# Abstract Template

**Abstract Title:** Four Decades of Environmental Investigation and Remediation of Contaminated Properties in the United States – What Has Changed and What Does the Future Hold?

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**Abstract (not more than 300 words)**

There have been a number of changes regarding how contaminated properties are investigated and remediated the Comprehensive Environmental Response and Compensation Act, commonly referred to as Superfund, was passed in 1980. This paper discusses five of these fundamental changes and discusses how understanding the changes may help to identify how contaminated properties are investigated and remediated in the future:

1. The regulatory approach has changed from an enforcement-driven process to a voluntary, property transaction-based process. As a result, more properties have been investigated and remediated and the interaction between government agencies and the "regulated community" has improved.
2. The investigation and remediation process has changed as a result of the availability of published regulatory guidelines, industry standards and in particular numeric risk-based criteria. This process now often considers factors such as land use, sustainability, soil reuse and cross media impacts.
3. The migration of soil vapor into buildings is now a common environmental concern in addition to impacts to soil and groundwater.
4. The opportunity for community involvement in the decision making process has changed as a results of the increased use of the internet and social media.
5. Funding and financing mechanisms have changed and now often rely on economic development-based financing and industry-specific reimbursement programs.

Government policies will continue to play a central role and the public will likely play an ever-increasing role as contaminated properties are investigated and remediated; however, the majority of investigation and remediation activities will likely continue to be the result of property redevelopment projects and real estate transactions. Adequate funding to address contaminated properties that do not present an opportunity for economic development will continue to be a challenge.

Keywords — environmental, investigation, redevelopment, remediation.

**Professional Biography (100-150 words)**

Ken has over 35 years of experience specializing in the areas of environmental investigation and remediation and regulatory policy development. Ken served as the President of *Landmark Environmental, LLC* from 2000 to 2015. Ken is currently an Executive Vice-

President. Ken is a former Board Chair of *Minnesota Brownfields*, a non-profit organization that promotes current brownfields initiatives.

Prior to the establishment of Landmark, Ken was a Vice-President at *Barr Engineering Company*. Ken also worked for the *Minnesota Pollution Control Agency* for nearly sixteen years, primarily as a manager in the Voluntary Investigation and Cleanup Program and the Superfund Program.

Ken has a Master's Degree in Environmental Studies from Bemidji State University and a Bachelor's Degree in Biology and Earth Science from the University of Minnesota. Ken participated in the Fellowship Program at the University of Minnesota, Humphrey Institute of Public Affairs in 1999 and 2000.



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