

the change for the reasons expressed above. One commenter observed:

We agree that personal sampling more accurately measures personal exposure. However, area sampling can also be useful for checking the reliability of personal sampling, and the degree to which that sampling is representative. Area sampling can also provide important information about the quality of compliance plans. MSHA should retain the ability to collect area samples for such purposes, and to require that operators collect them, even if area samples cannot, in themselves, trigger a citation.

The Agency agrees that personal sampling is more representative of personal exposure, which is why the change to personal sampling for compliance determinations is being proposed. The Agency also agrees that area sampling can be a useful tool for quantifying DPM concentrations at specific locations in a mine, which can greatly facilitate evaluation of DPM controls. MSHA has conducted extensive area sampling for DPM to assist Agency personnel, mine operators, and miners to better understand DPM baseline conditions in mines, and to evaluate the effectiveness of various DPM controls. MSHA intends to continue to conduct area sampling for DPM as necessary, but on a compliance assistance basis only, and not for compliance determinations or enforcement.

A few commenters were opposed to the elimination of area and occupational sampling for compliance determination. Two commenters suggested that relying on personal sampling alone would enable a mine operator to influence the sampling result to the mine operator's advantage by re-assigning a miner being sampled to an area with lower DPM levels. MSHA believes that although a mine operator may attempt to defeat compliance sampling by re-assigning the miner being sampled, MSHA's existing enforcement authority is adequate to ensure a valid and representative sample can nonetheless be obtained.

If the miner being sampled for DPM is re-assigned to a different workplace with lower DPM levels, or the miner's DPM exposure is deliberately manipulated by some other means, such as by withdrawing a "dirty" piece of equipment from the area where the miner is working, the inspector has the authority to investigate the circumstances, and invalidate the sample if the inspector determines that the miner's workday was not "normal." In egregious cases, where there is clear indication of intent and proof, the inspector may cite the mine operator

under 103(a) of the Mine Act for impeding an inspection. In either case, sampling may be conducted subsequently to obtain a valid and representative sample of that miner's DPM exposure.

One commenter suggested that personal sampling is not appropriate for miners who work inside enclosed cabs, because although they may be protected against DPM, other downstream miners who do not work inside enclosed cabs would not be protected. MSHA believes that the compliance status of any miner can be determined by personal sampling, whether they work in an enclosed cab or not. Personal sampling of the miner in an enclosed cab can determine whether the cab air filtration system or other DPM controls are adequate to maintain compliance for that miner. Downstream miners who do not work in enclosed cabs and who are suspected of high DPM exposures can also be sampled, and in accordance with MSHA's health sampling policy that targets miners with the highest exposures for sampling, the inspector would likely do so.

Several comments were also received that responded specifically to the questions asked in the ANPRM relating to existing § 57.5061(c) and proposed changes.

(a) What would be the cost implications for mine operators to conduct personal sampling of miners' DPM exposures if EC is the surrogate?

One commenter indicated that costs are secondary to whether the policy of conducting personal sampling for compliance determination is reasonable. Other comments suggested no change in expected costs because the NIOSH Method 5040 is in place at several commercial labs. Several commenters noted that costs may be lower if EC is the surrogate due to "fewer false readings and contaminated samples." On the whole, MSHA believes valid and representative samples can be obtained through personal sampling, and MSHA does not expect differences in sampling cost, if any, to be significant.

(b) What experience do mine operators have with DPM sampling and analysis?

The commenters indicated that mine operators' experience with DPM sampling and analysis varies widely across the underground metal and nonmetal mining industry. Some mine operators, especially those that have been parties to the DPM litigation and/or involved in the 31-Mine Study, have acquired considerable experience, while many other operators have had little or no experience. Several commenters mentioned that mining company health

and safety staff capable of conducting DPM sampling "are overburdened with other MSHA initiatives (HazCom, noise, silica) and will not be able to complete the required DPM tasks." These commenters recommended that AMSHA should provide in-mine training, sampling assistance [and] outreach meetings" and that MSHA health staff should help mine operators that lack DPM sampling experience "without enforcement, by providing comprehensive in-mine training and sampling assistance."

MSHA largely agrees that many mine operators are unfamiliar with MSHA's DPM sampling and analytical methods. Accordingly, MSHA intends to provide numerous opportunities for mine operators and miners to obtain training on DPM sampling. MSHA will target these compliance assistance training opportunities to small mine operators in particular. MSHA conducted a 3-day, in-mine, hands-on DPM sampling workshop at an underground limestone mine near Louisville, KY in December 2002, and other similar workshops are planned.

MSHA has also posted information on its Web site relating to the specialized DPM sampling cassette with integral submicron impactor. Also posted on the MSHA web site are a Compliance Guide on the standard itself, which includes considerable information about sampling, the draft chapter from MSHA's Metal and Nonmetal Health Inspection Procedures Handbook detailing the compliance sampling procedures that MSHA inspectors will follow, and the field notes form that MSHA inspectors will use to document DPM compliance sampling. All of this information is also available in hardcopy form for mine operators and miners who do not have internet access. MSHA intends to develop and provide additional DPM sampling-related compliance assistance materials as needed to mine operators and miners in both hard-copy form and on its Web site.

As a result of some of the changes in the rule language that have been proposed through this rulemaking, MSHA's DPM compliance sampling procedures will conform more closely to existing MSHA sampling practices for dust and other airborne contaminants. As a consequence, mine operators that have had no previous experience with DPM sampling, but have had experience with, or at least knowledge of, MSHA respirable dust sampling, will discover they have very little more to learn. Except for the sample filter cassette itself, the mechanics of DPM sampling will be almost identical to respirable