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## Soil & groundwater investigation complicated by ocean tidal influences (Santa Monica, California)

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After underground storage tanks that had previously contained diesel were abandoned in place beneath an overpass bridge leading to an ocean pier, Lindmark Engineering installed groundwater monitoring wells to investigate any impact of petroleum hydrocarbons on the groundwater. We used data loggers to record real-time fluctuations in groundwater elevations due to tidal influences. This action allowed us to determine that tidal influences had only a minimal effect on moving the hydrocarbon contamination beneath the site, even though the abandoned tanks were located approximately 600 feet from the ocean's surf zone. However, we did find that the tidal influences were accelerating the natural biodegradation of hydrocarbon contaminants in the groundwater. This natural biodegradation was sufficiently rapid that active remediation techniques were not necessary at this site. *Client: City of Santa Monica*

For more information on this project, please contact Lindmark Engineering at (818) 707-6100 or [ulf.lindmark@efiglobal.com](mailto:ulf.lindmark@efiglobal.com).