

REFERENCES

ACGIH [1984]. Particle size-selective sampling in the workplace. Report of the ACGIH Technical Committee on Air Sampling Procedures. *Ann Am Conf Gov Ind Hyg* 11:23-100.

ACGIH [1994]. 1994-1995 Threshold limit values for chemical substances and physical agents and biological exposure indices. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

ACGIH [1995]. Industrial ventilation manual of recommended practice. 22nd ed. Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

Addison J, Dodgson J [1990]. The influence of shape, size, and composition of individual dust particles on the harmfulness of coalmine dusts: development of methods of analysis. In: Proceedings of the VIIth International Pneumoconioses Conference, August 23-26, 1988, Pittsburgh, PA. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108.

Albert RE, Arnett LC [1955]. Clearance of radioactive dust from the human lung. *Arch Ind Health* 12:99-106.

Almich BP, Carson GA [1974]. Some effects of charging on 10-mm nylon cyclone performance. *Am Ind Hyg Assoc J* 35:603-612.

Althouse R, Attfield M, Kellie S [1986]. Use of data from X-ray screening program for coal workers to evaluate effectiveness of 2 mg/m³ coal dust standard. *J Occup Med* 28(8):741-745.

Althouse RB, Castellan RM, Wagner GR [1992]. Pneumoconioses in the United States: highlights of surveillance data from NIOSH and other Federal sources. *Occup Med: State of the Art Rev* 7(2):197-208.

Amandus H [1983]. The Appalachian coal miner mortality study: a 14-year follow-up. Morgantown, WV: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, Division of Respiratory Disease Studies, NTIS No. PB-83-235-556.

Amandus HE, Hanke W, Kullman G, Reger RB [1984]. A re-evaluation of radiological evidence from a study of U.S. strip coal miners. *Arch Environ Health* 39(5):346-351.

Amandus HE, Petersen MR, Richards TB [1989]. Health status of anthracite surface coal miners. *Arch Environ Health* 44(2):75-81.

Ames RG [1982]. Gastric cancer in coal miners: some hypotheses for investigation. *J Soc Occup Med* 32:73-81.

Ames RG, Gamble JF [1983]. Lung cancer, stomach cancer, and smoking status among coal miners. *Scand J Work Environ Health* 9:443-448.

ANSI [1979]. American national standard—fundamentals governing the design and operation of local exhaust systems. New York, NY: American National Standards Institute, Inc., ANSI Z9.2-1979.

Armstrong BK, McNulty JC, Levitt LJ, Williams KA, Hobbs MST [1979]. Mortality in gold and coal miners in Western Australia with special reference to lung cancer. *Br J Ind Med* 36:199-205.

Ashford JR, Enterline PE [1966]. Radiologic classification of the pneumoconioses. *Arch Env Health* 12:314-330.

ASPH [1986]. A proposed national strategy for the prevention of occupational lung diseases. In: Proposed national strategies for the prevention of leading work-related diseases and injuries. Part 1. Washington, DC: The Association of Schools of Public Health, under a cooperative agreement with the National Institute for Occupational Safety and Health.

ASTM [1993]. Standard classification of coals by rank. In: Annual book of ASTM standards. Philadelphia, PA: American Society for Testing and Materials, Designation D 388-92a.

ATC (Aerosol Technology Committee, American Industrial Hygiene Association) [1970]. Guide for respirable mass sampling. *Am Ind Hyg Assoc J* 31(1):133-137.

ATS (American Thoracic Society) [1962]. Chronic bronchitis, asthma, and pulmonary emphysema: a statement by the Committee on diagnostic standards for nontuberculous respiratory diseases. *Am Rev Respir Dis* 85:762-768.

ATS (American Thoracic Society) [1979]. ATS statement—snowbird workshop on standardization of spirometry. *Am Rev Respir Dis* 119:831-838.

ATS (American Thoracic Society) [1987a]. Standardization of spirometry—1987 update. *Am Rev Respir Dis* 136:1285-1298.

ATS (American Thoracic Society) [1987b]. Standards for the diagnosis and care of patients with chronic obstructive pulmonary disease (COPD) and asthma. *Am Rev Respir Dis* 136:225-244.

ATS (American Thoracic Society) [1991]. Lung function testing: selection of reference values and interpretive strategies. *Am Rev Respir Dis* 144:1202-1218.

- Attfield MD [1985]. Longitudinal decline in FEV₁ in United States coalminers. *Thorax* 40:132-137.
- Attfield MD [1992]. British data on coal miners' pneumoconiosis and relevance to U.S. conditions. *Am J Public Health* 82(7):978-983.
- Attfield MD, Althouse RB [1992]. Surveillance data on U.S. coal miners' pneumoconiosis, 1970 to 1986. *Am J Public Health* 82(7):971-977.
- Attfield MD, Castellan R [1992]. Epidemiological data on U.S. coal miners' pneumoconiosis, 1960 to 1988. *Am J Public Health* 82(7):964-970.
- Attfield MD, Hodous TK [1992]. Pulmonary function of U.S. coal miners related to dust exposure estimates. *Am Rev Respir Dis* 145(3):605-609.
- Attfield MD, Hodous TK [1995]. Does regression analysis of lung function data obtained from occupational epidemiologic studies lead to misleading inferences regarding the true effect of smoking? *Am J Ind Med* 27:281-291.
- Attfield MD, Moring K [1992a]. The derivation of estimated dust exposures for U.S. coal miners working before 1970. *Am Ind Hyg Assoc J* 53(4):248-255.
- Attfield MD, Moring K [1992b]. An investigation into the relationship between coal workers' pneumoconiosis and dust exposure in U.S. coal miners. *Am Ind Hyg Assoc J* 53(8):486-492.
- Attfield MD, Seixas NS [1995]. Prevalence of pneumoconiosis and its relationship to dust exposure in a cohort of U.S. bituminous coal miners and ex-miners. *Am J Ind Med* 27:137-151.
- Attfield MD, Wagner G [1992a]. A report on a workshop on the National Institute for Occupational Safety and Health B reader certification program. *J Occup Med* 34(9):875-878.
- Attfield MD, Wagner G [1992b]. Respiratory disease in coal miners. In: Rom WN, ed. *Environmental and occupational medicine*. 2nd ed. Boston, MA: Little, Brown and Company, pp. 325-344.
- Attfield M, Reger R, Glenn R [1984a]. The incidence and progression of pneumoconiosis over nine years in U.S. coal miners: I. principal findings. *Am J Ind Med* 6:407-415.
- Attfield M, Reger R, Glenn R [1984b]. The incidence and progression of pneumoconiosis over nine years in U.S. coal miners: II. relationship with dust exposure and other potential causative factors. *Am J Ind Med* 6:417-425.
- Attfield MD, Althouse R, Hall B, Kellie S [1985]. The mortality analysis of data from the first round of the National Coal Study. Chapter 7. In: *The National Coal Study and related research final report from round three of the study*. Morgantown, WV: U.S. Department of Health and

Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health. NTIS No. PB-85-221-026.

Attfield MD, Althouse R, Reger RB [1986]. An investigation of inter-reader variability among X-ray readers employed in the underground coal miner surveillance program. *Ann Am Conf Gov Ind Hyg* 14:401-409.

Attfield MD, Vallyathan V, Green FHY [1994]. Radiographic appearances of small opacities and their correlation with pathology grading of macules, nodules, and dust burden in the lungs. *Ann Occup Hyg* 38(Suppl 1):783-789.

Atuhaire LK, Campbell MJ, Cochrane AL, Jones M, Moore F [1985]. Mortality of men in the Rhondda Fach 1950-80. *Br J Ind Med* 42(11):741-745.

Balaan MR, Banks DE [1992]. Silicosis. In: Rom WN, ed. *Environmental and occupational medicine*. Boston, MA: Little, Brown and Company, pp. 345-362.

Balaan MR, Weber SL, Banks DE [1993]. Clinical aspects of coal workers' pneumoconiosis and silicosis. *Occup Med: State of the Art Rev* 8(1):19-34.

Banks DE, Bauer MA, Castellan RM, Lapp NL [1983]. Silicosis in surface coal mine drillers. *Thorax* 38:275-278.

Barnhart S [1994]. Irritant bronchitis. In: Rosenstock L, Cullen MR, eds. *Textbook of clinical occupational and environmental medicine*. Philadelphia, PA: W.B. Saunders Company.

Bartley DL, Breuer GM [1982]. Analysis and optimization of the performance of the 10 mm cyclone. *Am Ind Hyg Assoc J* 43:520-528.

Bartley DL, Chen CC, Song R, Fischbach TJ [1994]. Respirable aerosol sampler performance testing. *Am Ind Hyg Assoc J* 55(11):1036-1046.

Bates RL, Jackson JA, eds. [1987]. *Glossary of geology*. 3rd ed. Alexandria, VA: American Geological Institute.

Becklake MR [1985]. Chronic airflow limitation: its relationship to work in dusty occupations. *Chest* 88(4):608-617.

Becklake MR [1992]. Occupational exposures and chronic airways disease. In: Rom WN, ed. 2nd ed. *Environmental and occupational medicine*. Boston, MA: Little, Brown and Company, pp. 453-463.

Becklake MR, White N [1993]. Sources of variation in spirometric measurements: identifying the signal and dealing with noise. *Occup Med: State of the Art Rev* 8(2):241-264.

- Bellmann B, Muhle H, Creutzenberg O, Dasenbrock C, Kilpper R, MacKenzie JC, et al. [1991]. Lung clearance and retention of toner, utilizing a tracer technique, during chronic inhalation exposure in rats. *Fundam Appl Toxicol* 17:300-313.
- Bennett JG, Dick JA, Kaplan YS, Shand PA, Shennan DH, Thomas DJ, et al. [1979]. The relationship between coal rank and the prevalence of pneumoconiosis. *Br J Ind Med* 36:206-210.
- Blachman MW, Lippmann M [1974]. Performance characteristics of the multicyclone aerosol sampler. *Am Ind Hyg Assoc J* 35(1):311-316.
- Boden LI, Gold M [1984]. The accuracy of self-reported regulatory data: the case of coal mine dust. *Am J Ind Med* 6:427-440.
- Boehlecke B [1986]. Laboratory assessment of respiratory impairment for disability evaluation. In: Merchant JA, ed. *Occupational respiratory diseases*. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 86-102.
- Bohlig H, Bristol LJ, Cartier PH, Felson B, Gilson JC, Grainger TR, et al. [1970]. UICC/Cincinnati classification of the radiographic appearances of pneumoconiosis. *Chest* 58:57-67.
- Bohning DE, Atkins HL, Cohn SH [1982]. Long-term particle clearance in man: normal and impaired. *Ann Occup Hyg* 26(1-4):259-271.
- Bolton RE, Vincent JH, Jones AD, Addison J, Beckett ST [1983]. An overload hypothesis for pulmonary clearance of UICC amosite fibres inhaled by rats. *Br J Ind Med* 40:264-272.
- BOM [1986]. Investigation of quartz dust sources and control mechanisms on surface coal mine operations. Vol. 1. Results, analysis, and conclusions. Washington, DC: U.S. Department of the Interior, Bureau of Mines, NTIS No. PB-86-215-852.
- Borm PJA, Palmes N, Engelen JJM, Buurman WA [1988]. Spontaneous and stimulated release of tumor necrosis factor-alpha (TNF) from blood monocytes of miners with coal workers' pneumoconiosis. *Am Rev Respir Dis* 138:1589-1594.
- Borm PJA, Schins R, Janssen YMW, Lenaerts L [1992]. Molecular basis for differences in susceptibility to coal workers' pneumoconiosis. *Toxicol Lett* 64/65:767-772.
- Bowden DH [1987]. Macrophages, dust, and pulmonary diseases. *Exp Lung Res* 12:89-107.
- Bowman JD, Bartley DL, Breuer GM, Doemeny LJ, Murdock DJ [1984]. Accuracy criteria recommended for the certification of gravimetric coal mine dust samplers. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, NTIS No. PB-85-222-446.

Briant JK, Moss OR [1984]. The influence of electrostatic charge on the performance of 10-mm nylon cyclones. *Am Ind Hyg Assoc J* 45(7):440-445.

Brief RS, Scala RA [1975]. Occupational exposure limits for novel work schedules. *Am Ind Hyg Assoc J* 36:467-469.

British Coal Corporation [1993]. British coal medical service annual report 1993-94. Nottinghamshire, England: British Coal Corporation.

Burkhart JE, McCawley MA, Wheeler RW [1987]. Particle size distributions in underground coal mines. *Am Ind Hyg Assoc J* 48(2):122-126.

Busch KA, Taylor DG [1981]. Statistical protocol for the NIOSH validation tests. In: Choudhary G, ed. *Chemical hazards in the workplace—measurement and control*. Washington, DC: American Chemical Society, ACS Symposium Series 149.

Campbell EJ, Senior RM [1981]. Cell injury and repair. *Clin Chest Med* 2(3):357-375.

Cantrell BK, Rubow KL, Watts WF Jr, Bagley ST, Carlson DH [1993]. Pollutant levels in underground coal mines using diesel equipment. In: Bhaskar R, ed. *Proceedings of the 6th U. S. Mine Ventilation Symposium*. Littleton, CO: Society for Mining, Metallurgy, and Exploration, Inc.

Caplan A [1962]. Correlation of radiological category with lung pathology in coal-workers' pneumoconiosis. *Br J Ind Med* 19:171-179.

Caplan KJ, Doemeny LJ, Sorenson SD [1973]. Evaluation of coal mine dust personal sampler performance. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, NIOSH Contract No. PH CPE-R-70-0036.

Castellan RM, Sanderson WT, Petersen MR [1985]. Prevalence of radiographic appearance of pneumoconiosis in an unexposed blue collar population. *Am Rev Respir Dis* 131(5):684-686.

Castranova V, Bowman L, Reasor MJ, Lewis T, Tucker J, Miles PR [1985]. The response of rat alveolar macrophages to chronic inhalation of coal dust and/or diesel exhaust. *Environ Res* 36:405-419.

CDC (Centers for Disease Control) [1990]. Silicosis: cluster in sandblasters—Texas, and occupational surveillance for silicosis. *MMWR* 39(25):433-437.

CEN (Comite Europeen de Normalisation) [1993]. *Workplace atmospheres—size fraction definitions for measurement of airborne particles*. Brussels, Belgium: Comite Europeen de Normalisation, Central Secretariat, European pre-standard EN/232.

- Cervik J, Sainato A, Baker E [1985]. Longwall dust control by water infusion. *Mining Eng* 37(2):149-153.
- CFR. Code of Federal regulations. Washington, DC: U.S. Government Printing Office, Office of the Federal Register.
- Chan TL, Lippmann M [1977]. Particle collection efficiencies of air sampling cyclones: an empirical theory. *Environ Sci Tech* 11(4):377-382.
- Chan TL, Lippmann M [1980]. Experimental measurements and empirical modelling of the regional deposition of inhaled particles in humans. *Am Ind Hyg Assoc J* 41:399-409.
- Ciba [1959]. Terminology, definition, and classification of chronic pulmonary emphysema and related conditions. A report of conclusions of a Ciba Guest Symposium. *Thorax* 14:286-299.
- Cilento EV, Georgellis GB [1991]. The effects of dipalmitoyl lechithin coated fresh quartz on superoxide release from alveolar macrophages in vitro. Chapter 39. In: Frantz RL, Ramani RV, eds. *Proceedings of the 3rd Symposium on Respirable Dusts in the Mineral Industry*. Littleton, CO: Society of Mining Engineering, pp. 313-315.
- Cinkotai FF, Gibbs ACC, Sharpe TC [1984]. A comparison of exposure to airborne dust in cotton processing plants estimated from personal and workzone samples. *Ann Occup Hyg* 28(3):347-352.
- Coates DR [1981]. Energy and fossil fuels. In: *Environmental geology*. New York, NY: John Wiley and Sons.
- Cochrane AL [1962]. The attack rate of progressive massive fibrosis. *Br J Ind Med* 19:52-64.
- Cochrane AL [1973]. Relation between radiographic categories of coalworkers' pneumoconiosis and expectation of life. *Br Med J* 2:532-534.
- Cochrane AL [1983]. Coal and the lung. *Thorax* 38(11):877-878.
- Cochrane AL, Haley TJL, Moore F, Holf D [1979]. The mortality of men in the Rhondda Fach, 1950-1970. *Br J Ind Med* 36:15-22.
- Cockcroft A, Andersson N [1987]. Radiological irregular opacities and coalwork exposure: a case-referent study. *Br J Ind Med* 44:484-487.
- Cockcroft A, Wagner JC, Seal EME, Lyons JP, Campbell MJ [1982a]. Irregular opacities in coalworkers' pneumoconiosis—correlation with pulmonary function and pathology. *Ann Occup Hyg* 26(1-4):767-787.
- Cockcroft A, Wagner JC, Ryder R, Seal RME, Lyons JP, Andersson N [1982b]. Post-mortem study of emphysema in coalworkers and non-coal workers. *Lancet* 2:600-603.

Colinet JF, McClelland JJ, Jankowski RA [1991]. Interactions and limitations of primary dust controls for continuous miners. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, RI 9373.

Collins HPR, Soutar CA [1988]. Reproducibility of a radiographic classification of progressive massive fibrosis. *Ann Occup Hyg* 32(Suppl 1):567-573.

Collins HPR, Dick JA, Bennett JG, Pern PO, Rickards MA, Thomas DJ, et al. [1988]. Irregularly shaped small shadows on chest radiographs, dust exposure, and lung function in coalworkers' pneumoconiosis. *Br J Ind Med* 45:43-55.

Collis EL, Gilchrist JC [1928]. Effects of dust upon coal trimmers. *J Ind Hyg* 10(4):101-110.

Cook WA [1987]. Occupational exposure limits—worldwide. Fairfax, VA: American Industrial Hygiene Association.

Cornwell R, Hanke W [1983]. Hazard evaluation and technical assistance report: Mine Safety and Health Administration, Morgantown, West Virginia. Washington, DC: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 82-112/113/114.

Costello J, Ortmeyer CE, Morgan WKC [1974]. Mortality from lung cancer in U.S. coal miners. *Am J Public Health* 64(3):222-224.

Costello J, Ortmeyer CE, Morgan WKC [1975]. Mortality from heart disease in coal miners. *Chest* 67(4):417-421.

Cotes JE, Field GB [1972]. Lung gas exchange in simple pneumoconiosis of coal workers. *Br J Ind Med* 29:268-273.

Cotes JE, Steel J [1987]. Pneumoconiosis of coalworkers and related occupations. In: Cotes JE, Steel J, eds. *Work-related lung disorders*. Oxford, England: Blackwell Scientific Publications.

Cotes JE, Deivanayagam CN, Field GB, Billiet L [1971]. Relation between type of simple pneumoconiosis (p or m) and lung function. In: Walton WH, ed. *Inhaled particles III*. London, England: Unwin Brothers.

Cowie RL, Mabena SK [1991]. Silicosis, chronic airflow limitation, and chronic bronchitis in South African gold miners. *Am Rev Respir Dis* 143:80-84.

Cowie AJ, Crawford NP, Miller BG, Dodgson J [1981]. A study of the importance of "total" dust (as compared with the respirable fraction) in causing upper respiratory disease. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/81/9.

Crapo RO, Morris AH [1981]. Standardized single breath normal values for carbon monoxide diffusing capacity. *Am Rev Respir Dis* 123:185-189.

- Dalal NS, Suryan MM, Jafari B, Shi X, Vallyathan V, Green FHY [1988]. Electron spin resonance detection of reactive free radicals in fresh coal dust and quartz dust and its implications to pneumoconiosis and silicosis. In: Frantz RL, Ramani RV, eds. Respirable dust in the mineral industries: health effects, characterization and control. University Park, PA: The Pennsylvania State University, pp. 24-29.
- Dalal NS, Shi X, Vallyathan V [1989a]. Potential role of silicon—oxygen radicals in acute lung injury. In: Mossman BT, Begin RO, eds. Effects of mineral dusts on cells. Berlin, Germany: Springer-Verlag, NATO ASI Series, Vol. H30.
- Dalal NS, Suryan MM, Vallyathan V, Green FHY, Jafari B, Wheeler R [1989b]. Detection of reactive free radicals in fresh coal mine dust and their implication for pulmonary injury. *Ann Occup Hyg* 33(1):79-84.
- Davis JMG [1980]. The relationship between the mass and composition of coal mine dust and the development of pneumoconiosis. Chapter 21. In: Rom WN, Archer VE, eds. Health implications of new energy technologies. Ann Arbor, MI: Ann Arbor Science.
- Davis JMG, Ottery J, Le Roux A [1977]. The effect of quartz and other non-coal dusts in coalworkers' pneumoconiosis. Part II. Lung autopsy study. In: Walton WH, ed. Inhaled particles IV. Oxford, England: Pergamon Press, pp. 691-701.
- Demange M, Gendre JC, Herve-Bazin B, Carton B, Peltier A [1990]. Aerosol evaluation difficulties due to particle deposition on filter holder inner walls. *Ann Occup Hyg* 34(4):399-403.
- Demers LM, Rose M, Bartlett GL [1988]. The effects of coal mine dust particles on the metabolism of arachidonic acid by alveolar macrophages. In: Frantz RL, Ramani R, eds. Respirable dust in the mineral industries: health effects, characterization, and control. University Park, PA: Pennsylvania State University.
- Dimich-Ward H, Bates DV [1994]. Reanalysis of a longitudinal study of pulmonary function in coal miners in Lorraine, France. *Am J Ind Med* 25:613-623.
- Divers EF, Cecala AB [1990]. Dust control in coal preparation and mineral processing plants. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, IC 9248.
- Divers E, Jayaraman N, Page S, Jankowski R [1987]. Guidelines for dust control in small underground coal mines. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines.
- Dobrev M, Burilkov T, Kolev K, Lalova P [1977]. Characteristics of lung dusts and their relation to dust exposure and pathological findings in the lungs. In: Walton WH, ed. Inhaled particles IV. Proceedings of an International Symposium organized by the British Occupational Hygiene Society, Edinburgh, September 22-26, 1975. Oxford, England: Pergamon Press.
- Douglas AN, Lamb D, Ruckley VA [1982]. Bronchial gland dimensions in coal miners: influence of smoking and dust exposure. *Thorax* 37:760-764.

Douglas AN, Robertson A, Chapman JS, Ruckley VA [1986]. Dust exposure, dust recovered from the lung, and associated pathology in a group of British coalminers. *Br J Ind Med* 43:795-801.

Douglas AN, Collins HPR, Fernie JM, Soutar CA [1988]. The relationship between radiographic and pathological appearances of progressive massive fibrosis. *Ann Occup Hyg* 32(Suppl 1):561-566.

Doyle HN [1970]. Dust concentration in the mines. In: *Proceedings of the Symposium on Respirable Coal Mine Dust*. Washington, DC: U.S. Department of the Interior, Bureau of Mines, IC 8458.

Dreessen WC, Jones RR [1936]. Anthracosilicosis. *JAMA* 107(15):1179-1185.

Driscoll KE, Lindenschmidt RC, Maurer JK, Higgins JM, Ridder G [1990a]. Pulmonary response to silica or titanium dioxide: inflammatory cells, alveolar macrophage-derived cytokines, and histopathology. *Am J Respir Cell Mol Biol* 2:381-390.

Driscoll KE, Maurer JK, Crosby LL [1990b]. Overload of lung clearance is associated with activation of alveolar macrophage tumor necrosis factor and fibronectin release. *J Aerosol Med* 3(Suppl 1):S83-S91.

EIA [1989]. *Coal data: a reference*. Washington, DC: U.S. Department of Energy, Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels, Publication No. DOE/EIA-0064(87).

EIA [1991]. *Coal data: a reference*. Washington, DC: U.S. Department of Energy, Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels, Publication No. DOE/EIA-0064(90).

EIA [1993]. *Coal production 1992*. Washington, DC: U.S. Department of Energy, Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels, Publication No. DOE/EIA-0118(92).

Eisen EA [1987]. Standardizing spirometry: problems and prospects. *Occup Med: State of the Art Rev* 2(2):213-225.

Eisen EA, Wegman DH, Louis TA [1983]. Effects of selection in a prospective study of forced expiratory volume in Vermont granite workers. *Am Rev Respir Dis* 128:587-591.

Eisen EA, Robins JM, Greaves IA, Wegman DH [1984]. Selection effects of repeatability criteria applied to lung spirometry. *Am J Epidemiol* 120(5):734-742.

Emmett PC, Aitken RJ, Hannan WJ [1982]. Measurements of the total and regional deposition of inhaled particles in the human respiratory tract. *J Aerosol Sci* 13(6):549-560.

- Enterline PE [1964]. Mortality rates among coal miners. *Am J Public Health* 54(5):758-768.
- Enterline PE [1967]. The effects of occupation on chronic respiratory disease. *Arch Environ Health* 14:189-200.
- Enterline PE [1972]. A review of mortality data for American coal miners. *Ann N Y Acad Sci* 200:260-272.
- Enterline PE, Lainhart WS [1967]. The relationship between coal mining and chronic nonspecific respiratory disease. *Am J Public Health* 57(3):484-494.
- Epstein DM, Miller WT, Bresnitz EA, Levine MS, Geftter WB [1984]. Application of ILO classification to a population without industrial exposure: findings to be differentiated from pneumoconiosis. *Am J Roentgenol* 142:53-58.
- Fairman PR, O'Brien RJ, Swecker S, Amandus HE, Shoub EP [1977]. Respiratory status of surface coal miners in the United States. *Arch Environ Health* 32:211-215.
- Felson B, Morgan WKC, Bristol LJ, Pendergrass EP, Dessen EL, Linton OW, et al. [1973]. Observations on the results of multiple readings of chest films in coal miners' pneumoconiosis. *Radiology* 109(1):19-23.
- Fernie JM, Ruckley VA [1987]. Coalworkers' pneumoconiosis: correlation between opacity profusion and number and type of dust lesions with special reference to opacity type. *Br J Ind Med* 44:273-277.
- Ferris BG [1978]. Part II. Recommended respiratory disease questionnaires for use with adults and children in epidemiologic research: Epidemiology standardization project. *Am Rev Respir Dis* 118(6, Part II):7-53.
- Fisher T [1991]. High technology: the next step to increased miner safety and improved productivity. *Coal Voice*, May/June.
- Fletcher CM, Oldham PD [1949]. The problem of consistent radiological diagnosis in coalminers' pneumoconiosis. An experimental study. *Br J Ind Med* 6:168-183.
- Fletcher C, Peto R [1977]. The natural history of chronic airflow obstruction. *Br Med J* 1:1645-1648.
- Fletcher CM, Pride NB [1984]. Definitions of emphysema, chronic bronchitis, asthma and airflow obstruction: 25 years on from the Ciba Symposium. *Thorax* 39:81-85.
- Fletcher C, Peto R, Tinker C, Speizer FE [1976]. The natural history of chronic bronchitis and emphysema: an eight-year study of early chronic obstructive lung disease in working men in London. Oxford, England: Oxford University Press, pp. 1-9, 70-105.

Flinn RH, Seifert HE, Brinton HP, Jones JL, Franks RW [1941]. Soft coal miners health and working environment. Washington, DC: U.S. Public Health Service, Public Health Bulletin No. 270.

Foxman B, Higgins ITT, Oh MS [1986]. The effects of occupation and smoking on respiratory disease mortality. *Am Rev Respir Dis* 134:649-652.

Garay SM [1992]. Pulmonary function testing. In: Rom WN, ed. Environmental and occupational medicine. Boston, MA: Little, Brown and Company.

Garland RP, Thorpe BL, Hadden GG [1979]. Investigations into dust surveillance and control in drivages, scourings and bord and pillar workings. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/79/17 (EUR. P51).

German Research Institute [1992]. MAK- and BAT-values 1992: maximum concentrations at the workplace and biological tolerance values for working materials. Weinheim, Federal Republic of Germany: VCH Verlagsgesellschaft mbH, Report No. 28.

Given PH [1984]. An essay on the organic geochemistry of coal. In: Gobarty ML, Larsen JW, Wender I, eds. Coal science. Vol. 3. New York, NY: Academic Press, Inc., pp. 70-86.

Gold WM, Boushey HA [1988]. Pulmonary function testing. In: Murray JF, Nadel JA, eds. Respiratory medicine. Philadelphia, PA: W.B. Saunders Company, pp. 611-682.

Goldenhar LM, Schulte PA [1994]. Intervention research in occupational health and safety. *J Occup Med* 36(7):763-775.

Gosset P, Lassalle P, Vanhee D, Wallaert B, Aerts C, Voisin C, et al. [1991]. Production of tumor necrosis factor-alpha and interleukin-6 by human alveolar macrophages exposed in vitro to coal mine dust. *Am J Respir Cell Mol Biol* 5:431-436.

Gough J [1940]. Pneumoconiosis in coal trimmers. *J Pathol Bacteriol* 51:277-280.

Gough J, James WRL, Wentworth JE [1950]. A comparison of the radiological and pathological changes in coalworkers' pneumoconiosis. *J Faculty Radiol* 1:28-39.

Green SO [1987]. Scrubbers and remote control allow North River No. 1 mine to extend cutting depth of continuous miners. *Mining Eng* 39(8):781-784.

Green FHY, Althouse R, Weber KC [1989]. Prevalence of silicoses at death in underground coal miners. *Am J Ind Med* 16:605-615.

Hadden GG, Jones CO, Thorpe HL [1977]. A comparative assessment of dust surveillance procedures including the use of "personal" and "fixed position" sampling instruments. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/77/15 (EUR. P41).

- Hagopian JH, Bastress EK [1976]. Recommended industrial ventilation guidelines. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, DHEW (NIOSH) Publication No. 76-162.
- Halperin W, Baker EL, Monson RR, eds. [1992]. Public health surveillance. New York, NY: Van Nostrand Reinhold.
- Halperin WE, Ratcliffe J, Frazier TM, Wilson L, Becker SP, Schulte PA [1986]. Medical screening in the workplace: proposed principles. *J Occup Med* 28(8):547-552.
- Haney RA, Ondrey RS, Fields KG [1993]. Influence of airflow and production on longwall dust control. Proceedings of the 6th U.S. Mine Ventilation Symposium, Salt Lake City, Utah. Littleton, CO: Society for Mining, Metallurgy, and Exploration, Inc., pp. 43-49.
- Hankinson JL [1986]. Pulmonary function testing in the screening of workers: guidelines for instrumentation, performance, and interpretation. *J Occup Med* 28(10):1081-1092.
- Hankinson JL [1993]. Instrumentation for spirometry. *Occup Med: State of the Art Rev* 8(2):397-407.
- Hankinson JL, Bang KM [1991]. Acceptability and reproducibility criteria of the American Thoracic Society as observed in a sample of the general population. *Am Rev Respir Dis* 143:516-521.
- Hankinson JL, Wagner GR [1993]. Medical screening using periodic spirometry for detection of chronic lung disease. *Occup Med: State of the Art Rev* 8(2):353-361.
- Hankinson JL, Reger RB, Fairman RP, Lapp NL, Morgan WKC [1977a]. Factors influencing expiratory flow rates in coal miners. In: Walton WH, ed. *Inhaled particles IV*. Oxford, England: Pergamon Press, pp. 737-755.
- Hankinson JL, Reger RB, Morgan WKC [1977b]. Maximal expiratory flows in coal miners. *Am Rev Respir Dis* 116:175-180.
- Hankinson JL, Viola JO, Petsonk EL, Ebeling TR [1994]. BTPS correction for ceramic flow sensor. *Chest* 105(5):1481-1486.
- Harber P, Lockey JE [1992]. Pulmonary function testing in pulmonary prevention. *Occup Med: State of the Art Rev* 6(1):69-79.
- Hartle R [1981]. Health hazard technical assistance report: Colorado Springs Public Utilities, Colorado Springs, CO. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, NIOSH Report No. 81-034-035-934.

Hartman HL, Mutmansky JM, Wang YJ, eds. [1982]. *Mine ventilation and air conditioning*. 2nd ed. New York, NY: John Wiley and Sons.

Heppleston AG [1992]. Coal workers' pneumoconiosis: a historical perspective on its pathogenesis. *Am J Ind Med* 22:905-923.

Hewett P [1991]. Limitations in the use of particle size-selective sampling criteria in occupational epidemiology. *Appl Occup Environ Hyg* 6(4):290-300.

Hewett P [1993]. Memorandum of March 25, 1993, from Paul Hewett, Division of Respiratory Disease Studies, to Eileen Kuempel, Division of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Public Health Service, U.S. Department of Health and Human Services.

Heyder J, Gebhart J, Rudolf G, Schiller CF, Stahlhofen W [1986]. Deposition of particles in the human respiratory tract in the size range 0.005-15 μm . *J Aerosol Sci* 17(5):811-825.

Higgins ITT [1972]. Chronic respiratory disease in mining communities. *Ann N Y Acad Sci* 200:197-210.

Higgins ITT, Cochrane AL [1961]. Chronic respiratory disease in a random sample of men and women in the Rhondda Fach in 1958. *Br J Ind Med* 18:93-102.

Higgins RI, Dewell P [1968]. A gravimetric size-selecting personal dust sampler. Alvechurch, Birmingham, England: British Cast Iron Research Association, BCIRA Report 908.

Higgins MW, Keller JB [1970]. Predictors of mortality in the adult population of Tecumseh. *Arch Environ Health* 21:418-424.

Higgins ITT, Higgins MW, Lockshin MD, Canale N [1968]. Chronic respiratory disease in mining communities in Marion County, West Virginia. *Br J Ind Med* 25:165-175.

Higgins ITT, Oh MS, Whittaker DE [1981]. Chronic respiratory disease in coal miners: follow-up study of two mining communities in West Virginia. Morgantown, WV: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, Division of Respiratory Disease Studies.

Hinds WC, Bellin P [1988]. Effect of facial-seal leaks on protection provided by half-mask respirators. *Appl Ind Hyg* 3(5):158-163.

Hodous TK, Attfield MD [1990]. Progressive massive fibrosis developing on a background of minimal simple coal workers' pneumoconiosis. In: *Proceedings of the VIIth International Pneumoconiosis Conference, August 23-26, 1988, Pittsburgh, PA*. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108.

Hodous TK, Hankinson JL [1990]. Prospective spirometric study of new coal miners. In: Li Y, Yao P, Schlipkötter HW, Idel H, Rosenbruch M, eds. International Symposium on Pneumoconioses, ISP '88. Dusseldorf, FRG: Stefan W. Albers Verlag Publishing Co., pp. 206-211.

Howe LC [1987]. Increased productivity by applying deep cut technology. Paper presented at the Coal Convention '87, sponsored by the American Mining Congress, Cincinnati, OH, May 3-6, 1987.

Huggins CW, Johnson SN, Segreti JM, Snyder JG [1985]. Determination of alpha quartz particle distribution in respirable coal mine dust samples and reference standards. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, RI 8975.

Hurley JF, Jacobsen M [1986]. Occupational hygiene implications of new results on progressive massive fibrosis in working coalminers. *Ann Am Conf Gov Ind Hyg* 14:85-89.

Hurley JF, Maclaren WM [1987]. Dust-related risks of radiological changes in coal miners over a 40-year working life: report on work commissioned by NIOSH. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/87/09.

Hurley JF, Maclaren WM [1988]. Factors influencing the occurrence of progressive massive fibrosis (PMF) in miners and ex-miners. *Ann Occup Hyg* 32(Suppl 1):575-583.

Hurley JF, Soutar CA [1986]. Can exposure to coalmine dust cause a severe impairment of lung function? *Br J Ind Med* 43:150-157.

Hurley JF, Copland L, Dodgson J, Jacobsen M [1979]. Simple pneumoconiosis and exposure to respirable dust: relationships from twenty-five years' research at ten British coalmines. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/79/13.

Hurley JF, Burns J, Copland L, Dodgson J, Jacobsen M [1982]. Coalworkers' simple pneumoconiosis and exposure to dust at 10 British coalmines. *Br J Ind Med* 39:120-127.

Hurley JF, Maclaren WM, Alexander WP, Cowie AJ, Collins HRR, Ewing A, et. al [1984]. Factors influencing the occurrence of progressive massive fibrosis in British coalminers. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/84/02.

Hurley JF, Alexander WP, Hazledine DJ, Jacobsen M, Maclaren WM [1987]. Exposure to respirable coalmine dust and incidence of progressive massive fibrosis. *Br J Ind Med* 44:661-672.

Hyatt RE, Kistin AD, Mahan TK [1964]. Respiratory disease in southern West Virginia coal miners. *Am Rev Respir Dis* 89:387-401.

ILO [1959]. Meeting of experts on the international classification of radiographs of the pneumoconioses. *Occup Health Safety* 9:63-69.

ILO [1970]. International classification of radiographs of pneumoconiosis. Revised 1968. Occupational Safety and Health Series No. 22. Geneva, Switzerland: International Labour Office.

ILO [1972]. ILO U/C international classification of radiographs of pneumoconioses 1971. Rev. ed. Occupational Safety and Health Series No. 22. Geneva, Switzerland: International Labour Office.

ILO [1980]. Guidelines for the use of ILO international classification of radiographs of pneumoconiosis. Rev. ed. Occupational Safety and Health Series No. 22. Geneva, Switzerland: International Labour Office.

Ingram RH Jr., O'Cain CF [1971]. Frequency dependence of compliance in apparently healthy smokers versus non-smokers. *Bull Physiopathol Respir* 7:195-210.

Irwig LM, Rocks P [1978]. Lung function and respiratory symptoms in silicotic and nonsilicotic gold miners. *Am Rev Respir Dis* 117:429-435.

ISO (International Organization for Standardization) [1993]. Air quality-particle size fraction definitions for health-related sampling. Geneva, Switzerland: ISO Report No. ISO 7708.

Jacobsen M [1973]. Progression of coal workers' pneumoconiosis in Britain in relation to environmental conditions underground. In: Proceedings of the Conference on Technical Measures of Dust Prevention and Suppression in Mines, Luxemburg, October 11-13, 1972. Luxemburg: Commission of the European Communities, pp. 77-93.

Jacobsen M [1976]. Dust exposure, lung diseases, and coal miners' mortality [Dissertation]. Edinburgh, Scotland: University of Edinburgh.

Jacobsen M [1979]. Effect of further dust exposure among men with early and more advanced signs of simple pneumoconiosis. Edinburgh, Scotland: Institute of Occupational Medicine, final report on CEC Contract 6244-00/8/107, Report No. TM/79/16.

Jacobsen M [1984]. Coalworkers' pneumoconiosis: results from epidemiological studies in Britain. Paper presented at the VIth International Pneumoconiosis Conference, Bochum, Germany, September 20, 1983, pp. 92-102.

Jacobsen M, Maclaren WM [1982]. Unusual pulmonary observations and exposure to coalmine dust: a case-control study. *Ann Occup Hyg* 26(1-4):753-765.

Jacobsen M, Rae S, Walton WH, Rogan JM [1970]. New dust standards for British coal mines. *Nature* 227:445-447.

Jacobsen M, Rae S, Walton WH, Rogan JM [1971]. The relation between pneumoconiosis and dust-exposure in British coal mines. In: Walton WH, ed. *Inhaled particles III*. Vol. 2. Surrey, United Kingdom: Unwin Brothers Limited, The Gresham Press, pp. 903-919.

Jacobsen M, Burns J, Attfield MD [1977]. Smoking and coalworkers' simple pneumoconiosis. Vol. 2. In: Walton WH, ed. Inhaled particles IV. Oxford, England: Pergamon Press, pp. 759-771.

Jacobson M [1970]. Assessing respirable dust in United States coal mines. In: Proceedings of the Symposium on Respirable Coal Mine Dust. Washington, DC: U.S. Department of the Interior, Bureau of Mines, IC 8458.

Jacobson M [1971]. Respirable dust in bituminous coal mines in the U.S. In: Walton WH, ed. Inhaled particles III. Vol. 2. Surrey, United Kingdom: Unwin Brothers Limited, pp. 745-755.

Jacobson M, Lamonica JA [1969]. Personal respirable dust sampler. Washington, DC: U.S. Department of the Interior, Bureau of Mines, IC 8458.

Jankowski RA, Organiscak JA [1983]. Dust sources and controls on the six U.S. longwall faces having the most difficulty complying with dust standards. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, IC 8957.

Jankowski RA, Kissell FN, Daniel JH [1986]. Longwall dust control: an overview of progress in recent years. *Mining Eng* 38(10):953-958.

Jankowski RA, Whitehead KL, Thomas DJ, Williamson AL [1989]. High-pressure inward-facing drum sprays reduce dust levels on longwall mining sections. In: Longwall USA international exhibition conference: conference papers, Pittsburgh, PA, June 19-22, 1989.

Jankowski RA, Organiscak JA, Jayaraman NI [1991]. Dust sources and controls for high tonnage longwall faces. In: Proceedings for the Annual Meeting of the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME), Salt Lake City, Utah, February 22-26, 1991.

Jankowski RA, Jayaraman NI, Potts JD [1993]. Update on ventilation for longwall mine dust control. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, IC 9366.

Jayaraman NI, Volkwein JC, Kissell FN [1990]. Update on continuous miner dust scrubber applications. *Mining Eng* 42(3):281-284.

Kaegi E, Baynton M [1981]. Respiratory disorders associated with coal mining. Edmonton, Alberta: Alberta Workers' Health, Safety and Compensation, Occupational Health and Safety Division, Medical Services Branch.

Kang JH, Van Dyke K, Pailles WH, Castranova V [1991]. Potential role of platelet-activating factor in development of occupational lung disease: action as an activator or potentiator of pulmonary phagocytes. In: Frantz RL, Ramani RV, eds. Proceedings of the 3rd Symposium on Respirable Dust in the Mineral Industries. Littleton, CO: Society for Mining, Metallurgy, and Exploration, Inc., pp. 183-190.

Kauffmann F, Drouet D, Lellouch J, Brille D [1982]. Occupational exposure and 12-year spirometric changes among Paris area workers. *Br J Ind Med* 39:221-232.

Kellie SE, Attfield MD, Hankinson JL, Castellan RM [1987]. Spirometry variability criteria—association with respiratory morbidity and mortality in a cohort of coal miners. *Am J Epidemiol* 125(3):437-444.

Kenny LC [1992]. Report of progress towards the development of a performance standard for aerosol sampling instruments used in occupational hygiene. *J Aerosol Sci* 23(7):773-779.

Kibelstis JA, Morgan EJ, Reger R, Lapp NL, Seaton A, Morgan WKC [1973]. Prevalence of bronchitis and airway obstruction in American bituminous coal miners. *Am Rev Respir Dis* 108:886-893.

Kilburn KH [1980]. Occupational chronic bronchitis. In: Last JM, ed. *Public health and preventive medicine*. New York, NY: Appleton-Century-Crofts, p. 620.

Kilburn KH [1984]. Particles causing lung disease. *Environ Health Perspect* 55:97-109.

Kilburn KH [1986]. Chronic bronchitis and emphysema. In: Merchant JA, ed. *Occupational respiratory diseases*. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 86-102.

Kim H [1989]. Characteristics of airborne coal mine dust and its implications to coal workers' pneumoconiosis [Dissertation]. Morgantown, WV: West Virginia University.

King EJ, Maguire BA, Nagelschmidt G [1956]. Further Studies of the dust in lungs of coal-miners. *Br J Ind Med* 13:9-23.

Kissell FN, Jankowski RA [1993]. Fixed-point and personal sampling of respirable dust for coal mine face workers. Chapter 42. In: *Proceedings of the 6th U.S. Mine Ventilation Symposium*, Salt Lake City, Utah. Littleton, CO: Society for Mining, Metallurgy, and Exploration, Inc.

Kleinerman J, Green F, Harley RA, Lapp NL, Laqueur W, Naeye RL, et al. [1979]. Pathology standards for coal workers' pneumoconiosis. *Arch Pathol Lab Med* 103(8):374-432.

Knight G, Kirk B [1982]. Comparison of respirable dust specifications with recent lung data. *Am Ind Hyg Assoc J* 43(8):575.

Knudson RJ, Lebowitz MD, Holberg CJ, Burrows B [1983]. Changes in the normal maximal expiratory flow-volume curve with growth and aging. *Am Rev Respir Dis* 127:725-734.

Kogut J [1994]. Letter of May 12, 1994, from Jon Kogut, Mine Safety and Health Administration, to David Bartley, Division of Physical Sciences and Engineering, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Public Health Service, U.S. Department of Health and Human Services.

- Kost JA, Saltsman RD [1977]. Evaluation of the respirable dust area sampling concept as related to the continuous miner operator. Monroeville, PA: Bituminous Coal Research, Inc., Report L-792.
- Kriegseis W, Scharmann A [1982]. Specific harmfulness of respirable dusts from West German coal mines. V. Influence of mineral surface properties. *Ann Occup Hyg* 26(1-4):511-525.
- Kriegseis W, Scharmann A [1985]. Determination of free quartz surfaces in coal mine dust. *Ann Occup Hyg* 29(1):91-99.
- Kuempel ED, Stayner LT, Attfield MD, Buncher CR [1995]. An exposure-response analysis of mortality among U.S. coal miners. *Am J Ind Med* 28(2):167-184.
- Kuhn DC, Demers LM [1991]. Eicosanoid production in the alveolar macrophage exposed to mineral dust in vitro is dependent on surface chemical characteristics of the dust. Chapter 37. In: Ramani RV, ed. *Proceedings of the 3rd Symposium on Respirable Dusts in the Mineral Industry*. Society of Mining Engineering, pp. 301-306.
- Kuhn DC, Stauffer JL, Lipton A, Leitzel K, Gaydoes L, Demers LM [1991]. Eicosanoid and cytokine production by the alveolar macrophage from the coal miner. Chapter 17. In: Ramani RV, ed. *Proceedings of the 3rd Symposium on Respirable Dusts in the Mineral Industry*. Society of Mining Engineering, pp. 131-143.
- Kusnetz S, Hutchinson MK [1979]. A guide to the work-relatedness of disease. Rev. ed. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, DHEW (NIOSH) Publication No. 79-116, NTIS No. PB-79-298-561.
- Lainhart WS [1969]. Roentgenographic evidence of coal workers' pneumoconiosis in three geographic areas in the United States. *J Occup Med* 11(8):399-408.
- Lainhart WS, Doyle HN, Enterline PE, Henschel A, Kendrick MA [1969]. *Pneumoconiosis in Appalachian bituminous coal miners*. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Consumer Protection and Environmental Health Service, Environmental Control Administration, Bureau of Occupational Safety and Health, Washington, DC: U.S. Government Printing Office.
- Lamonica JA, Treafis HN [1971]. Investigation of pulsation dampers for personal respirable dust samplers. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, RI 7636.
- Lapp NL, Castranova V [1993]. How silicosis and coal workers' pneumoconiosis develop—a cellular assessment. *Occup Med: State of the Art Rev* 8(1):35-56.
- Lapp NL, Parker JE [1992]. Coal workers' pneumoconiosis. *Clin Chest Med* 11(2):243-252.

Lapp NL, Lewis D, Schwegler-Berry D, Abrons H, Kung M, Castranova V [1991]. Bronchoalveolar lavage in asymptomatic underground coal miners. In: Ramani RV, ed. Proceedings of the 3rd Symposium on Respirable Dusts in the Mineral Industry. Society of Mining Engineering, pp. 159-169.

Larsen JW [1981]. Coal structure. In: American Institute of Physics Proceedings, pp. 1-27.

Lassalle P, Gosset P, Aerts C, Fournier E, Lafitte JJ, Degreef JM, et al. [1990]. Abnormal secretion of interleukin-1 and tumor necrosis factor alpha by alveolar macrophages in coal workers' pneumoconiosis: comparison between simple pneumoconiosis and progressive massive fibrosis. *Exp Lung Res* 16:73-80.

Last JM, ed. [1983]. A dictionary of epidemiology. New York, NY: Oxford University Press.

LeBouffant L, Daniel H, Martin JC, Bruyere S [1982]. Effect of impurities and associated minerals on quartz toxicity. *Ann Occup Hyg* 26(1-4):625-633.

LeBouffant L, Addison J, Bolton RE, Bruch J, Bruyet B, Daniel H, et al. [1988]. Compared in vitro and in vivo toxicity of coalmine dusts—relationship with mineralogical composition. *Ann Occup Hyg* 32(Suppl 1):611-620.

Lehnert BE [1990]. Alveolar macrophages in a particle "overload" condition. *J Aerosol Med* 3(Suppl 1):S9-S30.

Leidel NA, Busch KA, Lynch JR [1977]. Occupational exposure sampling strategy manual. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, DHEW (NIOSH) Publication No. 77-173.

Leidel NA, Busch KA [1994]. Statistical design and data analysis requirements. Chapter 10. In: Harris RL, Cralley LJ, Cralley LV, eds. *Patty's industrial hygiene and toxicology*, 3rd ed. Vol. 3, Part A. New York, NY: John Wiley and Sons, Inc., pp. 453-582.

Leigh J [1990]. 15 year longitudinal studies of FEV₁ loss and mucus hypersecretion development in coal workers in New South Wales, Australia. In: Proceedings of the VIIth International Pneumoconioses Conference, Part I, Pittsburgh, Pennsylvania. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108, pp. 112-121.

Leigh J, Outhred KG, McKenzie HI, Wiles AN [1982]. Multiple regression analysis of quantified aetiological, clinical and post-mortem pathological variables related to respiratory disease in coal workers. *Ann Occup Hyg* 26(1-4):383-400.

Leigh J, Outhred KG, McKenzie HI, Glick M, Wiles AN [1983]. Quantified pathology of emphysema, pneumoconiosis, and chronic bronchitis in coal workers. *Br J Ind Med* 40:258-263.

Leigh J, Wiles AN, Glick M [1986]. Total population study of factors affecting chronic bronchitis prevalence in the coal mining industry of New South Wales, Australia. *Br J Ind Med* 43:263-271.

Leigh J, Driscoll TR, Cole BD, Beck RW, Hull BP, Yang J [1994]. Quantitative relation between emphysema and lung mineral content in coalworkers. *Occup Environ Med* 51:400-407.

Levy BS, Halperin WE [1988]. Screening for occupational disease. 2nd ed. In: Levy BS, Wegman DH, eds. *Occupational health: recognizing and preventing work-related disease*. Boston, MA: Little, Brown, and Co., pp. 75-86.

Lewis FA [1983]. Health hazard evaluation report: Pennsylvania Power and Light, Martins Creek Steam Electric Station, Martins Creek, Pennsylvania. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, NIOSH Report No. HETA 81-472-1380, NTIS No. B-85-178-556/XAB.

Lewis TR, Green FHY, Moorman WJ, Burg JR, Lynch DW [1989]. A chronic inhalation toxicity study of diesel engine emissions and coal dust, alone and combined. *J Am Coll Toxicol* 8(2):345-375.

Liddell FDK [1973]. Mortality of British coal miners in 1961. *Br J Ind Med* 30:15-24.

Liden G, Kenny LC [1991]. Comparison of measured respirable dust sampler penetration curves with sampling conventions. *Ann Occup Hyg* 35(5):485-504.

Liden G, Kenny LC [1993]. Optimization of the performance of existing respirable dust samplers. *Appl Occup Environ Hyg* 8(4):386-391.

Lieben J, Pendergrass E, McBride WW [1961]. Pneumoconiosis study in central Pennsylvania coal miners. I. Medical phase. *J Occup Health* 3:493-506.

Linch AL, Pfaff HV [1971]. Carbon monoxide—evaluation of exposure potential by personnel monitor surveys. *Am Ind Hyg Assoc J* 32:745-752.

Linch AL, Wiest EG, Carter MD [1970]. Evaluation of tetraalkyl lead exposure by personnel monitor surveys. *Am Ind Hyg Assoc J* 31:170-179.

Linch KD [1994]. Environmental surveillance of small coal mines. Unpublished manuscript presented at the Small Mines Summit, Beckley, WV, April 9, 1994. Morgantown, WV: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

Lioy PJ, Lippmann M, Phalen RF [1984]. Rationale for particle size-selective air sampling. In: *Particle size-selective sampling in the workplace: report of the ACGIH Technical Committee on Air Sampling Procedures*. *Ann Am Conf Ind Hyg* 11:27-34.

Lippmann M [1985]. Development of particle size-selective threshold limit values. *Ann Am Conf Ind Hyg* 12:27-34.

Lippmann M, Harris WB [1962]. Size-selective sampler for estimating respirable dust concentrations. *Health Phys* 8:155-163.

Lippmann M, Albert RE [1969]. The effect of particle size on the regional deposition of inhaled aerosols in the human respiratory tract. *Am Ind Hyg Assoc J* 30:257-275.

Liu BYH, Pui DYH, Rubow KL, Szymanski WW [1985]. Electrostatic effects in aerosol sampling and filtration. *Ann Occup Hyg* 29(2):251-269.

Llewellyn RL, Washburn HL, Halvorsen WJ [1981]. Coal preparation. Chapter 18. 2nd ed. In: Crickmer DF, Zegeer DA, eds. *Elements of practical coal mining*. Baltimore, MD: Port City Press, Inc., pp. 569-602.

Lorberau C [1990]. Memorandum of April 30, 1990, from C. Lorberau, Division of Physical Sciences and Engineering, to Henry S. Chan, Division of Standards Development and Technology Transfer, National Institute for Occupational Safety and Health, Centers for Disease Control, Public Health Service, U.S. Department of Health and Human Services.

Love RG, Miller BG [1982]. Longitudinal study of lung function in coal-miners. *Thorax* 37:193-197.

Love RG, Miller BG, Beattie J, Cowie HA, Groat S, Hagen S, et al. [1992]. A cross-sectional epidemiological study of the respiratory health and exposure to airborne dust and quartz of current workers in opencast coalmines. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/92/03.

Maclaren WM, Soutar CA [1985]. Progressive massive fibrosis and simple pneumoconiosis in ex-miners. *Br J Ind Med* 42:734-740.

Maclaren WM, Hurley JF, Collins HPR, Cowie AJ [1989]. Factors associated with the development of progressive massive fibrosis in British coalminers: a case-control study. *Br J Ind Med* 46:597-607.

Marine WM, Gurr D, Jacobsen M [1988]. Clinically important respiratory effects of dust exposure and smoking in British coal miners. *Am Rev Respir Dis* 137:106-112.

Mark D [1990]. The use of dust-collecting cassettes in dust samplers. *Ann Occup Hyg* 34(3):281-291.

Mark D, Cowie H, Vincent JH, Gibson H, Lynch G, Garland R, et al. [1988]. The variability of exposure of coalminers to inspirable dust. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/88/02.

- Matalo NM, Melville RK, Gorishek WM, Dixon JA [1972]. High incidence of gastric carcinoma in a coal mining region. *Cancer* 3(29):733-737.
- Matte TD, Fine L, Meinhardt TJ, Baker EL [1990]. Guidelines for medical screening in the workplace. *Occup Med: State of the Art Rev* 5(3):439-456.
- Mauderly JL, Cheng YS, Snipes MB [1990]. Particle overload in toxicological studies: friend or foe? *J Aerosol Med* 3(Suppl 1):S169-S187.
- Maynard AD [1993]. Respirable dust sampler characterisation: efficiency curve reproducibility. *J Aerosol Sci* 24(Suppl 1):S457-S458.
- McAteer JD [1981]. *Miner's Manual*. Washington, DC: Crossroad Press.
- McBride WW, Pendergrass E, Lieben J [1963]. Pneumoconiosis study of western Pennsylvania bituminous-coal miners. *J Occup Med* 5(8):376-388.
- McBride WW, Pendergrass EG, Lieben J [1966]. Pneumoconiosis study of Pennsylvania anthracite miners. *J Occup Med* 8(7):365-376.
- McCarthy DS, Craig DB, Cherniack RM [1976]. Effect of modification of the smoking habit on lung function. *Am Rev Resp Dis* 114:103-113.
- McClelland JJ, Jankowski RA [1987]. Investigation of dust sources and control technology for longwall plow operations. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, IC 9173.
- McClelland JJ, Organiscak JA, Jankowski RA, Pothini BR [1987]. Water infusion for coal mine dust control: three case studies. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, RI 9096.
- McKay RT, Lockey JE [1991]. Pulmonary function testing: guidelines for medical surveillance and epidemiological studies. *Occup Med: State of the Art Rev* 6(1):43-57.
- McLintock JS, Rae S, Jacobsen M [1971]. The attack rate of progressive massive fibrosis in British coalminers. In: Walton WH, ed. *Inhaled particles III*. Vol. II. Surrey, United Kingdom: Unwin Brothers Limited, The Gresham Press, pp. 933-950.
- Meijers JMM, Swaen GMH, Slangen JJM, Vliet KV, Sturmans F [1991]. Long-term mortality in miners with coal workers' pneumoconiosis in the Netherlands: a pilot study. *Am J Ind Med* 19:43-50.
- Meiklejohn A [1951]. History of lung diseases of coal miners in Great Britain: Part I, 1800-1875. *Br J Ind Med* 8:127-137.

Meiklejohn A [1952a]. History of lung diseases of coal miners in Great Britain: Part II, 1875-1920. *Br J Ind Med* 9:93-98.

Meiklejohn A [1952b]. History of lung diseases of coal miners in Great Britain: Part III, 1920-1952. *Br J Ind Med* 9:208-220.

Melandri C, Prodi V, Tarroni G, Formigani M, DeZaiacomo T, Bompane GF [1977]. On the deposition of unipolarly charged particles in the human respiratory tract. In: Walton WH, ed. *Inhaled particles IV*. Oxford, England: Pergamon Press, pp. 193-201.

Mercer TT [1973]. *Aerosol technology in hazard evaluation*. New York, NY: Academic Press, Inc.

Merchant, JA, Taylor G, Hodous TK [1986]. Coal workers' pneumoconiosis and exposure to other carbonaceous dusts. In: Merchant JA, ed. *Occupational respiratory diseases*. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 86-102.

Mermelstein R, Kilpper RW [1990]. Xerox exposure limit for respirable dust (N.O.S.). Paper presented at the American Industrial Hygiene Conference, Orlando, Florida, May 13-18, 1990.

Meyer MB, Luk GD, Sotelo JM, Cohen BH, Menkes HA [1980]. Hypothesis: the role of the lung in stomach carcinogenesis. *Am Rev Respir Dis* 121:887-892.

Miller BG, Jacobsen M [1985]. Dust exposure, pneumoconiosis, and mortality of coalminers. *Br J Ind Med* 42:723-733.

Miller FJ, Martonen TB, Menache MG, Graham RC, Spektor DM, Lippmann M [1988]. Influence of breathing mode and activity level on the regional deposition of inhaled particles and implications for regulatory standards. *Ann Occup Hyg* 32(Suppl 1):3-10.

Miller WF, Scacci R [1981]. Pulmonary function assessment for determination of pulmonary impairment and disability evaluation. *Clin Chest Med* 2(3):327-341.

Morfeld P, Vaultrin HJ, Kampmann B, Piekarski C [1992]. Modelling the effect of different time variables on the risk of developing coalworkers' pneumoconiosis. In: *Proceedings of the 9th International Symposium on Epidemiology in Occupational Health*. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 94-112.

Morgan RH [1979]. Proficiency examination of physicians for classifying pneumoconiosis chest films. *Am J Radiol* 132:803-808.

- Morgan WKC [1968]. The prevalence of coal workers' pneumoconiosis. *Am Rev Respir Dis* 98:306-310.
- Morgan WKC [1975]. Coal workers' pneumoconiosis. Chapter 10. In: Morgan WKC, Seaton A, eds. *Occupational lung diseases*. Philadelphia, PA: W.B. Saunders Company, pp. 149-215.
- Morgan WKC [1978]. Industrial bronchitis. *Br J Ind Med* 35:285-291.
- Morgan WKC [1980]. Respiratory disability in coal miners [letters]. *JAMA* 244(19):2158-2159.
- Morgan WKC [1983]. Coal and the lung [letters]. *Thorax* 38:878.
- Morgan WKC [1986]. On dust, disability, and death. *Am Rev Respir Dis* 134:639-641.
- Morgan WKC, Lapp NL [1976]. Respiratory disease in coal miners. *Am Rev Respir Dis* 113:531-559.
- Morgan WKC, Burgess DB, Lapp NL, Seaton A [1971]. Hyperinflation of the lungs in coal miners. *Thorax* 26(5):585-590.
- Morgan WKC, Burgess DB, Jacobson G, O'Brien RJ, Pendergrass EP, Reger RB [1973a]. The prevalence of coal workers' pneumoconiosis in U.S. coal miners. *Arch Environ Health* 27:221-226.
- Morgan WKC, Reger R, Burgess DB, Shoub E [1973b]. A comparison of the prevalence of coal workers' pneumoconiosis and respiratory impairment in Pennsylvania bituminous and anthracite miners. *Ann N Y Acad Sci* 200:252-259.
- Morgan WKC, Handelsman L, Kibelstis J, Lapp NL, Reger R [1974]. Ventilatory capacity and lung volumes of U.S. coal miners. *Arch Environ Health* 28:182-189.
- Morrow PE [1988]. Possible mechanisms to explain dust overloading of the lungs. *Fundam Appl Toxicol* 10:369-384.
- Morrow PE [1992]. Dust overloading of the lungs: update and appraisal. *Toxicol Appl Pharmacol* 113:1-12.
- Morrow PE, Yuile CL [1982]. The disposition of coal dusts in the lungs and tracheobronchial lymph nodes of dogs. *Fundam Appl Toxicol* 2:300-305.
- Morrow PE, Gibb FR, Gazioglu KM [1967]. A study of particulate clearance from the human lungs. *Am Rev Respir Dis* 96(6):1209-1221.
- Morrow PE, Muhle H, Mermelstein R [1991]. Chronic inhalation study findings as a basis for proposing a new occupational dust exposure limit. *J Am Coll Toxicol* 10(2):279-290.

MSHA [1989a]. Coal mine health inspector procedures. Arlington, VA: U.S. Department of Labor, Mine Safety and Health Administration, MSHA Handbook Series No. 89-VI.

MSHA [1989b]. Infrared determination of quartz in respirable coal mine dust. Pittsburgh, PA: U.S. Department of Labor, Mine Safety and Health Administration.

MSHA [1991]. Injury experience in coal mining, 1990. Washington, DC: U.S. Department of Labor, Mine Safety and Health Administration, IR 1205.

MSHA [1992a]. Calibration and maintenance procedures for coal mine respirable dust samplers. Washington, DC: U.S. Department of Labor, Mine Safety and Health Administration, IR 1121 (Rev.).

MSHA [1992b]. Review of the program to control respirable coal mine dust in the United States. Washington, DC: U.S. Department of Labor, Mine Safety and Health Administration.

MSHA [1993]. Mine injuries and worktime, quarterly. Closeout edition 1992. Washington, DC: U.S. Department of Labor, Mine Safety and Health Administration.

MSHA [1994]. Small mine summit report. Washington, DC: U.S. Department of Labor, Mine Safety and Health Administration, May 1994.

Muhle H, Bellmann B, Creutzenberg O, Heinrich U, Ketkar M, Mermelstein R [1990a]. Dust overloading of lungs after exposure of rats to particles of low solubility: comparative studies. *J Aerosol Sci* 21(3):374-377.

Muhle H, Creutzenberg O, Bellmann B, Heinrich U, Mermelstein R [1990b]. Dust overloading of lungs: investigations of various materials, species differences, and irreversibility of effects. *J Aerosol Med* 3(Suppl 1):S111- S128.

Muhle H, Bellmann B, Creutzenberg O, Fuhst R, Koch W, Mohr U, et al. [1990c]. Subchronic inhalation study of toner in rats. *Inhalation Toxicol* 2:341-360.

Muhle H, Bellmann B, Creutzenberg O, Dasenbrock C, Ernst H, Kilpper R, et al. [1991]. Pulmonary response to toner upon chronic inhalation exposure in rats. *Fundam Appl Toxicol* 17:280-299.

Muir DCF, Burns J, Jacobsen M, Walton WH [1977]. Pneumoconiosis and chronic bronchitis. *Br Med J* 2:424-427.

Mundell RL, Jankowski RA, Ondrey RS, Tomb TF [1984]. Respirable dust control on longwall mining operations in the United States. Washington, D.C.: U.S. Department of Labor, Mine Safety and Health Administration, Report No. IR 1151.

- Mutmansky JM, Lee C [1984]. An analysis of coal and geologic variables related to coal workers' pneumoconiosis. In: Proceedings of the Lakeview Conference, October 8, 1984, Lakeview, WV: Center for Generic Respirable Disease Studies.
- Mutmansky JM, Lee C [1987]. Statistical analysis of the size and elemental composition of airborne coal mine dust. Washington, DC: U.S. Department of the Interior, Bureau of Mines, Interim Report.
- Naeye RL, Dellinger WS [1972]. Coal workers' pneumoconiosis: correlation of roentgenographic and postmortem findings. *JAMA* 220(2):223-227.
- Nagelschmidt G [1965]. The study of lung dust in pneumoconiosis. *Am Ind Hyg Assoc J* 26:1-7.
- Nemery B, Brasseur L, Veriter C, Frans A [1987]. Impairment of ventilatory function and pulmonary gas exchange in non-smoking coalminers. *The Lancet* 2:1427-1429.
- Niewiadomski GE, Jankowski RA, Kissell FN [1982]. Ten ways to reduce longwall dust. *Am Mining Congr* 68(8):46-49.
- Niewiadomski G, Tomb T, Parobeck P [1990]. Monitoring and controlling quartz dust exposure in U.S. coal mines: current MSHA program and experience. In: Proceedings of the VIIIth International Pneumoconioses Conference, Part I, Pittsburgh, Pennsylvania. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108, pp. 81-84.
- NIOSH [1974]. NIOSH criteria for a recommended standard: occupational exposure to crystalline silica. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, DHEW (NIOSH) Publication No. 75-120.
- NIOSH [1986]. NIOSH criteria for a recommended standard: occupational exposure to hot environments. Revised criteria 1986. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 86-113.
- NIOSH [1987a]. NIOSH guide to industrial respiratory protection. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 87-116.
- NIOSH [1987b]. NIOSH respirator decision logic. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 87-108.
- NIOSH [1988a]. Current Intelligence Bulletin 50: carcinogenic effects of exposure to diesel exhaust. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service,

Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 88-116.

NIOSH [1988b]. NIOSH testimony on the Occupational Safety and Health Administration's proposed rule on air contaminants, August 1, 1988, Docket No. H-020. NIOSH policy statements. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health.

NIOSH [1991a]. Current Intelligence Bulletin 54: environmental tobacco smoke in the workplace, lung cancer and other health effects. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 91-108.

NIOSH [1991b]. NIOSH criteria for a recommended standard: occupational exposure to ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, and their acetates. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 91-119.

NIOSH [1992]. NIOSH Alert: request for assistance in preventing silicosis and deaths in rock drillers. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 92-107.

NIOSH [1994a]. Documentation for immediately dangerous to life or health concentrations (IDLHS). Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

NIOSH [1994b]. NIOSH manual of analytical methods. 3rd rev. ed. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 94-113.

NIOSH [1994c]. NIOSH comments on the Mine Safety and Health Administration's notice on coal mine respirable dust standard noncompliance determinations, May 20, 1994, NIOSH policy statements. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

NIOSH [1994d]. NIOSH comments on the Nuclear Regulatory Commission proposed rule on frequency of medical examinations for use on respiratory equipment, November 18, 1994, 10 CFR 20. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

- Niven RM, Fishwick D, Pickering CAC, Fletcher AM, Warburton CJ, Crank P [1992]. A study of the performance and comparability of the sampling response to cotton dust of work area and personal sampling techniques. *Ann Occup Hyg* 36(4):349-362.
- Olishifski JB [1971]. General methods of control. In: Olishifski JB, McElroy FE, eds. *Fundamentals of industrial hygiene*. Chicago, IL: National Safety Council, pp. 439-480.
- Olson RC, Roepke WW [1984]. Respirable dust sources of longwall mining examined. *Mining Eng* 36(8):1158-1163.
- Ong T, Whong WZ, Ames RG [1983]. Gastric cancer in coal miners: an hypothesis of coal mine dust causation. *Med Hypotheses* 12:159-165.
- Orenstein AJ, ed. [1960]. *Proceedings of the pneumoconiosis conference, University of Witwatersrand, Johannesburg. February 9-24, 1959.* South African Council for Scientific and Industrial Research, Boston, MA: Little, Brown and Company p. 619.
- Organiscak JA, Listak JM, Jankowski RA [1985]. Factors affecting respirable dust generation from longwall roof supports. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines. IC 9019, NTIS No. PB-85-236-453.
- Organiscak JA, Jankowski RA, Kelly JS [1986]. Dust control to improve quality of longwall intake air. Pittsburgh, PA: U.S. Department of the Interior, Bureau of Mines, IC 9114.
- Organiscak JA, Page SJ, Jankowski RA [1992]. Relationship of coal seam parameters and airborne respirable dust at longwalls. Pittsburgh, PA: U.S. Department of Interior, Bureau of Mines, RI 9425.
- Ortmeyer CE, Baier EJ, Crawford GM Jr. [1973]. Life expectancy of Pennsylvania coal miners compensated for disability. *Arch Environ Health* 27:227-230.
- Ortmeyer CE, Costello J, Morgan WKC, Swecker S, Petersen M [1974]. The mortality of Appalachian coal miners, 1963-1971. *Arch Environ Health* 29:67-72.
- Parker JE [1994]. Silicosis. In: Rakel RE, ed. *Conn's current therapy*. Philadelphia, PA: W.B. Saunders, pp. 207-210.
- Parkes RW [1982]. Pneumoconiosis due to coal and carbon. 2nd ed. In: *Occupational lung disorders*. London, England: Butterworths, pp. 175-232.
- Parobeck P, Tomb TF, Ku H, Cameron J [1981]. Measurement assurance program for the weighings of respirable coal mine dust samples. *J Qual Tech* 13(3):157-165.
- Peto R, Speizer FE, Cochrane AL, Moore F, Fletcher CM, Tinker CM, et al. [1983]. The relevance in adults of air-flow obstruction, but not of mucus hypersecretion, to mortality from chronic lung disease. *Am Rev Respir Dis* 128:491-500.

Petsonk EL, Attfield MD [1994]. Coal workers' pneumoconiosis and other coal-related lung disease. In: Rosenstock L, Cullen MR, eds. Textbook of clinical occupational and environmental medicine. Philadelphia, PA: W.B. Saunders Company.

Phalen RF [1984]. Airway anatomy and physiology, Chapter 3. In: Particle size-selective sampling in the workplace. Report of the ACGIH Technical Committee on Air Sampling Procedures. *Ann Am Conf Ind Hyg* 11:35-46.

Phalen RF, Hinds WC, John W, Liroy PJ, Lippmann M, McCawley MA, et al. [1986]. Rationale and recommendations for particle size-selective sampling in the workplace. *Appl Ind Hyg* 1(1):3-14.

Phalen RF, Hinds WC, John W, Liroy PJ, Lippmann M, McCawley MA, et al. [1988]. Particle size-selective sampling in the workplace: rationale and recommended techniques. *Ann Occup Hyg* 32(Suppl 1):403-411.

Philipson K, Falk R, Camner P [1985]. Long-term lung clearance in humans studied with teflon particles labeled with chromium-51. *Exp Lung Res* 9:31-42.

Piacitelli GM, Amandus HE, Dieffenbach A [1990]. Respirable dust exposures in U.S. surface coal mines (1982-1986). *Arch Environ Health* 45(4):202-209.

Porterfield CW, Phelps ER [1981]. Modern mining methods—surface. In: Crickmer DF, Zegeer DA, eds. Elements of practical coal mining. 2nd ed., Chapter 17. New York, NY: Society of Mining Engineers.

Potts JD, McCawley MA, Jankowski RA [1990]. Thoracic dust exposures on longwall and continuous mining sections. *Appl Occup Environ Hyg* 5(7):440-447.

Prinz B, Stolz R, Ruhrkohle AG, Essen FRG [1990]. Effect of the measuring strategy on the determination of respirable dust concentration in the breathable air at underground workplaces. In: Proceedings of the VIIth International Pneumoconiosis Conference, August 23-26, 1988, Pittsburgh, PA. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108.

Pritchard JN [1989]. Dust overloading—a case for lowering the TLV of nuisance dusts? *J Aerosol Sci* 20(8):1341-1344.

Puskar MA, Harkins JM, Moomey JD, Hecker LH [1991]. Internal wall losses of pharmaceutical dusts during closed-face, 37-mm polystyrene cassette sampling. *Am Ind Hyg Assoc J* 52:280-286.

Rae S, Walker DD, Attfield MD [1971]. Chronic bronchitis and dust exposure in British coalminers. In: Walton WH, ed. Inhaled particles III. Vol. II. Old Woking, Surrey, England: Unwin Brothers, Limited, pp. 883-896.

Rasmussen DL, Laquer WA, Futterman P, Warren HD, Nelson CW [1968]. Pulmonary impairment in Southern West Virginia coal miners. *Am Rev Respir Dis* 98:658-667.

Reisner MTR [1971]. Results of epidemiological studies of pneumoconiosis in West German coal mines. In: Walton WH, ed. *Inhaled particles III*. Vol. II. Old Woking, Surrey, England: Unwin Brothers Limited, pp. 921-929.

Rice WS [1987]. Face automation impact on the workforce. Paper presented at the Coal Convention '87, Cincinnati, OH, May 3-6, 1987. American Mining Congress.

Robertson A, Hurley JF, Brown PW, Collins HPR, Dodgson J, Maclaren WM [1987]. A case-control study of reasons for unusual radiological changes of pneumoconiosis among individual mine workers. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/87/11.

Rockette HE [1977]. Cause specific mortality of coal miners. *J Occup Med* 19(12):795-801.

Roepke WW, Strebig KC [1989]. Linear cutting concept improves health and safety for miners. Paper presented at the 40th Annual Earthmoving Industry Conference, Peoria, Illinois, April 11-13, 1989. Warrendale, PA: Society for Automotive Engineers, Inc., SAE Technical Papers Series Report No. 890978.

Rogan JM, Attfield MD, Jacobsen M, Rae S, Walker DD, Walton WH [1973]. Role of dust in the working environment in development of chronic bronchitis in British coal miners. *Br J Ind Med* 30:217-226.

Rom WN [1991]. Relationship of inflammatory cell cytokines to disease severity in individuals with occupational inorganic dust exposure. *Am J Ind Med* 19:15-27.

Rom WN, Kanner RE, Renzetti AD, Shigeoka JW, Barkman HW, Nichols M et al. [1981]. Respiratory disease in Utah coal miners. *Am Rev Respir Dis* 123:372-377.

Rooke GB, Ward FG, Dempsey AN, Dowler JB, Whitaker CJ [1979]. Carcinoma of the lung in Lancashire coalminers. *Thorax* 34:229-233.

Rossiter CE [1972a]. Relation between content and composition of coalworkers' lungs and radiological appearances. *Br J Ind Med* 29:31-44.

Rossiter CE [1972b]. Relation of lung dust content to radiological changes in coal workers. *Ann N Y Acad Sci* 200:465-477.

Ruckley VA, Fernie JM, Chapman JS, Collings P, Davis JMG, Douglas AN, et al. [1984]. Comparison of radiographic appearances with associated pathology and lung dust content in a group of coalworkers. *Br J Ind Med* 41:459-467.

Ryder R, Lyons JP, Campbell H, Gough J [1970]. Emphysema in coal workers' pneumoconiosis. *Br Med J* 3:481-487.

Samet JM [1989]. Definitions and methodology in COPD research. In: Hensley M, Saunders N, eds. *Clinical epidemiology of chronic obstructive lung disease*. New York, NY: MerceL Decker, Inc., pp. 1-22.

Schlick DP, Fannick NL [1971]. Coal in the United States. In: Key MM, Kerr LE, Bundy M, eds. *Pulmonary reactions to coal dust*. New York, NY: Academic Press.

Schlick DP, Peluso RG [1970]. Respirable dust sampling requirements under the Federal Coal Mine Health and Safety Act of 1969. Washington, DC: U.S. Department of the Interior, Bureau of Mines, IC 8484.

Schraufnagel DE, Claypool WC, Fahey PJ, Jacobs ER, Rubin DB, Snider GL [1987]. Interstitial pulmonary fibrosis. *Am Rev Respir Dis* 136:1281-1284.

Seaton A [1983]. Coal and the lung. *Thorax* 38:241-243.

Seaton A, Lapp NL, Morgan WKC [1972]. Relationship of pulmonary impairment in simple coal workers' pneumoconiosis to type of radiographic opacity. *Br J Ind Med* 29:50-55.

Seaton A, Dick JA, Dodgson J, Jacobsen M [1981]. Quartz and pneumoconiosis in coalminers. *Lancet*, December 5, 1981, pp. 1272-1275.

Seixas NS, Robins TG, Rice CH, Moulton LH [1990]. Assessment of potential biases in the application of MSHA respirable coal mine dust data to an epidemiologic study. *Am Ind Hyg Assoc J* 51(10):534-540.

Seixas NS, Robins TG, Attfield MD, Moulton LH [1992]. Exposure-response relationships for coal mine dust and obstructive lung disease following enactment of the Federal Coal Mine Health and Safety Act of 1969. *Am J Ind Med* 21:715-734.

Seixas NS, Robins TG, Attfield MD, Moulton LH [1993]. Longitudinal and cross sectional analyses of exposure to coal mine dust and pulmonary function in new miners. *Br J Ind Med* 50:929-937.

Shennan DH, Washington JS, Thomas DJ, Dick JA, Kaplan YS, Bennett JG [1981]. Factors predisposing to the development of progressive massive fibrosis in coal miners. *Br J Ind Med* 38:321-326.

Silicosis and Silicate Disease Committee [1988]. Diseases associated with exposure to silica and nonfibrous silicate minerals. *Arch Pathol Lab Med* 112:673-720.

Silverstein MA [1990]. Medical screening, surveillance, and the prevention of occupational disease. *J Occup Med* 32(10):1032-1036.

- Simon JA, Hopkins ME [1981]. Geology of coal. In: Crickmer DF, Zegeer DA, eds. Elements of practical coal mining. 2nd ed. New York, NY: The American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc., pp. 14-42.
- Skelly R, Loy L [1979]. Illustrated surface mining methods. New York, NY: McGraw-Hill, Inc., pp. 1-87.
- Snider GL [1989]. Chronic obstructive pulmonary disease: a definition and implications of structural determinants of airflow obstruction for epidemiology. *Am Rev Respir Dis* 140:S3-S8.
- Soderholm SC [1981]. Compartmental analysis of diesel particle kinetics in the respiratory system of exposed animals. In: EPA 1981 diesel emissions symposium: registration and abstract book. Research Triangle Park, NC: U.S. Environmental Protection Agency.
- Soderholm SC [1989]. Proposed international conventions for particle size-selective sampling. *Ann Occup Hyg* 33(3):301-320.
- Soderholm SC [1991a]. Why change ACGIH's definition of respirable dust? *Appl Occup Environ Hyg* 6(4):248-250.
- Soderholm SC [1991b]. Correction. *Ann Occup Hyg* 35(3):357-358.
- Soderholm SC, McCawley MA [1990]. Should dust samplers mimic human lung deposition? *Appl Occup Environ Hyg* 5(12):829-835.
- Soutar CA [1987]. Update on lung disease in coalminers (editorial). *Br J Ind Med* 44:145-148.
- Soutar CA, Hurley JF [1986]. Relationship between dust exposure and lung function in miners and ex-miners. *Br J Ind Med* 43:307-320.
- Soutar CA, Maclaren WM, Annis R, Melville AWT [1986]. Quantitative relations between exposure to respirable coalmine dust and coalworkers' simple pneumoconiosis in men who have worked as miners but have left the coal industry. *Br J Ind Med* 43:29-36.
- Soutar CA, Campbell SJ, Gurr DC, Lloyd MH, Love RG, Cowie HA, et al. [1988]. Cross sectional studies of respiratory disease in British coalminers. Final report. Edinburgh, Scotland: Institute of Occupational Medicine, Report No. TM/88/06.
- Soutar C, Campbell S, Gurr D, Lloyd M, Love R, Cowie H, et al. [1993]. Important deficits of lung function in three modern colliery populations. *Am Rev Respir Dis* 147:797-803.
- Stahlhofen W, Gebhart J, Heyder J, Philipson K, Camner P [1981]. Intercomparison of regional deposition of aerosol particles in the human respiratory tract and their long-term elimination. *Exp Lung Res* 2:131-139.

Stahlhofen W, Rudolf G, James AC [1989]. Intercomparison of experimental regional aerosol deposition data. *J Aerosol Med* 2(3):285-308.

Stamm SC, Zhong B-Z, Whong W-Z, Ong T [1994]. Mutagenicity of coal-dust and smokeless-tobacco extracts in salmonella typhimurium strains with differing levels of O-acetyltransferase activities. *Mutat Res* 321:253-264.

Stefanko R [1983]. *Coal mining technology: theory and practice*. Kingsport, TN: Kingsport Press, pp. 40-44, 285-338.

Stewart A [1948]. Pneumoconiosis of coal-miners: a study of the disease after exposure to dust has ceased. *Br J Ind Med* 5:120-140.

Stobbe TJ, Hyunwook K, Plummer RW [1990]. Mineral content variability of coal mine dust by coal seam, sampling location, and particle size. Part I. In: *Proceedings of the VIIth International Pneumoconiosis Conference, August 23-26, 1988, Pittsburgh, PA*. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108.

Stober W, Morrow PE, Morawietz G, Koch W, Hoover MD [1990]. Developments in modeling alveolar retention of inhaled insoluble particles in rats. *J Aerosol Med* 3(Suppl 1):S129-S154.

Stocks P [1962]. On the death rates from cancer of the stomach and respiratory diseases in 1949-1953 among coal miners and other male residents in counties of England and Wales. *Br J Cancer* 16:592-598.

Stopford W, Bundy SD, Goldwater LJ, Bittikofer JA [1978]. Microenvironmental exposure to mercury vapor. *Am Ind Hyg Assoc J* 39:378-384.

Strachan DP [1992]. Ventilatory function, height, and mortality among lifelong non-smokers. *J Epidemiol Commun Health* 46:66-70.

Strom KA, Chan TL, Johnson JT [1988]. Pulmonary retention of inhaled submicron particles in rats: diesel exhaust exposures and lung retention model. *Ann Occup Hyg* 32(Suppl 1):645-657.

Strom KA, Johnson JT, Chan TL [1989]. Retention and clearance of inhaled submicron carbon black particles. *J Toxicol Environ Health* 26:183-202.

Stuart BO, Liroy PJ, Phalen RF [1984]. Use of size-selection in establishing TLVs. In: *Particle size-selective sampling in the workplace: report of the ACGIH Technical Committee on Air Sampling Procedures*. *Ann Am Conf Ind Hyg* 11:85-96.

Stuart BO, Liroy PJ, Phalen RF [1986]. Particle size-selective sampling in establishing threshold limit values. *Appl Ind Hyg* 1:138-144.

- Suratt PM, Winn WC Jr., Brody AR, Bolton WK, Giles RD [1977]. Acute silicosis in tombstone sandblasters. *Am Rev Respir Dis* 115:521-529.
- Takemura T, Rom WN, Ferrans VJ, Crystal RG [1989]. Morphologic characterization of alveolar macrophages from subjects with occupational exposure to inorganic particles. *Am Rev Respir Dis* 140:1674-1685.
- Task Group on Lung Dynamics [1966]. Deposition and retention models for internal dosimetry of the human respiratory tract. *Health Phys* 12:173-207.
- Tecelescu D [1990]. Definitions claires des bronchopneumopathies chroniques: un impératif pour la pratique pneumologique, l'enseignement et la recherche. *Rev Pneumol Clin* 40:194-199.
- Thurlbeck WM [1976]. Chronic airflow obstruction in lung disease. Vol. 5. In: Bennington JL, ed. Major problems in pathology. Philadelphia, PA: W.B. Saunders Co.
- Tokuhata GK, Dessauer P, Pendergrass EP, Hartman T, Digon E, Miller W [1970]. Pneumoconiosis among anthracite coal miners in Pennsylvania. *Am J Public Health* 60:441-451.
- Tomb TF [1990]. Measurement strategies in U.S. underground coal mines. In: Proceedings of the VIIth International Pneumoconiosis Conference, August 23-26, 1988, Pittsburgh, PA. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108.
- Tomb TF, Ondrey RS [1976]. Determining the feasibility of area sampling to enforce the respirable dust standard in underground coal mines. Pittsburgh, PA: Pittsburgh Technical Support Center, Mining Enforcement and Safety Administration, IR 1037.
- Tomb TF, Treaftis HN, Mundell RL, Parobeck PS [1973]. Comparison of respirable dust concentrations measured with MRE and modified personal gravimetric sampling equipment. Washington, DC: U.S. Department of the Interior, Bureau of Mines, RI 7772.
- Tomb TF, Ondrey RS, Stoltz RT, Haney RA, Novakowski DLC, Atchison DJ, et al. [1990]. Evaluation of respirable dust control on longwall mining operations. Paper presented at the SME Annual Meeting, Salt Lake City, Utah, February 26-March 1. Society for Mining, Metallurgy, and Exploration, Inc.
- Tucker JD, Ong T [1985]. Induction of sister chromatid exchanges by coal dust and tobacco snuff extracts in human peripheral lymphocytes. *Environ Mutagen* 7:313-324.
- Tucker JD, Whong W-Z, Xu J, Ong T-M [1984]. Genotoxic activity of nitrosated coal dust extract in mammalian systems. *Environ Res* 35:171-179.
- Turner S, Cohen BS [1984]. Effects of electrostatic charge on aerosol collection with polystyrene filter cassettes. *Am Ind Hyg Assoc J* 45:745-748.

Ulmer WT, Reichel G [1972]. Functional impairment in coal workers' pneumoconiosis. *Ann N Y Acad Sci* 200:405-412.

USC. United States Code. Washington, DC: U.S. Government Printing Office.

U.S. Supreme Court [1980]. Industrial Union Department, AFL-CIO v. American Petroleum Institute et al., Case Nos. 78-911, 78-1036. *Supreme Court Reporter* 100:2844-2905.

Vallyathan V, Green FHY, Rodman NF, Boyd CB, Althouse R [1985]. Lung carcinoma by histologic type in coal miners. *Arch Pathol Lab Med* 109:419-423.

Vallyathan V, Shi X, Dalal NS, Irr W, Castranova V [1988]. Generation of free radicals from freshly fractured silica dust. *Am Rev Respir Dis* 138:1213-1219.

Vaughan NP, Chalmers CP, Botham RA [1990]. Field comparison of personal samplers for inhalable dust. *Ann Occup Hyg* 34(7):553-573.

Vautrin HJ, Morfeld P, Kampmann B [1990]. Prevalences, incidence densities and cumulative incidences of pneumoconiotic changes for two groups of miners of a mine in Western German Coal Mining. In: *Proceedings of the VIIth International Pneumoconioses Conference, August 23-26, 1988, Pittsburgh, PA.* Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS(NIOSH) Publication No. 90-108.

Vilcek J, Palombella VJ, Henriksen-DeStefano D, Swenson C, Feinman R, Hirai M, et al. [1986]. Fibroblast growth enhancing activity of tumor necrosis factor and its relationship to other polypeptide growth factors. *J Exp Med* 163:632-643.

Vincent JH [1994]. Measurement of coarse aerosols in workplaces: a review. *Analyst* 119:13-18.

Vincent JH, Johnston AM, Jones AD, Bolton RE, Addison J [1985]. Kinetics of deposition and clearance of inhaled mineral dusts during chronic exposure. *Br J Ind Med* 42:707-715.

Vincent JH, Jones AD, Johnston AM, McMillan C, Bolton RE, Cowie H [1987]. Accumulation of inhaled mineral dust in the lung and associated lymph nodes: implications for exposure and dose in occupational lung disease. *Ann Occup Hyg* 31(3):375-393.

Volkwein JC, Covelli A, Thimons ED [1979]. Dust protection afforded by enclosed cabs on surface and underground mine machinery. U.S. Department of the Interior, Bureau of Mines Metal and Nonmetal Health and Safety Program, Technical Progress Report 109.

Vostal JJ, Schreck RM, Lee PS, Chan TL, Soderholm SC [1982]. Deposition and clearance of diesel particles from the lung. In: Lewtas S, ed. *Toxicological effects of emissions from diesel engines.* New York, NY: Elsevier, pp. 143-159.

- Wagner GR, Spieler EA [1990]. Is the U.S. coal miner chest x-ray surveillance program succeeding in controlling lung disease? In: Proceedings of the VIIth International Pneumoconiosis Conference, August 23-26, 1988, Pittsburgh, PA. Cincinnati, Ohio: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 90-108.
- Wagner GR, Attfield MD, Kennedy RD, Parker JE [1992]. The NIOSH B reader certification program: an update report. *J Occup Med* 34(9):879-884.
- Wagner GR, Attfield MD, Althouse RB, Castellan RM, Parker JE [1993a]. Surveillance of pneumoconiosis in underground coal miners in the U.S. 1970-1986. In: Hurych J, Lesage M, David A, eds. Eighth International Conference on Occupational Lung Diseases, September 14-17, 1992, Prague, International Labour Organisation, pp. 568-573.
- Wagner GR, Attfield MD, Parker JE [1993b]. Chest radiography in dust-exposed miners: promise and problems, potential and imperfections. *Occup Med: State of the Art Rev* 8(1):127-141.
- Wallace WE, Keane BMJ, Hill CA, Vallyathan V, Saus F, Castranova V, et al. [1988]. The effect of lecithin surfactant and phospholipase enzyme treatment on some cytotoxic properties of respirable quartz and kaolin dusts. In: Frantz RL, Ramani RV, eds. Respirable dust in the mineral industries: health effects, characterization and control. University Park, PA: The Pennsylvania State University, pp. 154-166.
- Wallaert B, Lassalle P, Fortin F, Aerts C, Bart F, Fournier E, et al. [1990]. Superoxide anion generation by alveolar inflammatory cells in simple pneumoconiosis and in progressive massive fibrosis of nonsmoking coal workers. *Am Rev Respir Dis* 141:129-133.
- Weber SL, Banks DE [1994]. Silicosis. In: Rosenstock L, Cullen MR, eds. Textbook of clinical occupational and environmental medicine. Philadelphia, PA: W.B. Saunders Company.
- Webster JB, Chiaretta CW, Behling J [1990]. Dust control in high productivity mines. Preprinted paper presented at the Society for Mining, Metallurgy, and Exploration, Inc. Salt Lake City, UT, February 26-March 1, 1990.
- Weeks JL, Wagner GR [1986]. Compensation for occupational disease with multiple causes: the case of coal miners' respiratory diseases (commentary). *Am J Public Health* 76(1):58-61.
- Weeks JL, Levy BS, Wagner GR [1991]. Preventing occupational disease and injury. Washington, DC: American Public Health Association.
- Whitten DGA, Brooks JRV [1973]. The penguin dictionary of geology. Baltimore, MD: Penguin Books, Inc.
- WHO [1986]. Recommended health-based limits in occupational exposure to selected mineral dusts (silica, coal). Geneva, Switzerland: World Health Organization, Technical Report Series 734, pp. 3-82.

WHO [in press]. Health screening and surveillance of mineral dust exposed workers. WHO and ILO monograph.

Whong WZ, Long R, Ames RG, Ong TM [1983]. Role of nitrosation in the mutagenic activity of coal dust: a postulation for gastric carcinogenesis in coal miners. *Environ Res* 32:298-304.

Witschi H [1990]. Lung overload: a challenge for toxicology. *J Aerosol Med* 3(Suppl 1):S189-S196.

Wolff RK, Henderson RF, Snipes MB, Griffith WC, Mauderly JL, Cuddihy RG, et al. [1987]. Alterations in particle accumulation and clearance in lungs of rats chronically exposed to diesel exhaust. *Fundam Appl Toxicol* 9:154-166.

Wu Z-L, Chen J-K, Ong T, Matthews EJ, Whong W-Z [1990]. Induction of morphological transformation by coal-dust extract in BALB/3T3 A31-1-13 cell line. *Mutat Res* 242:225-230.

Wyngaarden JB, Smith LH Jr., eds. [1982]. *Cecil's textbook of medicine*. 16th ed. Philadelphia, PA: W.B. Saunders Co., p. 398.

Yoshida M, Yamauchi H, Yamaura Y [1980]. A study of mercury exposure monitoring—comparison of environmental and personal monitoring. *Jpn J Hyg* 35(3):543-549.

Yu CP, Morrow PE, Chan TL, Strom KA, Yoon KJ [1988]. A non-linear model of alveolar clearance of insoluble particles from the lung. *Inhal Toxicol* 1:97-107.

Zey JN, Donohue M [1983]. Health hazard evaluation report: Culley Generating Station, Yankeetown, In: Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control, Public Health Service, National Institute for Occupational Safety and Health, NIOSH Report No. HETA 81-112-1372, NTIS No. PB-85-163-467/XAB.