

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM UNITS 2 AND 3

HPO/CO-65 FIELD USE OF A LOW VOLUME PORTABLE AIR SAMPLER

PURPOSE:

This procedure lists the steps required to place the Rade Co. Model H 809C and H 809B2 low volume air samplers in service to collect a sample during an emergency to determine the concentration of airborne particulate and radioactive iodine.

REFERENCE:

None

PREREQUISITES:

None

PROCEDURE:

A. Rade Co. Model H 809C Battery Powered Air Sampler

1. Remove the protective covering from a Iodine sampling cartridge (Silver Zeolight) and mark the cartridge to indicate the direction of air flow through it.
2. Remove the retaining ring from the filter holder on the sampler and place the cartridge in the holder. Check that the cartridge seats properly and that the cartridge is installed as the flow marking indicates.
3. Place a piece of filter paper on the surface of the holder and replace the retaining ring.
4. Attach the black jumper cable (ground) to any available contact on the car frame/or fender. Attach the red jumper cable to the positive battery terminal. Start the car and let it idle during sampling.
5. Start the air sampler. Inspect the filter for tears and leakage paths. Read the flow meter and determine the time required to sample 60 ft³ of air. If a smaller sample volume is requested by the Radiation Survey Team Leader or Emergency Director reduce the sampling time to obtain a smaller sample and make a correction for the smaller sample volume when the activity is calculated (HPO/CO-64 and 67).
6. Record date, time, flow rate, sample location, and your initials on the envelope which will be used to transport the sample.

7. Record time at the end of the sample period and the flow meter reading on the transport envelope.
8. Turn the air sampler off. Remove the black jumper cable first, and then remove the red jumper cable.
9. Remove the filter paper and analyze it in accordance with procedure HPO/CO-64.
10. Remove the iodine cartridge and analyze it in accordance with procedure HPO/CO-67. Procedure HPO/CO-64 may be used as an alternate to HPO/CO-67.
11. If later laboratory analysis is required, package both samples for transport.

B. Rade Co. Model H 809B2 Portable Battery Powered Air Sampler

1. Remove the protective covering from a Iodine sampling cartridge (Silver Zeolight) and mark the cartridge to indicate the direction of air flow through it.
2. Remove the retaining ring from the filter holder on the sampler and place the cartridge in the holder. Check that the cartridge is installed as the air flow markings indicate.
3. Place a piece of filter paper on the surface of the holder and replace the retaining ring.
4. Set appropriate sampling time by adjusting thumb wheels. Sampler will automatically shut off at pre-set time.
5. Depress START button (sample run can be manually stopped by depressing the STOP button) to turn the air sampler on. Inspect the filter for tears and leakage paths. Read the flow meter and determine the time required to sample 60 ft³ of air. If a smaller sample volume is requested by the Radiation Survey Team Leader or Emergency Director reduce the sampling time to obtain a smaller sample and make a correction for the smaller sample volume when the activity is calculated (HPO/CO-64 and 67).
6. Record date, time on, flow rate (indicated by rotometer), sample location and initials of technician on the envelope which will be used to transport the sample.
7. Record time at the end of the sample period and the flow meter reading on the transport envelope.
8. Unit will stop at the end of the sample time or when the STOP button is depressed.
9. Remove the filter paper and analyze it in accordance with procedure HPO/CO-64.
10. Remove the iodine cartridge and analyze it in accordance with procedure HPO/CO-67. Procedure HPO/CO-64 may be used as an alternate to HPO/CO-67.
11. If later laboratory analysis is required, package both samples