PLAINTIFF'S EXHIBIT

UC-4950

[illegible]

[illegible] DIVISION • P.O. BOX 579 · 4625 ROYAL AVE., NIAGARA FALLS, NEW YORK 1[illegible]

To (Name) Dr. J. J. Welsh - 22nd Fl.
Division Mr. T. W. Carmody - 11th Fl.
Location Health, Safety & Environ. Affairs
New York, NY

Date January 31, 1978

[illegible] "Calidria" Asbestos

[illegible]

Copy to Messrs. O. J. Malacarne
J. L. Myers
E. A. Piersall
E. W. Shortridge
W. C. Thurber
File

Subject Sputum Cytology

The attached discussion of the sputum cytology results from the King City asbestos plant was prepared by Mr. Malacarne. He was seeking comments as to whether the data were of sufficient scope for publication in a journal and/or if we could make any use of it to enhance the Union Carbide visage as a safe and concerned employer.

Since my experience in this area is quite limited, it seemed most appropriate to pass it on to you for suggestions accompanied by the following general observations. Perhaps Dr. Enterline or the people at Carnegie-Mellon could be of assistance.

1. The exposed group of 64 individuals contained only 23 persons with 10-15 years' exposure and only 2 with more than 15 years. This is a very small group with a very limited exposure time to be a suitable cohort for a significant epidemiology study. It needs another 20 years of exposure before conclusions could be drawn.

2. The comparison with the non-miner population may be misleading. It seems likely that the very favorable picture found could, in large part, be due to the "healthy worker effect" that has been noted in a number of recent epidemiology studies. There is no way to tell from the information provided whether the non-miner group is a suitable standard of comparison.

In general, I would agree with Mr. Malacarne that positive results would have been alarming but also feel that the lack thereof is expected and, therefore, is not of broad general interest. It may be useful, however, to have these results compared with a suitable control population so we can have a better picture of where we actually stand.

A07035 X419663

John L. Myers
for Harrison B. Rhodes

~~HBR~~/rmm
Attach.

and need to be kept under surveillance, and the role of the occupational health physician is merely to do as he is told!

As part of the OSHA requirements, medical records have to be maintained by employers for at least 20 years, and the contents are available to the Assistant Secretary of Labor for Occupational Safety and Health, the Director of the National Institute for Occupational Safety and Health (NIOSH), to authorized physicians and medical consultants of either of them, and, on the request of any employee or former employee, to his physician. The employer is also entitled to receive from "any physician who conducts a medical examination," as stipulated, "all the information specifically required . . . and any other medical information related to occupational exposure to asbestos fibers." Employees who are found by an examining physician to be unable "to function normally wearing a respirator" or who will impair the safety or health of themselves or other employees by "use of a respirator" may not be assigned to tasks that require the use of respirators.

Certain additional requirements were proposed in 1975, but the proposed new standard has not yet even been considered under the required rulemaking procedures and, therefore, cannot go into effect.[20] One of these requirements is that for employees with "10 or more years of exposure to airborne concentrations of asbestos fibers or who are 45 years of age or older, a sputum cytology examination shall be made available." Other changes deal with recording when employees refuse to be examined, the provision to the employer by the examining physician of his "opinion as to whether the examined employee has any medical conditions which would place the employee at increased risk of material impairment of his or her health from exposure to asbestos fibers, or which would, directly or indirectly, be aggravated by such exposure," and "any recommended limitations upon the employee's exposure to asbestos fibers, or upon the use of protective clothing and equipment, such as a respirator. . . ." The physician has to issue to the employee a statement informing him of "any medical conditions which require further examination or treatment." It is proposed that records be maintained for at least 40 years or for the duration of employment plus 20 years, whichever period is longer.

The deficiencies in this approach are numerous, but their remedies are unfortunately not always available and will have to emerge through trial and error. No

TABLE 6

MORTALITY FROM ASBESTOSIS IN THE INSTALLATION OF ASBESTOS INSULATION, DERIVED FROM PUBLISHED REPORTS, 1976–8*

Reference	Population Studied	Number of Men	Total Deaths	Asbestosis Deaths	Percent of Deaths
Selikoff[15]	insulation workers, New York	370	198	25	12.6
Elmes & Simpson[16]	insulation workers, Belfast	162	122	16	13.1
Selikoff & Hammond[17]	insulation workers, United States & Canada	17,800	2270	162	7.1
Totals		18,332	2590	203	
Deaths in total population (%)		100	14.1	1.1	
All deaths due to asbestosis (%)			100	7.8	

*See References 15–17.

X412441

A02'277

Union Carbide trial exhibit UC-4950: Harrison B. Rhodes (signed by John L. Myers) to Dr. J. J. Welsh and T. W. Car... Published by AsbestosClaims.Law
ACL Doc 19454 · Page 2 of 4 asbestosclaims.law/library/19454/2

TABLE 7

MORTALITY IN VARIOUS SECTORS OF THE ASBESTOS INDUSTRY, DERIVED FROM PUBLISHED REPORTS, 1967–78*

Sector of the Asbestos Industry	Deaths from Cancer (%)	Deaths from Lung Cancer (%)	Deaths from Asbestosis (%)
Mining & milling	16.9	4.5	1.9
Manufacturing	25.7	11.7	5.5
Insulating	45.0	21.9	7.8

*See References 7–18.

criteria have been laid down for the qualifications required by examining physicians to enable them to comply with the law and reasonably interpret their findings in the light of it. No central record-keeping system has been devised to enable the storage and retrieval of linked records that relate to exposure, fiber type, occupation, industry, medical data, production data, and many other variables, such as smoking habit. No provision has been made for transfer of affected persons to other jobs, and the term "an occupation exposed to airborne concentrations of asbestos fibers" has not been defined in regard to liability of such concentrations to be hazardous to health.

There is a need to keep persons exposed to asbestos under surveillance to determine the degree of risk. Knowledge of fiber type and of industrial sector must be taken into account in assessing risk, because these factors appear to be important. Surveillance does not simply denote medical examination and record-keeping but the constant inspection of the workplace and workpractices, the constant measurement of exposure levels, a vigorous approach to conseling and education, and the training and retraining of selected persons, medical and others, in the recognition of hazards and disease with a view to proposing techniques for prevention.

REFERENCES

1. CAMPBELL, W. J., R. L. BLAKE, L. L. BROWN, E. E. CATHER & J. J. SJOBERG. 1977. Selected silicate minerals and their asbestiform varieties: mineralogical definitions and identification-characterization. U.S. Department of the Interior, Bureau of Mines. Washington, D.C. (Information circular, Bureau of Mines; 8751.)
2. WOOLF, H. B. (Ed.) 1977. Webster's New Collegiate Dictionary. G. & C. Merriam Company, Springfield, Mass.
3. POCHIN, E. E. 1975. The acceptance of risk. Brit. Med. Bull. 31: 184–190.
4. BRITISH OCCUPATIONAL HYGIENE SOCIETY-SUBCOMMITTEE ON ASBESTOS HYGIENE STANDARDS FOR CHRYSOTILE ASBESTOS DUST. 1968. Ann. Occup. Hyg. 11: 47–69.
5. MCVITTIE, J. C. 1965. Asbestosis in Great Britain. Ann. N.Y. Acad. Sci. 132: 128–138.
6. SELIKOFF, I. J., J. CHURG & E. C. HAMMOND. 1965. The occurrence of asbestosis among insulation workers in the United States. Ann. N.Y. Acad. Sci. 132: 139–155.
7. MCDONALD, J. C. 1973. Cancer in chrysotile mines and mills. IARC Sci. Publ. 8: 189–194.
8. MEURMAN, L. O., R. KIVILUOTO & M. HAKAMA. 1974. Mortality and morbidity among the working population of anthophyllite asbestos miners in Finland. Brit. J. Ind. Med. 31: 105–112.
9. MANCUSO, T. F. & A. A. EL-ATTAR. 1967. Mortality pattern in a cohort of asbestos workers. J. Occup. Med 9: 147–162.
10. NEWHOUSE, M. L. 1969. A study of the mortality of workers in an asbestos factory. Brit. J. Ind. Med. 26: 294–301.

X412442
AU2278

11. SELIKOFF, I. J., E. C. HAMMOND & H. SEIDMAN. 1973. Cancer risk of insulation workers in the United States. IARC Sci. Publ. 8: 209–216.
12. ENTERLINE, P., P. DECOUFLE & V. HENDERSON. 1973. Respiratory cancer in relation to occupational exposures among retired asbestos workers. Brit. J. Ind. Med. 30: 162–166.
13. PETO, J., R. DOLL, S. V. HOWARD, L. J. KINLEN & H. C. LEWINSOHN. 1977. A mortality study among workers in an English asbestos factory. Brit. J. Ind. Med. 34 169–173.
14. WEISS, W. 1977. Mortality of a cohort exposed to chrysotile asbestos. J. Occup. Med. 19: 737–740.
15. SELIKOFF, I. J. 1976. Lung cancer and mesothelioma during prospective surveillance of 1249 asbestos insulation workers, 1963–1974. Ann. N.Y. Acad. Sci. 271: 448–456.
16. ELMES, P. C. & M. J. SIMPSON. 1977. Insulation workers in Belfast. A further study of mortality due to asbestos exposure (1940–75). Brit. J. Ind. Med. 28: 174–180.
17. SELIKOFF, I. J. & E. C. HAMMOND. 1978. Asbestos-associated disease in United States shipyards. CA Cancer J. Clin 28: 87–99.
18. AHLMAN, K., T. J. PARTANEN, E. RINTALA & M. WIIKERI. 1973. Anthophyllite mining and milling as a cause of asbestosis. IARC Sci. Publ. 8: 165–168.
19. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR. 1972. (Part 1910—Occupational Safety and Health Standards). Standard for exposure to asbestos dust. Fed. Regist. 37: 1138.
20. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR. 1975. (29CFR Part 1910; Docket no. H-033). Occupational exposure to asbestos. Notice of Proposed Rulemaking. Fed. Regist. 40: 47652–47665.

A02279

X412443