7.3 Procedure

7.3.1 Flow through the pump should be calibrated, with the filter in line for each pump.

7.3.2 Clip filter holder to lapel or shirt pocket as close as possible to the person's nose and mouth. Filter should be horizontal or slightly down, never facing up. This is sometimes referred to as personnel sampling and is preferred.

7.3.3 At times it may be advantageous to collect samples from a fixed location representative of a more general work area. This is sometimes referred to as environmental sampling. In such cases, the filter should be located as close as possible to the person's breathing zone at the job or in the area being monitored. The type of sampling should be chosen to determine most accurately the employees' exposure.

7.3.4 Remove top section of the filter to expose the full filter face.

7.3.5 Turn on pump and set at approximately two (2) liters per minute rate (1—2.5 lpm range). Estimate sampling time (X) in minutes as follows (15 minute minimum):

$$X = \frac{316}{\text{pump rate (lpm)} \times \text{expected fiber count}}$$

Assume a fiber count of 2 per cubic centimeter for first test if no better information is available. (This equation optimizes ease and accuracy of the fiber count.) Record actual pump rate periodically. When finished sampling, turn off pump and record elapsed sampling time. Typical sampling record forms, EN—2731 (see Figure 3) are available from Stationery Stores, Engineering Department, Wilmington, Delaware.

7.3.6 Replace filter top after sample is collected and seal with tape prior to shipment. Stoppers furnished with filter units must be replaced before sealing.

7.4 Analysis. Completed samples (exposed filters) are placed in a mailing tube, sealed, and sent to a qualified laboratory with two copies of the sampling record.

7.4.1 It is recommended that an unexposed filter be included with each batch of samples for reference.

7.4.2 All determinations shall be made by the membrane filter method at 400—450X (magnification) (4mm objective) with phase contrast illumination.

7.4.3 Qualified Laboratories

G. W. Hiddemen
E. I. du Pont de Nemours & Co
Marshall Laboratory
3500 Grays Ferry Avenue
Philadelphia, PA 19146

Morton Corn, Ph D
Attention: Felix Stein
Graduate School of Public Health
University of Pittsburgh
Pittsburgh, PA 15213

W. A. Burgess
38 Fox Hill Street
Westwood, MA 02090

7.5 Record Keeping. Records of personnel and environmental monitoring shall be maintained for three (3) years and made available upon the request of authorized representatives of OSHA and NIOSH (National Institute of Occupational Safety and Health).

7.6 Caution Signs and Labels

7.6.1 Caution signs conforming to Figure 1 shall be posted at all approaches to areas where asbestos concentrations may be above permissible exposure limits. They shall be placed at a sufficient distance to permit an employee to read the signs and take necessary precautions before entering the area.

7.6.2 Caution labels conforming to Figure 2 shall be used to identify containers of raw materials, scrap, waste, other products containing asbestos, and asbestos contaminated clothing.

Portions printed in red meet OSHA requirements, Section 1910.93a.

PLAINTIFF'S
EXHIBIT
DUP-1604

REV. JUL 1975