

forcing" legislation, and a proposed health standard should not be rejected as infeasible "when the necessary technology looms on today's horizon". *AFL-CIO v. Brennan*, 530 F.2d 109 (3d Cir. 1975); *Society of Plastics Industry v. OSHA*, 509 F.2d 1301 (2d Cir. 1975), cert. denied, 427 U.S. 992 (1975). Similarly, information on the economic impact of a health standard which is provided to the Secretary of Labor at a hearing or during the public comment period, may be given weight by the Secretary. In adopting the language of [this section], the Committee wishes to emphasize that it rejects the view that cost benefit ratios alone may be the basis for depriving miners of the health protection which the law was intended to insure. S. Rep. No. 95-181, 95th Cong. 1st Sess. 21 (1977).

Though the Mine Act and its legislative history are not specific in defining feasibility, the courts have clarified the meaning of feasibility. The Supreme Court, in *American Textile Manufacturers' Institute v. Donovan* (OSHA Cotton Dust), 452 U.S. 490, 508-509 (1981), defined the word "feasible" as "capable of being done, executed, or effected."

In promulgating standards, hard and precise predictions from agencies regarding feasibility are not required. The "arbitrary and capricious test" is usually applied to judicial review of rules issued in accordance with the Administrative Procedures Act. The legislative history of the Mine Act indicates that Congress explicitly intended the "arbitrary and capricious test" be applied to judicial review of mandatory MSHA standards. "This test would require the reviewing court to scrutinize the Secretary's action to determine whether it was rational in light of the evidence before him and reasonably related to the law's purposes." S. Rep. No. 95-181, 95th Cong., 1st Sess. 21 (1977).

Thus, MSHA must base its predictions on reasonable inferences drawn from existing facts. In order to establish the economic and technological feasibility of a new rule, an agency is required to produce a reasonable assessment of the likely range of costs that a new standard will have on an industry, and the agency must show that a reasonable probability exists that the typical firm in an industry will be able to develop and install controls that will meet the standard.

#### B. Technological Feasibility

At this stage of the rulemaking, MSHA concludes that a permissible exposure limit of 308 micrograms of EC per cubic meter of air (308<sub>EC</sub> µg/m<sup>3</sup>) is technologically feasible for the metal and nonmetal underground mining

industry. Courts have ruled that in order for a standard to be technologically feasible an agency must show that modern technology has at least conceived some industrial strategies or devices that are likely to be capable of meeting the standard, and which industry is generally capable of adopting. *United Steelworkers of America, AFL-CIO-CLC v. Marshall*, (OSHA Lead) 647 F.2d 1273 (D.C. Cir. 1981) cert. denied, 453 U.S. 918 (1981) (citing *American Iron and Steel Institute v. OSHA*, (AISI-I) 577 F.2d 825 (3d Cir. 1978) at 834; and, *Industrial Union Dep't., AFL-CIO v. Hodgson*, 499 F.2d 467 (D.C. Cir.1974)). The existence of general technical knowledge relating to materials and methods which may be available and adaptable to a specific situation establishes technical feasibility. A control may be technologically feasible when Aif through reasonable application of existing products, devices or work methods with human skills and abilities, a workable engineering control can be applied" to the source of the hazard. It need not be an "off-the-shelf" product, but "it must have a realistic basis in present technical capabilities." (*Secretary of Labor v. Callanan Industries, Inc.* (Noise), 5 FMSHRC 1900 (1983)).

The Secretary may also impose a standard that requires protective equipment, such as respirators, if technology does not exist to lower exposures to safe levels. See *United Steelworkers of America, AFL-CIO-CLC v. Marshall*, (OSHA Lead) 647 F.2d 1164.

MSHA has established that technology is available that can accurately and reliably measure miners' exposures to DPM in all types of underground metal and nonmetal mines. MSHA intends to sample miners' exposures by using a respirable dust sampler equipped with a submicrometer impactor and analyze samples for the amount of elemental carbon using the NIOSH Analytical Method 5040, or any other method that NIOSH determines gives equal or improved accuracy, as stated in existing § 57.5061(b) and in this proposed rule.

MSHA is changing the surrogate that it uses to measure DPM exposures from total carbon (TC) to elemental carbon (EC). This change will avoid interferences associated with organic carbon that could collect on the filter and increase the likelihood of contaminating the sample with OC from non-diesel sources. MSHA agreed to propose this change as dictated by the DPM Settlement Agreement and the

entire mining community supports this change.

Control mechanisms also exist that are capable of reducing DPM exposures to the interim PEL of 308 micrograms in all types of underground metal and nonmetal mines. MSHA believes that mine operators will choose from various control options that are currently available, including diesel particulate filter (DPF) systems, ventilation upgrades, oxidation catalytic converters, alternative fuels, fuel additives, enclosures such as cabs and booths, improved maintenance procedures, newer engines (less DPM emitting), and various work practices and administrative controls. MSHA has given the mining industry flexibility in selecting DPM control options that best suit the mine operator's specific needs.

Based on the current information in the rulemaking record, MSHA concludes that it has a technologically feasible measurement method that operators and the Agency can use to accurately determine if miners' exposures exceed the limit. Both control mechanisms and the DPM sampling method are discussed elsewhere in this preamble. MSHA believes that the proposed standard would adequately address feasibility issues in one of two ways:

(1) Pursuant to § 57.5060(a) and (d) of the proposed rule. If MSHA determines that feasible engineering and administrative controls are being installed, used, and maintained and still do not reduce a miner's exposure to the limit, mine operators would be required to supplement controls with a respiratory protection program; or,

(2) Mine operators may apply to the MSHA district manager for approval for an extension of time in which to reduce miners' exposures to the DPM limit. MSHA is not proposing any maximum limit on the number of extensions an operator may have, since MSHA's decision hinges upon feasibility.

The proposal permits operators greater flexibility in complying with the DPM limit, contrary to the existing prohibition against using administrative controls and respiratory protection. Mine operators who need on-site technical assistance should contact the respective MSHA district manager for assistance. MSHA will continue to assist mine operators in special mining situations that could affect the successful use of DPM filters.

Section IV above contains the executive summary of the 31-Mine Study. As that section explains, the technical feasibility analyses in the 31-Mine Study were based on the highest DPM sample result obtained at each