



NIOSH

Comments to DOL

POSTHEARING COMMENTS OF THE
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
ON
THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S
PROPOSED RULE ON
OCCUPATIONAL EXPOSURE TO ASBESTOS, TREMOLITE, ANTHOPHYLLITE,
AND ACTINOLITE

29 CFR Parts 1910 and 1926
Docket No. H-033-e

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
National Institute for Occupational Safety and Health

4/26/91

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SPRINGFIELD, VA 22161

On January 24, 1991, the National Institute for Occupational Safety and Health (NIOSH) presented testimony to the Occupational Safety and Health Administration (OSHA) regarding the changes proposed to its existing regulation for occupational exposure to asbestos, tremolite, anthophyllite, and actinolite in the general [29 CFR 1910] and construction industries [29 CFR 1926]. During the hearing, NIOSH indicated in its testimony that additional information would be provided on several subjects and in response to questions raised at the hearing.

The following items are being provided:

1. NIOSH indicated in its testimony (page 216 of the transcript) that a review would be made of the OSHA analytical method for asbestos.

Response - Attachment 1 is a memorandum from Mr. Philip Bierbaum, Director, Division of Physical Sciences and Engineering (DPSE), NIOSH, to Clayton Doak, Document Manager, Division of Standards Development and Technology Transfer (DSDTT), NIOSH, that compares NIOSH Method 7400 and OSHA Method ID 160. This memo addresses the differences between the two methods.

2. NIOSH indicated in its testimony (page 229 of the transcript) that reports on NIOSH studies evaluating the effectiveness of negative-pressure glove bags and boxes in controlling exposures to airborne asbestos would be submitted when available.

Response - Attachment 2 is the NIOSH study, "An evaluation of glove bag containment in asbestos removal" (DHHS [NIOSH] Publication No. 90-119) which pertains to this subject. In regard to studies evaluating the effectiveness of negative-pressure glove bags, NIOSH is completing the following studies which will be forwarded to OSHA:

- a. In-depth survey report: Evaluation of the Aero-pipe capsule (negative air glove bag) during the removal of asbestos-containing pipe lagging (ECTB Report No. 147-21a)
 - b. In-depth survey report: Evaluation of a custom fabricated negative air glove bag during the removal of asbestos-containing pipe lagging (ECTB Report No. 147-22a)
3. NIOSH indicated in its testimony (page 243 of the transcript) and it was requested by Mr. Tim Hardy of the Safe Building Alliance (page 290 of the transcript) that NIOSH provide data on measuring concentrations lower than 0.1 f/cc.

Response - Attachments 3, 4, and 5 contain the results of asbestos investigations that have been made by the Hazard Evaluation and Technical Assistance Branch of NIOSH. The limit of detection (LOD) that was ascertained from the sampling strategies for these three sets

of samples was 0.002, 0.003, and 0.01 f/cc. The LOD was based upon a 7 fiber/square millimeter of filter, or 3000 fibers/filter for 25mm diameter filters. The analytical method used for the air samples collected was the phase contrast method (PCM), NIOSH Method 7400. No unusual sample rates or times were used in these studies; therefore, detecting levels below the proposed 0.1 fiber/cc limit may be possible in work environments where airborne contamination of particulate material is minimal.

4. Mr. Tim Hardy requested (page 246 of the transcript) that NIOSH check its records to determine if we had visited any plants where it was required to "HEPA all surfaces" as OSHA has proposed, once per shift, in order to reduce concentrations to the PEL.

Response - NIOSH has no data to document that the periodic cleaning of surfaces with a HEPA vacuum is necessary to achieve the PEL for asbestos. However, NIOSH does support OSHA in this requirement.

5. In response to a question from Mr. Mike Otchet of Armstrong World Industries (page 274 of the transcript), it was requested that a paper published in the British Journal of Industrial Medicine, updating the cancer mortality among chrysotile miners in Northern Italy, be provided to the docket.

Response - Attachment 6 is the paper titled, "An update of cancer mortality among chrysotile asbestos miners in Balangero, northern Italy" by Piolatto et al. which was published in the British Journal of Industrial Medicine 47:810-814; 1990.

6. Mr. Otchet also requested clarification (page 288 of the transcript) on the asbestos study at the Los Angeles Unified School District. Mr. Otchet indicated that he would direct written questions to Mr. Lemen and to OSHA.

Response - Mr. Otchet did not submit any questions to the docket for NIOSH clarification. However, NIOSH submits Attachment 7 which is a letter from Ms. Susie Wong, Director of the Environmental Health and Safety Branch, Los Angeles Unified School District (LAUSD). This communication presents the results of the testing performed on a variety of maintenance procedures used on vinyl asbestos floor tiles. As a result of this study, LAUSD found that certain brushes used with rotary-powered equipment do cause an excessive release of asbestos fibers. LAUSD recommends that OSHA ban the buffing of vinyl asbestos floor tiles except with low-abrasive pads at speeds of 190 rpm or less."

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7. Mr. Carl Goode of the National Roofing Contractors Association (NRCA) requested (page 297 of the transcript) that NIOSH review their submission to the docket in regard to using hand tools to remove built-up roofing and to reassess the NIOSH recommendations on page 8 of the testimony.

Response - NIOSH has reviewed the submission of the NRCA. Although most of the air monitoring data submitted by the NRCA showed exposures below 0.1 f/cc, two submissions—one entitled "Evaluation of asbestos exposure from asbestos-roofing removal operations" by Aherne and Levin, and one entitled "exposure to asbestos during roofing removal" by SRI International, both showed asbestos concentrations in excess of 0.1 f/cc during the removal of asbestos shingles using both powered and nonpowered tools. These studies, together with the NIOSH study (NIOSH 1985) submitted with our earlier comments, indicate that removal operations have the potential for exposing workers to airborne asbestos. All of the four recommendations made by NIOSH for reducing exposure remain appropriate.

8. Mr. James Thornton of Newport News Shipbuilding, requested (page 306 of the transcript) that NIOSH check its records in regard to the recommendations it made for other carcinogenic materials as to whether there were provisions for requiring the employer to notify the regulatory agency of upcoming work as required in the asbestos rule.

Response - NIOSH has not made recommendations to OSHA in the past that employers notify the regulatory agency about anticipated work involving carcinogenic substances. NIOSH does not normally provide comments to regulatory agencies on administrative provisions of their proposed regulations. However, NIOSH supports OSHA in this requirement because it would help identify asbestos removal operations for OSHA inspectors before these operations have been completed.

9. Ms. Carol Jones of OSHA questioned (page 311 of the transcript) whether NIOSH had any information on the use of negative pressure enclosures in large-scale vinyl-asbestos tile removal operations.

Response - NIOSH has not had any experience in the use of negative pressure enclosures for this type of application.

**Enclosures and/or attachments that
are not included are available free of
charge from the NIOSH Docket
Office (513/533-8450).**

REPORT DOCUMENTATION PAGE		1. REPORT NO.	2.	PB92-136043	
4. Title and Subtitle NIOSH Testimony on Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite by J. D. Millar, April 26, 1991				5. Report Date 1991/04/26	
7. Author(s) NIOSH				6.	
9. Performing Organization Name and Address NIOSH				8. Performing Organization Rept. No.	
				10. Project/Task/Work Unit No.	
				11. Contract (C) or Grant(G) No. (C) (G)	
12. Sponsoring Organization Name and Address				13. Type of Report & Period Covered	
				14.	
15. Supplementary Notes					
<p>18. Abstract (Limit: 200 words) This testimony contains the comments of NIOSH regarding the proposed rule on occupational exposure to asbestos (1332214), tremolite (14567738), anthophyllite (17068789), and actinolite (77536664). This testimony included a memorandum comparing NIOSH Method 7400 to OSHA Method ID 160, an evaluation of glove bag containment in asbestos removal, the limit of detection that was ascertained from the sampling strategies for three sets of samples, effectiveness of periodic cleaning of surfaces with a HEPA vacuum, an update on cancer mortality among chrysotile (12001295) asbestos miners, and the use of hand tools to remove built up roofing. ←</p>					
17. Document Analysis a. Descriptors					
b. Identifiers/Open-Ended Terms NIOSH-Publication, NIOSH-Author, NIOSH-Testimony, Millar-J-D, Asbestos-fibers, Mining-industry, Cancer-rates, Mortality-surveys, Airborne-dusts, Mineral-dusts					
c. COSATI Field/Group					
18. Availability Statement			19. Security Class (This Report)		21. No. of Pages 6
			22. Security Class (This Page)		22. Price

