

second reason given by AIA is that because the measurement and analytical method for assessing asbestos exposures is uncertain at lower levels, imposing a 0.2 f/cc PEL will not allow employers to ascertain whether they are in compliance [Exhibit 328, p. 7].

Day-to-Day Variability of Exposure Levels

To demonstrate day-to-day variability, AIA submitted evidence of recent exposure levels at plants identified as well controlled in various industry sectors. AIA stated that these data showed that the airborne asbestos exposures varied significantly from day to day at the same work station due to factors beyond the employer's control [Exhibit 312, Table H].

OSHA believes that AIA's data in fact supports the Agency's conclusion that 0.2 f/cc is feasible. AIA's data from three asbestos-cement pipe plants show that all operations in these plants would be able to meet a 0.2 f/cc PEL more than 50 percent of the time. These data also show that most operations in the asbestos-cement pipe industry could be expected to do significantly better. Approximately 80 percent of the measurements in the fiber introduction area and approximately 90 percent of the measurements in the pipe formation and lathe finishing area could be expected to read under 0.2 f/cc [Exhibit 312A, Table III] based on AIA's own calculations. In addition, OSHA disagrees with AIA's contention that since little can be done about the sources of variability and a conscientious employer must keep his average exposures far below the PEL, so that he will not inadvertently be cited on a "high day" [Exhibit 312A, Tab H, p. 4]. AIA listed the factors that influence variability, including changes in internal airflows such as fans being turned off or blocked, inoperative or blocked ventilation systems, or changes in individual work practices.

OSHA has observed in its enforcement experience that proper inspection and maintenance of ventilation systems can greatly increase their effectiveness and reduce the variability resulting from inefficient operation of such control systems [see also Exhibit No. 335]. OSHA also believes that variation in work practices may be minimized by supervision and training programs. While OSHA agrees with AIA that there is a day-to-day variability in exposure, OSHA believes that many of the major sources of day to day variability can be moderated by diligent employer control.

OSHA also disagrees with AIA's contention that the appropriate legal test for technological feasibility would assure that all employers may be 95 percent confident that an OSHA inspector will not measure an over exposure based on one day's sampling. There is nothing in the Act that would support such a test. No court that has reviewed OSHA's feasibility determinations has suggested such a test. In fact, the District of Columbia Court of Appeals has stated in pre-enforcement review that the court would not expect OSHA to prove the standard *certainly* feasible for *all* firms at *all* times in *all* jobs. [United Steel workers *supra*, 647 F. 2d 1270]. However, applying AIA's definition of feasibility would require a feasibility level that would give employers virtually that level of assurance (i.e., 85 percent versus 100 percent). The Agency's experience in promulgating and enforcing the former asbestos standard and other health standards provides additional policy reasons to reject AIA's test for determining industrywide feasibility.

AIA's test for feasibility depends upon a static picture of exposure levels and patterns. But as stated above, all feasibility determinations are projections of future control results. OSHA appropriately has decided that higher levels will fall as experience in applying controls increases. OSHA also has projected that the mix of circumstances under which those measurements were derived will change under the new standard. The mere lowering of the PEL creates its own incentive effect of decreased exposures and will reduce exposure variability.

Other policy reasons argue against AIA's statistical formulation of feasibility. Most importantly, to give a 95-percent level of assurance to employers that an OSHA inspector will not find a measurement above the PEL would require OSHA to deny to *employees* the assurance that they will be protected by exposure levels that are achievable. For example, it can be calculated that a plant that exceeds the PEL 70 percent of the time has a 35 percent chance that OSHA will not sample above the PEL during a visit in which a single 8-hour TWA sample was taken. AIA's data showed that *all* operations in the asbestos cement pipe industry can achieve 0.2 f/cc more than 50 percent of the time. Setting a level above 0.2 f/cc would mean that employees would unnecessarily be allowed to be exposed to higher levels than are *now* being achieved, simply to increase the level of assurance that an OSHA inspector will not obtain a high

sample on a one day inspection. Such a result would undermine employee protection and would be inconsistent with the policies of the OSH Act.

OSHA believes that employers can increase their assurance of not being unreasonably cited by implementing measures that would not expose employees to such increased risk. The employer can reduce the chances of citation by exercising diligence in applying available controls, by supervising the work habits and practices of employees, and by inspecting and maintaining systems in optimum condition. All of these measures will not only reduce employees' average exposures, but also will reduce their high exposures, and thus lower the probability of OSHA issuing a citation. Based on OSHA's experience in regulating other substances with notable day-to-day variability, such as coke oven emissions, OSHA is confident that employers can control a significant portion of such exposure changes.

Due to the nature of asbestos fibers, in some workplace operations, OSHA may measure on a day when exposures are above the PEL due to random exposure variations, even though the employers have installed and maintained engineering controls, instituted available work practices and conscientiously applied housekeeping measures that maintain exposures below the PEL most of the time. Therefore, where an employer can show, based on a series of measurements made pursuant to the sampling and analytic protocols set out in this standard, that the OSHA one-day measurement may be unrepresentatively high, OSHA may reinspect the workplace and measure the employees' exposure or may decide not to issue a citation, unless OSHA has reason to believe that there are circumstances within the employer's control to account for the high exposure measurement.

OSHA is not setting out specific "rebuttal" criteria in the standard that would bind OSHA always to reinspect and that would deny an employer the opportunity to contest citation only when certain specified criteria are met. One reason is that OSHA believes the informed judgment of the OSHA inspector is superior to a rule that would be based only on the number and result of the employer's measurements. Such a rule would not accommodate the OSHA inspector's observations about the quality of the employer's sampling and analytic program and the asbestos control, housekeeping, and training programs which OSHA believes are