

Appendix

Glossary of Terms and Acronyms

Glossary

- Alveolus/i:** An air sac of the lungs at the termination of the bronchioles.
- Antigen:** A substance that brings about an immune response when introduced into the body.
- Asthma:** A chronic respiratory disease accompanied by labored breathing, chest constriction, and coughing.
- Biologically effective dose:** The amount of a contaminant that interacts with cells and results in altered physiologic function.
- Black lung disease:** An occupational disease of coal workers resulting from deposition of coal dust in the lungs.
- Bronchoalveolar lavage fluid:** Fluid obtained from the bronchoalveolar region of the lungs by lavage.
- Bronchoconstriction:** Narrowing of a bronchus caused by constriction of bronchial smooth muscle.
- Bronchus:** One of the large conducting air passages of the lungs commencing at the bifurcation of the trachea and terminating in the bronchioles.
- Byssinosis:** An occupational respiratory disease of cotton, flax, soft-hemp, and sisal workers characterized by symptoms of chest tightness.
- Chronic bronchitis:** Chronic inflammation of bronchi resulting in cough, sputum production, and often progressive breathlessness.
- Cilia:** Long slender microscopic structures extending from a cell surface and capable of rhythmic motion.
- Collagen:** Family of fibrous proteins.
- Criteria pollutants:** Airborne substances that may cause or contribute to air pollution and may reasonably be anticipated to endanger public health or welfare.
- Cytotoxicity:** The quality of being deadly to cells.
- Dosimetry:** The estimation of the amount of a toxicant that reaches the target site following exposure.
- Elastin:** The protein base of connective tissues.
- Emphysema:** A condition of the lungs characterized by labored breathing and increased susceptibility to infection.
- Endothelium:** The layer of cells lining the blood vessels.
- Epidemiology:** The scientific study of the distribution and occurrence of human diseases and health conditions and their determinants.
- Epitheliums:** The thin layer of cells lining the inside of the respiratory tract.
- Extrinsic allergic alveolitis:** Severe immune responses to inhaled plant and animal dusts.
- Fibroblast:** The main cell of connective tissue.
- Fibrosis:** The formation of fibrous tissue as a result of injury or inflammation.
- Gas exchange:** The process of delivering oxygen in inhaled air to the bloodstream and delivering carbon dioxide and other gaseous components and metabolites in the blood stream to the exhalable air.
- In vitro:** Literally, in glass; pertaining to a biological process taking place in an artificial environment, usually a laboratory.
- In vivo:** Literally, in the living; pertaining to a biological process or reaction taking place in a living organism.
- Larynx:** Part of the respiratory tract containing the vocal cords.
- Lavage:** Irrigation or washing out of a cavity.
- Microphage:** A type of large, amoeba-like cell, found in the blood and lymph, which ingests dead tissue, tumor cells, and foreign particles.
- Magnetopneumography (MPG):** A non-invasive technique which provides a means of actively monitoring the dust retained in the lungs of people exposed to magnetic or magnetizable dusts.
- Microscopy:** The use of an instrument to obtain magnified images of small objects.
- Morphometry:** The measurement of the structure and forms of organisms, as opposed to the measurement of their functions.
- Mucus:** The viscous fluid secreted by the mucous glands.
- Nasopharyngeal region:** Region of the lung comprising the nasal cavity and pharynx.
- Phagocytosis:** Consumption of foreign particles by cells.
- Pharynx:** The portion of the alimentary canal which intervenes between the mouth cavity and the esophagus and serves both for the passage of food and the performance of respiratory functions.
- Pleura:** The serous membrane lining the pulmonary cavity.
- Pleural cavity:** The space that separates the lungs from the chest wall. It contains a small amount of fluid

and is bounded by membranes called the pleura.

Pneumoconiosis: A condition characterized by the deposition of mineral dust in the lungs as a result of occupational or environmental exposure.

Pulmonary edema: The accumulation of abnormally large amounts of watery fluid within the pulmonary alveoli.

Pulmonary fibrosis: The accumulation of abnormal quantities of fibrous tissue in the lung.

Pulmonary region: The region of the lung where oxygen in the air is supplied to the blood and carbon dioxide and other gaseous components and metabolites are released from the blood to the air remaining in the lungs.

Respiratory system: An interconnected series of air passages, cavernous organs, and cells that permit the introduction of oxygen, the-exchange of gases, and the removal of carbon dioxide from the body as well as the production of speech.

Risk assessment: The analytical process by which the nature and magnitude of risk are identified. Four steps make up a complete risk assessment: hazard identification, dose-response assessment, exposure assessment, and risk characterization.

Secretory cells: Cells that secrete mucus.

Spirometry: The measurement of the air inhaled and exhaled during respiration.

Toxicology: The study of adverse effects of natural or synthetic chemicals on living organisms.

Trachea: The windpipe.

Tracheobronchial region: The region of the lung comprising the trachea and bronchi.

Type I cells: Cells lining the alveoli which are very thin and delicate and spread over a relatively large area.

Type II cells: Cells lining the alveoli which release proteins and lipids providing a thin, fluid lining for the inside of the alveoli.

Acronyms

ATS —American Thoracic Society
BAL —Bronchoalveolar lavage
BALF —Bronchoalveolar lavage fluid
C M —Clean Air Act
CASAC —Clean Air Science Advisory Committee (EPA)
CDC —Centers for Disease Control
CFR —Code of Federal Regulations
c o —Carbon monoxide
C O₂ —Carbon dioxide

COAD —Chronic obstructive airway disease
COLD —Chronic obstructive lung disease
COPD —Chronic obstructive pulmonary disease
CPSA —Consumer Product Safety Act
CPSC —Consumer Product Safety Commission
DHHS —Department of Health and Human Services
DLco —Diffusing capacity of the lung for carbon monoxide
DOE —Department of Energy
DRDS —Division of Respiratory Disease Studies (NIOSH)
EPA —Environmental Protection Agency
ERP —Early Reduction Program
FDA —Food and Drug Administration
FDCA —Food, Drug, and Cosmetic Act
FEF₅₀ —Forced expiratory flow of 50 percent
FEF₇₅ —Forced expiratory flow of 75 percent
FEV₁ —Forced expiratory volume in 1 second
FHSA —Federal Hazardous Substances Act
FIFRA —Federal Insecticide, Fungicide, and Rodenticide Act
FMSHA —Federal Mine Safety and Health Act
FVC —Forced vital capacity
HEI —Health Effects Institute
HERL —Health Effects Research Laboratory
ITRI —Inhalation Toxicology Research Institute
MACT —Maximum achievable control technology
MMEF —Maximal midexpiratory flow
MPG —Magnetopneumography
MSHA —Mine Safety and Health Administration
NAAQS —National Ambient Air Quality Standards
NAS —National Academy of Sciences
NCTR —National Center for Toxicological Research
NHLBI —National Heart, Lung, and Blood Institute
NIEHS —National Institute of Environmental Health Sciences
NIH —National Institutes of Health
NIOSH —National Institute for Occupational Safety and Health
NO_x —Nitrogen oxides
NRC —National Research Council
OSHA —Occupational Safety and Health Administration
OTA —Office of Technology Assessment
PEL —Permissible exposure limit
RCRA —Resource Conservation and Recovery Act
TRI —Toxics Release Inventory
TSCA —Toxic Substances Control Act
UCLA —University of California at Los Angeles
VOC —Volatile organic compounds