

DERP Forum

Strengthening Relationships with our Regulatory Partners

St. Louis, Missouri

May 8-9, 2019

Cal-EPA Unified Approach for Evaluating Vapor Intrusion (Supplemental Guidance)

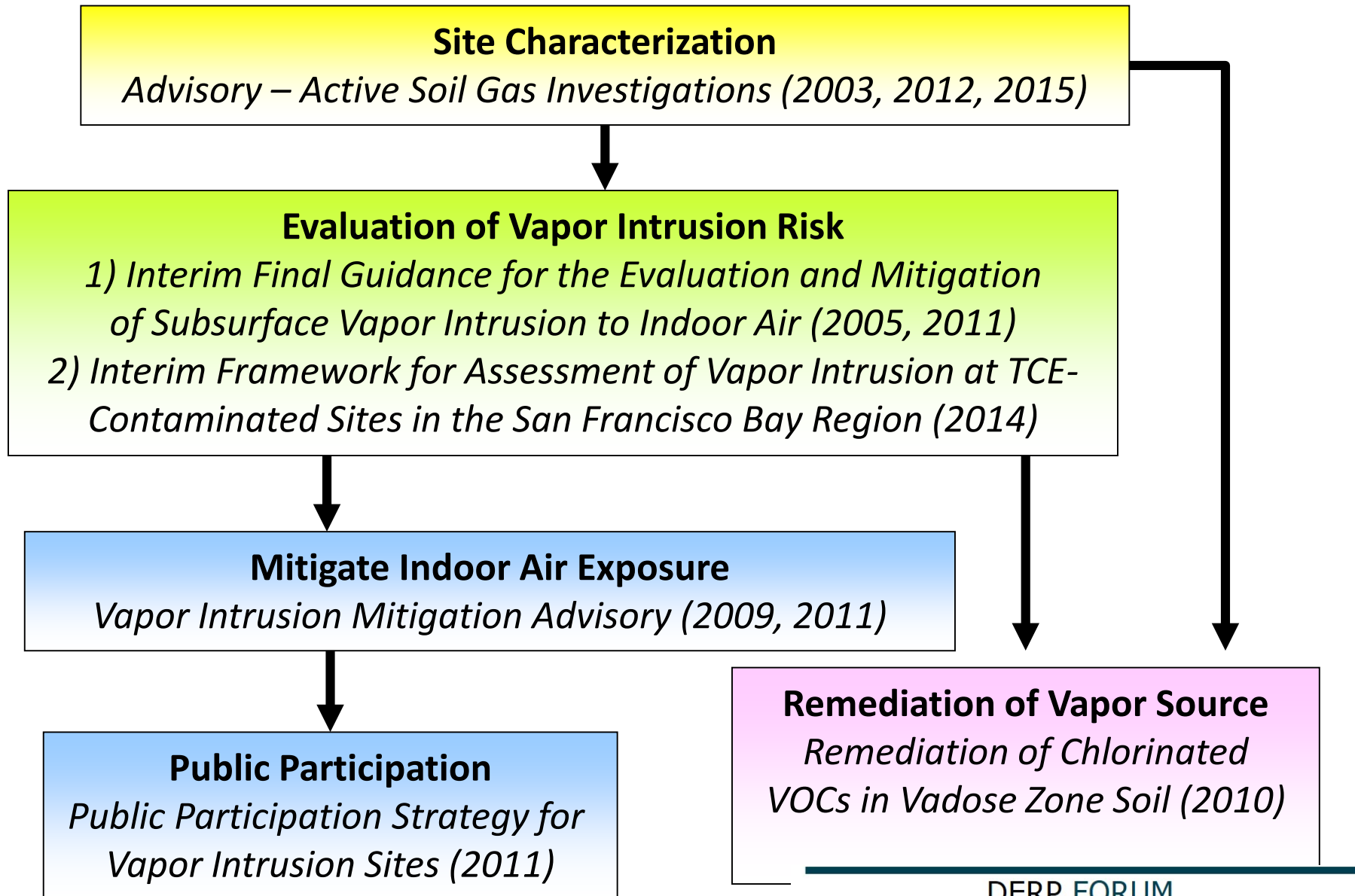
Defense Environmental Restoration Program Forum

**Dan Gallagher
Department of Toxic Substances Control
California Environmental Protection Agency**

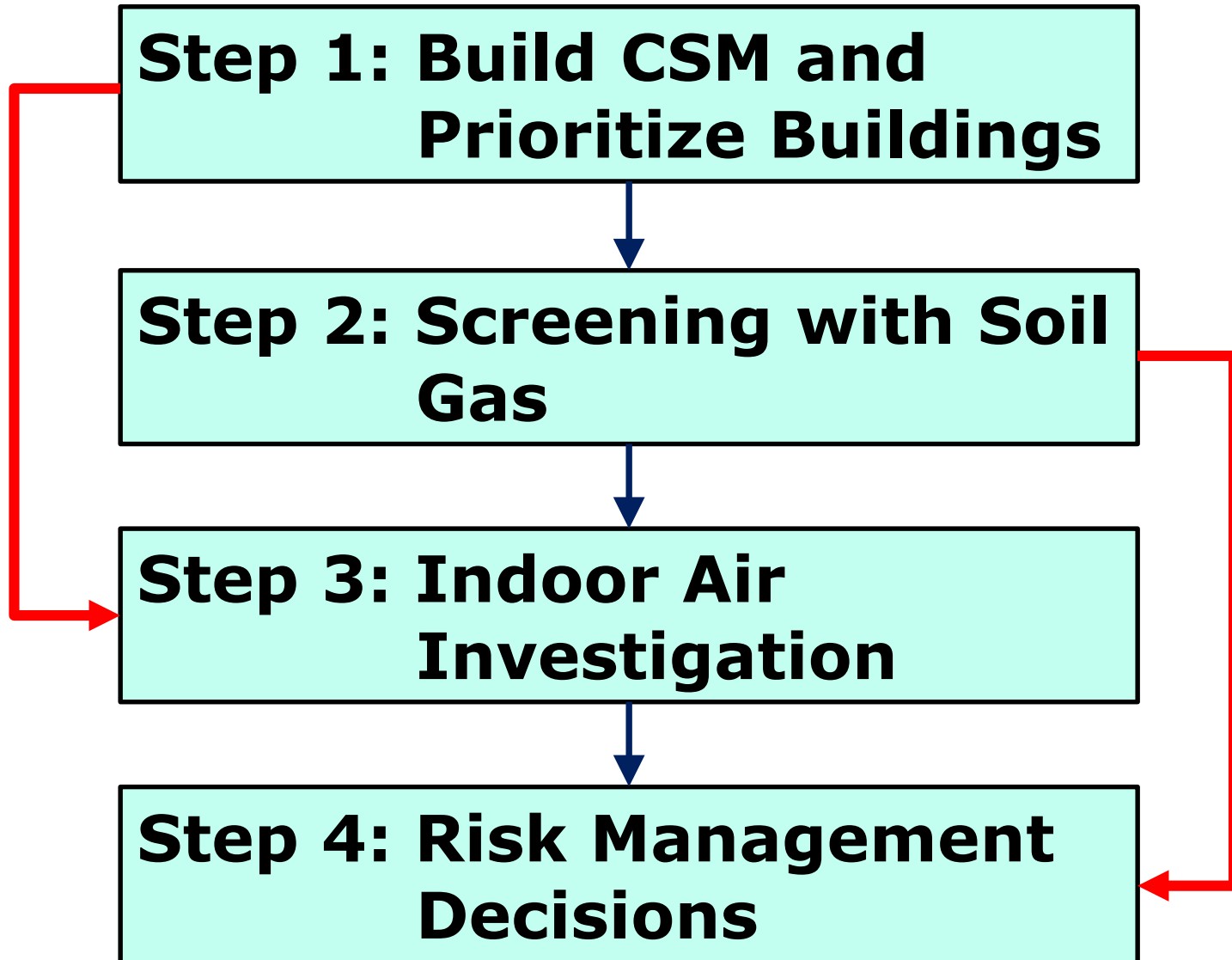


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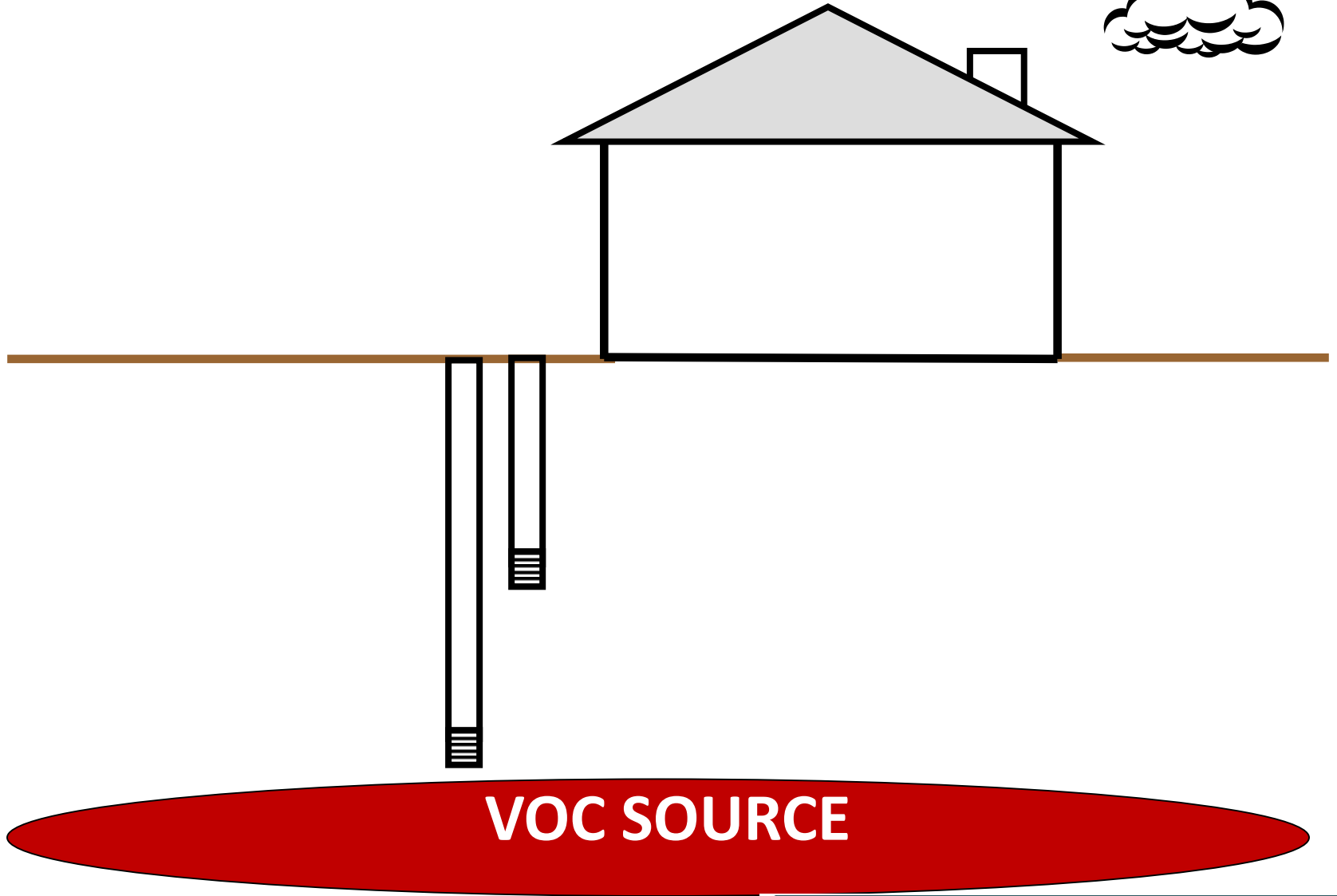
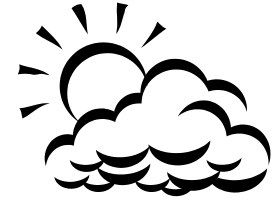
California Vapor Guidance Documents



Four Step Process



Soil Gas Sampling



VOC SOURCE

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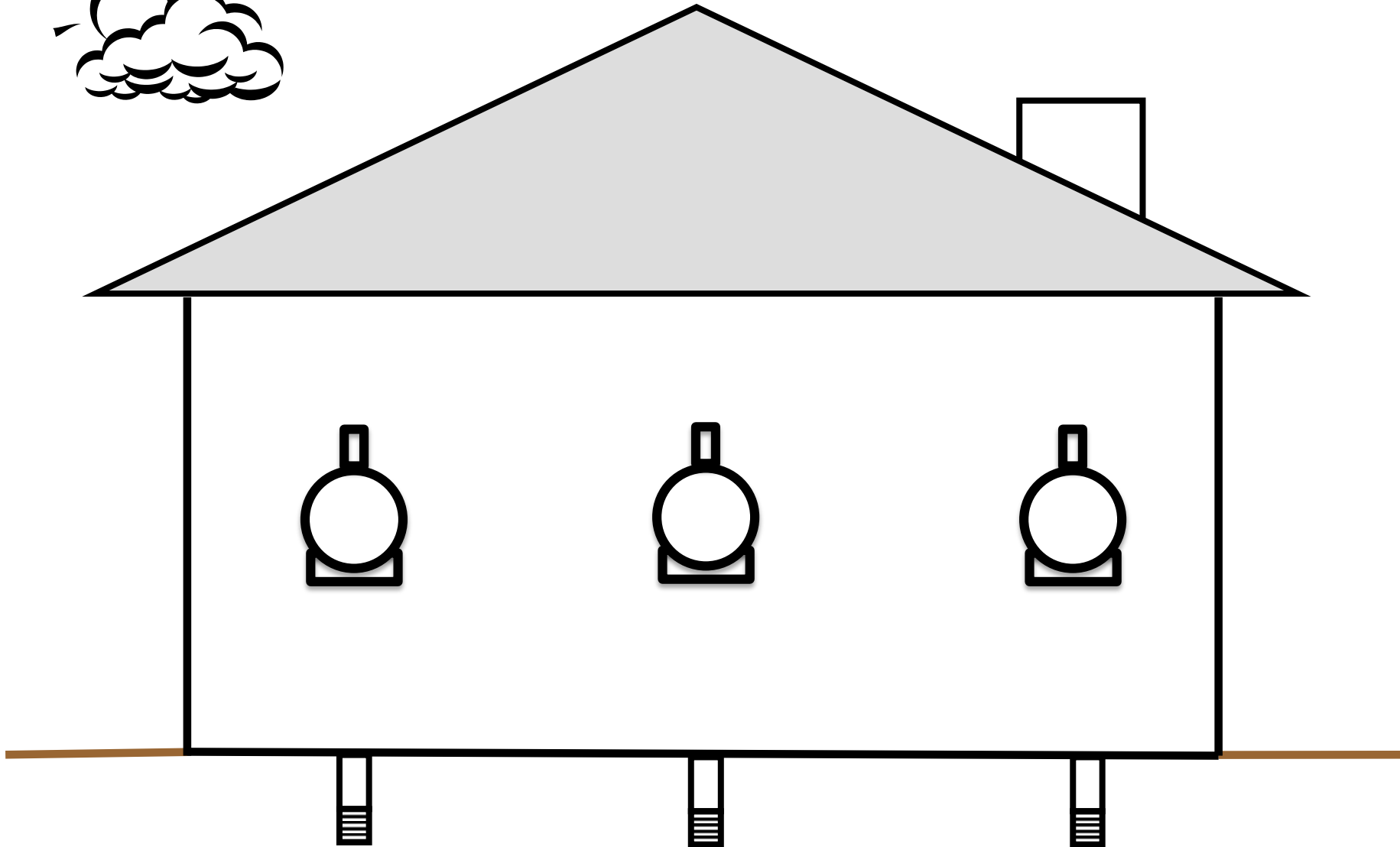
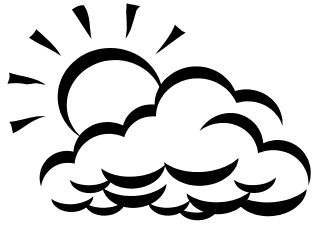
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Screening with Soil Gas Data

- 1. Each building should have a soil gas probe, located on the side nearest the source**
- 2. Place the soil gas probe close to the building**
- 3. Collect soil gas samples from two depths:**
 - Near the contaminant source**
 - Half-way between source and ground surface**
- 4. Sample the soil gas twice to evaluate seasonality**

Indoor Air Sampling



Indoor Air Investigations

- 1. Co-located indoor air and subslab at:**
 - Location of occupants**
 - Slab penetrations**
 - Near the release area**
- 2. Three or more locations recommended**
- 3. Long sampling duration (passive?)**
- 4. Collect other lines of evidence: cross slab pressure and sewers samples**

Indoor Air Investigation

Estimate Risk and Hazard Using Indoor Air Concentration

Repeat Indoor Air Sampling:

- 2+ event
- Different Seasons
- HVAC on/off

NO

Risk $\geq 1 \times 10^{-6}$
or HI ≥ 1

YES

Manage Exposure

Risk $\geq 1 \times 10^{-6}$
or HI ≥ 1

YES

NO

Low VI Priority Building

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Sewer Sample Locations

