somewhat higher than those determined by TEM. This difference could have been caused by particulate loss during sample preparation for TEM and by the fact that there were small numbers of fibers observed on each sample and therefore a small difference in the number of fibers counted by both methods would produce significant differences in concentrations. However, the greatest number of fibers observed by TEM were shorter than 5 µm in length (83%).

Metal Analysis

Hi-volume airborne samples collected at the shop area were analyzed for trace metals by atomic absorption spectrophotometry in accordance with the NIOSH Manual of Analytical Methods, Volumes 1 and 3.[4,6] Samples were analyzed for trace amounts of the following metals: lead, iron, zinc, chromium, copper, and manganese. As shown in Table 2 all of the metals were found in concentrations well below the OSHA standards or the NIOSH recommended standards.

RESULTS

Fibrous dust concentrations (fibers >5 µm in length) found on the day of the survey are reported in Table 1. The time-weighted average (TWA) concentrations for the two mechanics sampled were 0.04 and 0.006 fibers/cc. General area airborne samples indicated a range of concentration from 0.001 to 0.02 fibers/cc in the brake service area. Two peak samples collected during the compressed air/Stoddard solvent mist blow-off of brake assemblies had concentrations of 0.25 and 0.37 fibers/cc.

DISCUSSION

The airborne asbestos sample results for the facility are within the current OSHA asbestos standard. This standard states:

> "The 8-hour time-weighted average (TWA) airborne concentration of asbestos fibers to which any employee may be exposed shall not exceed 2 fibers, longer than 5 micrometers in length per cubic centimeter of air (fibers >5 µm/cc). The ceiling airborne concentration to which no employee may be exposed shall not exceed 10 fibers >5 µm/cc."

The results are also within the NIOSH recommended standard, in which the 8-hour TWA exposure to asbestos allowed is 0.1 fibers >5 µm/cc with a ceiling exposure of 0.5 fibers >5 µm/cc for any 15-minute