

## II. PRE-INSPECTION ACTIVITIES

### A. REVIEW BACKGROUND INFORMATION

1. Review and follow the inspection procedures in the [FOM](#) (CPL 02-00-150).
2. As part of the pre-inspection review, determine whether sampling may be required (and then verify during the on-site walk-around). Also during the pre-inspection review, determine whether exposure to more than one chemical may occur. Refer to OSHA's [CSI](#) file for the required sampling media, minimum and maximum sampling volume and flow rate, potential interferences, and handling requirements for individual chemical substances. Contact the SLTC for further guidance if necessary.

Determine whether there are special handling or shipping requirements prior to sample collection. Refer to OSHA's [CSI](#) file. For example, some types of samples need to be shipped back quickly and/or on ice. Sampling media for isocyanates need to be stored refrigerated and protected from light until used, and should be extracted in the field to enhance sample recovery.

3. Refer to Sections [III.I.](#) through [III.N.](#) for specific sampling requirements for:
  - Total dust
  - Respirable dust
  - Crystalline Silica
  - Metals
  - Asbestos
  - Organic vapors and gases

### B. OBTAIN SAMPLING MEDIA, EQUIPMENT AND SUPPLIES

1. The Cincinnati Technical Center (CTC) provides sampling media, supplies and equipment as part of the Agency Expendable Supplies Program (AESP) and the Agency Loan Equipment Program (ALEP). The following are some of the sampling supplies that may be obtained through the AESP:
  - Drager Chip Measurement System (CMS)
  - Detector tubes
  - Filter cassettes (such as preassembled asbestos cassettes)
  - Mixed cellulose ester filters (MCEF)
  - Collar clips and gelbands
  - Sorbent tubes, such as charcoal tubes
  - Tube holders, tube openers, collar clips and manifolds
  - Cyclones
  - Tygon tubing
  - Form OSHA-21 seals
  - Duct tape
  - Calibration gas and accessories
  - Shipping supplies
  - Ventilation smoke tube kits

A listing of supplies available through the AESP may be found at the following link: <https://extranet.osha.gov/dts/LAP/dts/ctc/aesp.pdf>.

CSHOs may place an order for expendable supplies through the CTC via email or fax. The requesting office is charged for the items delivered. When placing an order, please include "AESP ORDER" in the subject line and the following information in the body of the message:

- CSHO name and telephone number
- Office name and address
- For each item ordered:
  - AESP System ID Number (FES #)
  - Supplier Order Number
  - Brief description of the item(s)
  - Quantity

The ALEP allows field offices to borrow over 250 pieces of specialized monitoring and other equipment from the CTC. The equipment includes items such as air velocity meters for ventilation assessment, dust and fiber aerosol monitors, multi-gas detectors, indoor air quality meters, air sampling pumps and calibrators, and photoionization detectors (PID). The typical loan period is 30 days, which can be extended, if necessary, depending on demand. Equipment can be shipped overnight if the need is urgent.

A list of typical sampling equipment available through the ALEP may be found at the following link: <https://extranet.osha.gov/dts/LAP/dts/ctc/alep.pdf>. Orders for technical equipment may be made through the same email or fax numbers used for expendable supplies. When placing an order, please include "ALEP ORDER" in the subject line and for each item requested include manufacturer and model, a description of the item(s), and quantity.

2. The SLTC provides some specialized sampling media, such as Carbosieve S-III, passive/diffusive samplers, and pre-weighed filter/cassette units for gravimetric sampling and analysis. Gravimetric filters are weighed at the SLTC and shipped to the field assembled in special cassettes to be used for sampling. The cassette/filter units are returned to the SLTC after sampling for gravimetric determinations and for other analyses. See [Appendix A](#) for a discussion of pre-weighed filters. Refer to OSHA's [CSI](#) file or to [Appendix B](#) for a list of substances for gravimetric determination.

CSHOs may order sampling media from the SLTC using the [order form](#), which is located on the OSHA Intranet, under CSHO Resources, and which lists media available through the SLTC. [Appendix D](#) lists the shelf life of sampling media provided by the SLTC. [Appendix E](#) contains a listing of the most frequently requested sampling media from both the SLTC and the CTC.

## **C. PREPARE PERSONAL AIR SAMPLING EQUIPMENT**

1. Active Sampling

- Assemble filter cassettes prior to the site visit when practical. Verify that the two halves of the cassette are firmly and completely seated against each other to prevent sample material from bypassing the filter. Do not mix brands of cassette components. A hand press can be used to ensure a good seal between the filter and the cassette halves. Examine the assembled cassette to make certain that the joints fit together securely. Use shrink tape or gel bands around the cassette to cover joints.
- Ensure sampling pump batteries are fully charged. Battery care is discussed in [Section II: Chapter 3](#). Also, refer to the pump manual for specific battery care guidance.
- Calibrate personal sampling pumps before and after each day of sampling as described in [Appendix F](#). Disconnect the pump from the charger before calibration. Use the same specific type of sample media in line that will be used for sampling in the field (e.g., filter, sorbent tube); but do not use the actual media used for calibration for field sampling. Where more than one pump will be used in the field, label the pumps to avoid mix-up.
- Calibrate sampling pumps at the temperature and pressure (altitude) at which samples will be collected. If site conditions are substantially above or below room temperature, calibrate the pumps in a clean area at the site, if possible. Give the pump and calibrator electronics time to equilibrate to the temperature conditions at the site. If not possible, refer to manufacturer's guidance in the equipment manual for temperature corrections and contact the CTC as needed. If sampling will be performed at temperatures below 41° F, check the temperature operating range in the calibrator equipment manual before going to the site, and contact the CTC as needed.
- To avoid sample mix-up, each sample (i.e., cassette, sorbent tube, impinger media) must be labeled with a unique sample number. Either label each sampler before use, or prepare the OSHA-21 seals beforehand by writing in the sample numbers, and then affixing an OSHA-21 seal immediately after removing the sampling device from the pump after post-calibration. OSHA-21 seals are shown in [Appendix G](#). Note that preweighed gravimetric filters have assigned bar code numbers that can be used for sample identification.
- Record presampling calibration data (such as pump serial number and flow rate) and the temperature and pressure of the calibration location using the OIS sampling worksheet. This will also serve as the sample submission document for samples requiring analysis by the SLTC.

## 2. Diffusive (Passive) Sampling

- Diffusive samplers are convenient air sampling devices that sample gases and vapors and do not require the use of a sampling pump. They are discussed further in section III.N.2 of this chapter. Also refer to the [CSI](#) file for diffusive sampling applications and guidance.

- When using diffusive samplers, it is very important to record the sampling site temperature and pressure using the OIS sampling worksheet.