[The medical surveillance program] . . . is not a practical requirement to be implemented [in construction] . . . [and] . . . is very difficult to enforce because of the highly transitory nature of the employers as well as the employees . . .

The AIA/NA continued, ". . . medical surveillance [is also] time consuming, burdensome, [and] expensive" (Tr. 7/6). In a similar vein, Sherrel Mercer of the Mercer Construction Company maintained that ". . . medical surveillance requirements would serve no purpose and would impose great cost. It would be extremely difficult to arrange examinations at remote worksites" (Tr. 7/20X).

OSHA recognizes that the high turnover among construction employees and the non-fixed nature of construction workplaces complicates implementation of a medical surveillance program difficult in this sector, and the Agency has consequently retained some provisions and made changes to other requirements of the existing standard to accommodate this industry's characteristics. For example, the revised rule has maintained the provision from the existing standard permitting employers to use documentation showing that their employees have had a medical examination within the last 12 months that is equivalent to the one specified in the standard. This provision is particularly adapted to conditions in the construction industry, where, as CACOSH (Ex. 84-233) pointed out, employees may work for as many as 10 employers in a single year.

OSHA is also aware that there are numerous organizations that provide onsite chest x ray and spirometry testing through the use of mobile van units, and the Agency has, in past rulemakings, required that medical testing be performed even if these examinations must take place outside of a clinic or doctor's office. For example, the final rule for Occupational Noise Exposure (46 FR 4078; January 16, 1981) requires that audiometric testing be conducted and it is not uncommon for commercial specialists who evaluate employees' hearing to transport an audiometric test booth in a mobile van directly to the organization that has contracted for the testing.

A respondent from Oregon's occupational safety and health regulatory agency, the Workers Compensation Department, Accident Prevention Division (APD), submitted an Oregon program directive issued to construction firms that requires medical examinations whenever employees are "engaged in the removal or demolition of pipes, structures, or equipment covered with asbestos insulation or building materials. . . ." According to Kathryn T. Ellis, Supervisor of the Technical Section of APD, inspection of all asbestos demolition projects has indicated that "the demolition firms are complying with the current Oregon asbestos standard" (Ex. 92-013).

North Carolina also has a successful state program for asbestos removal operations; this program issued guidelines entitled *Specifications for Asbestos Removal* in 1981 (Ex. 90-254). These specifications require contractors to provide medical examinations for all employees. According to John C. Brooks, Commissioner of Labor of North Carolina, ". . . contractors [are] generally cooperative and [follow] established guidelines. Only 15 of 106 [asbestos] removal sites had received a notice of violation as of April 27, 1984."

In addition to questioning the feasibility of requiring a medical surveillance program for a construction standard for asbestos, the following issues were raised by comments regarding medical surveillance programs:

(1) The level at which the medical surveillance requirements should be triggered;

(2) Which employees should be covered by these provisions;

(3) How frequently chest roentgenograms and/or medical examinations should be administered, and the content of these examinations;

(4) The need for mandatory vs recommendatory medical tests;

(5) The necessity of administering a respiratory disease questionnaire;

(6) Whether non-physicians who administer pulmonary function testing should be required to complete a NIOSH-approved course in spirometry.

One issue raised in the November notice was at what level the medical surveillance program should be triggered. A few respondents supported triggering the medical surveillance provisions at 0.2 f/cc (Exs. 90-160, 90-166, and 90-173). Atlantic Richfield, commenting on the standard as it applies to both construction and general industry, noted that ". . . with the proposed standards of 0.2 or 0.5 f/cc, the action level of 0.2 f/cc is reasonable for [triggering] medical surveillance. . . ." (Ex. 90-160).

Some commenters, however, advocated a 0.1 f/cc trigger for medical surveillance (Exs. 90-49, 90-185, 92-015, and Tr. 6/26). For example, the Department of the Army suggested that "[f]or a PEL of 0.2 fiber/cc it is recommended that an action level of 0.1 fiber/cc be established for medical surveillance. . . ." (Ex. 90-49). Similarly, Dr. Kenneth Miller, a physician with the Oil, Chemical and Atomic Workers Union (OCAWU) indicated that . . . "[OCAWU] fully support[s] the AFL-CIO in their position that the . . . action level of . . . medical surveillance be set at one half the PEL" (Tr. 6/26). Setting the trigger for medical surveillance at 0.1 f/cc is consistent with the OSHA Program Directive issued on October 11, 1978, which instructed OSHA compliance officers to "provide uniform inspection and compliance procedures for the medical examination requirement in the asbestos standard". . . . specified that "[m]edical examinations . . . [are] required for any 7- to 8-hour time weighted average concentration of 0.1 f/cc or for a greater concentration."

The scope of the medical surveillance requirements was also an issue of concern to commenters. Several respondents agreed with certain elements of the provision regarding employee coverage (Exs. 84-457, 123.A, 263, 277). The Associated General Contractors of America (AGC), in a statement endorsed by the National Constructors Association (NCA) and the National Erectors Association (NEA), indicated that "the standard should require construction employers to provide an employee with a medical examination whenever that employee, *though fully protected,* has encountered airborne asbestos, at any level, for 30 days or more . . ." (Ex. 84-457). The Organization Resources Counselors, Inc. (ORC) recommended that employers institute a medical surveillance program for all employees exposed to asbestos in excess "of the action level" for more than a total of 30 days per year (Ex. 123.A). The Building and Construction Trades Department, AFL-CIO (BCTD) advocated a separate respirator examination for all persons required to wear negative-pressure or pressure demand respirators and recommended that all employees exposed to asbestos be provided an initial medical examination, except those workers who had received medical examinations within the past one year period. It also advocated the medical screening of almost all workers involved in the building trades for 10 years or more, under the assumption that all construction workers, including those not working directly with asbestos containing materials, have incurred some exposure to asbestos in the course of a decade of work in construction (Exs. 277, 330). The International Brotherhood of Boiler Makers supported BCTD's recommended medical examination protocol "as to both the detection of asbestos-related disease

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