UNION CARBIDE INTERNAL CORRESPONDENCE

CHEMICALS AND PLASTICS • P. O. BOX 8361, SOUTH CHARLESTON, WEST VIRGINIA 25303

To (Name) Mr. B. L. Murray
Division Building 48
Location South Charleston Plant

Date January 7, 1970
Originating Dept. Research and Development
Subject Asbestos Exposure - PRESTONE Canning

Copy to Dr. J. P. Creagh, 514
Mr. D. E. Deese, 515
Dr. C. U. Dernehl, NYO-4
Mr. H. R. Guest
Dr. E. Q. Hull, 514
Dr. R. E. Joyner, 515
Mr. N. H. Ketcham
Mr. W. E. Knight, 513
Mr. Harry Milward, 517
Mr. H. L. Robinson, 511

Dear Mr. Murray:

Based on the results of a very limited number of breathing zone air samples taken during the addition of asbestos to PRESTONE anti-freeze at the South Charleston and Whiting Plants, this operation does not represent a health hazard. The data in Table I attached to this letter give the results of the samples. The health hazard was evaluated by two technique: impinger sampling with lightfield counting and membrane filter sampling with counting using phase contrast illumination at 430X magnification. In no instance was the proposed Threshold Limit Value(TLV) of 12 fibers/ml by phase contrast microscopy exceeded. Only one impinger sample, the first sample taken on October 12, was above the proposed TLV of 2 mppcf, using lightfield counting. The TLVs are for repeated eight-hour exposure; whereas the time of exposure to the airborne asbestos during its addition to PRESTONE is very brief, only thirty minutes at the maximum. At Whiting, for example, the whole operation was completed in 9 minutes and is done only once a day. The one day on which the 2 mppcf limit was exceeded slightly at South Charleston was very windy. In all probability, a good portion of dust seen in this sample was windblown nuisance dust. This could no doubt be demonstrated by sampling the same location on a windy day when no asbestos is being added to obtain an idea of the background count.

Although the limited data now available indicate the addition of asbestos to PRESTONE is not a hazard to health, additional air samples should be taken at each plant doing canning during the next season, to further substantiate this conclusion.

Based on the data now available, it does not appear necessary for the men handling the asbestos to wear respiratory protection.

PLAINTIFF'S EXHIBIT
UC-5153

However, each plant should make this decision in the light of its own practice and policy.

Currently, the Department of Health, Education, and Welfare recommends that exposure to asbestos be evaluated by phase contrast counting of samples collected on membrane filter paper. Lightfield counting of impinger samples is acceptable but considered to be a less desirable method. For this reason, we are writing a procedure for Volume 38 of the Laboratory Manual for sampling with membrane filter paper and preparing the sample for phase contrast counting. The prepared samples can be sent to the R/D Department Environmental Hygiene Laboratory for counting, if phase contrast microscope illumination is not available at the plant. Procedures for impinger sampling and lightfield counting are already available in Volume 38.

Very truly yours,

J. E. Neff

JEN/rrw
Attachment