

## *FEDERAL AGENCIES, LAWS, AND REGULATIONS*

In a discovery deposition, attorneys ask the chief engineer for a manufacturer of warehouse storage racks what standards his company uses to test the structural integrity of its products. The engineer replies, “I am not aware of any standards for that.” At issue is a claim of a fork lift driver who became a paraplegic when he apparently was struck by rolls of paper falling from a storage rack he backed into. Imagine later in court when the attorney for the driver is presenting evidence for his client. He introduces information about a standard published by an association of manufacturers of warehouse equipment. The standard includes procedures for evaluating the structural integrity of storage racks under a variety of loading and use conditions. The evidence also shows that the chief engineer’s company is a member of the association. Then, with the chief engineer on the witness stand, the attorney quotes the discovery question and answer for the jury. Imagine the credibility of the chief engineer and manufacturer.

### **4-1 FEDERAL LAWS AND REGULATIONS**

The Congress of the United States enacts laws and appropriates money. Members of both the House of Representatives and the Senate propose bills and act on them. When approved by Congress and signed by the President, the bills become the law of the land. Many of the laws intend to protect the public and provide for their health and safety.

To implement and enforce the laws, Congress assigns responsibility for particular acts to organizations within the executive branch or to independent agencies. Most organizations in the executive branch are part of a department headed by a cabinet-level secretary. These organizations may issue regulations that establish how acts are to be implemented and enforced. Regulations created in support of an act have the authority of law.

To make laws and regulations apply to executive branch organizations the president signs executive orders requiring compliance. To make them apply to Congress, an act must include provisions that include Congress within the scope of the law, or Congress must pass a separate act assigning responsibility to its members and agencies.

Interpretation of federal laws and regulations is not done with absolute authority by an implementing and enforcing agency. The system of justice in the United States gives individuals and organizations the right to due process. Citizens may protest laws and regulations that adversely affect them by filing a complaint in a federal court and arguing for their position. One can appeal citations for violation of regulations.

## Civil and Criminal Law

There are two kinds of laws in the United States: civil law and criminal law. Civil laws deal with the private rights of individuals. Under civil laws, an individual (a person or organization) seeks to obtain compensation for a loss or to prevent a loss from occurring. Criminal laws deal with harmful acts or crimes against individuals, society, or the government. Crimes are prosecuted by the state or the federal government, depending on which has jurisdiction. On conviction, one faces fines and imprisonment. Violation of safety and health laws and regulations most often involve civil law. Some involve criminal actions and penalties.

**United States Code** The laws enacted by Congress are codified and logically grouped into the body of laws called the *United States Code* (USC). The USC is published and bound in volumes. The published version contains the full text of congressional acts. It is updated periodically to reflect additions, changes, and deletions resulting from each session of Congress. Federal laws and data about them appear in a multivolume, annual publication called *U.S. Statutes at Large*.

There are several methods for labeling congressional acts. Each public law has a number, such as Public Law 91-596. In this example, the act is the 596th law enacted by the 91st Congress. Each congress sits for two years. An act may also have a name as part of the provisions of the act. An example is the Occupational Safety and Health Act of 1970. Some acts also are cited by the name of the two individuals who sponsored it as a bill in Congress (one person from each legislative body—the House of Representatives and the Senate). For example, the OSHA Act of 1970 also is known as the Williams-Steiger Act.

Note that two acts are needed to set a government organization into action: an authorization act and an appropriation act. An authorization act assigns responsibility to a government agency, empowering it to perform certain functions. An appropriation act provides the money for a fixed period to pay for the activities. A federal agency cannot function unless Congress passes both acts. By limiting appropriations, Congress can control the effectiveness of a government agency.

## Code of Federal Regulations

Federal agencies propose and adopt regulations and standards. The *Code of Federal Regulations* (CFR) contains adopted final rules. Regulations are organized into 50 topics or titles. A title is normally assigned to a particular agency. The CFR is updated annually, with certain portions appearing each quarter. The CFR has an index and other aids for locating particular regulations. Today, the current CFR also appears in electronic media, such as CD-ROM or on the Internet.

Often the provisions of an act itself have little direct impact on engineers and others who must follow them. More often, one must comply with regulations issued by an agency in response to an act.

Each federal regulation is indexed by an alphanumeric code. For example, OSHA Safety and Health Standards for General Industry have the identifier: 29 CFR 1910. 29 CFR refers to Title 29 of the Code of Federal Regulations (Title 29 is assigned to OSHA) and 1910 refers to that part within Title 29 dealing with general industry. Each part is divided into subparts or sections, paragraphs, and subparagraphs. Part 1910 is divided into 26 subparts, A through Z. Part 1910 is also divided into sections, paragraphs, and several levels of subparagraphs. For example, Section 1910.1049 might have a sub-

sub-subparagraph labeled (d)(6)(iii)(e). Often particular portions have a descriptive name. For example, 29CFR1910.146 is called the OSHA Permit-Required Confined Spaces Standard.

## Federal Register

Each agency adopts or modifies federal regulations through an orderly process. After publication of proposed additions or changes, there is a period in which interested parties submit comment in writing or at public hearings. A proposed regulation may then be modified, left as proposed originally, or withdrawn. After public comment, a proposed regulation becomes an official government policy and procedure after publication as a final regulation. Proposed and final regulations, together with supporting data and arguments, appear in the *Federal Register*.

The *Federal Register* is a daily publication for communicating regulations and other legal documents of federal agencies to the public. It typically runs 50,000 to 80,000 pages per year. In presenting proposed or final changes in regulations, agencies may include supporting data, summaries of research, hearing dates, procedures for submitting comments, arguments for and against the regulation, projected impacts for the private sector, cost-benefit analysis, and effective implementation dates.

The date of publication forms the basis for citing items published in the *Federal Register*. A table of contents at the front of each daily issue identifies the sections included, the pages on which they appear, and the issuing agency.

## Other Federal Publications

In addition to developing regulations, most government agencies prepare publications for the public or make them available to the public. Many of these are helpful in complying with federal regulations. Others may be research, statistical, or other kinds of reports prepared by an agency or its contractors. All publications prepared for public distribution are indexed and listed in the *Monthly Catalog of U.S. Government Publications*. The National Technical Information Service in Springfield, Virginia, indexes and catalogs research and other reports. Many agencies publish a listing or catalog of their own documents. The Superintendent of Documents prints and sells many government publications.

A number of organizations distribute searchable versions of government regulations and standards and regularly update them as part of the service. These publications may be in electronic form, such as CD-ROM or distributed via the Internet. The *Congressional Quarterly*, *Federal Register*, and proposed federal legislation can be accessed on various government and private services on the Internet.

## Private Publications

Keeping track of changes in federal laws and regulations is a time-consuming task. A number of private publishing companies offer current-awareness publications, some of which are available in electronic form for computers. These publishers monitor what is going on in the federal government for various special fields of interest. They summarize actions of federal agencies. The publications often contain copies of proposed and final changes in federal and state laws and regulations. Information is organized in a convenient manner for readers. These current-awareness publications are available for occupational safety and health, product liability, environment, consumer products, food and drugs, workers' compensation, nuclear energy, mine safety and health, chemicals, hazardous

materials transportation, noise, insurance and loss control, and other topics important in safety engineering.

Other publishers simply keep track of federal and state agencies and their responsibilities. Some contain names, addresses, phone numbers, and similar information for contacting the agencies and their employees.

## 4-2 LEGISLATIVE BRANCH

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The legislative branch enacts the laws. In addition, there are two agencies under Congressional control that are of interest to the safety and health field. These are the Government Printing Office and the General Accounting Office.

The Government Printing Office (GPO) is the printing service for the federal government. Copies of most government publications, including safety and health topics, are available through the Superintendent of Documents at GPO.

Among other duties, the General Accounting Office (GAO) audits federal agencies. Safety and health agencies are audited to determine that they are properly using the powers assigned to them and performing their duties efficiently and effectively. The GAO reviews the regulations of each agency to be sure that they reflect the intent of Congress written into public law. Congress may propose changes to laws based on GAO audits.

## 4-3 JUDICIAL BRANCH

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Complaints and appeals regarding safety and health laws and regulations of the federal government are under the authority of the Supreme Court. Initially, district courts within each of the 10 judicial circuits of the United States hear cases. Appeals move to circuit courts of appeal and ultimately may reach the Supreme Court. Special organizations, such as the Occupational Safety and Health Review Commission, hear complaints regarding enforcement of particular federal regulations. Some complaints may proceed to district or circuit courts.

## 4-4 EXECUTIVE BRANCH

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The President heads the executive branch of the federal government. Special offices and commissions and 14 departments (this number may change from time to time), headed by secretaries, report directly to the President. There are also a number of standing and specially appointed offices, councils, and commissions that report to the President. One example was the Kemmeny Commission that investigated the Three Mile Island nuclear accident in 1979. Another is the Rogers Commission that investigated the *Challenger* Space Shuttle accident in 1986.

Figure 4-1 diagrams the key safety and health organizations within the executive branch. Many functions of these organizations are summarized in the following text. No summary can be kept complete and fully up to date, because there are frequent reorganizations and changes in programs and funding. Refer to current directories of government organizations found in most local libraries or on the Internet.

<b>EXECUTIVE BRANCH AGENCIES WITH MAJOR SAFETY RESPONSIBILITIES</b>
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**Department of Agriculture (USDA)**

**Department of Commerce**

- National Institute for Standards and Technology (NIST)

**Department of Defense (DOD)**

**Department of Health and Human Services (HHS)**

- Center for Disease Control (CDC)
- National Institute for Occupational Safety and Health (NIOSH)
- Food and Drug Administration (FDA)

**Department of Homeland Security (DHS)**

- United States Coast Guard (USCG)
- Federal Emergency Management Agency (FEMA)

**Department of Labor (DOL)**

- Occupational Safety and Health Administration (OSHA)
- Mine Safety and Health Administration (MSHA)
- Bureau of Labor Statistics (BLS)
- Employment Standards Administration
- Office of Workers' Compensation Programs (OWCP)

**Department of Transportation (DOT)**

- Federal Aviation Administration (FAA)
- Federal Railroad Administration (FRA)
- Federal Highway Administration (FHWA)
- National Highway Traffic Safety Administration (NHTSA)
- Urban Mass Transportation Administration
- Research and Special Programs Administration

Figure 4-1. Organizational structure for agencies within the executive branch that have major safety responsibilities.

**Department of Agriculture (USDA)**

***Animal and Plant Health Inspection Service*** This organization is responsible for protecting and improving animal and plant health for the benefit of humans and their environment. Also, it works to control and eradicate pests and diseases and to insure that drugs for animal use are pure and safe.

***Food Safety and Quality Service*** This organization ensures that foods for human consumption are safe, wholesome, nutritious, and of good quality. It sets standards for and inspects meat, poultry, eggs, dairy products, and fresh and processed fruit and vegetables. As a result of some bacteria-related deaths from several incidents that received national publicity in the early 1990s, the inspection methods of this agency were changed in the late 1990s. Previously, the inspection procedures used had been much the same as that introduced in the early 1900s.

**Department of Commerce**

***National Institute of Standards and Technology (NIST)*** This agency was formerly the National Bureau of Standards. As part of its broad mission, NIST conducts research

and develops codes and standards in fire protection and prevention, fire equipment, fire behavior, and safety of consumer and building products.

### **Department of Defense (DOD)**

This large agency has several million military and civilian employees. The agency has a safety office that addresses safety of peacetime, training, and combat military affairs. There are also safety organizations and safety schools within each of the services (Army, Navy, Air Force, and Marines). These organizations deal with special hazards associated with the manufacture, distribution, use, and disposal of weapons and weapon materials. They also oversee the safety of construction and maintenance of military facilities and installations.

### **Department of Health and Human Services (HHS)**

**Public Health Service (PHS)** PHS is responsible for promoting and assuring the highest level of health for Americans. The operating agencies within PHS have direct and indirect significance for safety and health professionals. Key agencies are the Centers for Disease Control (CDC; which also operates the National Institute for Occupational Safety and Health) and the Food and Drug Administration (FDA). Programs in the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) and the National Institutes of Health (NIH), particularly the National Institute of Environmental Health Sciences and the National Library of Medicine, may provide help for safety and health professionals.

**CDC** Within the CDC, the most important safety organization is the National Institute for Occupational Safety and Health (NIOSH). The mission of NIOSH is to assure safe and healthful working conditions for all working people. It recommends occupational safety and health standards, conducts research, and performs related activities in occupational safety and health.

**FDA** The FDA protects people against impure and unsafe foods, drugs, and cosmetics and against other potential hazards. The Bureau of Biologics regulates biological products. The Bureau of Drugs regulates drugs, including drug safety, effectiveness, and labeling. The Bureau of Foods is responsible for the composition, quality, nutrition, and safety of foods, food additives, colors, and cosmetics. The Bureau of Radiological Health carries out programs concerned with hazards of and human exposure to ionizing and nonionizing radiation. The Bureau of Medical Devices is charged with the safety, efficacy, and labeling of medical devices. Study of the toxic effects of chemical substances is the responsibility of the National Center for Toxicological Research.

### **Department of Homeland Security (DHS)**

This is a relatively new department that consolidated a number of government agencies. Although the emphasis is on security of the nation, some agencies have safety responsibilities.

**United States Coast Guard** The Coast Guard directs many of its functions at safety and health. It conducts search-and-rescue operations to protect life and property at sea and to remove navigational hazards. It enforces safety standards for the design, construction, equipping, and maintenance of commercial vessels and offshore structures. It investigates

marine accidents, is responsible for protecting the marine environment from pollution, and enforces rules and regulations governing the safety and security of ports and the anchorage and movement of vessels in U.S. waters. The Coast Guard operates and maintains a system of aids to navigation. It develops and directs national boating safety programs for small craft and creates uniform safety standards for recreational boats and equipment. The Marine Safety Council reviews proposed Coast Guard regulations.

**Federal Emergency Management Agency (FEMA)** FEMA is responsible for preparedness, mitigation, relief, and response activities for natural, artificial, and nuclear emergencies. FEMA supports training, education, and research for many kinds of emergencies, develops emergency plans and policies, and provides response and recovery assistance to state and local governments or other organizations when disasters occur. FEMA's United States Fire Administration works to reduce the national fire loss through training at the U.S. Fire Academy.

### **Department of Housing and Urban Development (HUD)**

Some of the programs operated by HUD intend to eliminate conditions detrimental to health, safety, and welfare in housing and community development. HUD develops standards, including structural and building sewer codes, for conventional and manufactured homes.

### **Department of the Interior**

The Department of the Interior protects and preserves public natural resources. This includes activities regarding water quality. The Bureau of Mines is a research and fact-finding agency. Areas of research include mine safety, health, and pollution abatement. The department also operates the National Mine Health and Safety Academy, which trains inspectors, managers, and other specialists for various safety and health positions in the mining industry.

### **Department of Labor (DOL)**

The DOL has many activities to foster and promote the safety and health of workers. The Women's Bureau is devoted to improving women's working conditions. Other important agencies are the Occupational Safety and Health Administration (OSHA), the Bureau of Labor Statistics, and the Office of Workers' Compensation Programs.

**OSHA** OSHA develops and implements standards and regulations and conducts inspections and investigations to ensure compliance, issues citations, and proposes penalties for violations. It also provides assistance to employers in complying with standards and regulations through consultations, training programs, and publications.

**Mine Safety and Health Administration (MSHA)** MSHA is responsible for safety and health in surface and underground mines in the United States. It develops, promulgates, and enforces standards, investigates accidents, and conducts training.

**Bureau of Labor Statistics** This agency conducts economic and statistical research. As part of its activities, it collects injury and illness data from employers and compiles national and regional statistics regarding worker safety and health.



**Office of Workers' Compensation Programs** This agency develops and recommends standards for state workers' compensation laws and provides technical assistance to states. It also administers three workers' compensation programs:

1. federal employees workers' compensation
2. workers' compensation for longshoremen and harbor workers
3. the "black lung" benefit program for coal miners and their survivors

## **Department of Transportation (DOT)**

DOT, divided into eight administrations, conducts programs concerned with all forms of transportation. Responsibilities include the safety of air, water, highway, rail, and pipeline transportation.

**Federal Aviation Administration (FAA)** As part of its functions, FAA fosters aviation safety through a number of activities. It issues and enforces rules, regulations, and standards for the manufacture, use, and maintenance of aircraft. It certifies pilots, other flight personnel, and airports; operates and maintains air navigation systems; manages air traffic; and conducts research in systems, procedures, facilities, and devices to ensure aviation safety.

**Federal Railroad Administration (FRA)** One of the responsibilities of the FRA is to administer and enforce rail safety laws and regulations concerned with locomotives, signals, safety appliances, brakes, hours of service, transportation of hazardous material, and the reporting and investigation of railroad accidents.

**Federal Highway Administration (FHWA)** In carrying out highway transportation programs, one of FHWA's duties is to make highways safe. FHWA develops and implements standards for highway design, construction, and maintenance; promotes the correction of street and highway hazards for vehicles and pedestrians; and conducts research in highway safety and traffic. It enforces safety regulations for motor carriers (trucking), seeks noise abatement, and performs activities relating to the transport of hazardous materials on highways.

**National Highway Traffic Safety Administration (NHTSA)** NHTSA conducts programs to reduce the frequency of motor vehicle crashes, the severity of injuries, and economic losses that result. It issues Federal Motor Vehicle Safety Standards that establish safety features and characteristics for motor vehicles. It tests vehicles for damage susceptibility, crashworthiness, and ease of repair, and it tests motor vehicles and equipment for compliance with standards. It conducts research and development projects to improve the safety of motor vehicles and related equipment and to make motor vehicles safe for operators, occupants, and pedestrians. It also operates programs to assist state and local motor vehicle safety programs, to set motor vehicle fuel economy standards, and to measure fuel efficiency of vehicles.

**Urban Mass Transportation Administration** This agency promotes and tries to improve urban mass transportation, including safety of mass transit equipment.

**Research and Special Programs Administration** In this branch of DOT, the Materials Transportation Bureau develops standards, monitors compliance, conducts research,



and coordinates the activities of other agencies for transportation of hazardous materials by air, water, rail, highway, and pipeline. In the Transportation Program Bureau, the Transportation Safety Institute promotes safety and security management through training programs for government and industry.

## **4-5 INDEPENDENT AGENCIES**

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Independent agencies operate under their own administration, not falling directly under any of the three main branches of the federal government. One reason these agencies are independent is to minimize the influence by related agencies that promote a technology or by general policies of a current presidential administration.

### **Consumer Products Safety Commission (CPSC)**

The CPSC protects the public against unreasonable risk of injury from consumer products. It assists consumers in evaluating the safety of products, develops standards for consumer product safety, and supports research in the causes and prevention of injury, illness, and death from consumer products. It also operates the National Injury Information Clearinghouse, which compiles data on consumer product injuries from a sampling of hospital emergency room cases across the country.

### **Environmental Protection Agency (EPA)**

The EPA is responsible for protecting and enhancing the environment. It develops and enforces standards, assists state and local governments, and conducts research in prevention and control of air and water pollution. Its responsibility governs pollution from solid waste, noise, radiation, and toxic substances.

### **National Transportation Safety Board (NTSB)**

The NTSB helps assure that all forms of transportation are operated safely. It investigates transportation accidents (all civil aviation and serious rail, pipeline, marine, selected highway, and other catastrophic accidents) and develops recommendations for other government agencies and transportation industries regarding transportation safety, transport of hazardous materials, accident investigation methods, regulations, and reporting of accidents.

### **Nuclear Regulatory Commission (NRC)**

The NRC protects the public health and safety and the environment by licensing and regulating the use of nuclear energy. It also develops and enforces regulations concerning nuclear safety, and it inspects licensed activities, sponsors research, and publishes reports related to its mission.

### **Occupational Safety and Health Review Commission (OSHRC)**

The OSHRC adjudicates disagreements resulting from citations issued to employers for noncompliance with OSHA standards. Decisions by OSHRC judges may be appealed to the U.S. courts.

## 4-8 OTHER DEPARTMENTS, AGENCIES, AND SAFETY PROGRAMS

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Many departments and agencies that have not been listed have safety programs as well, at least for their own employees or contractors. For example, the U.S. Army Corps of Engineers has detailed safety rules and regulations that Corps construction contractors must follow. By executive order of the President, all agencies within the executive branch are required to comply with safety laws and regulations.

Under the OSHAct of 1970, states may choose to operate programs to protect the safety of workers under federal guidelines or to allow the federal OSHA administration to operate such programs with the states. Similarly, states may choose to operate their own Environment Protection Agency.

States often establish laws, regulations, and standards and operate enforcement agencies to protect the safety of its citizens with regard to many kinds of products, operations, and services. Some estimate that states generate far more safety and health laws and standards than does the federal government.

### EXERCISES

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1. Find a safety or health regulation from the CFR on
  - (a) ladders for construction
  - (b) ladders and walking surfaces affixed to truck trailers
  - (c) elevators in mines
  - (d) hazardous waste disposal
  - (e) windshields in automobiles
2. What is the public law number for
  - (a) The OSHAct of 1970?
  - (b) The Resource Conservation and Recovery Act of 1976?
3. Find announcements of proposed changes to safety regulations, schedules for public hearings, or final rule adoption in recent issues of the *Federal Register*.
4. Make a literature search on some topic in safety and health using the Internet. Identify if the sources of information are reliable.
5. Find out what publications the Consumer Products Safety Commission has available by contacting a regional or area office or by looking in the *Monthly Catalog of U.S. Government Publications*.
6. Find rulings of the Occupational Safety and Health Review Commission in commercial legal review publications.
7. Find out whether your state operates a state plan for occupational safety and health or for environmental protection. Compare the state regulations to those issued by the corresponding federal agencies.

## REVIEW QUESTIONS

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1. Describe differences and similarities between federal laws and federal regulations.
2. By what means are federal executive branch agencies required to comply with safety and health laws and regulations?
3. What is the main difference between civil and criminal law?
4. What is the *U.S. Code*?
5. Describe the methods used to label acts of Congress.
6. What is the *Code of Federal Regulations*? How is it indexed?
7. What is the *Federal Register*? What is its significance for safety and health information?
8. What is the name for each federal agency identified below by acronym? Is it an independent agency? What safety and health responsibility does it have?
  - (a) GAO
  - (b) NIST
  - (c) PHS
  - (d) NIOSH
  - (e) FDA
  - (f) OSHA
  - (g) MSHA
  - (h) BLS
  - (i) FAA
  - (j) FRA
  - (k) FHWA
  - (l) NHTSA
  - (m) MTB
  - (n) EPA
  - (o) FEMA
  - (p) NTSB
  - (q) NRC
  - (r) OSHRC

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