

Early Warning System Takes Aim at Leaking Underground Storage Tanks

BY GARY M. KVISTAD, HATCH AND PARENT

For the past five years, the South Tahoe Public Utility District has been engaged in a high profile battle over leaking gasoline storage tanks that have contaminated groundwater. South Lake Tahoe grabbed national newspaper headlines when it became the first and most affected communities stricken with MTBE contamination in the nation. Aside from posing a threat to the legendary pristine water quality of the area, the contamination problem presented real and dramatic health risks to the area residents. The District's sole source of water is underlying groundwater supplies.

In South Lake Tahoe, groundwater contamination has caused the closure of about one-third of the District's 34 wells and severely limited its ability to supply clean water to its customers. The very life-blood of the region's water supply was being threatened. In response to the Herculean challenge of remedy and managing the contamination in an uncertain regulatory environment, the District has adopted a unique Groundwater Management Plan designed to elevate the information base and keep this type of problem from ever happening again.

MTBE was promoted by the petroleum industry as enabling gasoline to burn cleaner, which in turn reduces air pollution. However, petroleum, like other chemicals spills and leaks through leaky pipelines, facilities and human error. When gasoline-containing MTBE is released into the groundwater, it dissolves and moves with the groundwater rather than attaching to

soil particles, as do most gasoline components. The result, MTBE is transported along with groundwater and drawn into wells. MTBE is recognized as a suspected carcinogen and is detectable (taste and odor) at levels as low as 5 parts per billion or less and unfortunately, the District has encountered groundwater containing multi-times this amount of MTBE.

MTBE was not suspected to be a health risk until after it was detected in wells. By then it was too late. MTBE had spread into large underground plumes contaminating vast quantities of groundwater. In the District's case, MTBE contamination was so widespread that one-third of its wells have been contaminated or were severely threatened if the wells continued operating. The Board of Directors of the District refused to put the public at risk by delivering water to its customers that contained any detectable MTBE.

The District has been fighting this problem for four years and spent over \$3 Million to keep its water system in limited operation. This figure does not include the clean-up cost of the contaminated groundwater, which could take decades and tens of millions of dollars. Although MTBE is no longer sold in the Tahoe Basin as a result of Governor Gray Davis' Executive Order, the District wants to be pro-active in attempting to better manage its water resources and minimize risks of further contamination.

The District opted to pursue a first-of-its-kind management program, utilizing the authority granted by that includes an early warning system. Under the plan,

the District will install or use existing monitoring wells at underground storage tank sites that are located near wells. The monitoring wells will be sampled at various intervals, depending on proximity to the wells, to determine if a tank is leaking. If a leak is detected, the monitoring wells double as interim extraction wells until a full-scale remediation and clean-up plan is implemented. Consequently, the plan enables the District to quickly detect leaks, provide early warning, and require the operator/owner to immediately start clean-up of the contamination rather than waiting for the plume to grow unabated.

The plan provides a mechanism for the District to actively protect and limit damage to its groundwater supplies and give the gasoline tank operator/owner an opportunity to clean-up the contamination early and save millions of dollars that would otherwise be spent to clean-up large plumes. A win-win for everyone. The plan was adopted in cooperation with and the support of the Regional Water Quality Control Board, Lahontan Region, and the County of El Dorado.

Former GRA Board member, the late Kevin J. Neese, spawned the Groundwater Management Plan idea. The District's staff and Board of Directors have championed the effort through its ultimate adoption. 💧

Gary M. Kvistad
Hatch and Parent
1-805-963-7000
gkvistad@hatchparent.com