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Mr. Ralph Sarla
Union Carbide Nuclear Company
Sterling Forest

July 29, 1963

Mr. C. E. Brown
Mr. K. W. Lentz
Dr. Nale

Sterling Forest Plant

PLAINTIFF'S EXHIBIT
UC-1392

Dear Ralph:

The following are the particle counts for air samples collected at the asbestos development facility at Sterling Forest, July 25, 1963.

Location	MPPCF	Remarks
Mezzanine above bagger	3.9 2.0 3.0 3.1	Bagging CMS-mechanically refined. No visible dust lost from exhaust system. Traffic doors wide open.
Alongside bagger operator	5.4 8.5 5.2 4.8	Some dust loss in beating bags to settle product.

The diameters of the fiber were as reported before (7/17/63) generally from 0.5-1.2 microns but some smaller sizes were observed. The lengths were mostly from 0.9-10.0 microns but there were some shorter and a few as long as 30 microns.

A majority of the particles could not be identified as fiber. The average definitely identifiable fiber content of all the samples was 32 per cent and the range of fiber content was 29-39 per cent. Examination of twenty different fields of dust that were allowed to settle on a glass slide on the mezzanine above the bagger showed about the same average identificable fiber content.

It is possible and perhaps probable that most of the unknown particles were unopened fiber. It is interesting to note, however,

that the scarcity of distinguishable fiber in the air samples was similar to findings reported by the Penna. Dept. of Health in examination of an asbestos textile mill, and by the Metropolitan Life Insurance Co. in a summary of a series of studies made in textile mills throughout the United States. Actually, both sources reported smaller percentages of fiber than we have found with sample contents ranging from 1 to 26 per cent.

I don't know what significance the different shaped particles have as far as exposure of personnel is concerned. I still believe it wise to observe 5 million particles per cubic of air as the maximum permissible dustiness and I believe we can stay within that limit with our process.

Yours very truly,

Paul W. McDaniel

Paul W. McDaniel
Industrial Hygiene Engineer

PWM/en