

# Appendix

# Glossary of Terms and Acronyms

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## 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 O<sub>2</sub>** —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  
**FEF<sub>50</sub>** —Forced expiratory flow of 50 percent  
**FEF<sub>75</sub>** —Forced expiratory flow of 75 percent  
**FEV<sub>1</sub>** —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<sub>x</sub>** —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