

PART 74—COAL MINE DUST PERSONAL SAMPLER UNITS

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AUTHORITY: 30 U.S.C. 957, 961.

SOURCE: 35 FR 4326, Mar. 11, 1970, unless otherwise noted.

§ 74.1 Purpose.

The regulations in this part set forth the requirements for approval of coal mine dust personal sampler units designed to determine the concentrations of respirable dust in coal mine atmospheres; procedures for applying for such approval; test procedures; and labeling.

§ 74.2 Sampler unit.

A coal mine dust personal sampler unit shall consist of (a) a pump unit, (b) a sampling head assembly, and (c) if rechargeable batteries are used in the pump unit, a battery charger.

§ 74.3 Specifications of sampler unit.

(a) *Pump unit*—(1) *Dimensions*. The overall dimensions of the pump unit, hose connections and valve or switch covers shall not exceed 8 inches in height, 6 inches in width and 4 inches in thickness.

(2) *Weight*. The pump unit shall not weigh more than 4 pounds.

(3) *Construction*. The case and all components of the pump unit shall be of sufficiently durable construction to endure the wear of use in a coal mine and shall be tight fitting, so as to minimize the amount of dust entering the pump case.

(4) *Exhaust*. The pump shall exhaust into the pump case, maintaining a slight positive pressure which will reduce the entry of dust into the pump case.

(5) *Switch*. The pump unit shall be equipped with an on-off switch or equivalent device on the outside of the pump case. This switch shall be protected against accidental operation during use and protected to keep dust from entering the mechanisms.

(6) *Flow rate adjustment*. Except as provided in the last sentence of this paragraph (a) (6), the pump unit shall be equipped with a suitable means of flow rate adjustment accessible from outside the case. To prevent accidental adjustment, the flow rate adjuster shall be recessed in the pump case and shall require the use of an adjusting tool. If the pump is capable of maintaining the flow rate consistency required in this part without adjustment, an external flow rate adjuster is not required.

(7) *Battery*. The power supply for the pump shall be a suitable battery located in the pump case or in a separate case which attaches to the pump case by a permissible electrical connection.

(8) *Pulsation*. (i) The irregularity in flow rate due to pulsation shall have a fundamental frequency of not less than 20 Hz.

(ii) On and after July 1, 1974 the quantity of respirable dust collected with a sampler unit shall be within ± 5 percent of that collected with a sampling head assembly operated with non-pulsating flow.

NOTE: The test procedures for evaluating sampler units with respect to this specification will be provided on request by the National Institute for Occupational Safety and Health, 1014 Broadway, Cincinnati, Ohio 45202.

(iii) Certificates of approval issued for sampler units which fail to comply with the specification set forth in paragraph (a) (8) (ii) of this section when such specification becomes effective, shall be revoked.

(9) *Belt clips*. The pump unit shall be provided with a belt clip which will hold the pump securely on a coal miner's belt.

(10) *Recharging connection*. A suitable connection shall be provided so that the battery may be recharged without removing the battery from the pump case or from the battery case if a separate battery case is used.

(11) *Flow rate indicator*. A visual indicator of flow rate (e.g., a flowmeter)