



# PIPELINE RISK MANAGEMENT

## MANAGING RISK

Effective pipeline risk management incorporates both the concepts of failure event frequency and the potential consequences of that event. BakerRisk's approach to pipeline risk assessment is to identify areas of priority at a high level and focus on progressively greater levels of detail using our detailed frequency models or sophisticated consequence analysis tools.



It is critical not to view pipeline risk management solely through the prism of corrosion protection, emergency response, isolation philosophy, or any other single perspective. BakerRisk's experienced staff can make a global assessment of a pipeline operation with specific recommendations for improvement.

### **BakerRisk's highly experienced staff offers:**

- ◆ Risk analysts with an **average of over 20 years experience**
- ◆ Specific experience leading safety programs **as employees of pipeline operating companies**
- ◆ Multidisciplinary experience that enables **identification of the critical issues associated with pipeline design, operations and maintenance**, and is not tied to a single aspect of pipeline performance

## REGULATORY COMPLIANCE

BakerRisk has performed many studies in support of regulatory submissions that satisfied the regulators through objective balancing of risks and costs.



## PREDICTIVE TOOLS

Much effort has been spent by others in developing models to predict which segments of a pipeline pose the greatest likelihood of failure. A careful review of these models indicates that they are inconsistent in many respects with the historical record.

For this reason and others, DOT has not approved these methods as a sole means of pipeline risk prioritization. BakerRisk has prepared a "white paper" which discusses the essential elements of building a comprehensive reliability model for your pipeline. This paper is available upon request.

Our state-of-the-art SafeSite<sub>3G</sub><sup>TM</sup> software models the impact of failures, including dispersion, fire and explosion events. These models incorporate theories developed at BakerRisk and other facilities, and include data from past incidents.



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BAKER ENGINEERING AND RISK CONSULTANTS, INC.

## Headquarters

3330 Oakwell Court, Suite 100  
San Antonio, TX 78218-3024  
210.824.5960 tel  
210.824.5964 fax

## Houston Office

4100 Greenbriar, Suite 130  
Stafford, TX 77477-3908  
281.491.3881 tel  
281.491.3882 fax

### About BakerRisk

Baker Engineering and Risk Consultants, Inc. is one of the world's leading explosion analysis, structural design, and risk engineering companies. BakerRisk provides comprehensive consulting, engineering, laboratory and range testing services to government agencies and private companies who are involved with dangerous, highly hazardous, reactive, or explosive materials.



Blast Effects & Explosion Testing



Dynamic Structural Analysis and Design



Risk Engineering



Process Safety



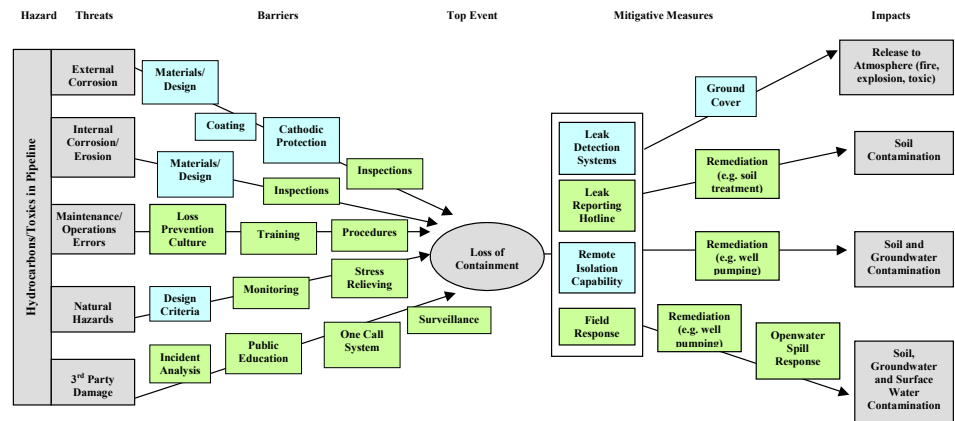
Incident Investigations



Reactive Chemicals Testing & Management Systems

[www.BakerRisk.com](http://www.BakerRisk.com)

## Elements of Pipeline Risk Management



The diagram above illustrates the many facets of pipeline risk management, from preventing a release to minimizing the impacts should a release occur.

BakerRisk staff have experience in these subject areas as members and managers of safety groups in pipeline operating companies. Other staff members have years of experience in the modeling of pipeline reliability and/or consequences of releases. And where necessary, BakerRisk supplements its in-house expertise with external partners, such as in the area of groundwater modeling.

This experience, technology, and access to resources ensures that BakerRisk can provide the most accurate and comprehensive pipeline risk management services available.