



Phase Behavior Study

Tersus provides surfactant formulations specific to site geochemistry and NAPL composition. To evaluate the effectiveness of our standard formulations at mobilizing subsurface NAPL at your site, a phase behavior study is performed. The study determines the optimal surfactant/electrolyte formulation that will produce an ultra-low NAPL/ground water interfacial tension (IFT). Tersus will require the following site samples:

- 300 ml of site groundwater¹
- 100 ml of Site NAPL minimum (300 ml preferred)

Please notify us by phone call or email when the samples are shipped and provide a tracking number. The shipping address for the samples is:

Hasegawa Engineering
330 - 3120 32nd Street N
Lethbridge AB T1k7b4
Canada
Telephone: (403) 328-2686
Attention: Mark Hasegawa

NAPL and Groundwater Sampling

To further define the nature of the contamination, Tersus recommends that you collect samples of NAPL from temporary wells or that existing monitoring wells be fully purged before sampling, so that fresh NAPL, representative of the NAPL in the subsurface, is available for sampling. Tersus requests that you collect a minimum of 100 milliliters of NAPL. NAPL should not be preserved but should be shipped fresh in an air tight container with a good seal and minimal headspace. Teflon seals are recommended, as some NAPL may dissolve coated paper or rubber-type seals.

Groundwater samples also should be collected from the temporary wells or fully purged monitoring wells. If the temporary wells do not produce enough groundwater, then groundwater may be collected from the site monitoring wells if fully purged. It is highly preferable, however, that the groundwater be collected from wells screened only over the contaminated interval. Groundwater samples should NOT be preserved, but should be shipped with good seals and no headspace.

We recommend shipping the NAPL in the same container with the ground water so it can serve as a diffusion barrier to minimize equilibration of the groundwater with the atmosphere.

Final Results

The formulation of the surfactant system will remain the property of Tersus and will not be disclosed to the client. The final report will include recommended dosages.

¹ It is preferable that the groundwater and NAPL be shipped in the same container with no headspace and packed on ice.