Risk Communication and Risk Management at Vapor Intrusion Sites – Ignore at Your Own Risk

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OVERVIEW

• Two vapor intrusion sites

• Same state

• Same cleanup program

• Different outcome
RISK COMMUNICATION

- Risk communication has been defined as “actions, words, and other messages, responsive to the concerns and values of the information recipients, intended to help people make more informed decisions about threats to their health and safety”.

Fischhoff, B. *Risk Perception and Communication*; Environmental and Occupational Health Sciences February 2009
RISK ?
RISK = HAZARD + OUTRAGE

Voluntary  involuntary
Natural    manmade
Control    no control
Familiar   unfamiliar
Trust      no trust
No effects on children  effects on children
RISK COMMUNICATION GOALS

- Establish TRUST

- Provide information to enable residents to make decisions about vapor intrusion impacts

- Create open and ongoing lines of communication
RISK MANAGEMENT GOALS

- Secure initial and ongoing access for vapor intrusion investigation and monitoring
- Manage risk to the client
Risk Communication - Risk Management Strategy

- **Transparency**
  - Open, honest, frank
  - Remove barriers to information-language, distance, economic

- **Dialogue**
  - Appoint one contact
  - Public meetings and information sessions
  - One on one interaction
  - Listen, listen, listen
Risk Communication - Risk Management Strategy

- Work with regulators
  - Reflected trust
  - Consistent approach

- Good housekeeping
  - Punctual
  - Grandma’s house
## Effectiveness

<table>
<thead>
<tr>
<th>Category</th>
<th>Site 1 - strategy</th>
<th>Site 2 - no strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified letters received</td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>Initial contact with homeowner</td>
<td>97%</td>
<td>20%</td>
</tr>
<tr>
<td>Access to conduct sub-slab sample</td>
<td>89%</td>
<td>0%</td>
</tr>
<tr>
<td>On-going monitoring</td>
<td>95%</td>
<td>NA</td>
</tr>
</tbody>
</table>
Site 1
Site 1

- Overall access rate over 5 years – 89%
  - continued access 95%

- Strategy:
  - Transparency: Contacts, repository, simple access agreements
  - Dialogue: Public meeting, information sessions, one on one
  - Regulators: local and state involvement
  - Housekeeping: punctual, polite
Site 2
Site 2

- Overall access rate 0%
- Transparency – factsheet
- Dialogue –
- Regulators – no effort to establish relationship with regulators
- Housekeeping – punctual, polite
Risk communication is an integral part of a successful, long-term vapor intrusion project. Without risk communication, one cannot build trust with individual homeowners or the greater community, or create the opportunity for ongoing access to homes or access to new homes. Expensive litigation becomes more likely. A good risk communication strategy is good risk management.
“For any of its potential to be realized, risk communication must be taken seriously. One cannot rely on undisciplined speculation about the beliefs or motivations of other people. One cannot expect to quiet a raging controversy with a few hastily prepared messages. One cannot assume that expensively produced communications will work without technically competent evaluations. Those who ignore these issues may be the problem as much as the risk is. The price of their ignorance is borne by everyone concerned. The public is demeaned by the experts as being hysterical, while the experts are vilified as being evil.”

Baruch Fischhoff.