



Shell Oil Company
Interoffice Memorandum

see meeting

MARCH 13, 1990

FROM: L. C. WADDELL, M.D., CORPORATE MEDICAL DEPARTMENT

TO: H. BONFILI, M.D., WOOD RIVER MANUFACTURING COMPLEX
R. JUDICE, M.D., NORCO MANUFACTURING COMPLEX
R. HUGHES, M.D., DEER PARK MANUFACTURING COMPLEX
E. SHEPPER, M.D., DEER PARK MANUFACTURING COMPLEX

SUBJECT: REVISED ASBESTOS STANDARD

Attached for your information is the revised asbestos standard. The written physician's statement will have to be changed to include the mention that the employee has been informed about the combined effects of asbestos exposure and smoking. Dr. Cowles is revising the asbestos examination physician written opinion sheet and the generic written opinion sheet to reflect that change. Sometimes the form making process can take a while and it is possible that those forms might not be available by the May 7 implementation date. You might want to use a stamp with the appropriate words if the forms are not available by that time. The two changes that will affect the medical program are found on page 3731.

A handwritten signature in cursive script, appearing to read "L. C. Waddell, Jr." followed by a large flourish.

L. C. Waddell, Jr., M.D.

Attachment

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table Z-1-A, table Z-2 or table Z-3. The latter were issued under section 6(a) (29 U.S.C. 655(a)).

Section 1910.1000, the Transitional Limits columns of table Z-1-A, table Z-2 and table Z-3 also issued under 5 U.S.C. 553. Section 1910.1000, the Transitional Limits columns of table Z-1-A, table Z-2 and table Z-3 not issued under 29 CFR part 1911 except for the arsenic, benzene, cotton dust, and formaldehyde listings.

§ 1910.1000 [Amended]

2. Section 1910.1000, table Z-1-A is amended by revising the Note at the end of the Table to read as follows:

Note: Pursuant to administrative stays effective September 1, 1989 and published in the Federal Register on September 5, 1989, and extended in part by notices published in the Federal Register on October 6, 1989, December 6, 1989 and on February 5, 1990 the September 1, 1989 start-up specified in 29 CFR 1910.1000(f)(2)(i) is stayed as follows:

Until April 1, 1990 for nitroglycerin and ethylene glycol dinitrate in the explosives industry; until October 1, 1989 for perchloroethylene in the drycleaning industry; until September 1, 1990 for the acetone TWA for certain "doffers" in the cellulose acetate fiber industry; and until the decision on the merits of the Eleventh Circuit Court of Appeals in the case of *Courtcrafts Fibers, Inc. v. U.S. Department of Labor*, No. 89-7073 and consolidated cases, for the Ceiling for carbon monoxide for blast furnace operations, vessel blowing at basic oxygen furnaces and sinter plants in the steel industry (SIC 33). OSHA will publish in the Federal Register notice of the termination of the carbon monoxide stay.

[FR Doc. 90-2579 Filed 2-2-90; 8:45 am]

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29 CFR Parts 1910 and 1926

[Docket No. H-033]

Occupational Exposure to Asbestos

AGENCY: Occupational Safety and Health Administration, Department of Labor.

ACTION: Final rule; partial response to court remand.

SUMMARY: On June 20, 1986, at 51 FR 22612, OSHA published revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite in general industry (29 CFR 1910.1001) and construction (29 CFR 1926.58). OSHA reduced the 8-hour time weighted average (TWA) permissible exposure limit (PEL) to 0.2 f/cc and adopted provisions for medical surveillance, exposure monitoring, methods of compliance, respirators and recordkeeping, among others.

On February 2, 1988, the U.S. Court of Appeals for the District of Columbia

Circuit upheld the standard in most respects but remanded the case to OSHA on several issues. *Building and Construction Trades Department v. Brock*, 838 F.2d 1258 (D.C. Cir. 1988). In partial response to the decision, on September 14, 1988, OSHA issued a short term excursion limit (STEL) for asbestos, tremolite, anthophyllite, and actinolite of 1 f/cc averaged over a sampling period of 30 minutes (53 FR 35610).

In June and July 1989, the Building and Construction Trades Department of the AFL-CIO (ECTD) and the AFL-CIO petitioned the Court to order OSHA to resolve all remand issues on the record of the 1986 rulemaking proceeding. The court, on October 30, 1989, ordered OSHA to take action on three of the remand issues by December 14, 1989 (Category I), three other issues by January 28, 1990, and the remaining issues by February 27, 1990.

OSHA issued its response on the first three remand issues on December 14, 1989 (54 FR 52024, December 20, 1989).

This document constitutes OSHA's response on the second group of remand issues. OSHA is (1) expanding its ban on workplace smoking and adding training requirements covering the availability of smoking control programs; (2) explaining how and why OSHA's respirator requirements will result in employee risk being reduced below that remaining at the PEL; and (3) adding a requirement that employers assure that employees working in or contiguous to regulated areas comprehend required warning signs, and requiring that training programs specifically instruct employees about the content and presence of signs and labels.

OSHA intends to publish a notice of proposed rulemaking by February 27, 1990, covering the third group of issues and the issue of the exemption for "small-scale, short-duration operations" deferred from the December 1989 response.

EFFECTIVE DATE: Amendments to the standard will become effective May 7, 1990.

FOR FURTHER INFORMATION CONTACT: Mr. James Foster, OSHA, U.S. Department of Labor, Office of Public Affairs, Room N3647, 200 Constitution Avenue NW., Washington, DC 20210. Telephone (202) 523-8151.

SUPPLEMENTARY INFORMATION:

I. Clearance of Information Collection Requirements

On March 31, 1983, the Office of Management and Budget (OMB) published 5 CFR part 1320, implementing

the information collection provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* (48 FR 13666). Part 1320, which became effective on April 30, 1983 and was revised May 10, 1988 (53 FR 16618), sets forth procedures for agencies to follow in obtaining OMB clearance for information collection requirements. OSHA does not believe that the resolution of these remand issues results in any substantial change to the information collection burden which would require OMB paperwork clearance. The new provisions either do not increase paperwork or simply make explicit requirements which were implicit in the unrevised rules. Even in the latter group, the increase in information gathering burden is *de minimis*. OMB has approved information collection requests for the existing asbestos standards in accordance with the provisions of the Paperwork Reduction Act under control numbers 1218-0133 and 1218-0134.

Although the additional provisions do not impose any substantial new information gathering burden, OSHA is submitting the paperwork provisions in 29 CFR 1910.1001(j)(5)(iv)(C) and 29 CFR 1926.58(k)(4)(iii) for OMB clearance pursuant to 5 CFR part 1320, and the Paperwork Reduction Act of 1980.

II. Background

On June 17, 1986, OSHA issued revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry and construction (51 FR 22612 *et seq.*, June 20, 1986). Effective July 21, 1986, the revised standards amended OSHA's previous asbestos standard issued in 1972. (On October 17, 1986, OSHA published a partial stay of the revised standards insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite (51 FR 37602). The stay has been extended to November 30, 1990 (see 54 FR 30704), to enable OSHA to complete rulemaking on these non-asbestiform minerals. The partial stay continues to apply to the 1986 standards and all amendments thereto, including the amendments in this notice.)

Separate comprehensive standards for general industry and construction were issued which shared the same PEL and most ancillary requirements. The standards reduced the TWA permissible exposure limit tenfold to 0.2 fibers per cubic centimeter of air (f/cc) from the previous 2 f/cc limit. Specific provisions were added in the construction standard to cover unique hazards relating to asbestos abatement and demolition jobs.

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Several major participants in the rulemaking proceeding including the AFL-CIO, the Building and Construction Trades Department ("BCTD"), and the Asbestos Information Association ("AIA"), challenged various provisions of the revised standards. On February 2, 1988, the U.S. Court of Appeals for the District of Columbia Circuit issued its decision upholding most major challenged provisions, but remanding certain issues to OSHA for reconsideration (*BCTD, AFL-CIO v. Brock*, 838 F. 2d 1258). The Court held that where rulemaking participants had recommended regulatory provisions which, on the record, appeared to be feasible and to confer more than a *de minimis* benefit in reducing significant risk, OSHA must either adopt them, refute the evidence of feasibility or benefit, or more persuasively explain why OSHA did not adopt the provisions. The Court also ordered OSHA to clarify the regulatory text for two provisions and found one provision, a ban on spraying asbestos-containing products, unsupported by the record. In addition, OSHA's failure to adopt a STEL was ordered to be reconsidered within 60 days of the Court's mandate. In partial response, OSHA issued a STEL called an "excursion limit," of 1 f/cc measured over 30 minutes, on September 14, 1988 (53 FR 35610).

On June 10 and July 18, 1989, BCTD and the AFL-CIO petitioned the Court to enforce its remand order by ordering OSHA to resolve all remand issues on the record of the 1986 rulemaking proceeding within 7 to 60 days. The Court, in an October 30, 1989 order, divided the remand issues into three categories as follows.

With respect to three issues, the Court ordered OSHA to take action by December 14, 1989. These issues were:

- (1) Formally delete the ban on the spraying of asbestos-containing materials;
- (2) Clarify that periodic monitoring in the construction industry must be resumed after conditions change; and
- (3) Clarify the exemption for "small-scale, short-duration operations" from the negative-pressure enclosure requirements of the construction standard to limit the exemption to work operations where it is impractical to construct an enclosure because of the configuration of the work environment.

OSHA issued its response on these issues on December 14, 1989 (54 FR 52024, December 29, 1989). In that document OSHA (1) removed the ban on the spraying of asbestos-containing materials; (2) changed the regulatory text to clarify when construction employers must resume periodic

monitoring; and (3) explained why OSHA was not amending the regulatory text to clarify the limited exemption for "small-scale, short-duration operations" in the construction industry standard, but instead would institute rulemaking on this issue.

With respect to the second group of issues, the Court ordered OSHA to complete its response on the existing record by January 28, 1990. These issues are:

(4) The possibility of further regulations governing employee smoking controls;

(5) The effectiveness levels of various respirators and OSHA's policy of requiring respirators to protect workers at only the PEL level; and

(6) The possibility of bi-lingual warnings and labels for employers with a significant number of non-English-speaking employees.

The Court stated that if OSHA determines that these issues could not be resolved on the existing record, OSHA may explain why and commence new rulemaking instead.

Finally, as to the three remaining remand issues, the Court allowed OSHA to publish rulemaking proposals no later than February 27, 1990. These issues are:

(7) The establishment of operation-specific permissible exposure limits;

(8) The extension of reporting and transfer requirements; and

(9) the expansion of the competent person requirement to all employers engaged in any kind of construction work.

This document constitutes OSHA's response on the second group of remand issues. On issue 4, OSHA is adding various smoking control provisions. It is prohibiting workplace smoking in areas where occupational exposure to asbestos takes place; expanding training to include information about available smoking cessation programs and require the distribution of self-help smoking cessation material, and requiring that the physician's written opinion state that the employee has been advised of the combined effect of smoking and asbestos exposure in producing lung cancer. The Agency is explaining why it is not adopting AIA's additional suggestions for smoking controls.

On issue 5, OSHA is explaining how and why the provisions in the 1986 standards relating to respiratory protection will result in employee risk being reduced below that remaining solely as a result of the PEL and that the effectiveness levels of respirators are under review.

On issue 6, OSHA is adding a provision requiring that employers

assure that employees working in or contiguous to regulated areas comprehend warning signs. Employers may devise the means to assure employee comprehension, using symbols, graphics, pictographs or languages other than English. OSHA also is requiring that the training program specifically instruct employees as to the content and presence of signs and labels.

Because OSHA has considered these issues in response to the Court's remand and is adding regulatory text based on the prior rulemaking record developed after notice and comment, the Agency concludes that additional opportunity for notice and comment is impractical and unnecessary in accordance with the intent of 5 U.S.C. 553(b).

III. Summary and Explanation of the Remand Issues

Expanded Smoking-Control Regulations

In the 1986 standards, OSHA included certain smoking related requirements in response to the substantial record evidence that smoking multiplies the lung cancer risk of asbestos-exposed workers. Thus, the mandated training program must include information concerning the relationship between smoking and exposure to asbestos in producing lung cancer (§ 1910.1001(j)(5)(iii)(B); § 1925.58(k)(3)(iii)(C)), and smoking is prohibited in regulated areas (§§ 1910.1001(e)(5), 1926.58(e)(5)).

OSHA believed that this approach was consistent with the record evidence and with policy considerations of the agency. During the rulemaking, AIA suggested expanded smoking control provisions such as banning the hiring of smokers for asbestos-related work, requiring employer-provided smoking cessation programs, prohibiting work-site use of tobacco products, and banning smoking during work hours. See 51 FR at 22700. OSHA rejected these requests for greater smoking controls. AIA petitioned for review. In its decision, the Court found record evidence showing that smoking cessation programs can reduce a significant risk and are feasible to implement. It concluded that, where there is such a prima facie showing of efficacy and feasibility, OSHA must justify its non-adoption of a requirement to offer smoking cessation programs and that "unarticulated 'policy considerations'" are not sufficient justification for its failure to do so. (See 838 F.2d at 1271).

OSHA notes that AIA suggested four smoking control provisions. Only one,

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the suggestion that OSHA mandate employer-sponsored smoking cessation programs, was supported by evidence introduced by AIA concerning feasibility and effectiveness. The Court held that Agency justification is required only for suggestions for which there is record evidence concerning feasibility and effectiveness. Therefore, the Agency believes it is required to reconsider only the smoking-cessation program suggestions. However, because the remand order may include all suggested smoking controls, OSHA has reconsidered AIA's entire smoking control program.

OSHA believes that the response most consistent with its statutory authority, relevant policy considerations detailed below and the rulemaking record developed in support of the 1986 standards is to add regulatory provisions which will ban smoking in work areas where occupational exposure to asbestos exists; to expand the required training programs to include information concerning available smoking cessation programs and to distribute self-help smoking cessation program material; and to require that during mandated medical examinations physicians inform employees of the combined effect of asbestos and smoking in producing lung cancer.

First, OSHA is adding a provision which will prohibit smoking in all work areas where there is "occupational exposure to asbestos" because of activities in such areas. (29 CFR 1910.1001(i)(4), 1926.58(j)(3).) This is an expansion of the present smoking ban, which, as in most OSHA health standards, is confined to regulated areas where exposures are elevated. "Occupational exposure," as discussed in the preambles to the 1986 asbestos standards, means asbestos exposure, which has its source in the workplace. Thus, employees who work in areas where asbestos abatement and renovation activity are ongoing may be occupationally exposed even though they do not disturb or handle asbestos. The new provision will read as follows: "The employer shall ensure that employees do not smoke in work areas where they are occupationally exposed to asbestos because of activities in that area."

OSHA is extending the former more limited smoking ban, to reduce residual risk among exposed smokers and non-smokers, based on the following record evidence and considerations. OSHA appropriately relied on studies that included smokers when it determined that workplace asbestos risk for all

workers is "significant" (838 F. 2d at 1265). The risk for smoking workers exposed to asbestos is substantially higher. (See e.g. Tr. 7/2, p. 153-156.) OSHA does not know with certainty whether banning smoking at the workplace will result in diminished total smoking consumption for asbestos workers who smoke. However, given their higher residual risk, and the suggestion that contemporaneous smoking and asbestos exposure is particularly risky, the Agency believes that even a small reduction in workplace smoking will reduce risk to smoking employees by more than a *de minimis* amount. (See e.g. Tr. 7/2, at 153-155.)

Feasibility of a workplace smoking ban is apparent from the record. Employers now are required to enforce a ban on smoking in regulated areas; expanding that ban to all areas where there is occupational exposure to asbestos raises no cost issue.

OSHA is also requiring that employers augment their training programs to offer smoking cessation self-help material, such as NIH Publication No. 89-1647, and that physicians certify that they have informed employees of the health risks of smoking and asbestos exposure during required medical examinations. These provisions are the core of AIA's suggested smoking cessation program requirement, which the court found on the record to be feasible and effective. OSHA is not adopting two other suggested features of such programs—providing incentives to participate and requiring smoking cessation activities on at least a quarterly basis—because, as explained below, the record shows such requirements do not appear to provide more than a *de minimis* benefit to the affected workforce.

OSHA is providing, in non-mandatory appendices, names, addresses and brief descriptions of public health organizations which provide smoking cessation programs and materials to assist employers in complying with this requirement (§ 1910.1001, appendix I; § 1926.58, appendix J). Although the regulatory text specifically identifies NIH material as appropriate to meet the requirement for employer distribution of self-help smoking cessation material, alternative program material provided by other public health or private organizations may be substituted.

Requiring employers to offer smoking cessation self-help material and resource information is intended to reduce residual lung cancer risk by reducing the incidence of employee smoking. During the hearing on the 1986

standards, AIA's witness, John Pinney, testified that the available evidence demonstrated that most smoking cessation programs, including self-help, result in similar success rates of from 10% to 20%. The 30% success rate mentioned in the court's decision relates to people enrolled in formal quit smoking clinics over a three-year period (Tr. 7/10 at 404, 410), particularly where employer provided incentives are offered (Tr. 7/10, p. 413). Therefore, OSHA expects that providing self-help material and requiring medical advice to enhance motivation will provide substantial help to smoking employees to reduce their smoking and thus their risk from asbestos exposure.

Mr. Pinney also recommended periodic medical advice to heighten individual motivation for program participants. Therefore, OSHA also is expanding its medical surveillance program by requiring that the physician certify that he has informed the employee of the synergistic relationship between cigarette smoking and asbestos exposure in developing lung cancer; that stopping smoking will reduce lung cancer risk; and that he has advised the employee to stop smoking. During the rulemaking, Dr. Selikoff, an authority on asbestos-related disease, testified that advising employees to stop smoking would be a significant risk reduction measure (Tr. 7/2, 194).

OSHA has not adopted the other features of the recommended smoking cessation program because, on the record, they do not appear to offer more than a *de minimis* benefit. Mr. Pinney testified that an ideal program would provide activities on at least a quarterly basis, and provide monetary incentives to participate. However, the largest group of asbestos-exposed workers do not work in manufacturing workplaces which lend themselves to these features. Rather they work in highly transient, mobile construction worksites, or in brake repair facilities, such as gas stations, with small employee populations and high turnovers not amenable to large scale programs with frequently scheduled activities and awards. The success of these features has been demonstrated only in limited production facilities. Mr. Pinney acknowledged that there "has not been an effort to modify these principles to apply them to a mobile type of setting" (Tr. 7/10, p. 414). Therefore OSHA believes there is inadequate evidence that adopting these additional provisions would result in more than a *de minimis* benefit to most asbestos-exposed employees.

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The other provisions urged by AIA—banning the workplace sale of tobacco products, and banning the hiring of asbestos workers who are smokers—have been reevaluated by OSHA in the context of the remand order. The Agency has determined not to adopt these provisions based on policy considerations and the lack of evidence concerning their feasibility and effectiveness.

The policy considerations are paramount. Adopting a ban on hiring smokers would circumvent the statutory goal of providing safe workplaces by instead restricting the workplace to "safe" workers. It could also promote intrusive employer surveillance of employees' personal lives.

As noted by the Court, OSHA has mandated "special treatment" of workers with higher risk factors in two regulatory contexts (838 F. 2d at 1272). However, these regulations, unlike a ban on hiring smokers, do not protect workers solely by excluding them from the workplace. The employer must first attempt a "workplace" solution to reducing the susceptible employee's risk. Thus, were employers are required to remove workers unable to wear respirators, the need for respirator use must be premised on a showing that the employer cannot institute feasible engineering and work practice controls. The number of employees who cannot be fitted with any respirator has been shown to be minimal, and the employer must first offer available alternative employment. (See e.g. 29 CFR 1910.1001(g)(3)(iv)).

The other regulatory provision cited by the court as mandating "special treatment" for susceptible workers requires that "workers trim their beards to allow a good face-seal when using respirators". See 29 CFR 1910.134(e)(5)(i). OSHA notes that this is not really comparable to regulating the off site practice of some workers to smoke, because the presence of facial hair directly affects the workplace exposure of employees by interfering with the face to facepiece seal.

Also as a matter of policy, OSHA is reluctant to reduce workplace risks by prescribing extra-workplace lifestyles or behaviors. This policy is based on the following considerations. The issue of extra-workplace factors which interact with workplace conditions to increase workplace risk is not confined to smoking and asbestos. For example, dietary patterns affect the incidence of coronary disease which affects workplace performance and may result in sudden coronary events at the workplace, and pregnancy may increase

the risk to both mother and child from otherwise benign workplace factors.

Although the interaction between asbestos exposure and smoking is significant, it is evident that "lifestyle" choices by workers increase their workplace risk in many other situations as well. The Agency believes that it is authorized to regulate the employees' personal behavior at the worksite when worksite risks are elevated, even where that risk may be aggravated by extra-workplace behavior (see e.g. *Furgis Industry Assn. v. Department of Labor* 773 F. 2d 1436 (4th Cir., 1985)). However, OSHA believes that it is not authorized to regulate personal behavior off the worksite, even when the risk of such behavior interacts synergistically with workplace risks. Further, the Agency is also concerned that by claiming a broader public health role in regulating lifestyle issues, it may be entering areas where it has limited expertise. OSHA also notes that in no other standard is an employer required to provide behavior modification programs where conduct is not work-related. The Agency also believes it should deploy its limited resources at correcting workplace hazards caused by workplace-based factors at this time as an exercise of its priority-setting authority pursuant to section 6(g) of the Act.

The Agency also rejects AIA's recommendation to ban the sale of tobacco products at asbestos worksites. First, no evidence of efficacy or feasibility was submitted. Therefore, OSHA does not believe it must defend its failure to adopt the recommendation. Second, the most significant source of future asbestos employment, asbestos abatement work, is primarily performed by contractors working at premises which they do not control. OSHA does not believe it is administratively feasible to enforce a ban on tobacco sales in these circumstances. Another significant source of asbestos related employment, brake repair, is frequently performed at service stations. Public access to stations may create demand for on-site tobacco sales. Thus a ban of on-site sales may interfere with the employer's economic activity in selling to the public. Since much brake repair work is intermittent and the sales area is separated from the repair area, a sales ban for the entire station would be difficult to enforce because it may apply only while the repair work is underway and may not apply to a separate sales area. Further, OSHA believes that any benefit to employees from such a ban is highly speculative, and appears to be *de minimis*. The policy considerations relevant to a ban on the employment of

smokers also apply to a ban on the sale of tobacco products when the use of such products extends outside the workplace. Therefore OSHA has determined, based on these considerations, that it is neither necessary nor appropriate to adopt a ban on the workplace sale of tobacco products.

Respirator Policy

In the 1986 asbestos standards, OSHA reaffirmed its traditional policy of preferring engineering and work practice controls to respirators to control employee exposure. The issue of whether OSHA should change this policy to allow the employer to rely on respirators was specifically raised and rejected by the Agency based on "overwhelming record support" for OSHA's traditional policy. See 51 FR at 22692 *et seq.* Thus, in the standards, employers first must attempt to reduce exposures by installing engineering controls and instituting work practices. Only when the preferred methods are infeasible, not yet installed, or insufficient to meet the permissible limits, or in situations where estimated exposures are uncertain, does OSHA require respirator use. Respirator use is not required in other situations when engineering and work practice controls reduce exposure to or below the PELs even though exposure to the PELs still presents a risk to employees which is not insignificant. The PELs were chosen based on the technological limitations of engineering and work practice controls, and the limitations of the available monitoring technology.

OSHA also requires employers to select required respirators from a class rated by its "protection factor" as able to protect employees at the ambient exposures to which they will be exposed. (See 29 CFR § 1910.1001(g)(2)(i); 1926.55(a)(2)(ii)). The ratings are expressed as multiples of the PEL: thus a respirator with an assigned protection factor of 10, is rated as able to protect employees in environments up to 2 f/cc, ten times the PEL of 0.2 f/cc.

BCTD challenged two aspects of OSHA's respirator requirements. It objected to OSHA's supplemental respirator policy as allowing "the use of any respirator that can protect employees to the degree that they would be protected at 0.2 f/cc," "rather than mandating the use of the most protective respirator feasible". As to this claim, OSHA responded that the most protective respirator, i.e. a supplied-air respirator, had safety hazards of its own and therefore should not be mandated in every case. Secondly, BCTD objected to

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the protection factors assigned by OSHA to various respirator classes, contending they are contrary to the record evidence (BCTD Br. at 49). OSHA responded that it used protection factors common to other standards and that the asbestos record did not provide "sufficient evidence to warrant changing this uniform approach at this time." It further noted that the Agency was undertaking a review of its general respirator standard (29 CFR 1910.134, see 51 FR 36593); that questions concerning effectiveness levels for respirator classes would be considered during that rulemaking; and if appropriate, conforming changes would be made to the asbestos standards (Secty's Br. at 85).

The Court found that OSHA's judgment about supplied air respirators was properly within the Agency's discretion. However, the Court was troubled by the fact that OSHA's respirator requirements appeared to require only that the combined effect of engineering and work practice controls and respirators limit exposure to the PEL, where that limit was based on the technological limitations of engineering and work practice controls and where "the PEL is conceded to leave a significant health risk . . ." (838 F.2d at 1274, emphasis added). The Court ordered OSHA to explicitly justify this policy. In addition, the Court ordered OSHA to complete its review of the general respirator standard, and "integrate" its results with the asbestos standards "without undue delay" (838 F.2d at 1275).

OSHA's response to the order is as follows. OSHA reaffirms its previous position concerning effectiveness levels. However, the Agency is expanding its explanation to demonstrate the correctness of its decision, and the limitations of the protection factor concept itself.

BCTD claimed that certain studies in the rulemaking record demonstrated that the performance of half-mask negative pressure respirators in actual use does not warrant OSHA's assigned protection factor of 10. OSHA, however, determined that these studies were flawed, and thus were an "insufficient basis" to change its historical protection factor assignment of 10. The flaws are serious. OSHA's review of the 1976 early workplace study cited by BCTD (Ex. 298), showed that the probe placement was incorrect, and so virtually guaranteed high and unrepresentative in-mask measurements. Further, the study was conducted on a workforce which received little or no regular fit-testing.

Thus, reported low protection factors in that study do not appear to be the result of the inherent capability of that respirator type, but more likely reflect flawed experimental design, and/or poorly fitting masks. Similar defects make the results of the other studies cited by BCTD unreliable and thus inadequate to use as a basis for setting protection factors.

These studies help illustrate, as explained more fully below, why OSHA regards protection factors as indicating performance capabilities of various respirator types only if they are used correctly, fitted carefully and maintained according to regulatory requirements.

BCTD also objected to the fact that OSHA assigned a protection factor of 100 to all powered air-purifying respirators (PAPRs). OSHA noted that a NIOSH recommendation for a lower rating is not binding (Br. at 85). OSHA further notes that NIOSH is also planning to review its recommendations in a rulemaking revising its respirator approval criteria. NIOSH's most recent public recommendations concerning PAPRs assigned a protection factor of 25 to loose fitting PAPRs and 50 to tight fitting PAPRs (See 10 DHHS (NIOSH) Publication No. 87-116, at 211). Thus, NIOSH recommends protection factors which are lower than the 100 which OSHA assigned. OSHA does not believe, however, that these differences in assigned protection factors would significantly affect risk in actual asbestos workplaces. This is because there are few, if any, asbestos workplaces where a PAPR is likely to be selected, with exposures between 25 times the PEL and 100 times the PEL, i.e., between 5 fibers and 20 fibers per cc. Therefore, OSHA believes that adjusting the protection factor for PAPRs to 25 to agree with a NIOSH recommendation would have no real effect on workplace risk.

OSHA notes that it is still planning to revise and update its general respirator standard. For the reasons discussed above, it believes that continuing to enforce the current asbestos respirator requirements during this interim period will not expose employees to unnecessary risk. In sum, OSHA believes its protection factor assignments properly reflected the record, are consistent with OSHA's other standards, and if applied as part of an entire respirator program offer effective protection to respirator wearing employees.

With respect to the other respirator issue, i.e., tying supplemental respirator protection to meeting the PEL, OSHA

concluded that the result of implementing the entire required respirator program would result in reducing exposures below the PEL. This means that risk would be reduced below that estimated at the PEL, using any respirator type approved in the standards. This finding was based on the following considerations: OSHA's predictions of relatively low ambient concentrations of asbestos after feasible engineering, work practice and housekeeping controls would be instituted; OSHA's revised and tightened respirator requirements which require more protective respirator types, require individual fit testing and PAPRs on employee request; Agency assessment that compliance with the standards' entire respirator program would ensure adequate respirator usage and fit; and provisions unique to asbestos to encourage the use of respirator types rated as more protective.

OSHA predicted that most operations, after engineering, work practice and housekeeping controls were instituted would not expose employees to above 0.2 f/cc, the PEL. However, where controls would not reduce exposures to the PEL, ambient exposure concentrations remaining in most such operations would be 0.5 f/cc or less measured over an 8-hour shift. For example, see 51 FR at 22665, tables 22 and 23. In these operations, respirators must supplement other controls. The permitted type of respirator rated as least protective, i.e., a half mask with a high efficiency filter, is rated as having a protection factor of 10. This means that it is expected to filter out at least 90% of the ambient concentration if properly fitted and worn. The remaining concentration (less than 10%) would leak into the mask through gaps between the wearer's face and the respirator. Since the standards require high efficiency filters, virtually no fibers will penetrate the filter itself. When a half mask respirator is used in maximum asbestos concentrations of up to 0.5 f/cc, the in-mask concentration under optimum fitting conditions may be not more than 0.05 f/cc, well below the PEL. Thus in most anticipated situations use of the "lowest" ranking respirator type was expected to reduce actual exposures below the PELs when respirators fit, and are maintained and worn properly.

OSHA has also required that upon an employee's request, the employer provide a respirator type rated more protective, i.e., a PAPR with an expected protection factor of 100. 29 CFR 1910.1001(g)(2)(ii), and 1926.58(h)(2)(iii).

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Further, in abatement and renovation work, where expected ambient concentrations are variable, additional provisions encourage and require supplemental respirator use without regard to exposure levels. Thus in major abatement jobs, incentives to use the most protective class of respirators, supplied air respirators operated in the positive-pressure mode, are provided by exempting employers who provide such respirators from the obligation to monitor exposures daily for construction employees working within regulated areas. 29 CFR 1926.58(f)(3).

Additionally, in small scale, short term abatement and renovation operations, where glove bags are used, respirators must be worn by employees removing asbestos regardless of actual exposures measured in the workplace. 29 CFR 1926.58, app. G.

OSHA believes therefore that its supplemental respirator use requirements will result in employee exposure below the PELs, where employers comply with all respirator program provisions.

Further, unlike engineering and work practice controls, the record does not contain evidence that the performance of respirators can now be reliably evaluated by measuring in-mask concentrations and OSHA has declined to set respirator requirements on this basis. Therefore, the respirator selection and use requirements in the standards attempt to cover most aspects of reliable respirator use including selection, fit testing, maintenance, and comfort without reference to numerical performance levels.

Thus although the respirator selection tables in the standards rate respirator classes in terms of their estimated capability to meet certain multiples of the PEL, the tables only start the employer's selection process, not end it. Thus, OSHA additionally requires, not only that the respirator chosen be of an appropriate class, *i.e.*, may be used in the concentrations set out in Table I, but also that it be certified for use by MSHA/NIOSH, and that the individual user be personally fit-tested to account for individual variations in fit, and thus face-seal. Decreasing the inevitable discomfort of respirator wear, and thereby avoiding the temptation to loosen strap tension or remove the respirator for "relief," is provided for, as noted above, by requiring the employer to provide a PAPR for employees who ask for one, instead of a half-mask respirator otherwise indicated as appropriate. The relative rankings of respirator effectiveness are crude guidelines which set a floor for

respirator selection, which other requirements amplify.

OSHA wished to retain flexibility to choose among a variety of respirator types to achieve optimum protection for two reasons. It did not prescribe the use of respirator types based only on their protection factor ratings, for at this time that rating may be uncertain in actual use. Further any numerical rating now available is only a partial indicator of respirator suitability for a job. For example, OSHA has assigned a protection factor of 50 to full facepiece air-purifying respirators equipped with high efficiency filters, and a protection factor of 10 to a half-mask non-disposable air-purifying respirators equipped with high-efficiency filters. Although the nominal protective edge for the full-facepiece respirator is five times greater than for the half-facepiece respirator, OSHA's experience indicates that the half-facepiece respirator is more comfortable, and that the full facepiece mask can impair vision and contribute to heat stress. None of these factors are reflected in the current numerical ratings. Therefore, the Agency is reluctant to require always that the full facepiece type be used, because the Agency's experience indicates that it will not always be more protective. Similar concerns exist relative to all respirator types. The class rated as most protective, a supplied air type, was acknowledged in the Court's decision to create safety hazards which justified the Agency's decision to allow other respirator types which are free from such concerns.

To provide additional protection, OSHA deleted from allowable respirator types in the asbestos standards respirator types which did not meet extraordinary performance criteria. Thus, OSHA has limited the flexibility to choose among respirator types by excluding some respirator types which are simply not good enough to protect against asbestos. Thus, dust, mist, and fume filters previously allowed for asbestos exposure, although they are recognized as appropriate against other toxic substances, are prohibited in the 1986 standards. OSHA believed that the high toxicity of asbestos requires that only high efficiency filters can be safely used by workers when using negative pressure respirators which depend on filtration. Furthermore, disposable respirators which are often allowed to be used in other OSHA standards are prohibited for use by asbestos exposed workers. OSHA believed that these respirators were not suitable because of the apparent fitting problems. Thus, OSHA has eliminated from possible use

against asbestos, entire respirator classes which the agency believes do not perform well enough to reliably protect employees against a highly toxic contaminant such as asbestos.

OSHA believes that its respirator program requirements, discussed above, properly reflect the record of its rulemaking which specifically explored respirator design defects and program deficiencies. In addition to the problematic nature of respirator use, reliance on engineering and work practice controls for asbestos is preferable because they measurably reduce exposures of employees directly involved in asbestos producing operations, reduce or eliminate bystander exposures, avoid the deposit of asbestos dust on work surfaces and employee clothing which results in further exposures, and include methods of controls such as substitution, or fully bonded asbestos-containing materials which will eliminate or reduce future asbestos exposures.

The balance in the asbestos standard was struck therefore to rely on respirators where the preferred control systems would be insufficient, but not to elevate reliance on respiratory protection to a level of performance which can neither be measured nor reliably achieved. Therefore OSHA did not mandate respirator choice in this standard based primarily on numerical protection factors. As stated above, at this time the numbers themselves are inconclusive, the rankings are only partial indicators of respirator effectiveness, and perhaps most importantly, the rankings now used emphasize a theoretical level of respirator performance.

OSHA believes that this approach is rational and that employees required to wear respirators for supplemental protection will first benefit from all feasible engineering and work practice controls. It is intended to enhance reliance on favored control strategies such as engineering controls, work practices and housekeeping.

Bi-Lingual Signs and Labels

In the 1986 standards, OSHA prescribed a comprehensive hazard communication program including formal training, labeling asbestos-containing products, and erecting signs demarcating regulated areas where exposures exceed the PEL and, in construction, where negative pressure enclosures are erected for major abatement and renovation jobs. The training program which is required "to be conducted in a manner which the employee is able to understand,"

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includes conveying to each employee information concerning the quantity, location, manner of use, release and storage of asbestos; the health effects connected with asbestos exposure; and a review of this standard. 29 CFR 1910.1001(j)(5); 1926.58(k)(3). Neither warning signs nor labels were required to be in languages other than English. 51 FR 22724. BTCDD had argued that failure to require warnings in languages other than English is insufficiently protective of non-English-speaking employees and that OSHA should require signs and labels "bilingual in the languages that predominate in the workforce area." The Court found that:

It seems obvious that a warning sign or label in English will only rarely warn or educate non-English-speaking workers. The number of such workers in the construction industry is significant . . . Section (6)(b)(5) directs the agency to provide for all workers" (838 F. at 1277).

Therefore it ordered OSHA to reconsider its determination not to require signs and labels to be in languages other than English.

OSHA's response is as follows. After reconsideration of the rulemaking record, the Agency is adding a new element to its training program specifically covering the content and placement of warning labels and signs, and a new requirement that the employer assure that employees comprehend warning signs required in regulated areas. Such understanding may be obtained by utilizing English, if workers are trained accordingly, or by other means, such as utilizing universal symbols, graphics, or foreign languages. However, OSHA is not requiring similar assurances for warning labels.

OSHA is not specifically mandating that warning signs and labels be in languages other than English, because the Agency has determined that the benefit of such a specific requirement is unproven, that it raises policy issues for the agency that go beyond this standard, and that OSHA's entire hazard communication program for asbestos, as amended, will ensure that all exposed employees are effectively warned of the presence and hazards of asbestos-containing materials on worksites.

The first new provision will add regulatory text as paragraph (j)(5)(iii)(I) of the general industry standard and paragraph (k)(3)(iii)(I) of the construction standard, by adding a new element for inclusion in training programs. Thus, employers must inform employees of "the requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels." Training must cover

the location, posting, and contents of mandated labels and signs. OSHA intends that employees be shown actual signs and labels and review their contents during training. Non-English speaking employees thereby will be familiarized with the wording of signs and labels and the significance of those legends. OSHA believes that the additional training component will assure the comprehension by all employees of written warnings which are applied or posted to hazardous products and locations.

Relying on the training component of hazard communication programs to ensure knowledge and comprehension of written warnings has been OSHA's regulatory approach in the two generic hazard communication standards it has promulgated—the generic hazard communication rules covering health related hazards, 29 CFR 1910.1200, and the control of hazardous energy source rule, also known as lockout/tagout, 29 CFR 1910.147. In the lockout/tagout rule, OSHA allows machinery to be tagged in certain limited circumstances to prevent the release of hazardous energy, when maintenance and servicing are performed. Although the dangers of non-comprehension by employees are immediate and can be deadly, OSHA does not require foreign language tagout legends, but relies instead on training programs to underscore the meaning of tag messages, and requires that tags be "understandable" by all affected employees. 29 CFR 1910.147(c)(7). The generic health hazard communication standard similarly relies on training as the major medium of employee instruction as to hazards. As noted in the Agency's earlier response, OSHA allows the addition of foreign language legends to English language signs and labels, if the employer believes comprehension will thereby be improved.

OSHA has also added a requirement that the employer assure that warning signs required for regulated areas bear legends which are understandable to employees working in and contiguous to such posted areas. 29 CFR 1910.1001(j)(1)(iv); 1926.58(k)(1)(iv). OSHA will not require that such signs be in a foreign language, but employers must assure comprehension by all affected employees including non-English speaking ones. To convey the meaning of all elements of the required legend, the employer may use symbols, graphics, pictographs or languages used by affected employees, or any other proven means of communication. Posting regulated areas warns two employee groups, those working within the area who undergo training, and

those who work in the vicinity of regulated areas, who may not receive asbestos training. The second group is at risk of significant asbestos exposure if they cannot understand the signs which demarcate the potential high-exposure area.

Protection of bystander employees has acquired special meaning in asbestos work, because of the historical record of significant disease and death suffered by employees who themselves did not handle asbestos, but who worked in the vicinity of those who did (See 51 FR at 22711, 1). Therefore, OSHA has tried to reduce the risk for bystander employees where feasible. The provisions added are intended to protect both groups.

As noted above OSHA has not added regulatory provisions which require foreign language legends or symbols on warning labels. OSHA believes that because labeling of asbestos products is done by the manufacturer, the appropriate language for any downstream work force is unknown. Employees who work with asbestos products are required to undergo training if their exposure will be significant, and those who work in areas where exposures will exceed the PEL must be trained and also warned by signs.

Thus, although employers may attach foreign language and symbolic legends to product and waste material labels, OSHA does not believe the incremental benefits of such a requirement compels its adoption.

One policy concern of the Agency should be noted. Requiring foreign language warnings in the asbestos standard would constitute the first departmental requirement of this nature. Many departmental requirements across agency lines involve the communication of hazards, dangers, risks, and benefits to immigrant or foreign language work forces. The Agency believes that the issue of requiring the public to utilize foreign languages should only be addressed after a broader airing of the concerns about such an approach. The Agency believes that the approach taken in this standard, relying on performance objectives to assure comprehension of warnings, because it does not raise these policy concerns and because OSHA believes it is effective, is the most appropriate approach to conveying asbestos warnings to affected employees.

IV. State Plan Applicability

Twenty-five states and U.S. territories have their own OSHA-approved occupational safety and health plans.

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These states and territories are: Alaska, Arizona, California, Connecticut (for state and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York (for state and local government employees only), North Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming. Those states and territories are to adopt a standard comparable to that of OSHA's within six months of the effective date of the Federal rule.

List of Subjects

29 CFR Part 1910

Asbestos, Cancer, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

29 CFR Part 1926

Asbestos, Cancer, Construction industry, Hazardous materials, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

V. Authority

This document was prepared under the direction of Gerard F. Scannell, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. Accordingly, pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), section 107 of the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), the Longshore and Harbor Workers Compensation Act (33 U.S.C. 941), 29 CFR part 1911 and Secretary of Labor's Order No. 9-83 (48 FR 35736), 29 CFR parts 1910 and 1926 are hereby amended as set forth below.

Signed at Washington, DC, this 29th day of January, 1990.

Gerard F. Scannell,
Assistant Secretary of Labor.

Amended Standards

Part 1910 of title 29 of the Code of Federal Regulations is hereby amended as follows:

PART 1910—[AMENDED]

Subpart Z—[Amended]

1. The authority citation for subpart Z of part 1910 continues to read as follows:

Authority: Secs. 8, 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657; Secretary of Labor's Orders 12-71 (36 FR 8754), 8-76 (41

FR 25059), or 9-83 (48 FR 35736) as applicable; and 29 CFR part 1911.

All of subpart Z issued under sec. 6(b) of the Occupational Safety and Health Act, 29 U.S.C. 655(b), except those substances listed in the Final Rule Limits column of Table Z-1-A, which have identical limits listed in the Transitional Limits columns of Table Z-1-A, Table Z-2 or Table Z-3. The latter were issued under sec. 6(a) (29 U.S.C. 655(a)).

Section 1910.1000, the Transitional Limits columns of Table Z-1-A, Table Z-2 and Z-3 also issued under 5 U.S.C. 553. Section 1910.1000, Tables Z-1-A, Z-2 and Z-3 not issued under 29 CFR part 1911 except for the arsenic, benzene, cotton dust and formaldehyde listings.

Section 1910.1001 also issued under sec. 107 of Contract Work Hours and Safety Standards Act, 40 U.S.C. 333.

Section 1910.1002 not issued under 29 U.S.C. 655 or 29 CFR part 1911; also issued under 5 U.S.C. 553.

Section 1910.1003 through 1910.1018 also issued under 29 U.S.C. 653.

Section 1910.1025 also issued under 29 U.S.C. 653 and 5 U.S.C. 553.

Section 1910.1028 also issued under 29 U.S.C. 653.

Section 1910.1043 also issued under 5 U.S.C. 551 *et seq.*

Sections 1910.1045 and 1910.1047 also issued under 29 U.S.C. 653.

Section 1910.1048 also issued under 29 U.S.C. 653.

Sections 1910.1200, 1910.1499 and 1910.1500 also issued under 5 U.S.C. 553.

2. Section 1910.1001 is hereby amended by adding new paragraphs (j)(4), (j)(1)(iv), (j)(5)(iii)(I), (j)(5)(iii)(II), (j)(5)(iv)(C), (l)(7)(i)(D), and (o)(4), and new appendix I, and by revising paragraph (p)(2), to read as follows:

§ 1910.1001 Asbestos, tremolite, anthophyllite, and actinolite.

(j) * * *

(4) *Smoking in work areas.* The employer shall ensure that employees do not smoke in work areas where they are occupationally exposed to asbestos because of activities in that work area.

(j) * * *

(1) * * *

(iv) The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by paragraph (j)(1)(i) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

(5) * * *

(iii) * * *

(I) The names, addresses and phone numbers of public health organizations which provide information, materials, and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations

contained in Appendix I, to comply with this requirement.

(j) The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

(iv) * * *

(C) The employer shall inform all employees concerning the availability of self-help smoking cessation program material. Upon employee request, the employer shall distribute such material, consisting of NIH Publication No. 69-1647, or equivalent self-help material, which is approved or published by a public health organization listed in appendix I.

(l) * * *

(7)(i) * * *

(D) A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.

(o) * * *

(4) *Compliance date.* The requirements of paragraphs (j)(4), (j)(1)(iv), (j)(5)(iii)(I), (j)(5)(iii)(II), (j)(5)(iv)(C), and (l)(7)(i)(D) shall be complied with by May 7, 1990.

(p) * * *

(2) Appendices B, F, G, H, and I to this section are informational and are not intended to create any additional obligation not otherwise imposed or to detract from any existing obligation.

Appendix I to § 1910.1001—Smoking Cessation Program Information For Asbestos, Tremolite, Anthophyllite and Actinolite—Non-Mandatory

The following organizations provide smoking cessation information and program material.

1. The National Cancer Institute operates a toll-free Cancer Information Service (CIS) with trained personnel to help you. Call 1-800-4-CANCER* to reach the CIS office serving your area, or write: Office of Cancer Communications, National Cancer Institute, National Institutes of Health, Building 31, Room 10A24, Bethesda, Maryland 20892.

2. American Cancer Society, 3540 Peachtree Road, NE, Atlanta, Georgia 30062, (404) 320-3333

The American Cancer Society (ACS) is a voluntary organization composed of 58 divisions and 3,100 local units. Through "The Great American Smokeout" in November, the annual Cancer Crusade in April, and numerous educational materials, ACS helps people learn about the health hazards of smoking and become successful ex-smokers.

3. American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231, (214) 750-5300

The American Heart Association (AHA) is a voluntary organization with 130,000 members (physicians, scientists, and laypersons) in 55 state and regional groups. AHA produces a variety of publications and audiovisual materials about the effects of smoking on the heart. AHA also has developed a guidebook for incorporating a weight-control component into smoking cessation programs.

4. American Lung Association, 1740 Broadway, New York, New York 10019. (212) 245-8000

A voluntary organization of 7,500 members (physicians, nurses, and laypersons), the American Lung Association (ALA) conducts numerous public information programs about the health effect of smoking. ALA has 59 state and 85 local units. The organization actively supports legislation and information campaigns for non-smokers' rights and provides help for smokers who want to quit, for example, through "Freedom From Smoking," a self-help smoking cessation program.

5. Office on Smoking and Health, U.S. Department of Health and Human Services, 5600 Fishers Lane, Park Building, Room 110, Rockville, Maryland 20857

The Office on Smoking and Health (OSH) is the Department of Health and Human Services' lead agency in smoking control. OSH has sponsored distribution of publications on smoking-related topics, such as free flyers on relapse after initial quitting, helping a friend or family member quit smoking, the health hazards of smoking, and the effects of parental smoking on teenagers. *In Hawaii, on Oahu call 524-1234 (call collect from neighboring islands).

Spanish-speaking staff members are available during daytime hours to callers from the following areas: California, Florida, Georgia, Illinois, New Jersey (area code 210), New York, and Texas. Consult your local telephone directory for listings of local chapters.

PART 1926—[AMENDED]

Subpart D—[Amended]

3. The authority citation for subpart D of 29 CFR part 1926 continues to read as follows:

Authority: Secs. 4, 6, 8 Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); sec. 107 Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12-71 (38 FR 8754), 8-76 (41 FR 25059), or 9-63 (48 FR 35726) as applicable. Sec. 1926.55(c) and 1926.58 also issued under 29 CFR part 1911.

4. Section 1926.58 is hereby amended by adding new paragraphs (j)(3), (k)(1)(iv), (k)(3)(iii)(I), (k)(3)(iii)(J), (k)(4)(iii), (m)(4)(i)(D) and (o)(3), and appendix J, and by revising paragraph (p)(2), to read as follows:

§ 1926.58 Asbestos, tremolite, anthophyllite, and actinolite.

(j) . . .

(3) *Smoking in work areas.* The employer shall ensure that employees do not smoke in work areas where they are occupationally exposed to asbestos because of activities in that work area.

(k)(1) . . .

(iv) The employer shall ensure that employees working in and contiguous to regulated areas comprehend the warning signs required to be posted by paragraph (k)(1)(i) of this section. Means to ensure employee comprehension may include the use of foreign languages, pictographs and graphics.

(3) . . .

(ii) . . .

(I) The names, addresses and phone numbers of public health organizations which provide information, materials and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations contained in appendix J, to comply with this requirement.

(J) The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

(4) . . .

(iii) The employer shall inform all employees concerning the availability of self-help smoking cessation program material. Upon employee request, the employer shall distribute such material, consisting of NIH Publication No. 89-1647, or equivalent self-help material, which is approved or published by a public health organization listed in appendix J.

.

(m) . . .

(4) . . .

(i) . . .

(D) A statement that the employee has been informed by the physician of the increased risk of lung cancer attributable to the combined effect of smoking and asbestos exposure.

.

(o) . . .

(3) The requirements of paragraphs (j)(3), (k)(1)(iv), (k)(3)(iii)(I), (k)(3)(iii)(J), (k)(4)(iii), and (m)(4)(i)(D) shall be complied with by May 7, 1990.

(p) . . .

(2) Appendices B, F, G, H, I and J to this section are informational and are not intended to create any additional obligations not otherwise imposed or to detract from any existing obligations.

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Appendix J to § 1926.58—Smoking Cessation Program Information for Asbestos, Tremolite, Anthophyllite and Actinolite—Non-Mandatory.

The following organizations provide smoking cessation information.

1. The National Cancer Institute operates a toll-free Cancer Information Service (CIS) with trained personnel to help you. Call 1-800-4-CANCER* to reach the CIS office serving your area, or write: Office of Cancer Communications, National Cancer Institute, National Institutes of Health, Building 31, Room 10A24, Bethesda, Maryland 20892.

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3. American Heart Association, 7320 Greenville Avenue, Dallas, Texas 75231. (214) 750-5300

The American Heart Association (AHA) is a voluntary organization with 130,000 members (physicians, scientists, and laypersons) in 55 state and regional groups. AHA produces a variety of publications and audiovisual materials about the effects of smoking on the heart. AHA also has developed a guidebook for incorporating a weight-control component into smoking cessation programs.

4. American Lung Association, 1740 Broadway, New York, New York 10019. (212) 245-8000

A voluntary organization of 7,500 members (physicians, nurses, and laypersons), the American Lung Association (ALA) conducts numerous public information programs about the health effects of smoking. ALA has 59 state and 85 local units. The organization actively supports legislation and information campaigns for non-smokers' rights and provides help for smokers who want to quit, for example, through "Freedom From Smoking," a self-help smoking cessation program.

5. Office on Smoking and Health, U.S. Department of Health and Human Services, 5600 Fishers Lane, Park Building, Room 110, Rockville, Maryland 20857

The Office on Smoking and Health (OSH) is the Department of Health and Human Services' lead agency in smoking control. OSH has sponsored distribution of publications on smoking-related topics, such as free flyers on relapse after initial quitting, helping a friend or family member quit smoking, the health hazards of smoking, and the effects of parental smoking on teenagers. *In Hawaii, on Oahu call 524-1234 (call collect from neighboring islands).

Spanish-speaking staff members are available during daytime hours to callers from the following areas: California, Florida, Georgia, Illinois, New Jersey (area code 201), New York, and Texas. Consult your local telephone directory for listings of local chapters.

[FR Doc. 90-2527 Filed 2-2-90; 3:45 am]

BILLING CODE 4510-25-M

LAM 001734

Memo for Record — 21 Feb 91

Called Harris (by Health Dept - Occupational Health (620. 6860)

Mr. John Bremer out — left msg for him to call me back re. asbestos

25 Feb 91 - 1405 - called again, left msg. for Mr. Bremer.

1 Mar 91 - 1315 - called again, reached him.

Leans towards considering pleural ~~asbestos~~ plaques as asbestos, if considered as a disease ~~also~~ or condition attributable to occupational asbestos exposure. He will ask his Epidemiologist and call me back 1435: called back by Bremer — based on TX Med May 89 article, they will interpret as plaque ≠ asbestos, not reportable. Asked him to send it to me in writing, he states will do so.

11 Nov 92 - 1000 - After unsuccessful attempt via Shell Librarian to get copy of legal citation in the TX Med article, have now discussed it w/ Ms. Cote @ Shell Legal Library. She ~~refers~~ verifies citation is correct, but does not DEFINE "Asbestosis" — refer me to Mr Brent Averius, Shell Atty on asbestos cases, at 241-4565. have left SAM msg. for him to answer the point for me.

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DPMC-17430

Memo for Record —

13 Feb 91 p.m.

Called Dr. Reggie Greff, Houston Health Dept, Occup. ^{Health} ~~Med.~~ Section.
640-4359

Confirms that Asbestosis is reportable, etc, but not to him —
need to discuss w State Epidemiology (Janet Pichette at 512-458-7269);
State then distributes the individual case information to appropriate
county.

Suggests may also want to talk to City of Houston Epidemiology Dept
"Person-of-the-day" (640-4359).

Called for Janet Pichette, she will return call.

Called Dr Waddell — believes State does not want plague reports; OK
w him for me to seek answer (thinks Hughes went down this road earlier).

14 Feb — 1315

Called back by Janet Pichette:

I quite sure have not received any asbestos case reports from
Shell although thinks have some from Exxon.

Has no list of clinical / xray criteria for Dx "asbestosis";
unsure whether plaques reportable — "whatever you think
are good criteria to use for Dx of asbestosis, suspected or
confirmed" — is thinking of seeking criteria.

LAM 001736

DPMC-17431

MEMORANDUM FOR RECORD - 14 Feb 91

① Ascertained @ 1325, from Ms. Watkins @ Deer Park City Secretary's ofc. that Deer Park Health Officer is Dr Metz.

③ Talked to Dr. Metz (479-5941)

- a - He uses Dr Bradley as consultant, and thinks that plagues are probably within the category of "asbestosis". Has no strong feelings, however, and will gladly entertain a definition we use and can substantiate. Knows State is equivocal on the issue.
- b - I asked if he would consider answering the question if posed in writing so as to evolve local criteria - he would be glad to review material we send and give us a written reply.
- c - States he thinks there has only been one case reported in a Brown + Root Shell subcontractor.
- d - He would prefer we report cases directly to State, but keep him posted.

LAM 001737