potential safety and health problems involves the cooperation of employees, the success of such a program is highly dependent upon the employee's understanding of the hazards attendant to that job.

Finally, given the evidence of the carcinogenicity of asbestos, OSHA believes that these signs will not cause undue alarm. This is especially so when balanced against the positive results anticipated, as described above. For all of the reasons set forth OSHA believes that it is appropriate to use precautionary signs which warn of a cancer hazard.

The standard also requires that all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or their containers, be labeled with the appropriate information:

DANGER—CONTAINS ASBESTOS FIBERS; AVOID CREATING DUST; CANCER AND LUNG DISEASE HAZARD

The new standard allows two exceptions to the labeling and material safety data sheets (MSDS) requirements: no label or MSDS is required in those instances where: (1) Asbestos fibers have been modified by a bonding agent, coating, binder, or other material, provided that the manufacturer can demonstrate that during any reasonably foreseeable use (including handling, storage, disposal, processing, or transportation) employee exposure will remain below the action level; or (2) asbestos is present in a product in concentrations less than 0.1%. The exceptions provided in the revised standard are based, in part, on the exception given in the existing standard and are consistent with guidance provided in OSHA's Hazard Communication standard [1910.1200].

The existing asbestos standard provides that

> . . . no label is required where asbestos fibers have been modified by a bonding agent, coating, binder, or other material so that during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation, no airborne concentrations of asbestos fibers in excess of the exposure limits provided in paragraph (b) [PEL] of this section will be released [1910.1001(g)(2)(i)].

This is changed slightly in the revised rule so that airborne concentrations must be kept below the action level rather than the PEL.

As discussed earlier, an action level has been added to this rule to trigger a number of provisions, such as medical surveillance and monitoring, in part, because OSHA feels exposures at the action level may still pose significant risk to workers, and so keeping exposures below this level is important for worker protection. Therefore, OSHA has changed the exception to the labeling requirement to be consistent with the introduction of an action level in the revised rule. It is OSHA's belief that materials that have been treated in the manner described in the exception (such as bonding or coating) would not generally release airborne concentrations of asbestos above the action level, and that the change in the regulatory language should not impose any additional obligations upon employers exempt under the existing rule.

OSHA has added another exception to labeling, for materials containing less than 0.1% asbestos. The exception was added in response to concerns expressed by a number of participants that asbestos is a trace contaminant in a number of materials and products (see, for example, Grace, Ex. 344–16) and that labeling such products would constitute an undue burden on employers. In choosing the percent exemption, OSHA has taken general guidance from its Hazard Communication rule which specifies that a mixture shall be considered hazardous if a carcinogen is present in concentrations in excess of 0.1% [1910.1200(d)(5)(iv)]. While other percentages were suggested to the record (for example, 0.25%, Ex. 344–16), OSHA found no other data to override considerations of safety given in the generic standard and, hence, in the interest of the protection of worker health, has maintained the 0.1% recommendation.

The signs and labels requirements discussed above are consistent with Section 6(b)(7) of the OSH Act, which prescribes the use of labels or other appropriate forms of warning to apprise employees of the hazards to which they are exposed. Rulemaking participants generally supported OSHA's requirement for signs and labels. [Exs. 146, 233, 236, 312, 86–4, 90–174, 92–38]. There were no significant issues raised to the contrary.

Information and Training

The final standard requires employers to provide a training program for all employees expected to be exposed to airborne asbestos at or above the action level of 0.1 f/cc. The training requirement in the standard is patterned after OSHA's Hazard Communication standard [29 CFR 1910.1200(h) (1) and (2)].

Information and training are to be provided at the time of initial assignment and at least annually to employees who are exposed to airborne concentrations of asbestos at or above the action level. The content of the training program is intended to inform employees of: (1) The hazards to which they are exposed; (2) the necessary steps to protect themselves, including those to be taken during emergency situations; (3) the proper use and limitation of respirators and protective equipment; (4) a description of medical examinations and their purpose; (5) implementation of work practices and the use of available engineering controls; (6) the contents of this standard and (7) the added risk of lung cancer due to the combination of cigarette smoking and asbestos exposure. Section 6(b)(7) of the Act makes it clear that these are appropriate goals for an employee training program, and the final standard includes such provisions.

The employer is required to make a copy of the standard available to affected employees and their representatives. This requirement, in combination with the review provided for as part of the training program, is intended to ensure that employees understand their rights and duties under this standard.

The employer is also required to provide, upon request, all materials relating to the training program to the Assistant Secretary and Director. This is intended to provide an objective check of compliance with the requirements under this paragraph.

OSHA recognizes that asbestos may be only one of a number of substances to which an employee may be exposed simultaneously in the workplace. The education and training requirements in this standard contain those elements OSHA has determined to be basic. The format and content of the required training and information program are neither rigid nor extensive. An employer may, if desired, incorporate the required information for asbestos into an existing program of training and education to be provided to employees.

The final standard requires that the training program be provided at least annually. OSHA believes that an annual training program is both necessary and sufficient to ensure that employees maintain a continuing awareness of the hazards of asbestos and their rights and duties under the standard.

To increase the effectiveness of training goals the final standard requires that the training material be made available, without cost, to all affected employees or their representatives.

The final training provision is virtually identical to that proposed, except that the requirement is triggered