

Terminology for DOL Examiners

1. **Disability** – insufficient pulmonary capacity to perform the miner’s usual coal mine work based on objective tests and reasoned medical opinion.
2. **Usual coal mine work** – includes all the exertional tasks that the miner performed during his last 1-2 years of coal mine employment.
 - a. “Usual coal mine work” not only includes the miner’s daily tasks but also includes any other incidental work such as rock dusting (carrying 50 lb. bags of rock dust), carrying and hanging heavy electrical cables and ventilation curtains, setting and carrying timbers, shoveling coal that has spilled off the belt line, and moving equipment to a new section.
 - b. The examiner needs to identify some of the exertional tasks in order to categorize the miner’s work as mild, moderate, heavy, or very heavy manual labor.¹
 - c. And if the miner received a less physically demanding job or was being “carried by co-workers” to accommodate his shortness of breath or pneumoconiosis, then his “usual coal mine work” would be his *previous* position and duties.
3. **Objective test results** – PFT (pre-bronchodilator),² DLCO, and/or exercise ABG³ (*drawn at peak exercise from an indwelling catheter*).⁴

¹ Most miners had to perform some heavy and very heavy manual labor.

² The DOL disability standards are based on pre-bronchodilator values. A miner is not expected to work based on values improved by bronchodilators medication.

³ “The use of CPET [cardiopulmonary exercise testing] in patient management is increasing with the understanding that resting pulmonary and cardiac function testing cannot reliably predict exercise performance and functional capacity and that, furthermore, overall health status correlates better with exercise tolerance rather than with resting measurements.” ATS/ACCP Statement on Cardiopulmonary Exercise Testing, *Am J Respir Crit Care Med*, Vol 167, pp 211-277, 212 (2003).

⁴ “The optimal timing of this [exercise] sample is near maximal exercise. Assessing exercise gas exchange from a sample obtained from a single arterial puncture at peak exercise when the patient is struggling to finish the test or immediately post exercise, when the gas exchange milieu is already different from peak exercise conditions, is to be discouraged. PaO₂ changes occur rapidly after the end of exercise and clinically significant abnormalities present at peak exercise can be missed.” ATS/ACCP Statement at 224.

4. **Clinical pneumoconiosis** – *radiographic or pathology* evidence of the “fibrotic reaction of lung tissue” to the “permanent deposition of substantial amounts of particulate matter in the lungs.”
- a. Clinical pneumoconiosis can be established by x-ray with an ILO classification of 1/0 or greater and by equivalent findings on a CT scan or pathology.
 - b. Complicated [clinical] Pneumoconiosis (also called *progressive massive fibrosis* or PMF) – is an opacity of *clinical* pneumoconiosis *greater than 1 cm* in its greatest diameter (i.e. dimension) or a lesion of *clinical* pneumoconiosis *1 cm or greater*.⁵
 - i. Complicated Pneumoconiosis can be established with an ILO of classification of A, B, or C or equivalent findings on a CT scan or pathology.
 - ii. Complicated Pneumoconiosis creates an irrebuttable presumption of total disability due to pneumoconiosis.
 - iii. Diffuse dust related fibrosis is a form of clinical pneumoconiosis that can be confused with idiopathic pulmonary fibrosis in the general population. It has opacities that are often irregular and may be located in the bases of the lungs. It is usually a gradual slowly progressive process like the more nodular form.⁶
5. **Legal pneumoconiosis** – includes any chronic lung disease or impairment significantly related to, or substantially aggravated by,⁷ dust exposure in coal mine employment.
- a. Based on an exhaustive review and analysis of the relevant scientific and medical evidence conducted by NIOSH, the Department of Labor and federal black lung law recognizes that:

⁵ Pathology evidence of a 1 cm lesion would appear greater than 1 cm if viewed on an x-ray. See attached letter dated 1/9/02 from Gregory R. Wagner, M.D., as Director, NIOSH, Division of Respiratory Disease Studies.

⁶ Petsonk EL, Rose C, Cohen R. Coal Mine Dust Lung Disease. New Lessons from an Old Exposure. *Am J Respir Crit Care Med*. 2013;187 (11):1178-1185. doi:10.1164/rccm.201301-0042CI.

⁷ “Substantial” does not mean “majority.” In other words, even if *most* of the miner’s impairment is not related to coal-mine dust, as long as coal-mine dust was a substantial cause of *some* of it, that’s *legal* pneumoconiosis.

In addition to the risk of simple CWP and PMF, epidemiological studies have shown that coal miners have an increased risk of developing COPD,⁸ including chronic bronchitis and emphysema.⁹ See 65 Fed. Reg. 79939 (Dec. 20, 2000).

- b. DOL also referenced studies supporting the theory that “dust-induced emphysema and smoke-induced emphysema occur through similar mechanisms – namely the excess release of destructive enzymes from dust- (or smoke-) stimulated inflammatory cells in association with a decrease in protective enzymes in the lung.” See 65 Fed. Reg. Vol. 65 at 79942-43.

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⁸ A cross-sectional study cited by DOL found that “[e]ven in the absence of smoking, coal mine dust exposure is clearly associated with clinically significant airways obstruction and chronic bronchitis [and the] risk is additive with cigarette smoking.” Marine, et al, Clinically important respiratory effects of dust exposure and smoking in British coal miners, *Am Rev Respir Dis.* 137:106-112 (1968) (emphasis added).

⁹ An autopsy study of 616 coal miners and 106 non-miners found that “[c]umulative dust exposure is a significant predictor of emphysema severity in coal miners after accounting for cigarette smoking...Coal mine dust exposure and cigarette smoking had similar additive effects on emphysema severity....” Kuempel, et. al., *Contributions of Dust Exposure and Cigarette Smoking to Emphysema Severity in Coal Miners in the United States*, *Am J Resp Crit Care Med*, Vol 180, pp. 257-264, (2009) (emphasis added).