PLAINTIFF'S EXHIBIT

FD-1561 aa

June 22, 1973

Mr. J. A. Keller, Supervisor
Personnel Services Section
General Services

Subject: Asbestos Fiber Emissions from Sears Model No. 758.17831 - Shop Vacuum Cleaner

As requested, we evaluated asbestos fiber emissions from the Sears and Roebuck Model No. 758.17831 shop vacuum cleaner. This vacuum cleaner is intended to be used in lieu of compressed air clean up of asbestos laden brake lining dust on brake linings and drums.

The Sears vacuum has two vacuum motors each having its own discharge. Each discharge has a paper and a cloth type filter. The contaminant is deposited in a 45 gallon plastic drum.

Section 1910.93a of the Federal Register specifies: asbestos fiber in air determinations to comply with the provisions of the Occupational Safety and Health Act (OSHA) will be determined by 430X phase microscopy and collected at two liters per minute on a 37 mm open face Type AA Millipore membrane filter or its equivalent. In order to conduct an isokinetic efficiency of the vacuum cleaner, it would have been necessary to deviate drastically from the prescribed sampling rate and from the open face filter mode, thereby yielding sample results with no standard to compare the results to. Therefore, it was decided to place the vacuum cleaner in a small sealed room with no air changes taking place, and the only air movement in the room would be that generated by the discharge of the vacuum cleaner. The room chosen held a volume of 800 ft^3 of air. The vacuum was placed in the middle of the room and then five sampling stations were set up around the room equidistant from the vacuum cleaner. Ten pounds of asbestos fiber insulating material was then vacuumed up over a 12 minute period.

The current OSHA Threshold Limit Value for airborne asbestos fiber is 5 fibers greate than 5 microns in length per milliliter of air with a downward revision to 2 fibers greater than 5 microns in length per milliliter of air scheduled for July 1, 1976. The results of all five air samples taken during the test of the vacuum cleaner are well within the 5 fiber and 2 fiber greater than 5 microns in length per ml of air TLV's.

We feel that the Sears Model 758.17831 shop vacuum is acceptable from an [illegible] fiber emission standpoint, but special precautions will be required when emptying and cleaning the vacuum. An approved dust respirator for pneumoconiosis producing dust should be worn when cleaning the vacuum. The dust in the plastic drum should be removed from the drum wet and then disposed of in properly labeled sealed containers. The filters on discharge ports should also be disposed of when they become loaded rather than attempting to clean them. These filters should be bagged and disposed of in properly labeled sealed containers.

Henry B. Lick
Industrial Hygienist

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Chronology of Van Dyke Asbestos Incident

- A boiler fed water steam turbine pump was purchased and a scope of work to install the pump and associated piping was developed.

- On or about February 11, 1983, three "fab" shop pipefitters removed approximately 3 ft. of pipe insulation from a 2-1/2" boiler house steam line in preparation for the installation of the pump. The pipefitters were at the work site for approximately 30 minutes. One of the three pipefitters presented a segment of the insulation to the Union-Health and Safety Representative with the question - "Is this material asbestos"?

- February 25, 1983 - the Health and Safety Representative contacted the Plant Safety Engineer and submitted a portion of the original insulation sample and requested that it be forwarded to Ford Industrial Hygiene for analysis. She also communicated that she had previously submitted a sample to the State Health Department for analysis. No additional work was performed at job site.

- February 25, 1983 - insulation sample forwarded to Industrial Hygiene by Plant Safety Engineer - no additional work performed at work site.

- State report received by Union indicating sample contained asbestos.

- March 14, 1983 - report from Industrial Hygiene indicating negative findings (not asbestos). No additional work performed at job site.

- March 15, 1983 - Union notified of Industrial Hygiene findings.

- March 15, 1983 - Division Safety Activity notified of conflicting findings.

- March 15, 1983 - Industrial Hygiene directed to call State Health Department and review testing protocol to confirm conflict.

- March 15, 1983 - Industrial Hygiene notifies Division Safety Activity that they had confirmed that the state testing protocol was appropriate.

- March 15, 1983 - formal "stop" placed on work site.

- March 16, 1983 - a second test sample (residue of former sample) sent to commercial lab by Industrial Hygiene.

- Commercial lab confirms state report (insulation contains asbestos).

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- o Review of Industrial Hygiene testing protocol started.
- o March 16, 1983 - Union informs plant they plan to notify the Ford Department of the International Union.
- o March 16, 1983 - J. J. Whelan Union Relations Staff confirms call from the International Union and notifies Dr. F. V. Viola (Associate Medical Director) of the incident.

Since no sampling was conducted during the 30 minute work period, the extent of exposure is unknown, the level of asbestos content, 15-24%, is considered small and significant exposure is considered unlikely. The incorporation of the subject employes into a medical surveillance program is not planned since it may be counterproductive - asbestos related disease has an incubation period of from 10 to 20 years. Medical X-rays will not identify asbestos exposure or the probability of contracting the disease - unfortunately when the X-rays identify the presence of asbestos related disease, there is no medical treatment that will effect a cure.

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