Various states have made significant progress in developing guidance documents for evaluating and remediating vapor intrusion sites. Although there are similarities in many of these documents, they also vary widely, relying on different approaches regarding modeling, the value of soil and groundwater screening, indoor air sampling, remedial design approaches and public notification. The degree of regulatory oversight and the role of regulatory agencies also influence the direction of the guidance. Much of this guidance is changing and evolving. Environmental practitioners working in multiple states can influence these changes when working directly with regulators based on their practical experience in other jurisdictions. A comparison of 4 states, illustrates these similarities, differences and the opportunities to influence policy changes.

**Vapor Intrusion Guidance**

**How Four States Compare**

**Abstract**

**Date of VI Guidance**

<table>
<thead>
<tr>
<th>State</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>California</td>
<td>February 2005</td>
</tr>
<tr>
<td>New Jersey</td>
<td>September 2005</td>
</tr>
<tr>
<td>New York</td>
<td>October 2006</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>August 2007</td>
</tr>
</tbody>
</table>

**Updating Guidance**

- **California**: Yes
- **New Jersey**: Yes
- **New York**: Yes
- **Massachusetts**: *Yes*

**Agency Review & Approval**

- **California**: Yes
- **New Jersey**: Yes
- **New York**: Yes
- **Massachusetts**: No

**Soil Gas and/or Groundwater Screening**

- **California**: Screening based on soil gas with default attenuation factors
- **New Jersey**: Groundwater and soil gas screening levels
- **New York**: Soil gas combined with indoor air concentrations
- **Massachusetts**: Groundwater standards based on VI

**Required Residential Indoor Air Action Levels**

- **California**: Risk calculations based on indoor air sampling
- **New Jersey**: Exceedence of Rapid Action Levels (RALs)
- **New York**: Indoor air guidelines for methylene chloride, PCBindo, TCE, PCE and TCE
- **Massachusetts**: Detectable concentrations in residences, Critical Exposure Pathways (CEP)

**Indoor Air Sampling Duration**

- **California**: 24 hours residential
- **New Jersey**: 24 hours
- **New York**: 24 hours
- **Massachusetts**: 24 hours residential

**Assessment Indoor Sampling**

- **California**: 2 sampling events
- **New Jersey**: 2 sampling events
- **New York**: Multiple Rounds
- **Massachusetts**: Up to 4

**Mitigation Systems**

- **California**: Vapor Barriers, Passive Venting, Active Venting, Sealant, Building Pressurization
- **New Jersey**: Vapor Barrier, Passive Venting, Active Venting, SSDS, SMD, HVAC Modifications
- **New York**: Vapor Barrier, Passive Venting, Active Venting, SSDS, SMD, HVAC Modifications, Building Pressurization
- **Massachusetts**: Vapor Barrier, Passive Venting, Active Venting, SSDS, SMD, HVAC Modifications

**Proposed Engineering Control require approval**

- **California**: Yes
- **New Jersey**: Yes
- **New York**: *Yes*
- **Massachusetts**: Likely yes for residential, No for commercial

**Verification Sampling Post Mitigation**

- **California**: Indoor air sampling
- **New Jersey**: Indoor air sampling 2-4 weeks and during winter, pressure testing
- **New York**: Within 30 days or postponed until heating season
- **Massachusetts**: Indoor air sampling, currently undetermined amount of time

**Monitoring Requirements**

- **California**: O&M Plan, periodic indoor air testing; vapor and pressure measurements
- **New Jersey**: O&M Plan, periodic inspections, long term indoor air testing not required
- **New York**: O&M Plan
- **Massachusetts**: Activity and Use Limitation

**Institutional Controls**

- **California**: Land Use Covenant (LUC) Notice of existing conditions, prohibitions against specific uses and interference with the mitigation system, access for DTSC, 5 year review
- **New Jersey**: IC not required to operate system as long as owner has been provided notice, Monitor change in building ownership
- **New York**: Environmental Easement
- **Massachusetts**: Activity and Use Limitation, Maintain and operate mitigation system, unclear if monitoring to be incorporated into AUL

**Public Notice**

- **California**: Site specific community outreach plan developed
- **New Jersey**: NDDEP notifies property owners and tenants of sampling results
- **New York**: Provide sampling results to property owners and tenants, landlords disclose sampling results, information regarding mitigation systems
- **Massachusetts**: Provide sampling data results to property owners, notify tenants of remedial response actions to address IRAs

* New Jersey is transitioning to a privatized program by 2012.