

OSHA

SHARE  **OSHA QuickTakes** Newsletter  RSS FeedsOccupational Safety & Health Administration **We Can Help**What's New | Offices 

Home	Workers	Regulations	Enforcement	Data & Statistics	Training
Publications	Newsroom	Small Business	Anti-Retaliation		

OSHA 3143**Informational Booklet on Industrial Hygiene**U.S. Department of Labor
Occupational Safety and Health Administration

OSHA 3143 1998 (Revised)

This informational booklet is intended to provide a generic, non-exhaustive overview of a particular standards-related topic. This publication does not itself alter or determine compliance responsibilities, which are set forth in OSHA standards themselves and the *Occupational Safety and Health Act*. Moreover, because interpretations and enforcement policy may change over time, for additional guidance on OSHA compliance requirements, the reader should consult current and administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the Courts.

Material contained in this publication is in the public domain and may be reproduced, fully or partially, without permission of the Federal government. Source credit is requested but not required.

This information will be made available to sensory impaired individuals upon request.

Voice phone: (202) 219-8615; Telecommunications Device for the Deaf (TDD) message referral phone: 1-800-326-2577.

Industrial Hygiene

U. S. Department of Labor
Alexis M. Herman, SecretaryOccupational Safety and Health Administration
Charles N. Jeffress, Assistant SecretaryOSHA 3143
1998 (Revised)**Contents**[What is Industrial Hygiene?](#)[How Are OSHA and Industrial Hygiene Related?](#)[What is a Worksite Analysis?](#)[How do IH's Recognize and Control Hazards?](#)[What Are Some Examples of Job Hazards?](#)Air Contaminants
Chemical Hazards
Biological Hazards
Physical Hazards
Ergonomic Hazards[What Help Can OSHA Provide?](#)

Safety and Health Program Management Guidelines
State Programs
Free Onsite Consultation
Voluntary Protection Programs
Training and Education
Electronic Information
Emergencies

[Related OSHA Publications](#)

[States with Approved Plans](#)

[OSHA Consultation Project Directory](#)

[OSHA Area Offices](#)

[OSHA Regional Offices](#)

What is Industrial Hygiene?

Industrial hygiene is the science of anticipating, recognizing, evaluating, and controlling workplace conditions that may cause workers' injury or illness. Industrial hygienists use environmental monitoring and analytical methods to detect the extent of worker exposure and employ engineering, work practice controls, and other methods to control potential health hazards.

There has been an awareness of industrial hygiene since antiquity. The environment and its relation to worker health was recognized as early as the fourth century BC when Hippocrates noted lead toxicity in the mining industry. In the first century AD, Pliny the Elder, a Roman scholar, perceived health risks to those working with zinc and sulfur. He devised a face mask made from an animal bladder to protect workers from exposure to dust and lead fumes. In the second century AD, the Greek physician, Galen, accurately described the pathology of lead poisoning and also recognized the hazardous exposures of copper miners to acid mists.

In the Middle Ages, guilds worked at assisting sick workers and their families. In 1556 the German scholar, Agricola, advanced the science of industrial hygiene even further when, in his book *De Re Metallica*, he described the diseases of miners and prescribed preventive measures. The book included suggestions for mine ventilation and worker protection, discussed mining accidents, and described diseases associated with mining occupations such as silicosis.

Industrial hygiene gained further respectability in 1700 when Bernardo Ramazzini, known as the "father of industrial medicine," published in Italy the first comprehensive book on industrial medicine, *De Morbis Artificum Diatriba (The Diseases of Workmen)*. The book contained accurate descriptions of the occupational diseases of most of the workers of his time. Ramazzini greatly affected the future of industrial hygiene because he asserted that occupational diseases should be studied in the work environment rather than in hospital wards.

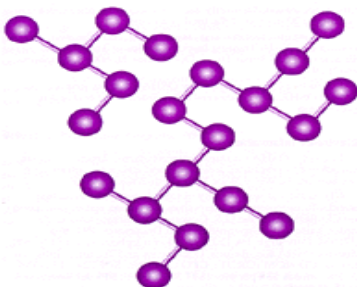
Industrial hygiene received another major boost in 1743 when Ulrich Ellenborg published a pamphlet on occupational diseases and injuries among gold miners. Ellenborg also wrote about the toxicity of carbon monoxide, mercury, lead, and nitric acid.

In England in the 18th century, Percival Pott, as a result of his findings on the insidious effects of soot on chimney sweepers, was a major force in getting the British Parliament to pass the *Chimney-Sweepers Act of 1788*. The passage of the English Factory Acts beginning in 1833 marked the first effective legislative acts in the field of industrial safety. The Acts, however, were intended to provide compensation for accidents rather than to control their causes. Later, various other European nations developed workers' compensation acts, which stimulated the adoption of increased factory safety precautions and the establishment of medical services within industrial plants.

In the early 20th century in the U. S., Dr. Alice Hamilton, led efforts to improve industrial hygiene. She observed industrial conditions first hand and startled mine owners, factory managers, and state officials with evidence that there was a correlation between worker illness and their exposure to toxins. She also presented definitive proposals for eliminating unhealthful working conditions.

At about the same time, U.S. federal and state agencies began investigating health conditions in industry. In 1908, the public's awareness of occupationally related diseases stimulated the passage of compensation acts for certain civil employees. States passed the first workers' compensation laws in 1911. And in 1913, the New York Department of Labor and the Ohio Department of Health established the first state industrial hygiene programs. All states enacted such legislation by 1948. In most states, there is some compensation coverage for workers contracting occupational diseases.

The U.S. Congress has passed three landmark pieces of legislation relating to safeguarding workers' health: (1) *the Metal and Nonmetallic Mines Safety Act of 1966*, (2) *the Federal Coal Mine Safety and Health Act of 1969*, and (3) *the Occupational Safety and Health Act of 1970 (Act)*. Today, nearly every employer is required to implement the elements of an industrial hygiene and safety, occupational health, or hazard communication program and to be responsive to the Occupational Safety and Health Administration (OSHA) and the *Act* and its regulations.



How Are OSHA and Industrial Hygiene Related?

Under the *Act*, OSHA develops and sets mandatory occupational safety and health requirements applicable to the more than 6 million workplaces in the U.S. OSHA relies on, among many others, industrial hygienists to evaluate jobs for potential health hazards. Developing and setting mandatory occupational safety and health standards involves determining the extent of employee exposure to hazards and deciding what is needed to control these hazards, thereby protecting the workers. Industrial hygienists, or IHs, are trained to anticipate, recognize, evaluate, and recommend controls for environmental and physical hazards that can affect the health and well-being of workers. More than 40 percent of the OSHA compliance officers who inspect America's workplaces are industrial hygienists. Industrial hygienists also play a major role in developing and issuing OSHA standards to protect workers from health hazards associated with toxic chemicals, biological hazards, and harmful physical agents. They also provide technical assistance and support to the agency's national and regional offices. OSHA also employs industrial hygienists who assist in setting up field enforcement procedures, and who issue technical interpretations of OSHA regulations and standards. Industrial hygienists analyze, identify, and measure workplace hazards or stressors that can cause sickness, impaired health, or significant discomfort in workers through chemical, physical, ergonomic, or biological exposures. Two roles of the OSHA industrial hygienist are to spot those conditions and help eliminate or control them through appropriate measures.

What is a Worksite Analysis?

A worksite analysis is an essential first step that helps an industrial hygienist determine what jobs and work stations are the sources of potential problems. During the worksite analysis, the industrial hygienist measures and identifies exposures, problem tasks, and risks. The most effective worksite analyses include all jobs, operations, and work activities. The industrial hygienist inspects, researches, or analyzes how the particular chemicals or physical hazards at that worksite affect worker health. If a situation hazardous to health is discovered, the industrial hygienist recommends the appropriate corrective actions.



How do IH's Recognize and Control Hazards?

Industrial hygienists recognize that engineering, work practice, and administrative controls are the primary means of reducing employee exposure to occupational hazards. Engineering controls minimize employee exposure by either reducing or removing the hazard at the source or isolating the worker from the hazards.

Engineering controls include eliminating toxic chemicals and replacing harmful toxic materials with less hazardous ones, enclosing work processes or confining work operations, and installing general and local ventilation systems.

Work practice controls alter the manner in which a task is performed. Some fundamental and easily implemented work practice controls include (1) following proper procedures that minimize exposures while operating production and control equipment; (2) inspecting and maintaining process and control equipment on a regular basis; (3) implementing good house-keeping procedures; (4) providing good supervision and (5) mandating that eating, drinking, smoking, chewing tobacco or gum, and applying cosmetics in regulated areas be prohibited.

Administrative controls include controlling employees' exposure by scheduling production and workers' tasks, or both, in ways that minimize exposure levels. For example, the employer might schedule operations with the highest exposure potential during periods when the fewest employees are present.

When effective work practices and/or engineering controls are not feasible to achieve the permissible exposure limit, or while such controls are being instituted, and in emergencies, appropriate respiratory equipment must be used. In addition, personal protective equipment such as gloves, safety goggles, helmets, safety shoes, and protective clothing may also be required. To be effective, personal protective equipment must be individually selected, properly fitted and periodically refitted; conscientiously and properly worn; regularly maintained; and replaced as necessary.

What Are Some Examples of Job Hazards?

To be effective in recognizing and evaluating on-the-job hazards and recommending controls, industrial hygienists must be familiar with the hazards' characteristics. Major job risks can include air contaminants, and chemical, biological, physical, and ergonomic hazards.

Air Contaminants

These are commonly classified as either particulate or gas and vapor contaminants. The most common particulate contaminants include dusts, fumes, mists, aerosols, and fibers. Dusts are solid particles that are formed or generated from solid organic or inorganic materials by reducing their size through mechanical processes such as crushing, grinding, drilling, abrading or blasting.

Fumes are formed when material from a volatilized solid condenses in cool air. In most cases, the solid particles resulting from the condensation react with air to form an oxide.

The term mist is applied to a finely divided liquid suspended in the atmosphere. Mists are generated by liquids condensing from a vapor back to a liquid or by breaking up a liquid into a dispersed state such as by splashing, foaming or atomizing. Aerosols are also a form of a mist characterized by highly respirable, minute liquid particles.

Fibers are solid particles whose length is several times greater than their diameter.

Gases are formless fluids that expand to occupy the space or enclosure in which they are confined. Examples are welding gases such as acetylene, nitrogen, helium, and argon; and carbon monoxide generated from the operation of internal combustion engines or by its use as a reducing gas in a heat treating operation. Another example is hydrogen sulfide which is formed wherever there is decomposition of materials containing sulfur under reducing conditions.

Liquids change into vapors and mix with the surrounding atmosphere through evaporation. Vapors are the volatile form of substances that are normally in a solid or liquid state at room temperature and pressure. Vapors are the gaseous form of substances which are normally in the solid or liquid state at room temperature and pressure. They are formed by evaporation from a liquid or solid and can be found where parts cleaning and painting takes place and where solvents are used.

Chemical Hazards

Harmful chemical compounds in the form of solids, liquids, gases, mists, dusts, fumes, and vapors exert toxic effects by inhalation (breathing), absorption (through direct contact with the skin), or ingestion (eating or drinking). Airborne chemical hazards exist as concentrations of mists, vapors, gases, fumes, or solids. Some are toxic through inhalation and some of them irritate the skin on contact; some can be toxic by absorption through the skin or through ingestion, and some are corrosive to living tissue.

The degree of worker risk from exposure to any given substance depends on the nature and potency of the toxic effects and the magnitude and duration of exposure.

Information on the risk to workers from chemical hazards can be obtained from the Material Safety Data Sheet (MSDS) that OSHA'S *Hazard Communication Standard* requires be supplied by the manufacturer or importer to the purchaser of all hazardous materials. The MSDS is a summary of the important health, safety, and toxicological information on the chemical or the mixture's ingredients. Other provisions of the *Hazard Communication Standard* require that all containers of hazardous substances in the workplace have appropriate warning and identification labels.

Biological Hazards

These include bacteria, viruses, fungi, and other living organisms that can cause acute and chronic infections by entering the body either directly or through breaks in the skin. Occupations that deal with plants or animals or their products or with food and food processing may expose workers to biological hazards. Laboratory and medical personnel also can be exposed to biological hazards. Any occupations that result in contact with bodily fluids pose a risk to workers from biological hazards.

In occupations where animals are involved, biological hazards are dealt with by preventing and controlling diseases in the animal population as well as proper care and handling of infected animals. Also, effective personal hygiene, particularly proper attention to minor cuts and scratches, especially those on the hands and forearms, helps keep worker risks to a minimum.

In occupations where there is potential exposure to biological hazards, workers should practice proper personal hygiene, particularly hand washing. Hospitals should provide proper ventilation, proper personal protective equipment such as gloves and respirators, adequate infectious waste disposal systems, and appropriate controls including isolation in instances of particularly contagious diseases such as tuberculosis.

Physical Hazards

These include excessive levels of ionizing and nonionizing electromagnetic radiation, noise, vibration, illumination, and temperature.

In occupations where there is exposure to ionizing radiation, time, distance, and shielding are important tools in ensuring worker safety. Danger from radiation increases with the amount of time one is exposed to it; hence, the shorter the time of exposure the smaller the radiation danger.

Distance also is a valuable tool in controlling exposure to both ionizing and non-ionizing radiation. Radiation levels from some sources can be estimated by comparing the squares of the distances between the worker and the source. For example, at a reference point of 10 feet from a source, the radiation is 1/100 of the intensity at 1 foot from the source.

Shielding also is a way to protect against radiation. The greater the protective mass between a radioactive source and the worker, the lower the radiation exposure.

Nonionizing radiation also is dealt with by shielding workers from the source. Sometimes limiting exposure times to nonionizing radiation or increasing the distance is not effective. Laser radiation, for example, cannot be controlled effectively by imposing time limits. An exposure can be hazardous that is faster than the blinking of an eye. Increasing the distance from a laser source may require miles before the energy level reaches a point where the exposure would not be harmful.

Noise, another significant physical hazard, can be controlled by various measures. Noise can be reduced by installing equipment and systems that have been engineered, designed, and built to operate quietly; by enclosing or shielding noisy equipment; by making certain that equipment is in good repair and properly maintained with all worn or unbalanced parts replaced; by mounting noisy equipment on special mounts to reduce vibration; and by installing silencers, mufflers, or baffles.

Substituting quiet work methods for noisy ones is another significant way to reduce noise, for example, welding parts rather than riveting them. Also, treating floors, ceilings, and walls with acoustical material can reduce reflected or reverberant noise. In addition, erecting sound barriers at adjacent work stations around noisy operations will reduce worker exposure to noise generated at adjacent work stations.

It is also possible to reduce noise exposure by increasing the distance between the source and the receiver, by isolating workers in acoustical booths, limiting workers' exposure time to noise, and by providing hearing protection. OSHA requires that workers in noisy surroundings be periodically tested as a precaution against hearing loss.

Another physical hazard, radiant heat exposure in factories such as steel mills, can be controlled by installing reflective shields and by providing protective clothing.

Ergonomic Hazards

The science of ergonomics studies and evaluates a full range of tasks including, but not limited to, lifting, holding, pushing, walking, and reaching. Many ergonomic problems result from technological changes such as increased assembly line speeds, adding specialized tasks, and increased repetition; some problems arise from poorly designed job tasks. Any of those conditions can cause ergonomic hazards such as excessive vibration and noise, eye strain, repetitive motion, and heavy lifting problems. Improperly designed tools or work areas also can be ergonomic hazards. Repetitive motions or repeated shocks over prolonged periods of time as in jobs involving sorting, assembling, and data entry can often cause irritation and inflammation of the tendon sheath of the hands and arms, a condition known as carpal tunnel syndrome.

Ergonomic hazards are avoided primarily by the effective design of a job or jobsite and better designed tools or equipment that meet workers' needs in terms of physical environment and job tasks. Through thorough worksite analyses, employers can set up procedures to correct or control ergonomic hazards by using the appropriate engineering controls (e.g., designing or re-designing work stations, lighting, tools, and equipment); teaching correct work practices (e.g., proper lifting methods); employing proper administrative controls (e.g., shifting workers among several different tasks, reducing production demand, and increasing rest breaks); and, if necessary, providing and mandating personal protective equipment. Evaluating working conditions from an ergonomics standpoint involves looking at the total physiological and psychological demands of the job on the worker.

Overall, industrial hygienists point out that the benefits of a well-designed, ergonomic work environment can include increased efficiency, fewer accidents, lower operating costs, and more effective use of personnel.

In sum, industrial hygiene encompasses a broad spectrum of the working environment. Early in its history OSHA recognized industrial hygiene as an integral part of a healthful work setting. OSHA places a high priority on using industrial hygiene concepts in its health standards and as a tool for effective enforcement of job safety and health regulations. By recognizing and applying the principles of industrial hygiene to the work environment, America's workplaces will become more healthful and safer.

What Help Can OSHA Provide?

Safety and Health Program Management Guidelines

Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses and their related costs. To assist employers and employees in developing effective safety and health programs, OSHA published recommended *Safety and Health Program Management Guidelines* (*Federal Register* 54(18):3908-3916, January 26, 1989). These voluntary guidelines apply to all places of employment covered by OSHA. The guidelines identify four general elements that are critical to the development of a successful safety and health management program:

- management commitment and employee involvement,
- worksite analysis,
- hazard prevention and control, and
- safety and health training.

The guidelines recommend specific actions under each of these general elements to achieve an effective safety and health program. A single free copy of the guidelines can be obtained from the U.S. Department of Labor OSHA/OICA Publications, P.O. Box 37535, Washington, DC 20013-7535, by sending a self-addressed mailing label with your request.

State Programs

The *Occupational Safety and Health Act of 1970* encourages states to develop and operate their own job safety and health plans. States administering occupational safety and health programs through plans approved under section 18(b) of the Act, must adopt standards and enforce requirements that are "at least as effective" as federal requirements. There are currently 25 state plan states: 23 cover the private and public sectors (state and local governments) and 2 cover the public sector only. For more information on State Plan states, see the list of states with approved plans at the end of this publication.

Free Onsite Consultation Consultation assistance is available on request to employers who want help in establishing and maintaining a safe and healthful workplace. Largely funded by OSHA, the service is provided at no cost to the employer. Primarily developed for smaller employers with more hazardous operations, the consultation service is delivered by state government agencies or universities employing professional safety consultants and health consultants. Comprehensive assistance includes an appraisal of all work practices and environmental hazards of the workplace and all aspects of the employer's present job safety and health program.

The program is separate from OSHA'S inspection efforts. No penalties are proposed or citations issued for any safety or health problems identified by the consultant. The service is confidential.

For more information concerning consultation assistance, see the list of consultation projects at the end of this publication.

Voluntary Protection Program (VPPs)

Voluntary Protection Programs (VPPs) and onsite consultation services, when coupled with an effective enforcement program, expand worker protection to help meet the goals of the *Act*. The three VPPs--Star, Merit, and Demonstration--are designed to recognize outstanding achievement by companies that have successfully incorporated comprehensive safety and health programs into their total management system. They motivate others to achieve excellent safety and health results in the same outstanding way as they establish a cooperative relationship among employers, employees, and OSHA.

For additional information on VPPs and how to apply, contact the OSHA area or regional offices listed at the end of this publication.

Training and Education

OSHA area offices offer a variety of information services, such as publications, audiovisual aids, technical advice, and speakers for special engagements. The OSHA Training Institute in Des Plaines, IL, provides basic and advanced courses in safety and health for federal and state compliance officers, state consultants, federal agency personnel, and private sector employers, employees, and their representatives.

OSHA also provides funds to nonprofit organizations, through grants to conduct workplace training and education in subjects where OSHA believes there is a lack of workplace training. Grants are awarded annually and grant recipients are expected to contribute 20 percent of the total grant cost. For more information on grants, training, and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, IL 60018; telephone (847) 297-4810.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Electronic Information

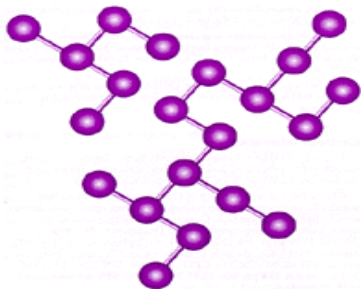
Internet--OSHA standards, interpretations, directives, technical advisors, compliance assistance, and additional information are now on the World Wide Web at <http://www.osha.gov/>.

CD-ROM--A wide variety of OSHA materials, including standards, interpretations, directives, and more, can be purchased on CD-ROM from the U.S. Government Printing Office. To order, write to the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 or telephone (202)512-1800. Specify OSHA Regulations, Documents, and Technical Information on CD-ROM (ORDT), GPO Order No. S/N 729-013-00000-5. The price is \$38 per year (\$47.50 foreign); \$15 per single copy (\$18.75 foreign).

Emergencies

For life-threatening situations, call (800) 321-OSHA. Complaints will go immediately to the nearest OSHA area or state office for help.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.



Related OSHA Publications

Single, free copies of the following publications can be obtained from the U.S. Department of Labor, OSHA/OICA Publications, P.O. Box 37535, Washington, DC 20013-7535. Send a Self-addressed mailing label with your request.

All About OSHA -- OSHA 2056

Employee Workplace Rights -- OSHA 3021

Consultation Services for the Employer -- OSHA 3047

How to Prepare for Workplace Emergencies -- OSHA 2019

Chemical Hazard Communication -- OSHA 3084

The following publications are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 (202) 512-1800. Include GPO Order No. and make checks payable to Superintendent of Documents.

Ergonomics: The Study of work -- OSHA 3125. Order No. 029-016-00 124-7; cost \$1.00

Framework for a Comprehensive Health and Safety Program in the Hospital Environment. Order No. 029-016- 00149-2; cost \$3.50.

General Industry Digest -- OSHA 2201. Order No. 029-016-00155-2; cost \$2.25.

Handbook for Small Business -- OSHA 2209. Order No. 029-016-00144- 1; cost \$4.00.

Job HazardAnalysis -- OSHA 3071. Order No. 029-016-00142-5; cost \$1.00.

Working Safely with Video Display Terminals -- OSHA 3092. Order No. 029-016-00123-9; cost \$1.00.

States with Approved Plans

Commissioner

Alaska Department of Labor
1111 West 8th Street
Room 306
Juneau, AK 99801
(907) 465-2700

Director

Industrial Commission of Arizona
800 W. Washington
Phoenix, AZ 85007
(602) 542-5795

Director

California Department of
Industrial Relations
45 Fremont Street
San Francisco, CA 94105
(415) 972-8835

Commissioner

Connecticut Department of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109
(203) 566-5123

Director

Hawaii Department of Labor and
Industrial Relations
830 Punchbowl Street
Honolulu, HI 96813
(808) 586-8844

Commissioner

Indiana Department of Labor -
State Office Building
402 West Washington Street
Room W195
Indianapolis, IN 46204
(317) 232-2378

Commissioner

Iowa Division of Labor Services

Secretary

Kentucky Labor Cabinet

Commissioner

Maryland Division of Labor and

1000 E. Grand Avenue
Des Moines, IA 50319
(515) 281-3447

1049 U.S. Highway,
127 South, Suite 2
Frankfort, KY 40601
(502) 564-3070

Industry
Department of Licensing and
Regulation
1100 N. Eutaw Street,
Rm. 613
Baltimore, MD 21202-2206
(410) 767-2215

Director

Michigan Department of Consumer
and Industry Services
4th Floor Law Building
P.O. Box 30004
Lansing, MI 48909
(517) 373-7230

Commissioner

Minnesota Department of Labor
and Industry
443 Lafayette Road
St. Paul, MN 55155
(612) 296-2342

Director

Nevada Division of Industrial
Relations
400 West King Street
Carson City, NV 89710
(702) 687-3032

Secretary

New Mexico Environment
Department
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2850

Commissioner

New York Department of Labor
W. Averell Hariman State Office
Building -12
Room 500
Albany, NY 12240
(518) 457-2741

Commissioner

North Carolina Department of
Labor
319 Chapanoke Road
Raleigh, NC 27603
(919) 662-4585

Administrator

Department of Consumer and
Business Services
Occupational Safety and Health
Division (OR-OSHA)
Labor and Industries Building
Room 430
Salem, OR 97310
(503) 378-3272

Secretary

Puerto Rico Department of Labor
and Human Resources
Prudencio Rivera Martinez Building
505 Munoz Rivera Avenue
HatoRey, PR00918
(809) 754-2119

Commissioner

South Carolina Department of
Labor,
Licensing, and Regulation
Koger Office Park, Kingstree
Building
110 Centerview Drive - P.O. Box
11329
Columbia, SC 29210
(803) 896-4300

Commissioner

Tennessee Department of Labor
Attention: Robert Taylor
710 James Robertson Parkway
Nashville, TN 37243-0659
(615) 741-2582

Commissioner

Industrial Commission of Utah
160 East 300 South,
3rd Floor
P.O. Box 146600
Salt Lake City, UT 84114-6600
(801) 530-6898

Commissioner

Vermont Department of Labor
and Industry
National Life Building
Drawer 20
120 State Street
Montpelier, VT 05620
(802) 828-2288

Commissioner

Virgin Islands Department of Labor
2131 Hospital Street,
Box 890
Christiansted
St. Croix, VI 00820-4666
(809) 773-1994

Commissioner

Virginia Department of Labor and
Industry
Powers-Taylor Building
13 South 13th Street
Richmond, VA 23219
(804) 786-2377

Director

Washington Department of
Labor and Industries
General Administration Building
P.O. Box 44001
Olympia, WA 98504-4001
(360) 902-4200

Administrator

Occupational Safety and
Compensation Division (WSC)
Wyoming Department of
Employment
Herschler Building,
2nd Floor East
122 West 25th Street
Cheyenne, WY 82002
(307) 777-7786

OSHA Consultation Project Directory

StateTelephone

- Arizona (602) 542-5795
- Arkansas (501) 682-4522
- California (415) 982-8515
- Colorado (970) 491-6151
- Connecticut (860) 566-4550
- Delaware (302) 761-8219
- District of Columbia (202) 576-6339
- Florida (904) 488-3044

Georgia (404) 894-2646
 Guam 011 (671) 475-0136
 Hawaii (808) 586-9100
 Idaho (208) 385-3283
 Illinois (312) 814-2337
 Indiana (317) 232-2688
 Iowa (515) 281-5352
 Kansas (913) 296-7476
 Kentucky (502) 564-6895
 Louisiana (504) 342-9601
 Maine (207) 624-6460
 Maryland (410) 333-4210
 Massachusetts (617) 727-3982
 Michigan (H) (517) 332-8250
 (S) (517) 322-1809
 Minnesota (612) 297-2393
 Mississippi (601) 987-3981
 Missouri (573) 751-3403
 Montana (406) 444-6418
 Nebraska (402) 471-4717
 Nevada (702) 486-5016
 New Hampshire (603) 271-2024
 New Jersey (609) 292-2424
 New Mexico (505) 827-4230
 New York (518) 457-2481
 North Carolina (919) 662-4644
 North Dakota (701) 328-5188
 Ohio (614) 644-2246
 Oklahoma (405) 528-1500
 Oregon (503) 378-3272
 Pennsylvania (412) 357-2561
 Puerto Rico (809) 754-2188
 Rhode Island (401) 277-2438
 South Carolina (803) 734-9614
 South Dakota (605) 688-4101
 Tennessee (615) 741-7036
 Texas (512) 440-3834
 Utah (801) 530-6868
 Vermont (802) 828-2765
 Virginia (804) 786-6359
 Virgin Islands (809) 772-1315
 Washington (360) 902-5638
 West Virginia (304) 558-7890
 Wisconsin (H) (608) 266-8579
 (S) (414) 521-5063
 Wyoming (307) 777-7700

(H) - Health
 (S) - Safety

OSHA Area Offices

Area Telephone
 Albany, NY (518) 464-6742
 Albuquerque, NM (505) 248-5302
 Allentown, PA (610) 776-0592
 Anchorage, AK (907) 271-5152
 Appleton, WI (414) 734-4521
 Austin, TX (512) 916-5783
 Avenel, NJ (908) 750-3270
 Baltimore, MD (410) 962-2840
 Bangor, ME (207) 941-8177
 Baton Rouge, LA (504) 389-0474

Bayside, NY (718) 279-9060
Bellevue, WA (206) 553-7520
Billings, MT (406) 247-7494
Birmingham, AL (205) 731-1534
Bismarck, ND (701) 250-4521
Boise, ID (208) 334-1867
Bowmansville, NY (716) 684-3891
Braintree, MA (617) 565-6924
Bridgeport, CT (203) 579-5581
Calumet City, IL (708) 891-3800
Carson City, NV (702) 885-6963
Charleston, WV (304) 347-5937
Cincinnati, OH (513) 841-4132
Cleveland, OH (216) 522-3818
Columbia, SC (803) 765-5904
Columbus, OH (614) 469-5582
Concord, NH (603) 225-1629
Corpus Christi, TX (512) 888-3420
Dallas, TX (214) 320-2400
Denver, CO (303) 844-5285
Des Plaines, IL (847) 803-4800
Des Moines, IA (515) 284-4794
Englewood, CO (303) 843-4500
Erie, PA (814) 833-5758
Fort Lauderdale, FL (305) 424-0242
Fort Worth, TX (817) 581-7303
Frankfort, KY (502) 227-7024
Harrisburg, PA (717) 782-3902
Hartford, CT (203) 240-3152
Hasbrouck Heights, NJ (201) 288-1700
Guaynabo, PR (787) 277-1560
Honolulu, HI (808) 541-2685
Houston, TX (713) 286-0583
. (713) 591-2438
Indianapolis, IN (317) 226-7290
Jackson, MS (601) 965-4606
Jacksonville, FL (904) 232-2895
Kansas City, MO (816) 483-9531
Lansing, MI (517) 377-1892
Little Rock, AR (501) 324-6291
Lubbock, TX (806) 743-7681
Madison, WI (608) 264-5388
Marlton, NJ (609) 757-5181
Methuen, MA (617) 565-8110
Milwaukee, WI (414) 297-3315
Minneapolis, MN (651) 664-5460
Mobile, AL (334) 441-6131
Nashville, TN (615) 781-5423
New York, NY (212) 466-2482
Norfolk, VA (804) 441-3820
North Aurora, IL (630) 896-8700
Oklahoma City, OK (405) 231-5351
Omaha, NE (402) 221-3182
Parsippany, NJ (201) 263-1003
Peoria, IL (309) 671-7033
Philadelphia, PA (215) 597-4955
Phoenix, AZ (602) 640-2007
Pittsburgh, PA (412) 644-2903
Portland, OR (503) 326-2251
Providence, RI (401) 528-4669
Raleigh, NC (919) 856-4770
Salt Lake City, UT (801) 524-5080
San Francisco, CA (415) 744-7120
Savannah, GA (912) 652-4393
Smyrna, GA (404) 984-8700
Springfield, MA (413) 785-0123
St. Louis, MO (314) 425-4249
Syracuse, NY (315) 451-0808
Tampa, FL (813) 626-1177

Tarrytown, NY(914) 524-7510
Toledo, OH (419) 259-7542
Tucker, GA (770) 493-6644
Westbury, NY (516) 334-3344
Wichita, KS(316) 269-6644
Wilkes-Barre, PA (717) 826-6538
Wilmington, DE (302) 573-6115

OSHA Regional Offices

Region I

(CT,* MA, ME, NH, RI, VT*)
JKF Federal Building
Room E-340
Boston, MA 02203
Telephone: (617) 565-9860

Region II

(NJ, NY,* PR,* VI*)
201 Varick Street
Room 670
New York, NY 10014
Telephone: (212) 337-2378

Region III

(DC, DE, MD,* PA, VA,* WV)
Gateway Building, Suite 2100
3535 Market Street
Philadelphia, PA 19104
Telephone: (215) 596-1201

Region IV

(AL, FL, GA, KY,* MS, NC, SC,* TN*)
Atlanta Federal Center
61 Forsyth Street, SW,
Room 6T50
Atlanta, GA 30303
Telephone: (404) 562-2300

Region V

(IL, IN,* MI,* MN,* OH, WI)
230 South Dearborn Street
Room 3244
Chicago, IL 60604
Telephone: (312) 353-2220

Region VI

(AR, LA, NM,* OK, TX)
525 Griffin Street
Room 602
Dallas, TX 75202
Telephone: (214) 767-4731

Region VII

(IA,* KS, MO, NE)
City Center Square
1100 Main Street, Suite 800
Kansas City, MO 64105
Telephone: (816) 426-5861

Region VIII

(CO, MT, ND, SD, UT,* WY*)
1999 Broadway, Suite 1690
Denver, CO 80202-5716
Telephone: (303) 844-1600

Region IX

(American Samoa, AZ,* CA,*
Guam, HI,* NV,* Trust
Territories of the Pacific)
71 Stevenson Street
Room 420
San Francisco, CA 94105
Telephone: (415) 975-4310

Region X

(AK,* ID, OR,* WA*)
1111 Third Avenue
Suite 715
Seattle, WA 98101-3212
Telephone: (206) 553-5930

* These states and territories operate their own OSHA-approved job safety and health programs (Connecticut and New York plans cover public employees only). States with approved programs must have a standard that is identical to, or at least as effective, as the federal standard.

OSHA Information Booklet #3143 -- Industrial Hygiene

[Freedom of Information Act](#) | [Privacy & Security Statement](#) | [Disclaimers](#) | [Important Web Site Notices](#) | [Contact Us](#)

U.S. Department of Labor | Occupational Safety & Health Administration | 200 Constitution Ave., NW, Washington, DC 20210

Telephone: 800-321-OSHA (6742) | TTY

www.OSHA.gov