



Summary of Recent Projects

Area of Work: *Sustainability*

Project Description: Landfill Gas Impacts to Groundwater, Sustainable Remediation Alternatives

Problem

AquAeTer was retained by its client to assess remediation options at a landfill with impacts to groundwater caused by landfill gas. Impacts to groundwater exceeded regulatory levels (MCL) by less than two times the regulatory limits (<10 ppb). Exceedences were shown to be reasonably stable by semi-annual monitoring conducted since 1992.

In the preliminary stages of remediation selection, it became apparent that traditional landfill gas remediation efforts might generate actual environmental impacts that exceed the potential impact of the groundwater problem.



Solution/Approach

- Conduct further evaluation of site media and delineation of contaminant source and extent (soil gas and groundwater);
- Confirm that the likelihood of human receptor impact are minimal;
- Justify that groundwater plume is stable and landfill gas (source) is gradually declining;
- Consider impact indicators used in life-cycle assessment methodologies to assess the fossil fuel and human health impacts required to implement and operate traditional gas collection and SVE systems. The assessment of impact indicators quickly informed us that significant impact to fossil fuel resources and combustion of such resource results in human health impacts that exceed the risk of contaminants in the groundwater;
- Determine the environmental impacts of implementing monitored natural attenuation;
- Prepare an alternate plan for monitored natural attenuation;
- Present findings and strategy to State agency; and
- Conduct natural attenuation monitoring and reporting.

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