

### Environmental Screening Levels (ESLs) Update Published by California Regional Water Quality Control Board – San Francisco Bay Region – April 2016

The California Regional Water Quality Control Board – San Francisco Bay Region recently published its 2016 update of the Environmental Screening Levels (ESLs). The ESLs are widely accepted risk-based screening levels for over 100 chemicals in soil, groundwater or soil vapor. These conservative screening levels are used to support decisions without the time or expense of a formal site-specific risk assessment. The ESLs offer two tiers of values; Tier 1 is the most conservative. Tier 2 is customized to site conditions and can lead to feasible alternatives for many properties with subsurface chemical impacts. The ESLs may be useful options during agency directed cleanups, transactional screening without regulatory oversight, or simply for screening soil for reuse following excavation.

The 2016 update represents a departure from previous ESL formats, and articulates important regulatory changes to acceptable assumptions and approaches for risk-screening. Toxicity criteria have been updated, and a new aquatic habitat goal (i.e., seafood) has been added. A new ESL was created for total petroleum hydrocarbons as Stoddard Solvent which may affect cleanup at dry cleaner sites, and the 2016 Tier 1 ESLs are based on a more conservative shallow groundwater assumption. Perhaps most significantly, this update incorporates a different approach to modeling vapor intrusion from groundwater or soil vapor to an overlying building. Ventilation, air exchange, and vapor entry rates were made more specific to the Bay Area climate; however, vapor attenuation during transport through soil is removed from the ESLs. And, finally, risks from petroleum degradation byproducts are reconsidered.

We also note that the 2016 ESL User's Guide emphasizes the importance of a valid conceptual site model (CSM) to appropriate ESL use, and a contaminant plume map and geologic cross-section prepared by Langan Treadwell Rollo are included as examples of acceptable CSM documentation. Current ESLs are available at:

[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml).

For additional information, please contact:

Robert Schultz, PG, CHG, Senior Project Manager  
[rschultz@langan.com](mailto:rschultz@langan.com) 415.955.5296  
(Northern California)

Keith Gilbert, PG, Senior Project Manager  
[kgilbert@langan.com](mailto:kgilbert@langan.com) 949.255.8665  
(Southern California)