinvention program was also developed in an attempt to meet an OSHA goal of reducing injuries and illnesses in 100,000 workplaces by 20 percent over a five-year period as laid out in OSHA’s Strategic Plan for Fiscal Years 1998-2002, which was required under the *Government Performance and Results Act (GPRA) of 1993*.

QUICK QUIZ

What were some of OSHA’s other GPRA goals?

An example of this approach was the Maine 200 program which ran from 1993 through 1996. Using workers’ compensation data from the State of

Maine, OSHA identified the 200 employers in that state with the highest number of injuries and offered them a chance to work in partnership with the agency or face stepped-up enforcement. All but two employers chose the partnership. Employers participating in the program eliminated hazards at a rate 14 times greater than would have been expected under the standard OSHA enforcement process, with more than 70 percent of the participants reporting significant reductions in serious injuries.

FACT

The Maine 200 program received the 1995 Ford Foundation Innovations in American Government Award as well as a Hammer Award from Vice President Al Gore's National Performance Review.

Maine 200 served as the basis for the Cooperative Compliance Program (CCP). CCP was developed using data OSHA collected in the 1996 OSHA Data Initiative (ODI) from 80,000 employers in industries with high injury and illness rates. To the 12,250 of these employers with the highest rates, OSHA made an offer of participation in the CCP. The premise of the program was that if the employer accepted the offer and joined the CCP with a commitment to develop a workplace safety and health program meeting certain guidelines they would reduce their chance of a programmed safety and health enforcement inspection from 100 percent to 30 percent. Small employers (i.e., less than 100 employees) that requested special compliance assistance would reduce their inspection chances to 10 percent.

More than 87 percent of the employers who were offered this partnership program had accepted when in February 1998, the U.S. Chamber of Commerce, National Association of Manufacturers, American Trucking Association, and the Food Marketing Institute filed suit in the U.S. Court of Appeals in Washington, D.C., to block implementation of the CCP, arguing that the agency did not follow proper procedures for rulemaking when it instituted the program. In April 1999, the D.C. Circuit Court of Appeals ruled against OSHA.

During the months when CCP was on hold pending the court's ruling, OSHA resumed traditional enforcement operations, using a plan that targeted 3,300 employers in 99 industries with injury or illness rates at or above the national average, based on injury and illness data collected through the ODI.

QUICK QUIZ

What name did OSHA give to this targeting plan?

Following the D.C. Court of Appeals' finding, OSHA announced the Site-Specific Targeting Plan (SST). This program directed inspections of 2,200 high-hazard workplaces with the highest injury and illness rates, based on data collected in 1998 from approximately 80,000 employers as part of the ODI.

Reinvention looks to the Field Operations Manual (FOM)

Also, as part of the government reinvention initiative, OSHA undertook a major project to revise its *Field Operations Manual* (FOM), whose detailed pages directed the professional actions of the agency's compliance safety and health officers. At its conclusion, the FOM was revised to become what is now referred to as the *FIRM* (*Field Inspection Reference Manual*). After four drafts, thousands of comments and extensive reviews at the field and national office level, the FOM was consolidated from 15 chapters (~400 pages) to 4 chapters (~100 pages) when the *FIRM* was reissued in September 1994. The goal was to make the new *FIRM* a useful reference document to give CSHOs the ability and confidence to rely on professional judgment in their decision making process.

Similarly, the National Reinvention Steering Team had been tasked with developing recommendations to transform the way OSHA conducted its business. Team members, most of whom served on one-year rotations, functioned as an "ideas group," filtering suggestions down to other teams comprised of national, regional and area office level management and labor management representatives. To facilitate the process of idea generation, OSHA employees were surveyed. The received feedback was evaluated and

implemented as appropriate. For example, some feedback suggested a need to change the process under which complaints of unsafe working conditions were managed. This led to a more effective use of “Phone and Fax” systems to conduct agency business and the institution of a 5-day turnaround goal to initiate an inspection when required.

QUICK QUIZ

Can you name some of the early members of the National Reinvention Steering Team? Hint...not everyone was from the national office.

As leadership enthusiasm grew for effective team-based initiatives, OSHA established other teams to address important issues such as the creation of Strategic and Rapid Response teams in each office. [The agency has since added construction teams as well]. In an effort to institutionalize effective teamwork throughout the agency, every office underwent 4 to 6 weeks of team training as part of the reinvention process. The entire effort of getting every office in OSHA through the reinvention process and training took approximately two years. Those who participated in this training often reported that the most difficult part was addressing and trying to resolve long-running personality clashes within the offices, a key requirement of the team building process.

The “Robo-CSHO” initiative was an effort to equip compliance officers with technology and tools to increase their productivity. Based on the accomplishments of the Cincinnati AO at the time, some Area Offices were tasked with becoming full Robo-CSHO offices, including the AOs in Columbus, Ohio and Parsippany, New Jersey. One important innovation under Robo-CSHO was the use of video cameras to document most violations in the field.



Charles Jeffress

In January 1997, Assistant Secretary Dear left the agency to return to Washington State, and, later that year, **Charles Jeffress** became the new Assistant Secretary for OSHA. Jeffress was North Carolina's deputy labor secretary in charge of the state's OSHA program in 1991 when a deadly fire at the Imperial Foods Processing in Hamlet, N.C., killed 25 employees. Their escape was blocked by locked fire exit doors. In the wake of this tragedy, Jeffress was credited with rebuilding the state's capacity to oversee job safety and health, thereby avoiding a reinstatement of federal authority that had been threatened by then U.S. Secretary of Labor Lynn Martin.

Standards Activities in the 1990s

Despite criticism from multiple stakeholders, OSHA issued a number of significant safety and health standards during this decade.

A wide spectrum of safety and health hazards were addressed as OSHA began to deal with new issues such as infectious diseases, indoor air quality, and ergonomics. These issues, especially in comparison to the previous decades, were somewhat novel workplace hazards which the agency had not previously encountered.

New Congressional mandates came into being during the 1990s with the passage of the *Small Business Regulatory Enforcement Fairness Act (SBREFA)* as well as Executive Order 12866 for Regulatory Planning and Review. These new requirements impact the rulemaking process with the intention of ultimately promulgating more robust standards and regulations.

FACT

Under SBREFA, federal agencies must analyze the impact of proposed regulations on small business. It also requires OSHA to establish a small business advocacy chairperson, responsible for establishing a comprehensive review process that includes representatives from small business. If a proposed standard is deemed too costly, it must be reconstructed so it has less of an impact on small business.

Several major safety and construction standards were finalized during this time period, such as the rules for confined spaces, logging operations, and fall protection in construction. OSHA also completed work on several major health standards such as the final standards for cadmium, lead in construction, hazardous chemicals in laboratories, methylenedianiline, 1,3-butadiene, and methylene chloride.

Among these comprehensive health standards was the hallmark standard for bloodborne pathogens. At the time of its development, the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV) were the focal points of the standard. However, it was the nationwide concern over HIV and the AIDS epidemic in the U.S. that played a strong role in promoting the promulgation of the final standard. This standard also marked a major foray into the healthcare environment. Although OSHA had other standards that applied in the healthcare setting, it was the Bloodborne Pathogens standard that had the greatest influence on work practices and safety and health programs in the healthcare industry.

Another major rule from this decade was the final standard for respiratory protection. This rulemaking, an effort to update a 1972 standard, had been in development for a number of years. Although there was general agreement that the existing standard was outdated, the rulemaking was a subject of much controversy, particularly its requirements for annual fit testing. The

breadth of its coverage over the general use, selection and maintenance of all respirators used in the workplace greatly influenced employee safety and health.

In addition to the promulgation of these final rules, a great deal of standards activity focused on revising standards in response to court challenges. For example, the formaldehyde and asbestos standards that were set in the late 1980s underwent judicial challenges that resulted in remands by the courts for certain sections of these rules. These remands spawned other rulemaking activities, and OSHA issued further final determinations that lowered the permissible exposure limits (PELs) for formaldehyde and asbestos, added medical removal protection for formaldehyde, and excluded non-asbestiform minerals from the asbestos standards.

Another major court decision, in 1991, resulted in a significant setback for OSHA. Two years before, OSHA had revised its Air Contaminants standard to address the concern that existing PELs – adopted in 1971, and based on health data from the 1960s and earlier – were outdated for many substances. Both organized labor and industry were in accord about the need to update the standard; however, PELs for several chemicals were challenged in court. In reviewing the challenge, the court ruled that the process that OSHA had used in revising the standard did not meet the legal requirements for establishing significant risk for each individual PEL. As a result, the court vacated the entire standard. Although the new standard had been enforced for two years, OSHA had to revoke the new PELs and resort back to the original 1971 PELs. OSHA continued to seek ways to update its PELs but the agency was compelled to maintain a substance-by-substance approach to standards development.

Reflections from the 2000s

Entering the New Millenium



John Henshaw

On August 6, 2001, **John Henshaw** was confirmed by the Senate to become the eleventh Assistant Secretary for OSHA. Prior to joining OSHA, Henshaw was a safety and health professional for small and medium-sized businesses for more than 25 years.



Edwin G. Foulke, Jr.

His successor, Assistant Secretary **Edwin G. Foulke, Jr.**, was the Chair of the OSH Review Commission in the early 1990s and started his career as an attorney practicing OSHA law in the late 1970s.

Since the year 2000, significant external factors have influenced OSHA's activities. Among them were the *Needlestick Safety and Prevention Act*, Congress' exercise of the *Congressional Review Act* to reject the ergonomics rule, a series of articles and a documentary by *The New York Times* and FRONTLINE about McWane, Inc., and a petition by unions for an emergency temporary standard on diacetyl.

Early in the new Administration's term, the agency was faced with responding to major incidents including the 9/11 terrorist attacks at the World Trade Center and the anthrax attacks at U.S. Postal Service facilities. Later, explosions at the BP Texas City Refinery in 2005 and the dust explosion at an Imperial Sugar Refinery in 2008 would draw the agency into a national debate and criticism over Process Safety Management (PSM) and combustible dust issues.

The agency played an important role in the aftermath of other major incidents such as Hurricane Katrina and the bridge collapse in Minnesota. Efforts to develop, update, and implement improved Emergency Response capabilities became a high priority.

Significant External Factors That Influenced OSHA

The Needlestick Safety and Prevention Act, 2000: On November 6, 2000, President Clinton signed the *Needlestick Safety and Prevention Act* which mandated OSHA to revise its Bloodborne Pathogens (BBP) standard to include specific additional definitions and requirements. Several important events led up to the approval of the Act and subsequent revision of 29 CFR 1910.1030.

In March 2000, the Centers for Disease Control and Prevention estimated that more than 380,000 percutaneous injuries from contaminated sharps occur annually among healthcare workers in hospital settings across the nation. The CDC report estimated that, depending on the type of device used and the procedure involved, 62 to 88 percent of sharps injuries can potentially be prevented with the use of safer medical devices.

In June 2000, Assistant Secretary Jeffress testified before the House Subcommittee on Workforce Protections about OSHA's updated directive on bloodborne pathogens. Following that hearing, Representatives Cass Ballenger of North Carolina and Major R. Owens of New York introduced the *Needlestick Safety and Prevention Act*, HR 5178, to codify important aspects of the compliance directive, require new recordkeeping procedures with respect to injuries with contaminated sharps, and involve employees in the selection and evaluation of safer medical devices. Four Senators introduced the companion bill, S. 3067. HR 5178 was passed under unanimous consent in the House, as was S3067 by the Senate. The Act was signed by President Clinton on November 6, 2000.

QUICK QUIZ

Rep. Ballenger had been an outspoken critic of OSHA during the 1990s. Can you name the major bill he introduced in 1995 to bring about agency reforms he felt were necessary?

List some of its proposals.

To implement the new law, on January 18, 2001, OSHA published a revision to the Bloodborne Pathogens standard in the *Federal Register*. The revisions went into effect on April 18, 2001. The revisions included new requirements for employers, such as additions to the exposure control plan and keeping a sharps injury log. They also specified the engineering controls in greater detail, such as safer medical devices, which must be used to reduce or eliminate employee exposures.

Congress Repeals the Ergonomics Rule, 2001: In March 2001, Congress repealed OSHA's rule on ergonomics which had been published a few months earlier by the Clinton administration. The rule was scheduled to take effect in October 2001 and would have required employers to establish programs to reduce injuries caused by repetitive motion and other stressors to the musculoskeletal system. It was the first time the *Congressional Review Act* was used to repeal a regulation.

Opponents of the rule denounced it as being excessively burdensome and complicated. Opponents also contended that the cost of compliance far outweighed expected savings in healthcare expenses, while others maintained that many employers had already implemented ergonomics programs for their employees.

Following Congress' repeal of the ergonomics rule, the Department of Labor conducted forums around the country and met with stakeholders. Written comments and oral testimony were taken from individuals representing labor, business and the medical community. These efforts culminated in the April 2002 announcement of OSHA's comprehensive four-pronged approach to reducing ergonomic injuries.

Attack on the World Trade Center, 2001: OSHA assumed a lead role in protecting the safety and health of responders at the World Trade Center site following the terrorist attacks of September 11, 2001. This disaster resulted in a “worksite” unlike any other in the nation’s history, with rescue responders first searching for survivors and later recovering the deceased in the midst of an unprecedented array of hazards. More than eight months of demolition and cleanup followed. OSHA, the City of New York, labor unions, contractors, and other government agencies collaborated to ensure that no other injuries or fatalities occurred during the dangerous recovery operations. As part of the safety effort, OSHA provided compliance assistance, collected and analyzed more than 24,000 air samples, and distributed more than 131,000 respirators. The agency distributed 11,000 hard hats, 13,000 pairs of safety glasses and more than 21,000 pairs of protective gloves to employees on the site. In all, OSHA ensured the elimination of more than 9,000 hazards and there was not one responder fatality in the 10-month cleanup operation.

QUICK QUIZ

When did WTC recovery and cleanup efforts officially end?

Anthrax Incidents Involving U.S. Postal Service, 2001: Two postal workers died after the U.S. Postal Service facility (Brentwood Mail Processing and Distribution Center in Washington, D.C.) was contaminated with highly respirable *Bacillus Anthracis* spores in October 2001. The spores were inhaled during the processing of contaminated letters that passed through mail-sorting machines. OSHA spent hundreds of hours working with the Office of Homeland Security, USPS, EPA and other government agencies in response to the anthrax threat. The agency also assisted in the clean-up of a second contaminated postal facility in Connecticut, issued a risk assessment matrix, and placed information on its website to help employers assess the Anthrax risk to their employees.

Prior to 2001, OSHA had not been recognized as a key participant in emergency response operations. The World Trade Center collapse and U.S. Postal Service anthrax emergency responses, however, led the agency to take on a

more prominent role in ensuring the safety and health of emergency response workers at disaster sites. These responses were the start of the inclusion of employee safety and health policies in local and national emergency management plans and operations. Employee safety and health is now recognized as a critical part of disaster operations around the country.

McWane, Inc., 2002: In January 2003, *The New York Times* and FRONTLINE reported on McWane, Inc., a manufacturer of pipes and related components, in a series of newspaper articles and in the documentary “A Dangerous Business.” Unsafe working conditions, serious injuries to employees and OSHA’s inspection history at Tyler Pipe Company in Tyler, Texas – a subsidiary of McWane – were subjected to in-depth examination and criticism. The story helped to crystallize, within OSHA, the need for mechanisms to identify corporate connections between business entities operating in multiple locations, including State Plan States.

In March 2003, Assistant Secretary John Henshaw issued a memorandum entitled “Enhanced Enforcement Program for Employers Who Are Indifferent to Their Obligations Under the *OSH Act*.” The memo contained instructions for focusing greater enforcement emphasis on employers who have a history of violations with OSHA, including history with the state plans. After four years of implementation, the memo was converted into a directive, which went into effect January 1, 2008.

BP Texas City Fire/Explosion, 2005: On March 23, 2005, at 1:20 p.m., the BP Texas City refinery experienced one of the worst industrial disasters in recent U.S. history. The incident occurred during the startup of an isomerization (ISOM) unit when a raffinate splitter tower was overfilled. Pressure relief devices opened, producing a flammable liquid geyser. The resulting explosion and fire killed 15 people and injured 180; all of the fatalities occurred in or near office trailers located close to the blowdown drum. The incident alarmed the community and resulted in financial losses exceeding \$1.5 billion.

FACT

The Texas City refinery, owned and operated by BP Products North America Inc., is BP's largest and most complex refinery with a rated capacity of 460,000 barrels per day and an ability to produce up to 11 million gallons of gasoline per day.

After the incident, OSHA conducted an investigation and issued 301 egregious willful violations for which BP paid a \$21 million penalty. This became the largest penalty issued by OSHA in its history and a referral was made to the Department of Justice for a possible criminal investigation. The accident also served as a catalyst for OSHA's National Emphasis Program, finalized in July 2007, which called for PSM inspections of every refinery under federal jurisdiction. The State Plan partners were also encouraged to participate in the NEP.

Hurricane Katrina, 2005: During the 2005 hurricane season along the Gulf Coast, the Worker Safety and Health Support Annex of the National Response Plan was activated for the first time, and OSHA took the lead in ensuring the safety of responders. OSHA and its state partners worked with FEMA and other agencies to ensure that work practices were evaluated, strategies were developed, and employers and employees were given proper information in order to perform tasks safely. OSHA and its partners from 27 states provided technical assistance at more than 4,200 work locations and removed approximately 6,800 employees from exposure to serious hazards. To complement these efforts, OSHA developed an assortment of compliance assistance materials in English and Spanish, including public service announcements and postings on the OSHA website.

UFCW and Teamsters Petition for ETS on Diacetyl, 2006: On July 26, 2006, the United Food and Commercial Workers International Union (UFCW) and the International Brotherhood of Teamsters (IBT) petitioned DOL for an Emergency Temporary Standard (ETS) for employees exposed to diacetyl, a major component in artificial butter flavoring. The petitioners requested that

the ETS contain a provisional permissible exposure limit (PEL) of 0.005 parts per million for diacetyl, require respiratory protection for employees exposed above that level, and require exposure monitoring and medical surveillance. The petition also asked OSHA to issue a bulletin notifying employers and employees of this hazard, inspect facilities and cite infractions where necessary under the General Duty Clause, and begin work on a permanent rule.

OSHA denied the petition for an ETS on September 25, 2007, on the basis that it did not meet the two thresholds required for an ETS in the *OSH Act*. In the interim, the agency finalized a National Emphasis Program (NEP) for butter flavorings containing diacetyl in the manufacturing of microwave popcorn. The July 2007 NEP directed OSHA resources to inspect facilities where employees may be at the greatest risk of exposure to this hazard. Other components of the NEP were aimed at educating employers and employees about the health hazard posed by butter flavorings containing diacetyl, and in September 2007, OSHA published the online document, *Hazard Communication Guidance for Diacetyl and Food Flavorings Containing Diacetyl*, to provide recommendations on hazard control and effective hazard communication.

Minnesota Bridge Collapse, 2007: On August 1, 2007, the I-35W Bridge in Minneapolis, Minnesota, collapsed, killing 13 people and injuring 98. A construction worker was among those killed. The eight-lane 1,907 ft. span bridge, a vital link over the Mississippi River, was located on the northeast edge of downtown Minneapolis and had been the most heavily used bridge in Minnesota, with roughly 140,000 vehicles crossing it daily.

State and Federal OSHA immediately mobilized resources to ensure that the responders all worked safely in the ensuing weeks and months. Personnel from OSHA's national, regional and area offices were at the site 24 hours a day, 7 days a week, providing expertise in the safe operation of cranes, road construction, chemicals, diving, and structural engineering.

Daily situation reports were completed and submitted through Region V and to the national office. Federal and state OSHA staff worked alongside municipal,

state and federal entities such as the NTSB, FEMA, FBI and a Navy dive team. To ensure responder safety during the removal phase of the operation, a partnership agreement was signed between Minnesota OSHA, Mn/DOT and Bollander & Sons, the general contractor in charge of the bridge removal. The collapsed bridge was completely removed from the site within nine weeks.

FACT

Emergency response workers who performed rescue, recovery and cleanup operations on the Minnesota bridge project did not suffer any lost time or recordable injuries!

Over 60,000 work hours were logged by the rescue, recovery and cleanup crews, and more than 4,500 hazards were identified and eliminated. Mandatory initial site safety orientation training was provided to more than 600 responders by Minnesota OSHA, and over 960 site-specific activity plans were submitted and approved.

Imperial Sugar Refinery Explosion, 2008: An explosion in February 2008 claimed the lives of 14 employees and hospitalized 39 others at the Imperial Sugar Refinery in Port Wentworth, Georgia. The disaster drew the third largest fine in the history of OSHA – \$8.7 million – for safety violations identified at the company's facilities in Port Wentworth, Georgia and Gramercy, Louisiana. OSHA's inspections of both facilities found large accumulations of combustible sugar dust in workrooms, on electrical motors and on other equipment. The investigation also determined that officials at the company were well aware of the conditions, but they took no action reasonably directed at reducing the obvious hazards. The citations included 108 instances of willful violations, 10 citations for other willful violations and 100 citations for serious violations.

The agency's enforcement, education and outreach programs intensified to protect employees from combustible dust hazards. The assistant secretary issued a memorandum to state plan administrators for them to join OSHA in its focus on combustible dust hazards; provided a two-hour refresher training

on the subject to 700 compliance officers; and ordered the agency to refine and expand the combustible dust National Emphasis Program that was announced in October 2007 to focus on facilities most likely to experience catastrophic dust explosions. In the spring of 2008, OSHA's Assistant Secretary testified on Capitol Hill about combustible dust hazards.

Significant Programs and Initiatives

Recordkeeping Rule Revised, 2001: In January 2001, OSHA published revisions to its recordkeeping regulations, marking the first time since 1978 that the rule had been revised. The goals of the revision were to simplify the system, clarify concepts, and make better use of technology. Along with the revised rule, the agency produced a recordkeeping policies and procedures manual with answers to frequently asked questions. In addition, a detailed Injury and Illness Recordkeeping website was established in 2002 containing links to helpful resources. The revised rule took effect in January 2002.

Alliance Program Launched, 2002: Begun in 2002, the Alliance program brings OSHA together with businesses, trade or professional organizations, unions and educational institutions. Compliance assistance tools have been developed and best practices have been shared in order to prevent injuries, illnesses and fatalities. For example, eTools (stand-alone, interactive, web-based training) have been developed under Alliances.

The success of the Alliance program has attracted attention outside of OSHA. For example, the Mine Safety and Health Administration (MSHA) launched its own version of an alliance program in January 2003. Other agencies, including the Environmental Protection Agency, the Food and Nutrition Service, and the U.S. Department of Transportation, and DOL's Office of Disability Employment Policy have approached OSHA about using aspects of the program to enhance their compliance assistance efforts. Staff of the Directorate of Cooperative and State Programs have also shared information on OSHA's compliance assistance and cooperative programs, including Alliances with representatives from Mexico and Australia.

Some of the issues addressed through the Alliance program include ergonomics, amputations, process safety management, and electrical hazards in the construction industry, and many others. The Alliance program continues to develop new products.

Four-pronged Approach to Ergonomics, 2002: On April 5, 2002, OSHA unveiled a comprehensive plan designed to reduce ergonomic injuries through a combination of industry-targeted guidelines, enforcement measures, workplace outreach and advanced research. Outreach efforts included special focus on protecting Hispanic and other immigrant employees.

Guidelines: The agency immediately began work on developing industry and task-specific guidelines to reduce and prevent ergonomic injuries, often called musculoskeletal disorders (MSDs) that occur in the workplace. OSHA also encouraged other businesses and industries to develop additional guidelines of their own.

Enforcement: The agency placed special emphasis on industries with the sorts of serious ergonomic problems that OSHA and DOL attorneys have successfully addressed in prior 5(a)(1) or General Duty clause cases, including the Beverly Enterprises and Pepperidge Farm cases. For the first time, OSHA had an enforcement plan designed from the start to target prosecutable ergonomic violations. Also for the first time, inspections were to be coordinated with a legal strategy developed by DOL attorneys that is based on prior successful ergonomics cases designed to maximize successful prosecutions.

Compliance Assistance: The plan also called for compliance assistance tools to help workplaces reduce and prevent ergonomic injuries. OSHA would provide specialized training and information on guidelines and the implementation of successful ergonomics programs. It would also administer targeted training grants, develop compliance assistance tools, forge partnerships and create a recognition program to highlight successful ergonomics injury reduction efforts.

Ergonomics Research: The plan also included the announcement of a national advisory committee; part of their task would be to advise OSHA on research gaps. In concert with the National Institute for Occupational Safety and Health, OSHA would stimulate and encourage needed research in this area.

Enhanced Enforcement Program, 2003: The Enhanced Enforcement Program was established in March 2003 as a means of targeting employers who are recalcitrant concerning their obligations under the *OSHA Act*. The program focused greater enforcement emphasis on those employers that have a history of violations with OSHA, including history with the state plans. After four years of implementation, the program was revised and issued as a directive which went into effect January 1, 2008.

Under the new directive, tools such as enhanced follow-up inspections, inspections of related work sites and enhanced settlement provisions can be used for greater enforcement emphasis.

Popcorn Plant NEP, 2007

In May 2000, nine employees at a microwave popcorn processing plant in Jasper, Missouri, developed a rare obstructive lung disease, bronchiolitis obliterans. One of these employees died in April 2006. The National Institute for Occupational Safety and Health (NIOSH), conducted an investigation at the plant and concluded that the observed lung disease in these employees was most likely caused by occupational exposure to artificial volatile butter-flavoring ingredients, including diacetyl.

In response to the issuance of NIOSH's interim Health Hazard Evaluation (HHE) report, OSHA sent a memorandum to all Regional Administrators in February 2002, transmitting the NIOSH interim HHE and alerting OSHA field staff of this emerging health issue. Compliance officers were encouraged to interview any employees they may encounter in microwave popcorn and snack manufacturing facilities, to be aware of potential engineering controls to reduce or eliminate potential exposures, and to conduct employee monitoring

for overexposure to any regulated substances. In 2004, the Directorate of Enforcement Programs again alerted the Regions, State Designees and Consultation Program Managers of this continuing health hazard, requesting each region to contact any employers who may have employees exposed to this hazard. In addition, a copy of OSHA's Safety and Health Information Bulletin (SHIB) entitled *Respiratory Disease Among Workers in Microwave Popcorn Processing Plants* was forwarded to the OSHA offices.

On July 26, 2006, the United Food and Commercial Workers International Union (UFCW) and the International Brotherhood of Teamsters (IBT) petitioned DOL for an Emergency Temporary Standard (ETS) for all employees exposed to diacetyl. OSHA denied the petition for an ETS on September 25, 2007, on the basis that it did not meet the requirements in the *OSH Act*.

On July 27, 2007, OSHA issued a directive implementing a National Emphasis Program (NEP) to identify and reduce or eliminate exposure to butter-flavoring chemicals used in microwave popcorn manufacturing facilities. The NEP directs OSHA's field staff to address the hazards and control measures associated with working in the microwave popcorn manufacturing industry where butter-flavoring chemicals including diacetyl are used in powder, liquid or paste forms, especially when the chemicals have the potential of becoming volatile. The goals of the NEP are to minimize and/or eliminate employee exposure to the hazards associated with microwave popcorn manufacturing.

After a hearing and Congressional action, the House passed HR 2693, the *Popcorn Workers Lung Disease Prevention Act* which included provisions requiring the agency to issue an interim final rule within 90 days and promulgate a final rule within 2 years of enactment. The Senate has yet to act on the measure. The agency began a 6(b) rulemaking process in spring 2008.

Refinery NEP, 2007: The Process Safety Management (PSM) standard was promulgated by OSHA in 1992. In July 2007, OSHA initiated a National Emphasis Program (NEP) to address catastrophic releases of highly hazardous

substances at refineries. The program called for focused, intensive inspections at every petroleum refinery in the country over the ensuing two years. The inspections were to be conducted by teams of highly trained and skilled compliance officers. The State Plan partners with refineries in their jurisdiction were also encouraged to participate in the emphasis program. A number of courses at OTI were revamped and others added to support the agency's ongoing PSM efforts.

Closing

OSHA's rich history, accomplishments and continued commitment to working men and women exemplifies a federal agency that will continue to improve the safety and health of America's workplaces.

Quick Quiz Answers

1970s

The U.S. Bureau of Labor was part of the Department of Commerce until the Department of Labor was established in 1913. (page 2)

James Hodgson was Secretary of Labor when Guenther became head of OSHA. The agency was in the Railway Labor Building at 400 First St., N.W., Washington, D.C. (page 4)

By saying “mahalo,” Hawaiian for thank you. The Honolulu area office is farthest away from the national office. (page 5)

There are 80 columns in a standard punch card. (page 6)

John Stender was selected for nomination by Secretary of Labor Peter J. Brennan, who had been president of the New York Building and Construction Trades Council. (page 7)

The new analyses that federal agencies were required to prepare were called Inflationary Impact Statements (IIS). (page 7)

Assistant Secretary Corn sought to improve relations with the National Institute for Occupational Safety and Health, an agency of the Department of Health and Human Services. He did so because NIOSH researches workplace health hazards and publishes recommendations for OSHA to promulgate new regulations. (page 8)

Approximately 500,000 businesses participated in the OSHA Consultation Program in its first 30 years. (page 10)

The maximum amount originally specified by the *OSH Act* for a serious or other-than-serious violation was \$1,000. Maximum for a willful violation was \$10,000. (page 11)

The Susan Harwood grants. Susan Harwood, a former director of the OSHA Office of Risk Assessment, died in 1996. (page 14)

Currently, 26 states and territories operate approved plans. Oregon received final approval on May 12, 2005. (page 15)

The video series was called “Spectrum.” It was recorded on 1-inch videotape cassettes and distributed in the field by mail pouch. When one area office viewed the tape, it was put in the pouch and mailed on to the next area office and on down the line. The last user was supposed to mail the tape back to the national office. (page 18)

1980s

Altos. It had a storage capacity of a whopping 40 MB! (page 19)

Secretary Brock said, “They used to use canaries for that!” [Union Carbide strongly denied that charge, but was fined a total of \$1.377 million in the Institute, W.Va. case. The corporation contested the citations, which were settled for \$408,500 in 1987, and agreed to the corporate-wide correction of injury and illness records.] (page 20)

Section 17(g) of the *OSH Act* deals with falsification of records. (page 21)

Cindy Coe Laseter led OSHA’s response to the Exxon Valdez oil spill. She now serves as OSHA’s Regional Administrator for Region IV. (page 22)

California. However, the state reversed its decision and Cal-OSHA is now the nation’s largest state OSHA agency. (page 24)

The standards marked for review were regulations for noise, personal protective equipment and the carcinogen policy. (page 25)

OSHA requires NRTL approval for 37 different types of products. They are described at <http://www.osha.gov/dts/otpca/nrtl/prodcatg.html>. (page 29)

IMIS stands for Integrated Management Information System. (page 30)

Other GPRA goals included: ensuring that complaints requiring an on-site inspection were resolved within 20 working days; plain language rewrites of OSHA standards; inclusion of all OSHA standards, regulations and reference materials on the agency’s website; redesigned field enforcement office. (page 39)

The Interim Plan for Inspection Targeting, or IPIT. (page 40)

Members of the Reinvention Steering Team included Tom Galassi, and David Ziegler from the national office; Mike Connors and Jim Stanley from the regions; and Robert Kulick (New Jersey) as an Area Office representative. Union representatives included: Ken Magiclic, Gaye Johnson, Ed Reardon and Camille Villanova from Local 12. (page 42)

Rep. Ballenger's bill, the *Safety and Health Improvement and Regulatory Reform Act of 1995*, sought to redirect OSHA funding from enforcement to consultation and training activities, allow third-party inspections and give employers the right to fix most violations rather than face immediate penalties. The bill initially also sought to merge OSHA and MSHA and to abolish NIOSH. (page 48)

World Trade Center recovery and cleanup efforts officially ended on May 30, 2002. Some three million work hours were logged on the worksite, yet, only 35 recovery or cleanup workers missed workdays due to injury and, most importantly, no more lives were lost to work at a site where so many innocent lives were lost to terrorism. (page 49)

OSHA's Assistant Secretaries 1970 – 2008

George C. Guenther (April 1971 – January 1973)

George C. Guenther served as the first Assistant Secretary of Labor for Occupational Safety and Health from 1971 to 1973. Under his leadership, the new agency was initially organized and adopted comprehensive consensus standards that had been developed by industry to protect employees from workplace safety and health hazards. Prior to assuming this position, Guenther had been director of the U.S. Department of Labor's Bureau of Labor Standards. Earlier, he served as deputy secretary of the Pennsylvania Department of Labor and Industry.

Guenther was born in Reading, Pennsylvania in 1931. He earned a bachelor of arts degree in psychology from Amherst College in 1952. Upon graduating, he entered the U.S. Navy as a communications officer for U.S. Navy Amphibious Transportation Squadron 3. Guenther left the Navy in 1955 to take over the family hosiery business.

John H. Stender (April 1973 – June 1975)

John H. Stender was an official of the Boilermakers Union and a member of the state of Washington's legislature when he was nominated to become the second Assistant Secretary of Labor for OSHA. He served from 1973 to 1975, during which time the agency put new emphasis on efforts to develop standards. Stender stoutly defended the agency's role as a catalyst for positive change to advance the nation's industrial health and safety record.

Born in Ismay, Montana, Stender attended Rocky Mountain College in Billings and joined the Boilermakers Union in 1937 while employed at a shipyard in Tacoma, Washington. Following his tenure with OSHA, he served with the Selective Service Administration and the Environmental Protection Agency. He died in 1993.

Morton Corn (December 1975 – January 1977)

Morton Corn, Ph.D., served as Assistant Secretary of Labor for OSHA from 1975 to 1977. One of Corn's goals as OSHA's third assistant secretary was to improve OSHA's relations and communications with Congress, state governments, labor and management. He brought expertise in occupational health and chemical engineering to the job, as well as vast experience consulting with management and labor. During his tenure, Corn directed OSHA's response to the Hopewell, Virginia kepone incident, sought to strengthen professionalism among the ranks of inspectors, and oversaw issuance of a final standard on coke oven emissions. He also supported increased emphasis on health standards, technical support and improved relations with the National Institute for Occupational Safety and Health.

Corn holds a doctorate in industrial hygiene and sanitary engineering from Harvard University and a bachelor's degree in chemical engineering from Cooper Union. He is a certified safety professional and professor emeritus at Johns Hopkins University School of Public Health.

Eula Bingham (April 1977 – January 1981)

Eula Bingham served as Assistant Secretary of Labor for Occupational Safety and Health from March 1977 to January 1981. As the agency's fourth assistant secretary, she advocated a common sense approach to its mission, eliminating scores of consensus standards deemed outdated or irrelevant to safety and health and emphasizing enforcement aimed at eliminating serious hazards. She also faced efforts to rein in OSHA's authority and to tighten controls over the cost of compliance. During her tenure, standards were developed for cotton dust, lead, benzene and other chemicals; the agency also proposed a generic cancer policy and safety rules for dock working, roofing and electrically-powered equipment.

Bingham earned her bachelor of science degree from Eastern Kentucky University in 1951, her master of science degree in physiology in 1954 and her doctorate in zoology, ecology and biochemistry in 1958, both from the University of Cincinnati. She is professor of environmental health at the

University of Cincinnati's College of Medicine and has served on many federal, national and international advisory committees, including the U.S. Secretary of Energy's Advisory Board and the Institute of Medicine of the National Academies.

Thorne G. Auchter (March 1981 – March 1984)

Thorne G. Auchter was the fifth Assistant Secretary of Labor for Occupational Safety and Health from February 1981 to March 1984, having served as chief safety and health officer for his family's Florida-based construction firm and as a principal author of an early OSHA state plan proposal for Florida. Vigorous debate over OSHA's future direction as well as budgetary restrictions challenged the agency during his tenure. Auchter pursued policies aimed at achieving balance among enforcement, training, state plan participation and voluntary compliance, while giving increased consideration to regulatory feasibility and costs. To enhance accountability, he adopted the Integrated Management System, and he created the directorates of federal-state operations, policy and field operations.

Auchter was born in Jacksonville, Florida and graduated from Jacksonville University in 1968. After leaving public service in 1984, he became president of B.B. Andersen Companies, a construction and development group in Kansas.

Robert A. Rowland (July 1984 – July 1985)

Robert A. Rowland was recess appointed to lead OSHA as the sixth assistant secretary in July 1984 and held the position until July 1985. Rowland served as the Chairman of the OSH Review Commission in Washington, D.C., from 1981 to 1984. Previously, he was a partner in the law firm of Mueller and Rowland in Austin, Texas, from 1962 to 1981 and assistant attorney general for the State of Texas from 1958 to 1962.

Mr. Rowland graduated from the University of Texas.

John A. Pendergrass (May 1986 – March 1989)

John A. Pendergrass held the position of Assistant Secretary of Labor for OSHA from 1986 to 1989. Prior to becoming OSHA's seventh assistant secretary, Pendergrass worked for several years in the area of industrial hygiene for the 3M Company. During his administration, the agency established the Nationally Recognized Testing Laboratory (NRTL) program, responded to the L'Ambiance Plaza lift-slab collapse, began extensive work to improve ergonomics in the meatpacking industry, and published the first edition of the *OSHA Technical Manual*.

Pendergrass received a bachelor's degree in biology and chemistry from the University of Alabama in 1948, and a master's degree from the University of Michigan in 1955. Since completing his tenure as assistant secretary for OSHA, Pendergrass was director of occupational and environmental health for American Service Corp., and currently serves as a consultant in Alabama.

Gerard (Jerry) Scannell (October 1989 – January 1992)

Gerard (Jerry) Scannell served as Assistant Secretary of Labor for OSHA from 1989 to 1992. Highlights of his administration included an agreement to provide technical assistance to the Energy Department on hazards at contractor-operated nuclear facilities, the upgrading of OSHA's office automation capabilities, implementation of a new penalty structure, and finalization of rules for lockout/tagout, process safety management, bloodborne pathogens, asbestos, cadmium, methylenedianline and formaldehyde.

Scannell received a bachelor's degree from the Massachusetts Maritime Academy in 1955. Currently, he is the director of corporate safety/fire/environment affairs, worldwide responsibility, at Johnson & Johnson in New Jersey.

Joseph A. Dear (April 1993 – January 1997)

Joseph A. Dear was the ninth Assistant Secretary of Labor for OSHA, serving from 1993 to 1996. Before coming to Washington, D.C., Dear was chief of staff for Governor Gary Locke of Washington state and later was director of the Washington State Department of Labor and Industries. As OSHA

administrator, he oversaw the finalization of standards for electrical power generation, construction and shipyard safety, hazard communication, and personal protective equipment. While defending OSHA against legislative attempts to alter the scope of its authority, Dear initiated negotiated rulemaking and implemented an increased minimum penalty for willful violations and a new non-formal complaint process. He also facilitated the agency's use of updated information technologies, including PCs, laptop computers, networking and e-mail.

Dear received a bachelor's degree in political economy from The Evergreen State College in 1976. He was appointed executive director of the Washington State Investment Board in 2002, and serves as the board's chief executive officer.

Charles N. Jeffress (November 1997 – January 2001)

Charles N. Jeffress served as Assistant Secretary of Labor for OSHA from 1997 to 2001. Before becoming OSHA's tenth assistant secretary, he was in charge of North Carolina's OSHA program. Jeffress achieved Congressional passage of the first major amendments to the *Occupational Safety and Health Act*, and received an innovation award from the Ford Foundation for OSHA's internet-based Expert Advisors software. He was instrumental in efforts to raise awareness of work-related musculoskeletal disorders and ergonomics issues, and he worked to strengthen standards to protect against bloodborne pathogens.

Jeffress holds a bachelor's degree from the University of North Carolina at Chapel Hill. He is a 1980 graduate of the Government Executives Institute at the UNC-Chapel Hill School of Business Administration and a 1990 graduate of the Program for Senior Executives in Government at the John F. Kennedy School of Government at Harvard University. Currently, Jeffress is the chief administrative officer of the Legal Services Corp., and is responsible for the human resources, financial services, information technology and administrative services.

John L. Henshaw (August 2001 – Decemeber 2004)

John L. Henshaw held the position of Assistant Secretary of Labor for OSHA from 2001 to 2004. Prior to his nomination to become OSHA's eleventh assistant secretary, he worked for more than a quarter century as a safety and health professional with small and medium-sized businesses. Henshaw guided the agency towards helping to create safer and healthier work environments using effective enforcement, outreach and compliance assistance, and partnerships and cooperative programs. During his tenure, fatalities and workplace injury and illness rates declined to record lows and OSHA implemented a four-step program to address ergonomics. As a result of Henshaw's leadership and the agency's involvement in the Sept. 11, 2001, tragedy, OSHA became a major coordinating federal agency in employee safety and health under the United States National Response Plan.

In 1971, Henshaw received a bachelor's degree in biology education from Appalachian State University. He received a master's degree in industrial hygiene/ environmental health administration from the University of Michigan School of Public Health in 1974. Currently, Henshaw serves as president of Henshaw and Associates, an occupational safety and health consulting firm.

Edwin G. Foulke, Jr. (April 2006 – November 2008)

Edwin G. Foulke, Jr. was confirmed by the Senate and joined OSHA in April 2006 as the twelfth Assistant Secretary of Labor for Occupational Safety and Health. Prior to his confirmation, Foulke served on the Occupational Safety and Health Review Commission from 1990 to 1995, chairing the Commission from March 1990 to February 1994. He served on the Workplace Health and Safety Committee for the Society for Human Resource Management from 2000 to 2004, including a two-year term as the committee's chair. He was also a member of the Health and Safety Subcommittee for the U.S. Chamber of Commerce. Foulke has also authored articles on workplace safety and health.

Foulke, a native of Perkasio, Pennsylvania, graduated with honors from North Carolina State University in 1974. He earned his law degree from Loyola University in 1978, and a Master of Law degree from Georgetown University Law School in 1993. He also served as an adjunct professor at New Orleans' St. Mary's Dominican College. He was a high school and college all-American in swimming.

