

Attachment 4D

Field Sampling Procedures for Airborne Asbestos and MMVF Samples at Building Interior Areas

1. Post cleaning sampling shall not begin until a visual inspection confirms the absence of visible dust and debris. Post cleaning air sampling shall be performed upon successful visual inspection and completed within 24 hours. A successful visual inspection shall be an inspection that verifies the absence of dust and debris.
2. All surfaces must be completely dry prior to the start of sampling.
3. The air samplers in residential units shall be placed in locations proximate to the locations where wipe and microvac samples were collected.
4. The air samplers for a common area should be placed in regions within 10 feet of the outlets for HVAC discharges if extant. If not they should be placed where residents are more likely to traverse or linger distributed such that all zones of that contiguous area are reasonably represented. If possible wipe and microvac samples should be collected at locations proximate to the locations where air samples were collected. Common spaces will be sampled without the use of forced air devices (fans, leaf blowers etc).
5. Airborne asbestos and MMVF sampling is conducted with 25-mm diameter, three-piece cassette with 50-mm electrically-conductive extension cowl, cellulose ester membrane filter, 0.8 μm pore size, and backup pad, connected to an air sampling pump. The filter cassette and extension cowl will be mounted onto a tripod, not taped to existing surface and should be directed downward at a 45 degree angle. Sampling equipment shall be placed away from obstructions.
6. All filters used to sample a residence or a common area should come from the same box/lot.
7. For small spaces, less than 160 square feet, 3 samples will be collected. For large spaces greater than 160 square feet and less than 25,000 square feet 5 samples will be collected. For spaces greater than 25,000 square feet, 1 sample will be collected for each 5,000 square feet.
8. The following equipment is required for air sampling: 1) sample bags, 2) sample labels, 3) sample pump, 4) tygon tubing, 5) flow calibration devices (i.e., rotometer), 6) calibration curve chart and table, 7) sampling cassettes, 8) field notebook, 9) indelible ink marker, 10) ink pens, 11) refuse bags, 12) sampling pump stands, and 13) disposable powderless, vinyl gloves. The air sampling equipment must be leak checked before and after sampling. The leak check information must be documented on the Field Data Sheet.

9. All air samples within a contiguous area are to be collected simultaneously. Air samples and field blank samples shall be collected in accordance with the procedures specified in NIOSH 7400 Method for PCM. Air sampling cassettes need to be monitored to ensure that cassettes are not clogging by monitoring flow rates. The minimum sampling volume required is 3600 liters at a rate of 10 liters per minute. All clearance air samples and copies of necessary documentation shall be hand delivered daily to the analytical contractor(s).

10. Standard 7 day turnaround time will be used for all samples unless otherwise directed by project monitor.

11. Air samples with conductive cowl attached will be placed in zip-lock bags and labeled with the sample number, time and date of collection, and analyses requested. Samples must be shipped upright in a rigid container with packing material to prevent jostling or damage.

Note: Do not use untreated polystyrene foam in the shipping container because electrostatic forces may cause fiber loss from sample filters.

12. Sealed bags will be placed in plastic coolers and delivered to the lab. All packaging will conform to IATA Transportation regulations for overnight carriers.

13. All sample documents will be sealed in a plastic bag and affixed to the underside of each cooler lid. The lid will be sealed and affixed on at least two sides with custody seals so that any sign of tampering is easily visible.

14. The Monitoring Contractor shall document all the necessary information regarding sampling activities, fill out all field logs, data sheets, and chain-of-custody forms. The Monitoring Contractor shall use Scribe for all sample and chain-of-custody documentation. Samples must be labeled and accompanied with completed chain-of-custody forms before shipping to the designated laboratory. The label must include the EPA Project Tracking Number.

15. All information must be maintained by the Monitoring Contractor. Dates for monitoring and/or cleaning shall be provided to EPA in an EPA approved format and timeframe. All data shall be maintained as confidential.

16. The Monitor Contractor will keep a field notebook, document the size of the sampled area, sampling locations and equipment used to collect the samples. In addition, date, start and completion dates for the cleaning, sample media, filter type, lot numbers of filter media, sampling train leak checks (pre- and post-sampling), flow rates (start/final), flow rate (average), time (start/finish), total elapsed time (min), calculated sample volume (L), pump fault, weather, units, quality assurance samples (lot blanks, field blanks, and field colocated samples), sampling dates and sample identification

numbers (sample IDs), complete chain-of-custody forms, EPA Project Tracking Numbers and laboratory address shall be entered into an agreed upon electronic format.