

June 11, 2008

Sampling for Soil Volatile Organics to Comply With New Jersey Soil Remediation Standards

The New Jersey DEP *Soil Remediation Standards* (NJAC 7:26D) have changed. These standards were published and became effective on *June 2, 2008*. The regulation sets new Soil Standards based on *Residential Direct Contact* and *Non-Residential Direct Contact Health Based Criteria*. The *Impact to Groundwater Standards* were not adopted at this time, but will be handled on a site-by-site basis. As per the NJDEP, there will be a six month “phase in” period from the effective date, June 2, 2008, to December 2, 2008.

NJAC 7:26E-1.3(d)2 states that the previous Soil Cleanup Criteria may be applied to sites, if:

- 1) a Remedial Action Workplan (RAW) or Remedial Action Report (RAR) containing Standards developed for the site under NJSA 58:10B-12a is submitted to the DEP prior to December 2, 2008;
- 2) the RAW or RAR meet the requirements of NJAC 7:26E-6; and
- 3) the standards or criteria developed by the DEP under NJSA 58:103B-12a for the site are not greater by an order of magnitude or more than the newly adopted Soil Remediation Standards.

As a result of the implementation of certain *Soil Remediation Standards* lower than the previous Soil Cleanup Criteria for volatile organics, **the current practice of using only a methanol preservation of samples for volatile analysis has changed.** Due to the dilution effect of methanol preservation (approximately 100X), the laboratory analytical results will contain detection levels higher than the Standards for Target Compound List (TCL) compounds, 1,2-Dibromoethane and 1,2-Dibromo-3-Chloropropane and possibly Priority Pollutant (PP) compound, Acrolein as well.

Provided the soil has less than 30% moisture, IAL can meet the new criteria for these standards with the field sampling procedure you currently use! If you only need to meet the criteria for the Residential Direct Contact or Non-Residential Direct Contact Standards, you can continue to collect and provide to IAL one Encore sampler to be transferred into methanol or one methanol preserved sample collected in the field.

Based on SW-846 Method 5035A, IAL can meet the New Soil Cleanup Criteria for *Impact to Ground Water*, *Residential Criteria* and *Non-Residential Criteria* for soil volatile organics by collecting the samples using one of the following options:

Option 1:

- 1) Three 5gram Encores collected in the field for each sample, are sealed and cooled to $4 \pm 2^{\circ}\text{C}$.
- 2) Encores must be delivered to IAL *within 48 hours of sample collection* for transfer to preservatives.
- 3) IAL will preserve two - 5 gram samples in 5mls of water and freeze to $< -7^{\circ}\text{C}$. One 5 gram sample will be preserved in 10mls of methanol for a medium-high level analysis, if necessary.
- 4) The holding time after preservation and prior to analysis is 14 days from the date of collection.

The charge for this option will be \$10 for each Encore and \$25 for the sample preservation.

Option 2:

- 1) The sample is collected in the field using a syringe-type device.
- 2) 5 grams of soil sample is placed into each of 2 tared 40 ml vials containing 5mls of water.
- 3) 5 grams of soil sample is placed into 1 tared 40 ml vial containing 10mls of methanol.
- 4) As with the current field preservation method, the sample aliquots must be weighed and preserved in the field.
- 5) Samples must be returned to IAL *within 48 hours of sample collection*.
- 6) Sample holding time is 14 days from the date of collection.

PLEASE NOTE: The sample collection technique is very important with this Option 2. Caution must be taken to ensure that no excess sample remains on the threads of the vial and that vial caps are secured snugly on the vials. If not, volatiles may be lost, resulting in lower recoveries.

The charge for this field sampling kit will be \$25 for the laboratory prepared VOC Vials.

The adoption of the new SRS will no doubt cause some confusion with project planning. Please contact your IAL Account Manager or IAL Project Manager at (973) 361- 4252 with any questions about sample handling.

Thank you for your continued use of IAL's Services!!