

6. SAMPLING

6.1 Monitoring. Sampling of each operation must be for at least 15 minutes duration and taken in a frequency and pattern to accurately represent the employee's exposure over his work period. If results indicate a level of asbestos dust in excess of the limit, the operation should be reviewed to reduce exposure, see 2.4, and resampled. The initial sampling program must determine the 8-hour time weighted average. Intervals between samples shall not exceed six (6) months.

6.2 Equipment. Samples may be taken with a portable battery-operated air sampler attached to an employee's belt or placed in the work area.

CAUTION: Samples may not be collected in hazardous areas, as defined in DEID, without a permit to use a spark producing device.

6.2.1 Pump

Mikronaire or Model C115
Bendix Corp
Environmental Science Division
Towson, Md 21204

or

Gravimetric or Monksaire
Mine Safety Appliances Co
230 N. Braddock Ave
Pittsburgh, Pennsylvania 15208

Either unit must include battery charger and battery; carrying case is optional.

6.2.2 Filter

Millipore No. MAWP-037-AO filter,
white, nongridded,
0.8 micron pore
Millipore Corporation
Bedford, Massachusetts 01730

6.3 Procedure

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

6.3.2 Clip filter holder to lapel or shirt pocket as close as possible to the person's mouth. This method of personnel sampling is preferred.

6.3.3 If a sampler is affixed permanently in a work area, suspend the filter as close as possible to the person's breathing zone at the job to be monitored.

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

6.3.5 Turn on pump and set at approximately two (2) liters per minute rate. Check rate periodically. When finished sampling, turn off pump and record elapsed sampling time. Sampling record forms, EN-2731 (see Figure 3) are available from Stationery Stores, Eng Dept, Wilmington, Del.

6.3.6 Replace filter top after sample is collected and seal with tape prior to shipment.

6.4 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. Include an unexposed filter with the sample which has been handled in the same fashion without drawing air through it. Qualified laboratory information is available from Haskell Laboratory.

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

6.5 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).

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

