

INTRODUCTION

- Overview of what has brought us here today
- Status of NYS's policy and guidance
- Identification of training objectives



Why is vapor intrusion such a big deal NOW?

- Vapor intrusion is not a new phenomenon
- Our understanding of the process is evolving
 - many old assumptions are not valid —
3 examples



Example 1: Groundwater as a source

- **Old assumption:**

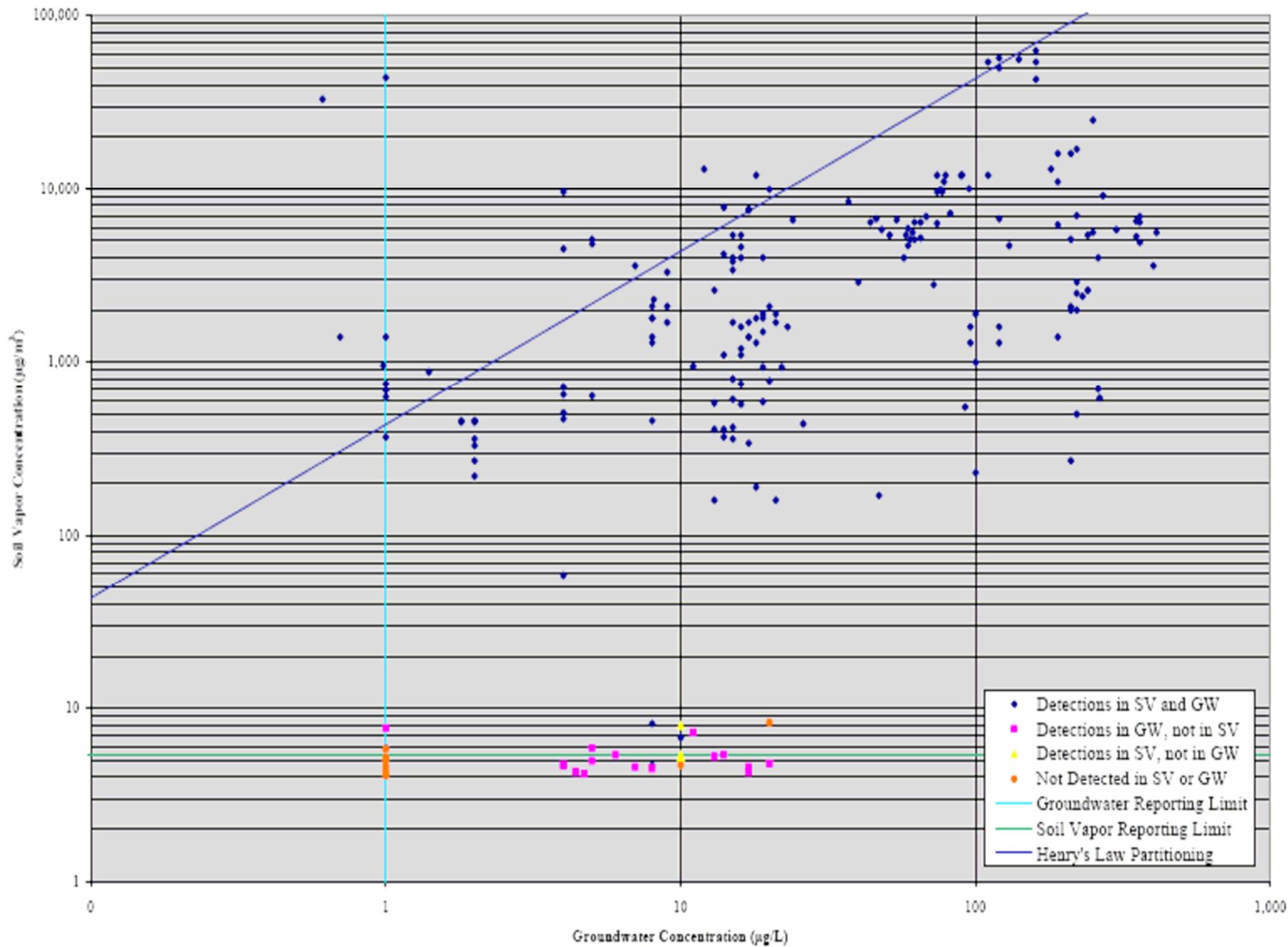
Need extremely high concentrations of volatile chemicals in the groundwater for there to be a potential for indoor air problems

- **Finding:**

The potential exists even at low levels (< 10 micrograms per liter, mcg/L).

*** HENRY'S LAW ***





Example 2: Soil vapor results

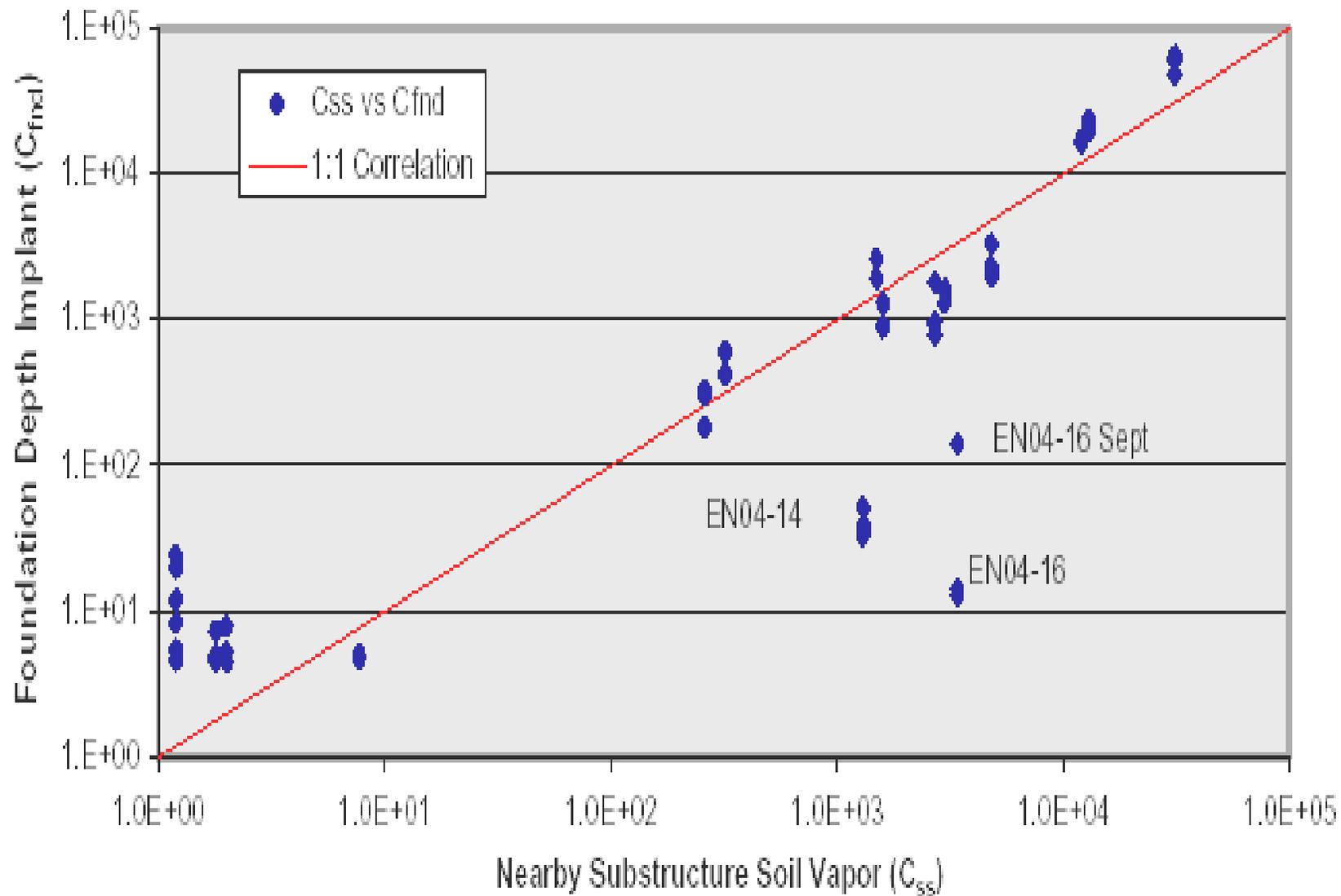
- **Old assumption:**

Soil vapor results from samples collected near a building, and at foundation depth, are representative of soil vapor conditions beneath the building's foundation.

- **Finding:**

Not necessarily. Levels immediately beneath the foundation may be 100x (or more) greater than those found in corresponding soil vapor samples.





Example 3: Attenuation factors

- **Old assumption:**

The ratio of levels in the soil vapor to indoor air [attenuation factor, A.F.] are typically 1,000 : 1 or greater.

Example 3: Continued

- **Findings:**

Sub-slab vapor (found immediately beneath the building's foundation) is a better parameter to use when calculating A.F.s than soil vapor.

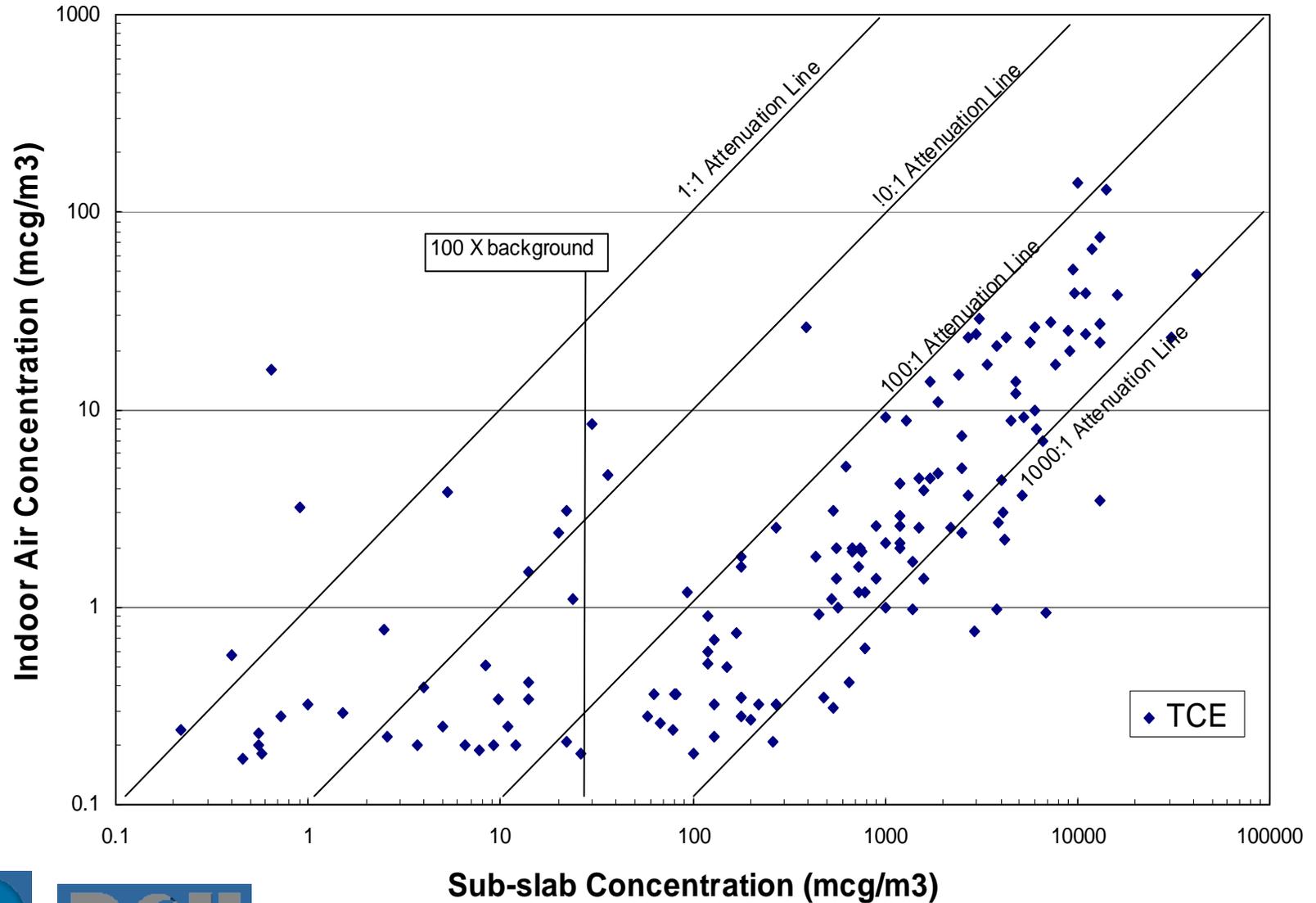
The influence of background levels should be considered when looking at A.F.s.

There is no one A.F. that can be applied at all sites. Some sites may have consistent A.F.s from structure to structure, while others do not.



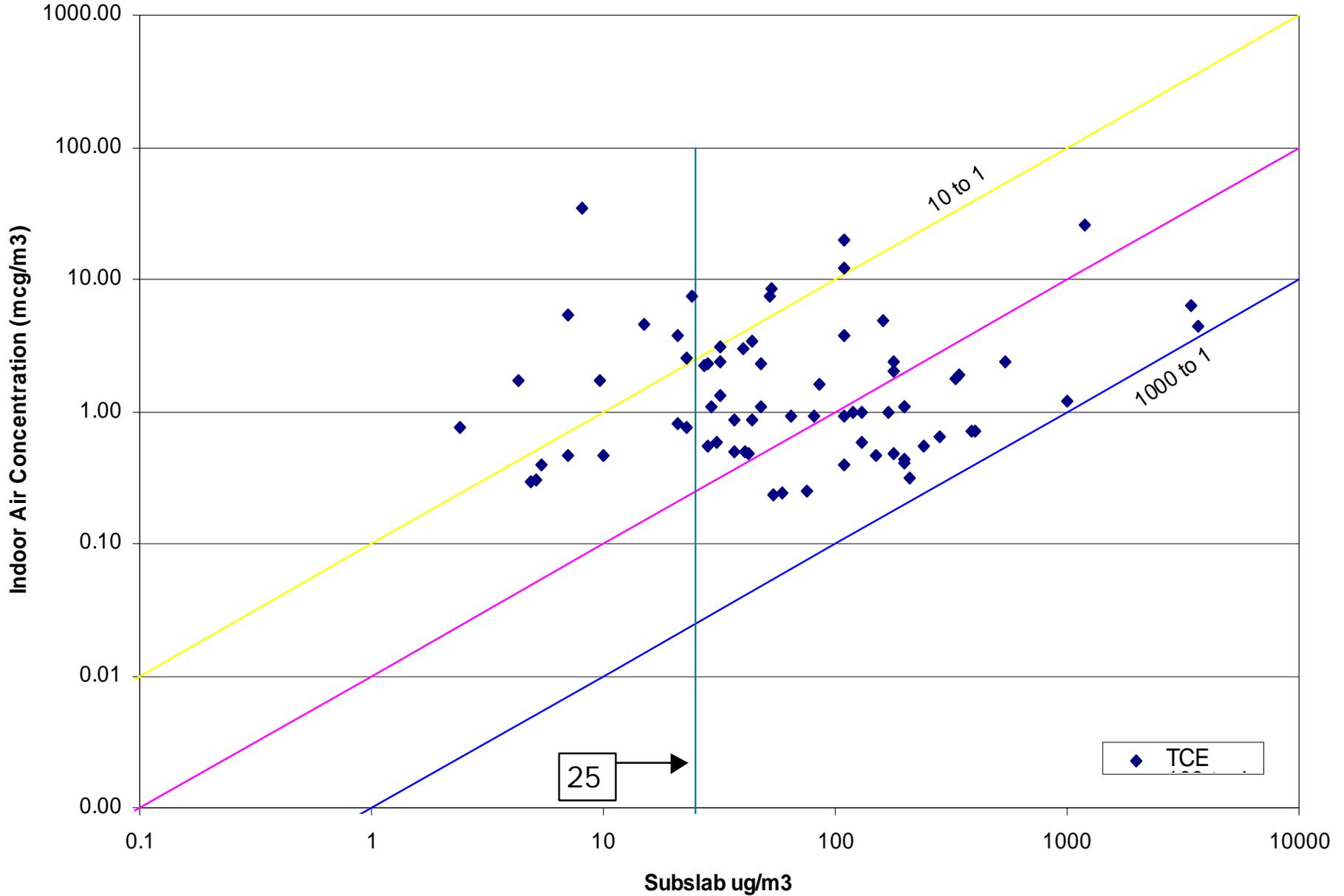
SITE A

TCE Indoor Air vs. Sub-slab Concentrations



SITE B

TCE Indoor Air vs. Sub-slab Concentrations



Why is vapor intrusion such a big deal NOW?

- Vapor intrusion is not a new phenomenon
- Our understanding of the process is evolving
 - many old assumptions are not valid
 - more precise analytical methods are available
 - sampling equipment and protocols are improved



RESULT?

**New approach
to addressing this issue**



NYS documents on vapor intrusion

DEC's draft policy — November 2004

<http://www.dec.state.ny.us/website/der/vaporstrat.pdf>

- Strategy for prioritizing sites

DOH's draft guidance — February 2005

http://www.health.state.ny.us/nysdoh/gas/svi_guidance/

- Process for evaluating vapor intrusion

NOTE

The documents are **COMPLEMENTARY**, not conflicting.



DEC's draft policy

**Vapor intrusion will be addressed at all sites
in New York State**

CURRENT and NEW SITES

- vapor intrusion will be incorporated into on-going and proposed activities

PAST SITES:

Sites where formal remedial decisions have already been made prior to Jan. 1, 2003

- need to revisit the issue



DEC's draft policy

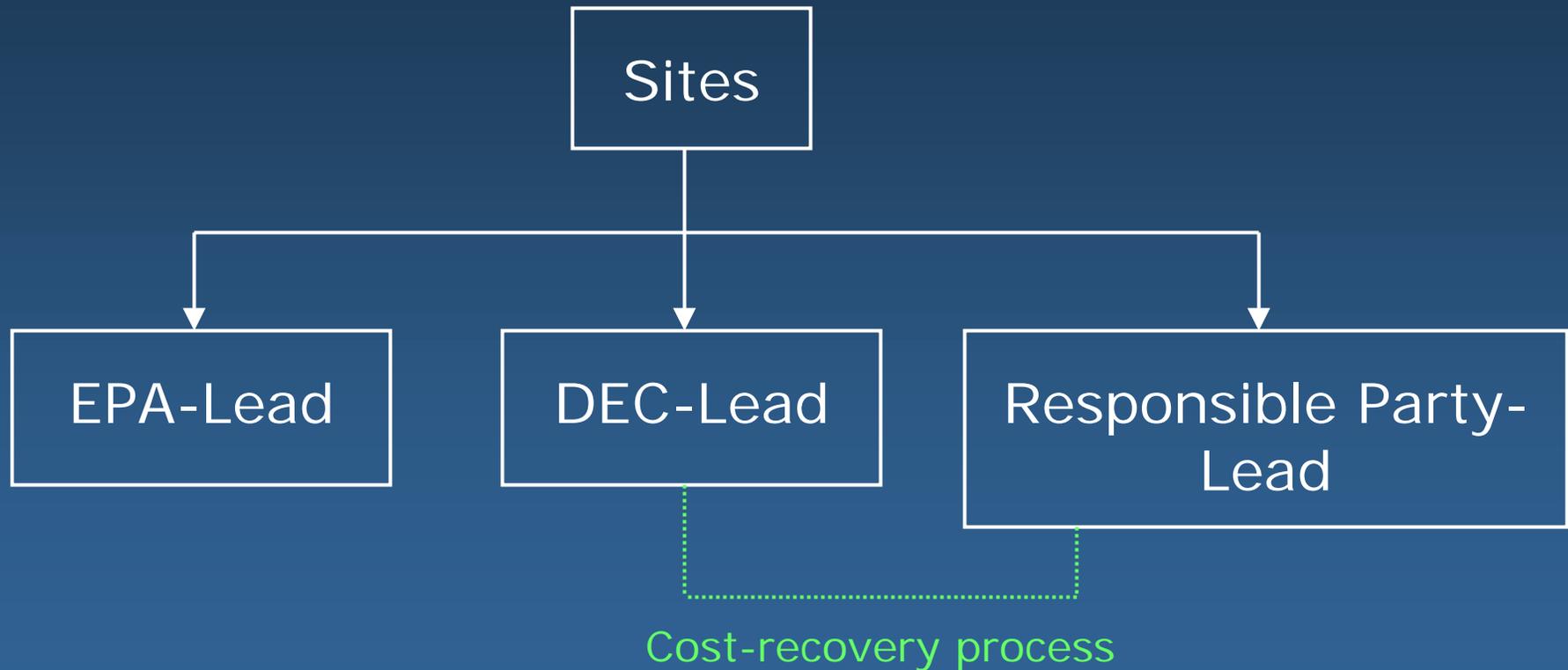
The document reflects the following:

- addressing vapor intrusion is one of the agencies' top priorities,
- the likelihood of vapor intrusion varies from site to site,
- the number of past sites to revisit is quite large, and
- revisiting this issue concurrently at all past sites is not feasible

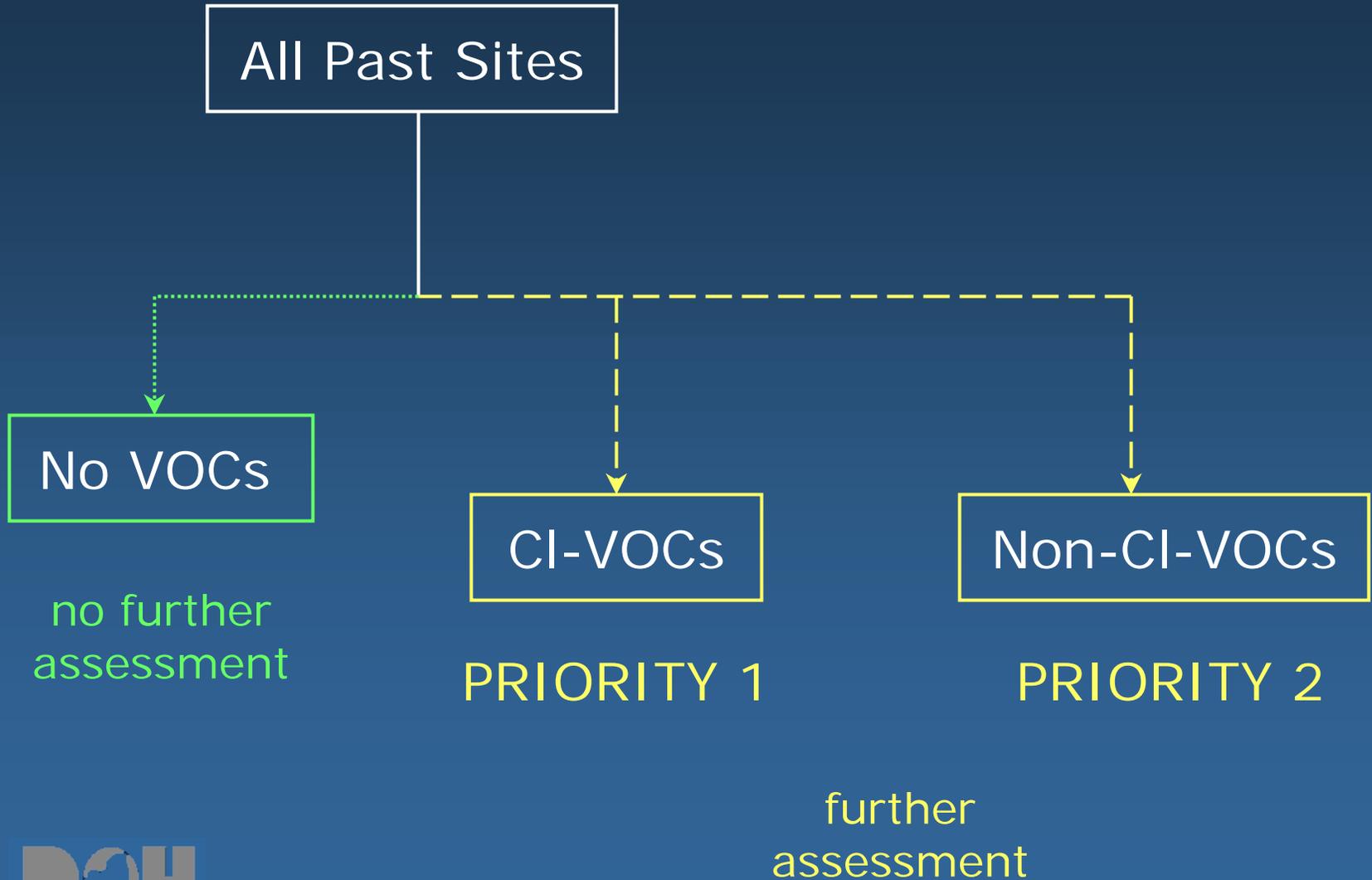


DEC's draft policy: Revisiting past sites

WHO WILL DO THIS?



DEC's draft policy: Prioritization of past sites



DEC's draft policy: Status of document

Currently revising document and preparing a responsiveness summary

- Will release both in the near future
 - notice in the ENB
 - available on the DEC's website
- Will release concurrently with DOH's documents



DEC's draft policy: Status of revisiting past sites

- Forwarded list of EPA-lead sites to EPA
- Soliciting involvement of responsible parties
- Have begun assessing Priority 1 DEC-lead sites
 - reviewing available data
 - developing work plans, as necessary, for additional sampling
 - will evaluate vapor intrusion in accordance with DOH's guidance



DOH's draft guidance document

Currently revising document and preparing a responsiveness summary

- Will release both in the near future
 - "working draft"
 - notice in the ENB
 - available on the DOH's website
- Will release concurrently with DEC's documents

Basis for today's training



Other documents

- NYSDEC: draft technical guidance for site investigation and remediation — December 2002
- EPA: draft guidance — November 2002
- Many states: vapor intrusion guidance
 - requirements and approaches vary widely

NOTE

Many aspects of NYS's approach differ significantly from the approach of others.

Training objectives

- What is vapor intrusion?
- What is the State's approach to
 - doing an investigation for vapor intrusion?
 - evaluating the data?
 - addressing exposures?
 - involving the community?
- What is my role in all of this?



Notes on today's training

Focus = vapor intrusion

- methods of remediating soil vapor, such as soil vapor extraction, will not be covered



Additional notes on today's training

Community outreach

- essential component of each step of the process — **going into people's homes and evaluating the air they breathe**
- approach should be tailored to specifics of the site, community characteristics, and regulatory program
- will be included in each section of today's training
- refer to Section 5 and Appendix G of DOH's guidance for additional information

