once every two days). As each job takes about an hour to complete, the long-term TWA average asbestos exposure of typical garage mechanics would be considerably less than 0.5 f/ml, even with air blowing of drums during changes of bonded linings. Such a value corresponds well with long-term TWA exposures measured by NIOSH during 1975-76. In earlier years, when riveted brake linings were maintained, long-term average exposures of garage mechanics might be in the range of 0.5 f/ml to 1 f/ml. However, mechanics employed in brake repair specialty shops or men working extensively in riveting or machining operations could be exposed to higher concentrations.

The existing data indicate that the majority of garage employees are not likely to have been exposed to long-term (over months or years) asbestos concentrations in excess of the current standard of 2 f/ml. The data also show that virtually all asbestos dust is released during easily controlled work activities and that with proper practices TWA asbestos concentrations can be reduced to about 0.1 f/ml or less.

C. Industrial Hygiene Research Needs

1. Size distribution determination

Electron microscopic size distributions of the asbestos in aerosols generated during brake repair are required. Existing data are extremely limited and applicable only to drum dusts.

2. Environmental Assessment of Garage Mechanics during Brake Repair

Data on the average asbestos concentrations experienced by workmen over the course of a brake job are needed. These evaluations should be made during work practices characteristic of earlier years utilized during the changing of both bonded and riveted linings.

SPNY 004544