

Philip L. Hageman, Research Physical Scientist  
United States Geological Survey  
Geology, Geophysics and Geochemistry Science Center, Denver  
Over 50 publications; more than 32 years specializing in geochemistry  
[https://www.researchgate.net/profile/Philip\\_Hageman](https://www.researchgate.net/profile/Philip_Hageman)

ResearchGate—list of publications (this webpage should stay intact)

This is a compilation of many of Phil's publications

See separate file with Phil's 2014 USGS Research/Development Scientist Record

This was a preliminary review copy so it has comments incorporated, but I thought you and the kids might still find it interesting

### 30-years of USGS Service Letter:

Philip L. Hageman has a long history of valuable contributions to analytical chemistry, interdisciplinary geochemistry, human health, and disaster response studies at the USGS. He has provided the leaching and analytical expertise for several aspects of hazard and disaster investigations, geoenvironmental studies, characterization work, and topical projects. In particular, Phil developed the USGS Field Leach Test, which is widely used in the mineral-environmental community and has also been applied to leaching materials related to disasters (e.g., hurricane-induced flood sediment, dust produced from the World Trade Center towers), volcanic ash, wildfire ash, and soils. He also played an important role in the research and development of analytical methods to determine mercury in a wide variety of geologic and water matrices. Most recently Phil expanded his skills to develop leaching and extraction procedures to assess metal-recovery potential for waste-stream materials. Phil's history of important contributions to method development and applied research at the USGS is greatly appreciated.

### Misc. Excerpts from Old Supervisory Letters:

Philip L. Hageman's research interests include a broad variety of interdisciplinary geochemistry studies incorporating geology, the environment, issues affecting human health, and disaster response. He has experience in characterization and assessment of the mobility of constituents from metal mining waste, varied geological sources, biological and environmental samples, and other unusual matrices. His expertise includes leaching studies, field studies, sampling, and analytical methodology used to determine mercury in geogenic, biological, and water samples.

Phil's laboratory work, method development and leaching techniques are key to the success of a variety of projects that rely on his expertise. He has provided the leaching and analytical foundation for several aspects of hazard and disaster investigations, geoenvironmental studies, characterization work, and topical projects. The number of co-authored publications in his RDSR attests to the importance of his contributions to a variety of studies. Phil is productive, efficient and self-directed in his work.

The Field Leach Test is widely used in the mineral-environmental community and has also been applied to leaching materials related to disasters (e.g., hurricane-induced flood sediment, dust produced from the World Trade Center towers), volcanic ash, wildfire ash, and soils to name a few examples. This relatively simple leaching test allows investigators to rapidly identify water-reactive constituents. According to Google Scholar Phil's 2000 proceedings paper, titled *A Simple Field Leach Test for Rapid Screening and Qualitative Characterization of Mine Waste Dump Material on Abandoned Mine Lands*, has 87 citations. Unfortunately, it is difficult to discern the number of citations for a USGS publication, such as Phil's Techniques and Methods publication or his Fact Sheet.