

Vapor Intrusion: Due Diligence Issues

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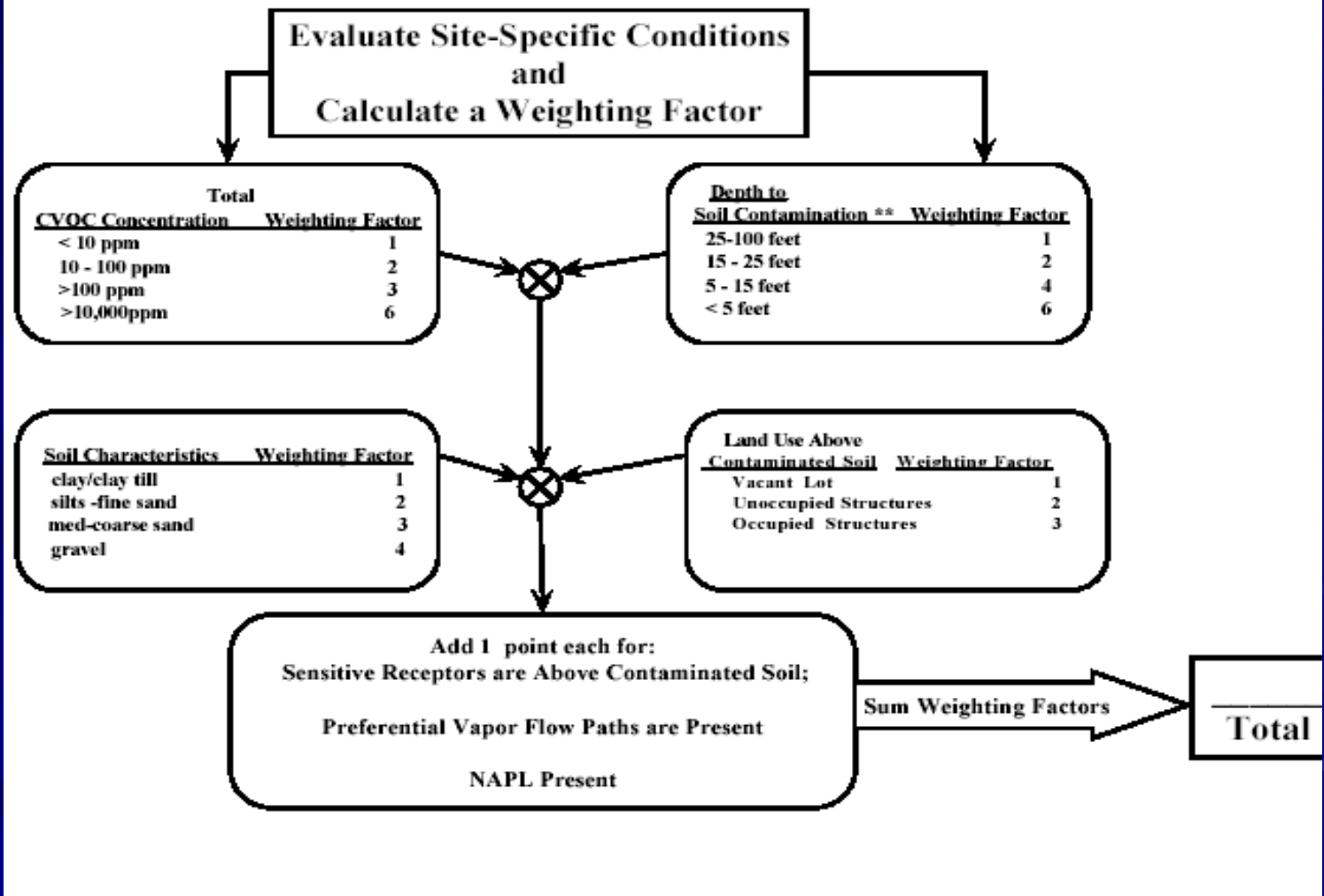
Liability for Vapor Intrusion

- CERCLA
- RCRA
- UST
- OSHA
- State Remedial Programs
- Common Law

Prioritization Process

- Four Weighting Factors
 - Total CVOC concentrations
 - Depth to Contamination
 - Soil Characteristics
 - Land Use (including adjacent land use)
- Numerical values scored for priority

Soil Screening for CVOC Vapor Intrusion



New York VI Update

- NYSDEC DER-13 Issued 10/18/06
 - eliminates 100 foot brightline test
 - adds 1 point to matrix for “sensitive receptors” above plume (day care, elder care, medical)
 - 1 point for preferential pathways
- 421 Legacy Sites (remedial decisions prior to 01/01/03)
 - EPA lead on NPL Sites
 - PRP or NYSDEC initial screening

NY VI Update Cont'd

- NYSDEC is halfway through initial screening
 - 9 regional offices to review at least 5 sites per year
 - Sites will be ranked following initial screening
- NYSDEC Will Pursue Cost Recovery
- Does not distinguish between residential and non-residential use
- LUCs for undeveloped property
- Oil Spill Fund Evaluating VI

BCP Impacts

■ Participants

- address off-site impacts
- possible significant threat determinations

■ Volunteers

- address on-site sources
- Qualitative Off-site Sampling

New York DOH VI Update

- NYSDOH Final Technical Guidance 10/2006
- Soil Gas and Modeling Insufficient for Pathway Elimination
- Decision Matrices Modified
 - Indoor Air Concentration Ranges Narrowed
 - Mitigation vs. Monitor modified



Indoor Air Guidance Values

- PCE 100 mcg/m³ (15 ppb)
- TCE 5 mcg/m³ (1 ppb)
- PCBs 1 mcg/m³

NYSDOH Matrix 1 (TCE)

- More Stringent TCE Standard (indoor 5 ug/m³ or sub-slab 250 ug/m³)
- May require reduction if indoor concentrations above background

NYSDOH Matrix 2 (PCE)

- 100 ug/m³ is immediate action level and not no action.
- Concentrations above background require mitigation
- OSHA PELs Do Not Apply for Exposures To Chemicals Not Used in Workplace
- Identifies “preferred” mitigation methods

NYSDOH Guidance

- Detailed Protocols for Investigating, Monitoring and Mitigating VI
- VI Pathway “MUST” be investigated if:
 - Existing or likely subsurface source of VOCs, and
 - Existing buildings or “possibility” that building may be “near” the subsurface source
- Whenever VOCs exceed GW Use classification?

Investigation Issues

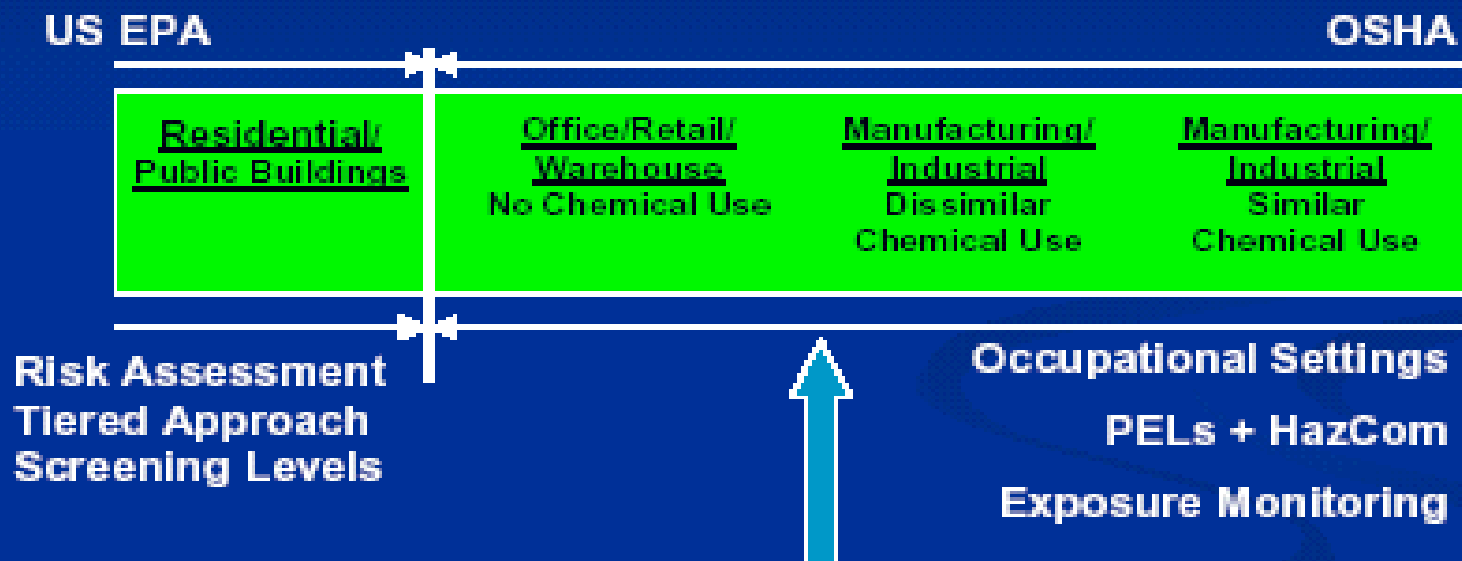
- No Tier Approach
- Modeling May Not Be Sole Basis for Determining Exposure Potentials
 - May be used to evaluate potential pathways
 - Must be Pre-Approved
 - Must Incorporate Site-Specific Factors
 - Modeling must be field verified
- May Have To Investigate If Outdoor VOCs Above Background Levels

Sampling and Evaluation Issues

- Soil Vapor Alone May Not Be Used to Rule Out Further Sampling or Mitigation
- Contemporaneous Outdoor and Indoor Sampling with Soil Vapor
- Heating Season Sampling Required To Rule Out Exposure
- Test outward to edge of plume

OSHA and EPA/State VI Jurisdictional Issue

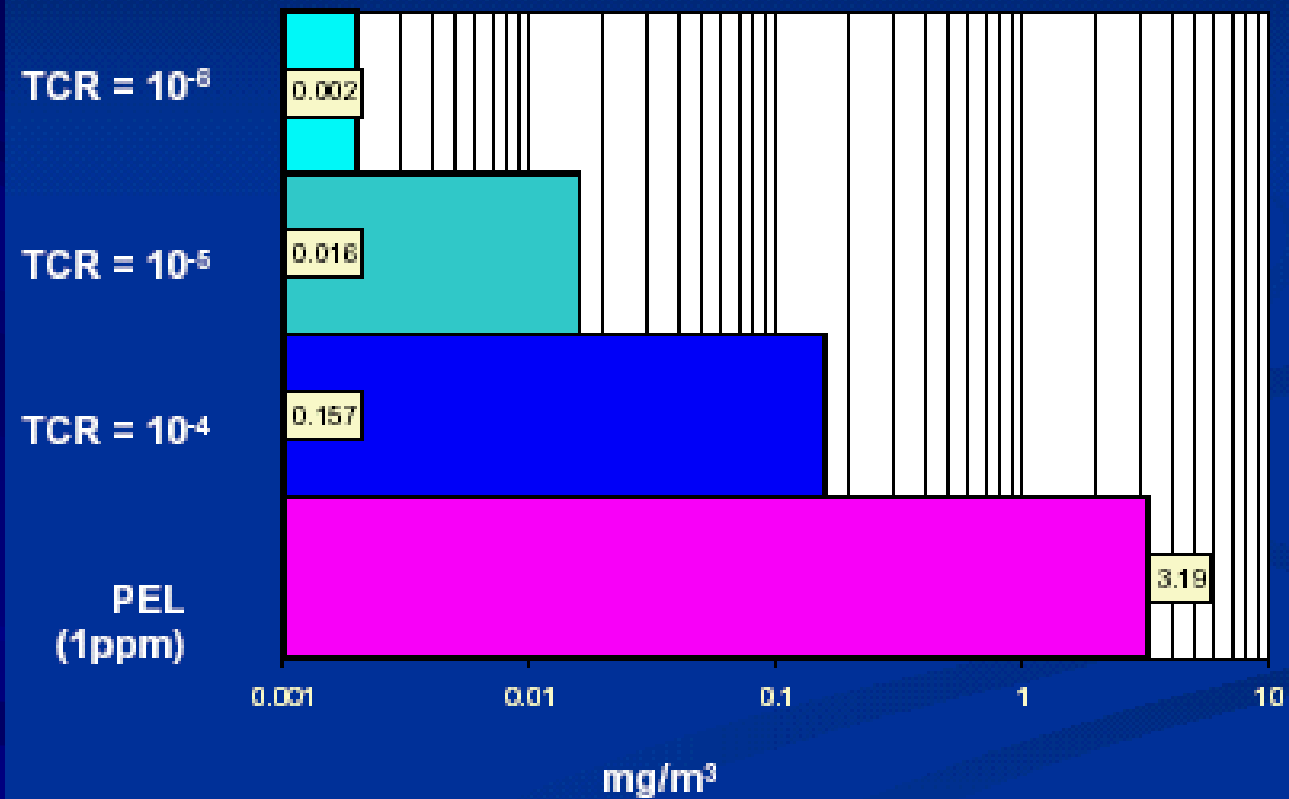
Federal Guidance



"... there may be instances (under CERCLA and other cleanup programs) where standards other than the OSHA standards are used to determine whether the exposure pathway presents a risk to human health."

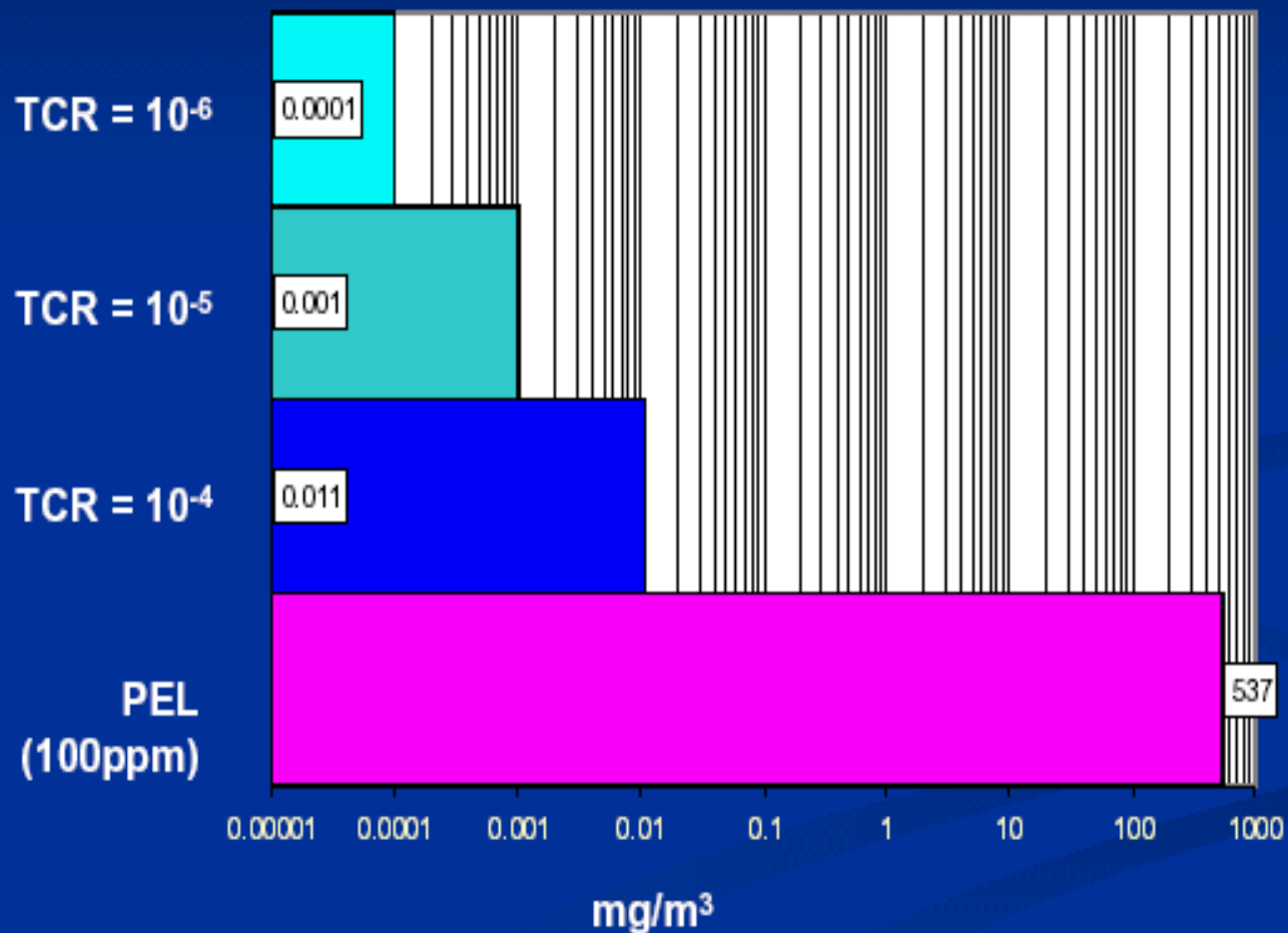
EPA vs. OSHA PEL

Benzene 3 Orders Different



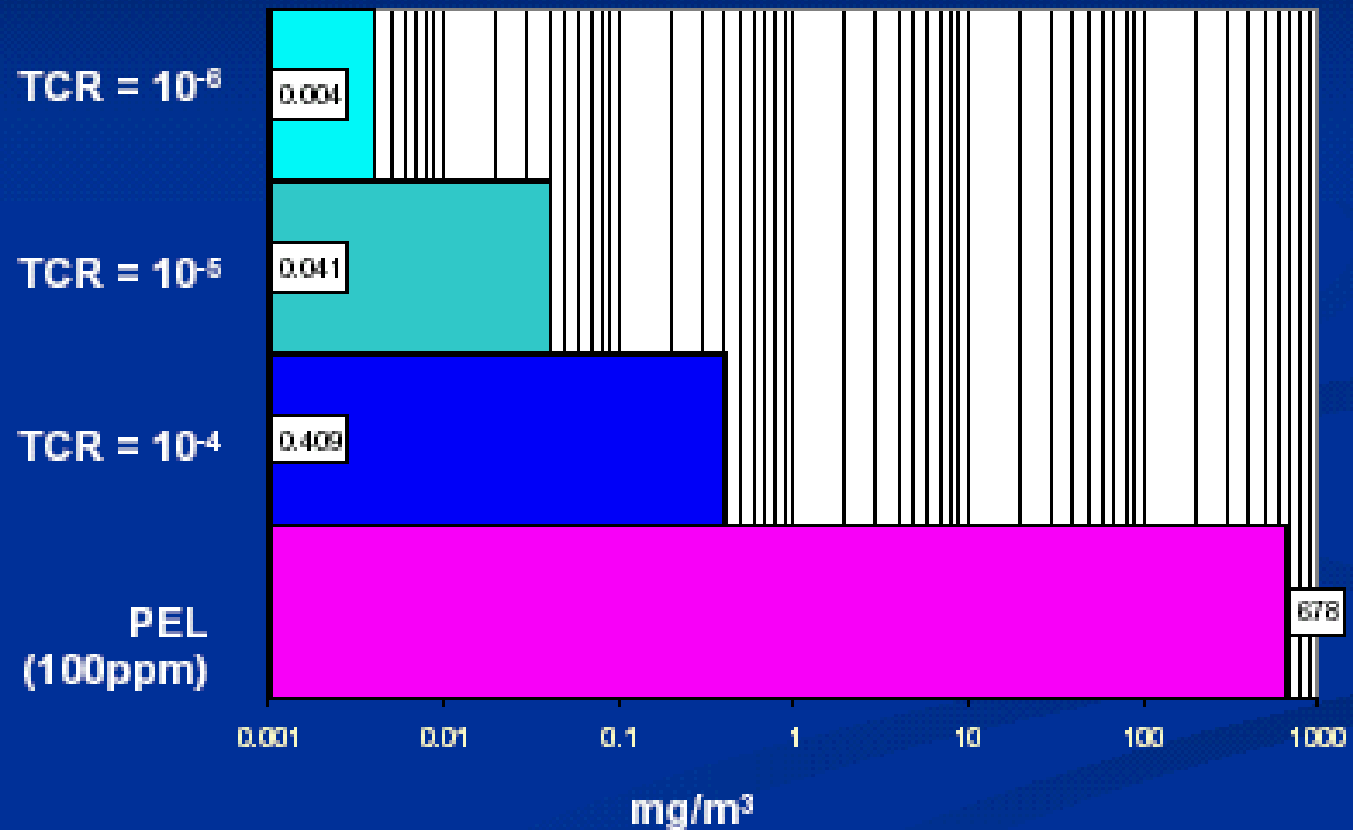
Trichloroethene (TCE)

6 Orders Different



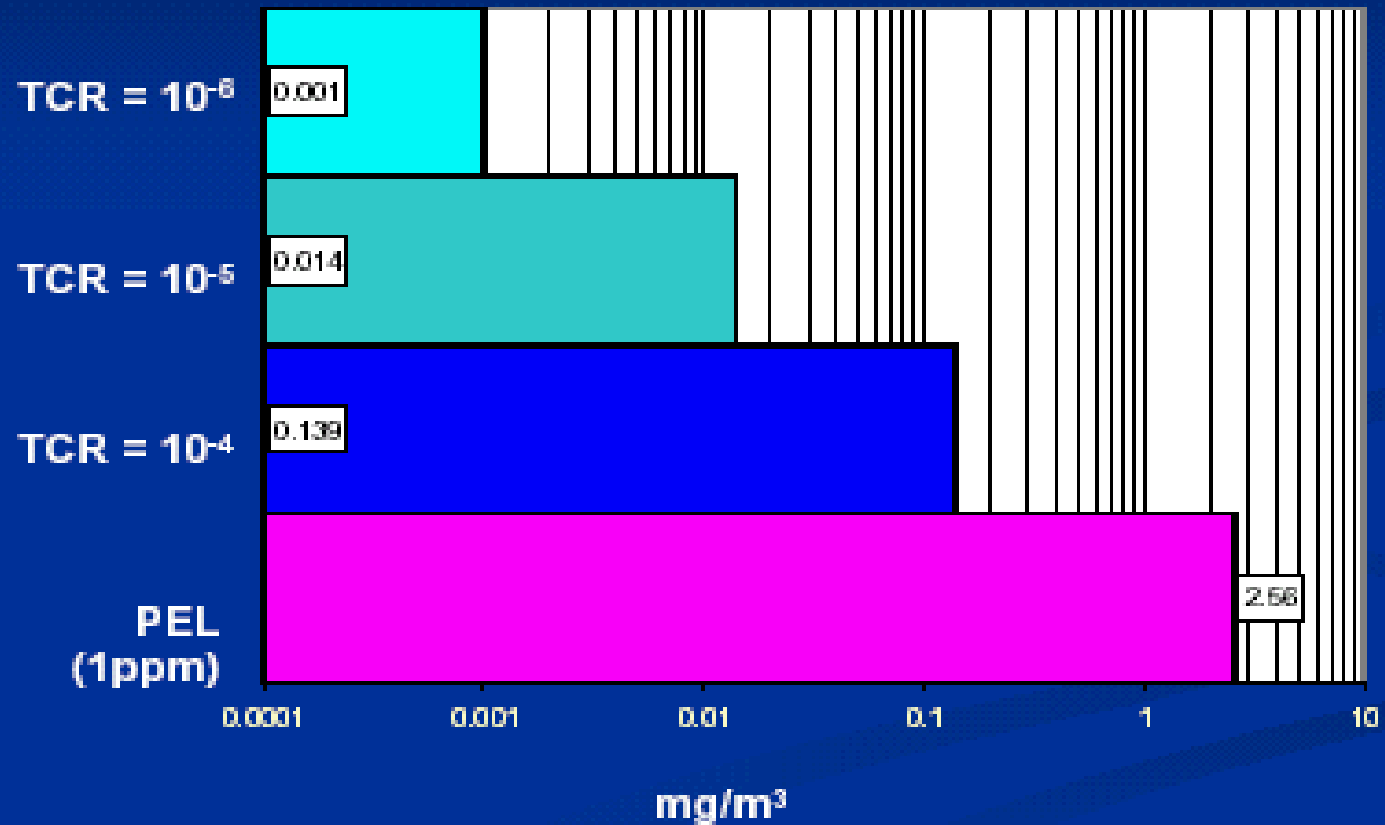
Tetrachloroethene (PCE)

5 Orders Different



Vinyl Chloride (VC)

3 Orders Different



EPA-OSHA Jurisdiction

- EPA/OSHA MOU 11/23/90
- EPA authority includes
 - Significant adverse reactions to chemicals posing potential hazard to public health or environment
 - Accidental, unpermitted or deliberate releases beyond workplace
 - Violations of EPA regulations

EPA-OSHA Jurisdiction

■ VI Guidance

- Not apply to occupational exposures where contamination similar to chemicals being handled
- May apply in occupational settings where VI constituents no longer or never used in workplace, or where chemicals modified by degradation
- Change in use may trigger pathway reevaluation

■ PELs not ARARs

OSHA-State Jurisdiction?

- Supremacy Clause
- Express Preemption
- Implied Preemption-federal law occupies field or state law conflicts with federal law

OSHA-State Jurisdiction?

- OSH Act § 18(a)- States not prevented from asserting jurisdiction under state law over occupational and health issues for which OSHA has not adopted a standard
- OSH Act § 18(b)- States may assume responsibility for occupational safety and health issues thru approved-state

Diligence Issues

- Do Not Need Completed Pathway For Lenders To Walk Away!
- Appropriate Standard
 - OSHA (but beware of Haz Com and MM Requirements)
 - DOH
- Know State Program (COCs, vertical/horizontal, sampling vs. modeling)
- State Dry Cleaner Funds
- Disclosure
- Insurance (E&O, Reopeners, PLL for TP liability)
- Fixed Price Remediation (NFA address VI?)