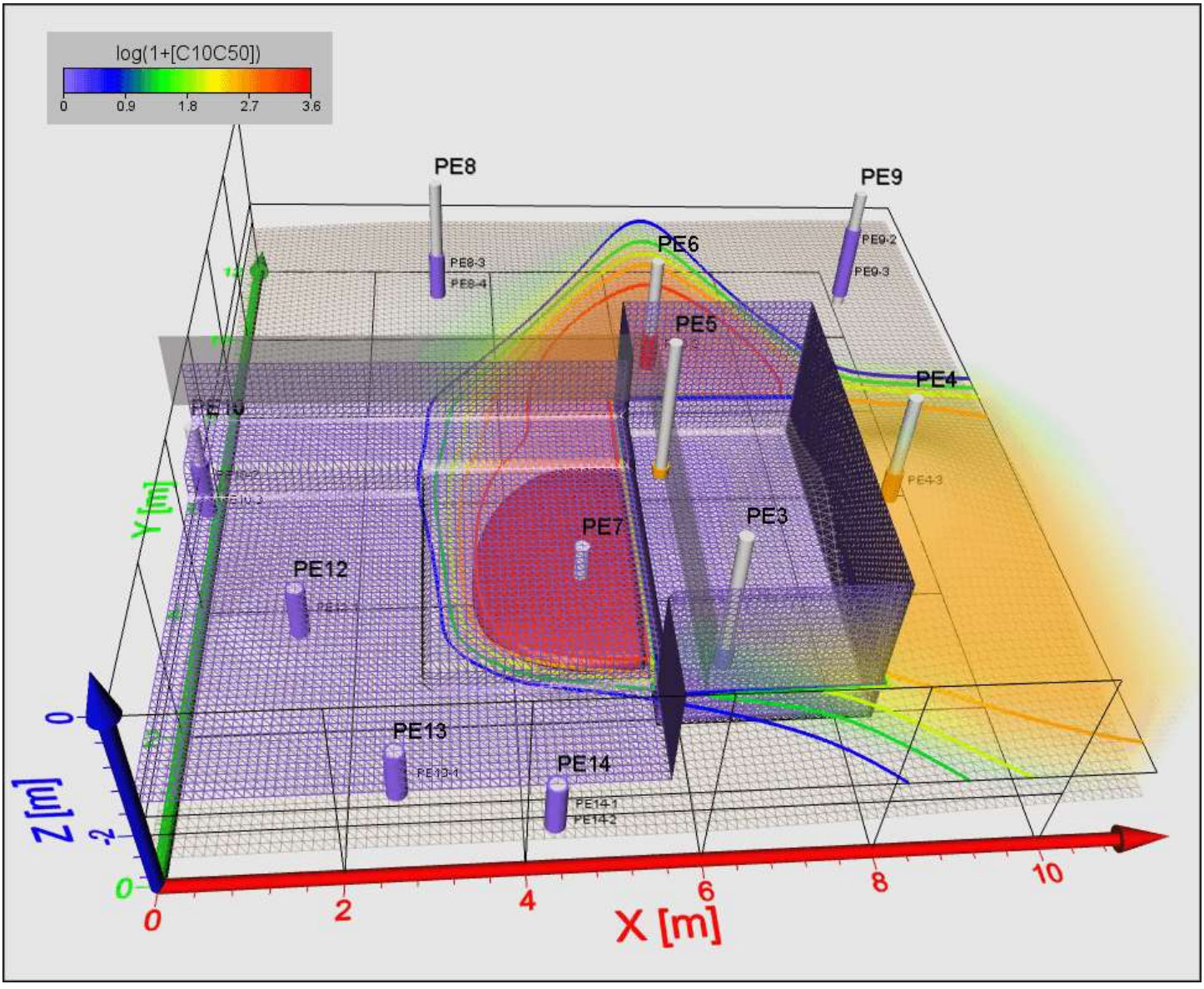
Customer Spotlight: Services Enviro-Mart, Inc.

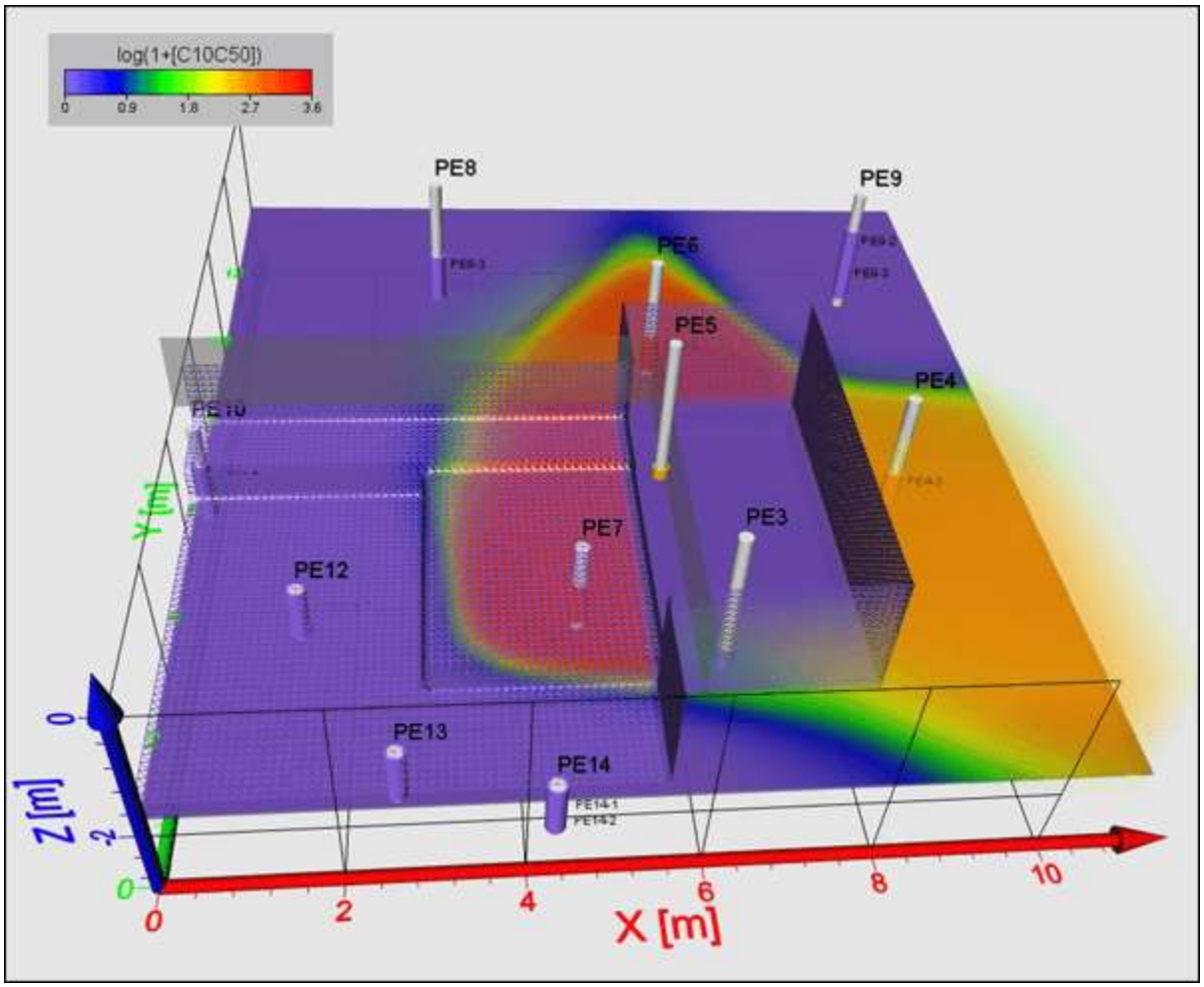
Golden Software customers possess a broad assortment of backgrounds from earth science and engineering to education and politics. This vast background results in a variety of uses for Golden Software's products. Each customer uses the software in a unique way, and we are pleased to share these stories. This newsletter features Philippe Lemoyne, Professional Engineer, and Martin Page, Professional Chemist, of Services Enviro-Mart, Inc. and their use of Voxler.

Services Enviro-Mart, Inc. is a soil and underground water decontamination service company located in Quebec, Canada. Their services include the elimination of organic contaminants and odors. Enviro-Mart utilizes a revolutionary technology, Cool -Ox™, to treat the contaminants. The technology is typically less expensive and invasive than remediation via excavation.

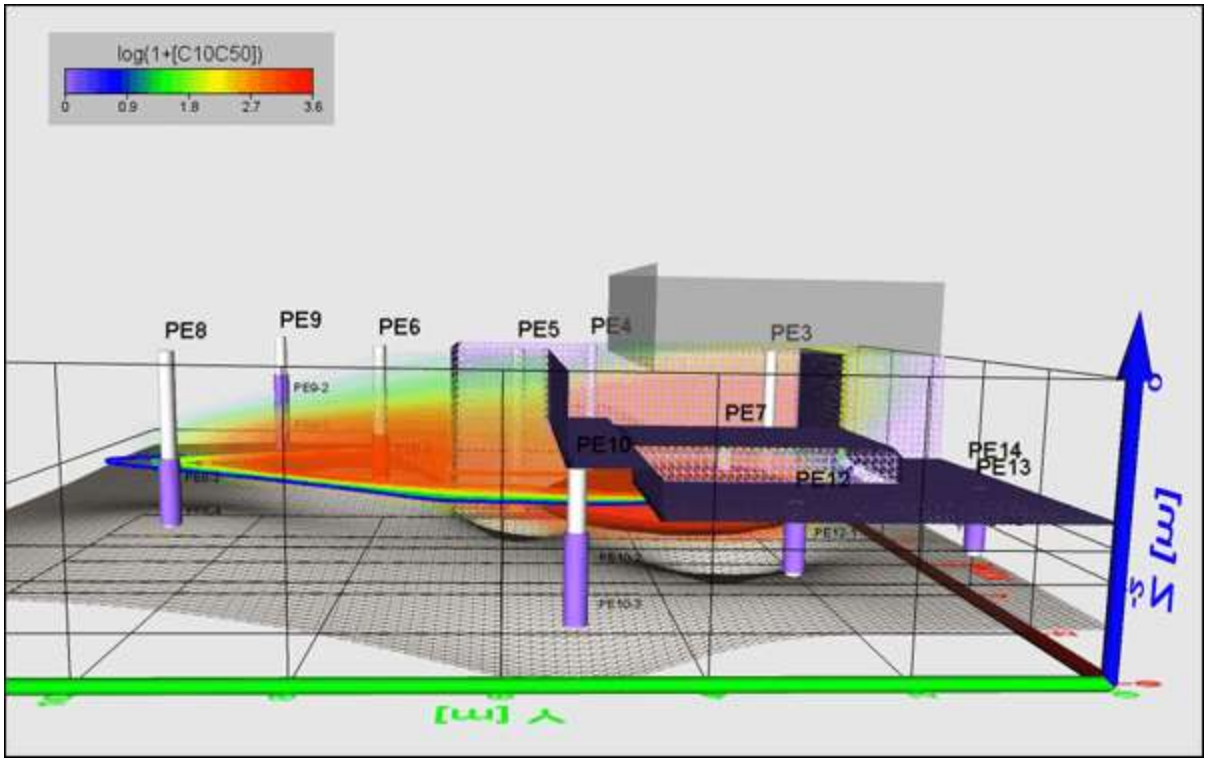
Part of Enviro-Mart's remediation process is mapping the contamination site. This is accomplished by using Voxler's modeling capabilities. The below image is of a soil remediation project for oil leaking beneath an apartment building's heating room displayed in Voxler. The contamination plume was computed by interpolating analyzed soil samples. The red isosurface, shown in the center of the below model, represents a C (3500ppm) level of C10-C50 petroleum hydrocarbon contamination. The acceptable level for residential locations, as specified by the MDDEP, is A (300ppm) or B (700ppm) levels.



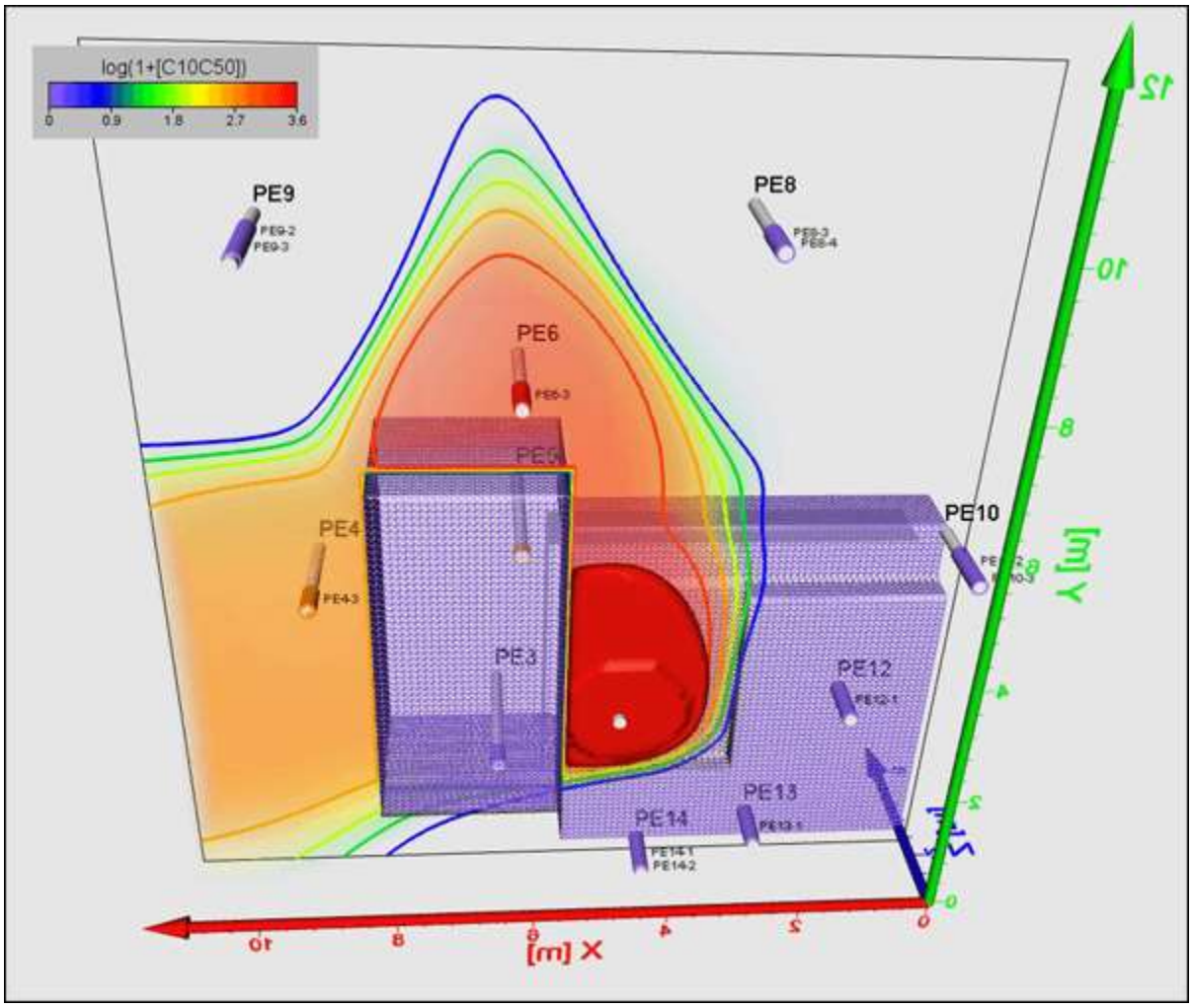
An orthographic view of the project. The leaking underground storage tank was removed from the PE3 and PE5 section and the contaminated bedrock was excavated. Thereafter, boring samples were taken from the surrounding area to determine the contamination plume. PE3 and PE5 were extracted from new soil which replaced the underground storage tank.



This OrthoImage module displays a 2D planar profile of contamination at a depth between PE6-3 and PE7-2.



A grid file was generated in Surfer and imported into Voxler to represent the bedrock top detected at each boring location.



The bottom view of the project displays the effect of removing the bedrock beneath the storage tank's former location.

As previously mentioned, the red isosurface represents a C (3500ppm) level of C10-C50 petroleum hydrocarbon contamination.

Once the contamination plume was modeled, Enviro-Mart injected Cool-Ox into the polluted soil. The injections occurred over a 20 week period with the majority of the injections occurring in the first 10 weeks. The final 10 weeks were spent battling troublesome pockets of contaminated soil. These "pockets of resistance" were caused by the uneven bedrock and poor oxide mobility in soil. These two factors made it difficult for the Cool-Ox to flow into all points of contamination.

At the end of the 20 week injection timeframe, the total level of petroleum hydrocarbons was reduced from greater than C levels (3500ppm) to A-B levels (500ppm). The total level of polycyclic aromatic hydrocarbons was reduced from greater than B levels (1.7ppm) to undetectable amounts (<0.1ppm).

Further information can be found on the Services Enviro-Mart website: http://servicesenviromart.com/index.php.