Changing Filters in Graseby Aerosol Sampler-Elkhorn Slough
Prepared by Don Bard
October 25, 2010

Materials

- Aerosol Sampler, deployed behind owl barn-Elkhorn Slough reserve
- Data sheet on clipboard
- Quarts filters, 0.4 µm pore size, 8x10, acid cleaned; one per sampling run
- Plastic tweezers, acid-cleaned (1 pair), gloves (optional)
- Cleaning towel and water
- Watch

Procedure

Starting a Sampling Run

1) Bring a clean filter (wrapped in foil inside a plastic bag), tweezers, watch and data sheet from the lab cabinet with you to the sampler.

2) Check that the sampler is off (unit is turned off by unplugging it from the power source extension cord). If the air sampler is dirty, spend a minute wiping it with a moist towel to remove some of the dust.

3) Open the roof of the aerosol sampler to expose the filter holder screens. Loosen the 4 thumb screws and remove the top screen assembly that holds the filter in place.

4) Using tweezers and or gloves to avoid touching the clean, acid-washed filter, remove it from its bag and place it onto the bottom screen. Center the filter carefully.

5) Put the top screen assembly back into place and hand tighten all 4 thumb screws.

6) Record the date and filter ID number on the data sheet.

7) Close the roof of the sampler.

8) Turn the sampler on by reconnecting the power cord into the extension cord. The blower motor should start immediately, and the dial in the gas meter should begin to turn. Record the start time on the data sheet (round to the nearest quarter hour).
9) Briefly describe weather conditions (temperature, wind, etc.) and record any other observations in the spaces provided on the data sheet.

10) Let run for approximately 1 week. If possible check the sampler every few days to check that it is still running.

**Finishing a Sampling Run**

11) After 1 week, bring the empty filter bag, cleaning towel, gloves/tweezers and data sheet back out to the aerosol sampler.

12) Turn off the sampler by unplugging it from the extension cord. Record the end time on the data sheet (round to the nearest quarter hour). Then record the total elapsed time using the previous start time.

13) Open the roof of the aerosol sampler to expose the filter holder unit. Loosen the 4 thumb screws and remove the top screen assembly that holds the filter in place.

14) Using tweezers and or gloves to avoid touching the clean, acid-washed filter, remove it from the sampler and place it into its foil envelope and bag.

15) Put the top screen assembly back into place and hand tighten all 4 thumb screws.

16) Close the roof of the sampler.

17) Briefly describe the weather conditions (temperature, wind, etc.) and those of the last 24 hours and record any other observations in the spaces provided on the data sheet.

18) Bring the filter, tools and data sheet back to the lab cabinet.