## Largest ERH Site in Latin America

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**Background/Objectives.** The project objective was to reduce PCE and TCE concentrations in groundwater by more than 98% to below the risk-based levels for residential purposes as established by Sao Paulo State legislation. This site is a former industrial site that is being redeveloped for residential purposes. Various remediation approaches were attempted unsuccessfully in the past 8 years before thermal remediation was considered and implemented. The treatment volume consisted of a vadose and saturated source zone.

**Approach/Activities.** The project objective was to reduce PCE and TCE in groundwater by more than 98%, using electrical resistance heating (ERH) to reduce contaminant concentrations below the risk-based levels. Prior to thermal remediation, a MIP investigation was completed to identify the correct treatment volume. Utilities were located before drilling and old water drains, which could have potentially been a pathway for the contamination, were removed. The treatment volume was approximately 54,454 cubic meters (m<sup>3</sup>). 470 electrodes with collocated vapor recovery wells and 38 temperature monitoring points were installed across numerous areas. Two 1200 kW power control units were used to apply energy to the ground in sequential phases. Due to the limited electrical power supply available, the site was treated by dividing it into five phases of heating. A train line (railway) passes right next to the site so additional safety measures were taken into consideration.

**Results/Lessons Learned.** All five heating sections were treated with ERH in 13 months. Bedrock contours varied across the site, which required the electrode installation to be flexible. TRS•Doxor was able to adjust electrode depths as needed across the site. Multiple water samples were taken from each monitoring well of each of the areas during heating, which will be presented.