



**FINAL REPORT ON  
MONITORED NATURAL ATTENUATION  
EVALUATION AND APPLICATION IN THE LAHONTAN REGION**

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**Report to the Lahontan Regional Water Quality Control Board  
Patty Z. Kouyoumdjian  
Executive Officer**



## MONITORED NATURAL ATTENUATION, EVALUATION AND IMPLEMENTATION

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*2501 Lake Tahoe Blvd., South Lake Tahoe, CA 96150*

*Internet: <http://www.waterboards.ca.gov/lahontan/>*

Primary author: Linda Stone, PG, CHG

Reviewers: Tom Gavigan, Cindi Mitton, Mike Plaziak, Doug Smith

Technical Contributors: Staff of the Lahontan Regional Water Board

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### Appendix 6 Performance Monitoring

To evaluate the site-specific effectiveness of MNA, a performance monitoring program should establish a monitoring well network, monitoring parameters, monitoring frequency, and methods to analyze and interpret monitoring data. USEPA 2004 states that all performance monitoring programs should be designed to accomplish the following:

- Demonstrate that natural attenuation is occurring according to expectations;
- Detect changes in environmental conditions (e.g., hydrogeologic, geochemical, microbiological, or other changes) that may reduce the efficacy of any of the natural attenuation processes;
- Identify any potentially toxic and/or mobile transformation products;
- Verify that the plume(s) is not expanding (either downgradient, laterally or vertically);
- Verify no unacceptable impact to downgradient receptors;
- Detect new releases of contaminants to the environment that could impact the effectiveness of the natural attenuation remedy;
- Demonstrate the efficacy of institutional controls that were put in place to protect potential receptors; and
- Verify attainment of remediation objectives.

The following figures show typical monitoring network and monitoring zones in map view and in cross-section.

