

SURVEY RESULTS AND DISCUSSION

Asbestos Exposure Levels

The optical microscopy fiber count analysis for the TWA, peak personal, and background area samples collected during the study are summarized in Table 1. The TWA concentrations ranged from 0.0 to 0.28 fibers/cc while peak levels ranged from 0.00 to 15.00 fibers/cc. The TWA and peak fiber exposures for mechanics tended to fluctuate. This is perhaps best explained by variations in work practices utilized, the inconsistencies in performing brake work that existed throughout the various repair shops, and because clean-off is done intermittently and therefore represents a small percent of the work performed during the shift. For example, the amount of time spent servicing brakes and the number of brake jobs that were performed per shift differed among the mechanics; likewise, there were differences in cleaning methods (e.g., compressed air, brush, vacuum), and procedural techniques (e.g., distance from brake housing to breathing zone). In addition, there were some mechanics who dropped the brake drums on the floor, causing airborne dispersal of brake dust. Environmental conditions at each brake service facility such as shop size, ventilation controls, and open windows and doors would also affect individual worker exposure and background concentrations of airborne asbestos fibers.

Regardless of the cleaning method utilized, TWA exposures for mechanics at all facilities were consistently less than 0.1 fibers/cc and did not differ much from TWA fiber concentrations for samples collected in the mechanics general work area. The similarities between mechanic TWA exposures and background fiber concentrations suggest that all individuals in the