

## Standard Operating Procedure 212

### Organic Vapor Screening

#### *Purpose*

Use this procedure to obtain a fast, general measurement of volatile organic compounds in soil.

#### *Safety Equipment*

- Wear nitrile gloves to reduce the incidence of skin contact with potentially contaminated soil and to reduce the risk of cross-contamination.
- Refer to the site-specific Health and Safety Plan for other safety concerns and applicable personal protective equipment.

#### *Required Equipment*

- Photoionization detector (PID) equipped with a 10.6 or an 11.8 eV lamp (refer to the site-specific sampling and analysis plan or proposal for proper lamp size)
- PID calibration equipment
- One quart sealable bags, or soil jars, lids and aluminum foil
- Appropriate log forms or note pad for field notes
- Sharpie or permanent marker

#### *Procedure*

1. Select a PID equipped with the proper lamp size the afternoon before the field work is scheduled and charge the battery overnight by plugging in the adapter. As the PIDs have no battery gauge, failure to recharge the battery may leave you with a discharged battery and an unusable PID.

2. Calibrate the PID upon arrival at the site or prior to leaving the office. Record all pertinent information on the calibration record located in the case of each PID and record the calibration on the Field Report form.
3. With a gloved hand, fill a dedicated sealable bag or soil jar approximately half full with soil to be screened. Refer to the site-specific sampling and analysis plan or work plan for appropriate sample container. Manually break up the soil clumps within the bag. Seal the bag, or cover the opening of the soil jar with aluminum foil and screw on a lid. Use a marker to write the sample identifier and depth on the bag or jar lid.
4. Shake the sealed bag or soil jar for approximately 15 seconds, then allow the soil to volatilize for at least 10 minutes in an atmosphere of at least 70°F. On cold days it may be necessary place the bag or soil jar inside a heated room or vehicle.
5. After headspace development, shake the sample for another 15 seconds.
6. Complete organic vapor screening within approximately 20 minutes of sample collection. If using soil jars, remove the lid. Pierce the aluminum foil or plastic bag with the probe of the PID. Record the highest meter response within a time period of two to five seconds.
7. Discard the soil samples on-site and dispose of used bags, soil jars, foil, and lids as trash.