Results of Soil Gas Sampling and Next Steps

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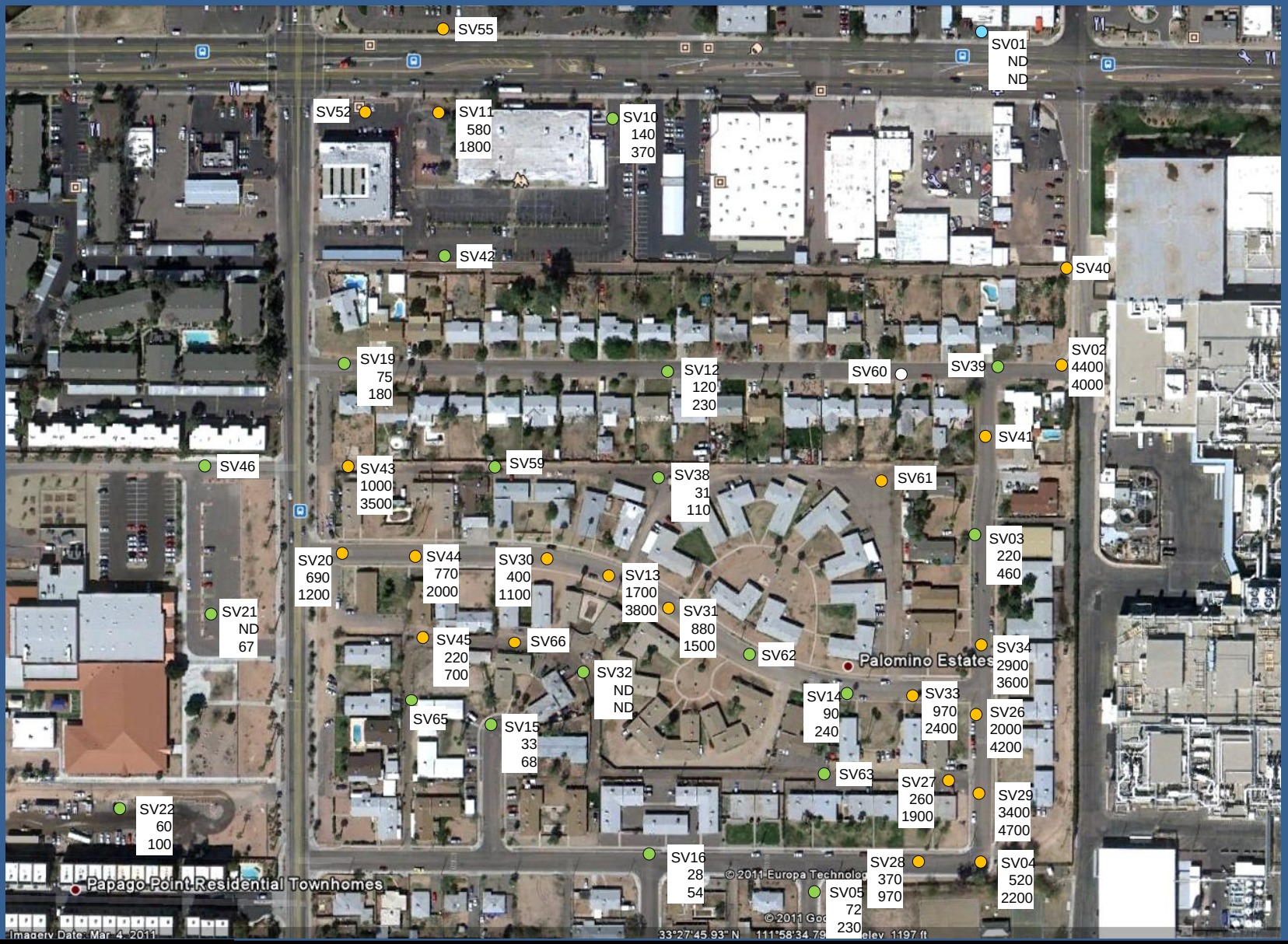
Sonoran Science Academy
SV01
McDowell R
SV24
SV11
SV10
SV25
SV19
Brill St.
SV12
SV02
50th St.
Brunson-Lee Elem. School
SV21
Willetta St.
SV13
SV03
SV20
SV23
Willetta St.
Educare Center (to be built)
SV15
SV14
SV26
SV22
Culver St.
SV04
SV16
SV05
Old Crosscut Canal
48th St.
49th St.
49th Place
Moreland St.
SV17
SV06
52nd Street Facility
Portland St.
SV18
Study Area
SV07
Roosevelt St.
SV08
SR-202 Red Mountain Freeway
SV09
Roosevelt St.



TCE Soil Vapor Concentrations

June 7, 2011

Approximate Scale

0 400 ft

N

SV21
ND
67

Installed Soil Gas Location and ID
TCE Result at 5 feet
TCE Result at 15 feet

TCE SGHHSL = 520 µg/m³

- TCE concentration not detected
- TCE concentration less than SGHHSL
- TCE concentration greater than SGHHSL
- Location not yet sampled

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PCE Soil Vapor Concentrations

June 7, 2011

Approximate Scale

0 400 ft

N

SV21
ND
40

Installed Soil Gas Location and ID
PCE Result at 5 feet
PCE Result at 15 feet

PCE SGHHSL = 180 µg/m³

- PCE concentration not detected
- PCE concentration less than SGHHSL
- PCE concentration greater than SGHHSL
- Location not yet sampled

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TCE Soil Vapor Concentrations

Approximate Scale

0 200 ft

N

SV37
360
910

Installed Soil Gas Location and ID
TCE Result at 5 feet
TCE Result at 15 feet

TCE SGHHSL = 520 µg/m³

- TCE concentration not detected
- TCE concentration less than SGHHSL
- TCE concentration greater than SGHHSL
- Location not yet sampled

June 7, 2011

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PCE Soil Vapor Concentrations

Approximate Scale

0 200 ft

N

SV37
ND
63

Installed Soil Gas Location and ID
PCE Result at 5 feet
PCE Result at 15 feet

PCE SGHHSL = 180 µg/m³

- PCE concentration not detected
- PCE concentration less than SGHHSL
- PCE concentration greater than SGHHSL
- Location not yet sampled

June 7, 2011

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TCE Soil Vapor Concentrations

Approximate Scale

0 400 ft

N

SV22
60
100

Installed Soil Gas Location and ID
TCE Result at 5 feet
TCE Result at 15 feet

TCE SGHHSL = 520 µg/m³

- TCE concentration not detected
- TCE concentration less than SGHHSL
- TCE concentration greater than SGHHSL
- Location not yet sampled

June 7, 2011

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PCE Soil Vapor Concentrations

Approximate Scale

0 400 ft

N

SV21 / ND / 40 — Installed Soil Gas Location and ID; PCE Result at 5 feet; PCE Result at 15 feet

PCE SGHHSL = 180 µg/m³

- PCE concentration not detected
- PCE concentration less than SGHHSL
- PCE concentration greater than SGHHSL
- Location not yet sampled

June 7, 2011

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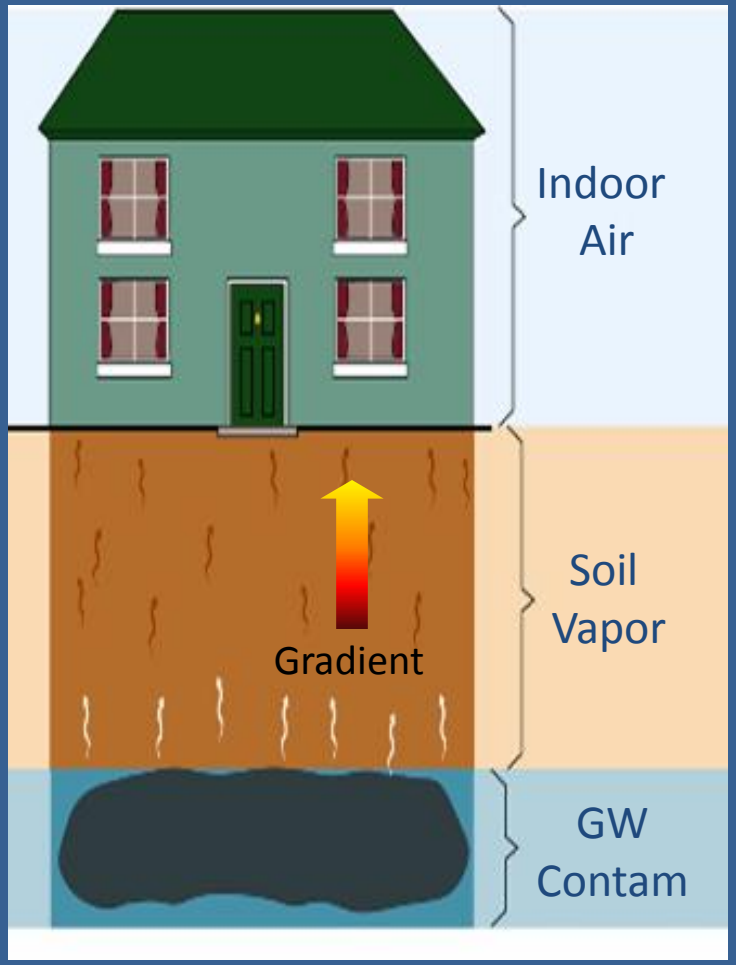
Indoor Air Sampling

- EPA is working with Freescale to prepare an Indoor Air Work Plan
- Access Agreement for permission to sample private property
- Sample of indoor air, sub slab soil gas and outdoor air will be collected.

Complementary Lines of Evidence



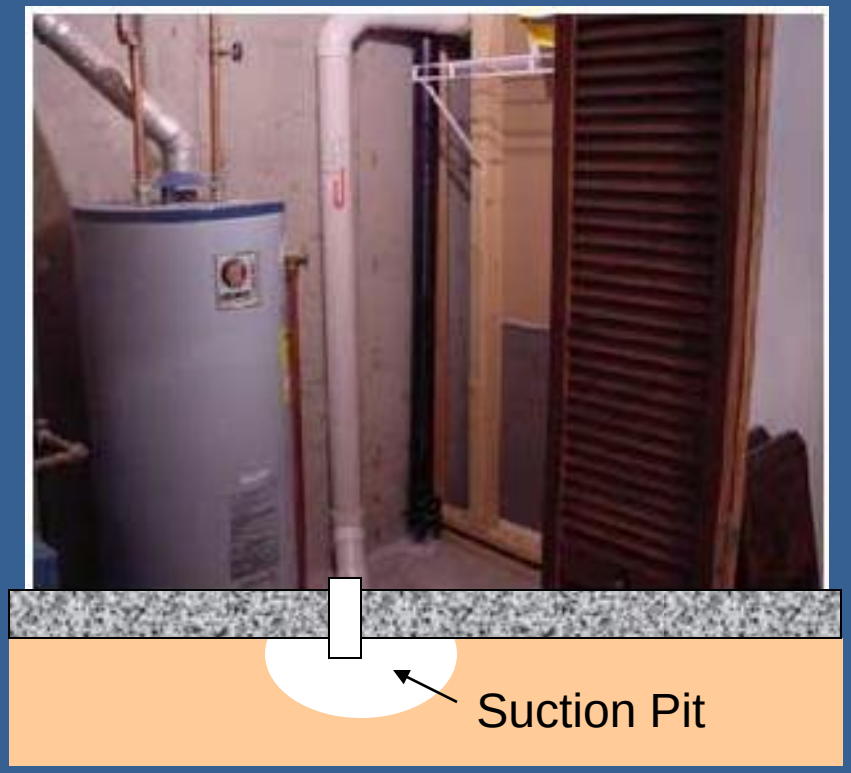
Sub-slab Probe Installation & Sampling

Indoor Air Sampling

Outdoor Air Sampling

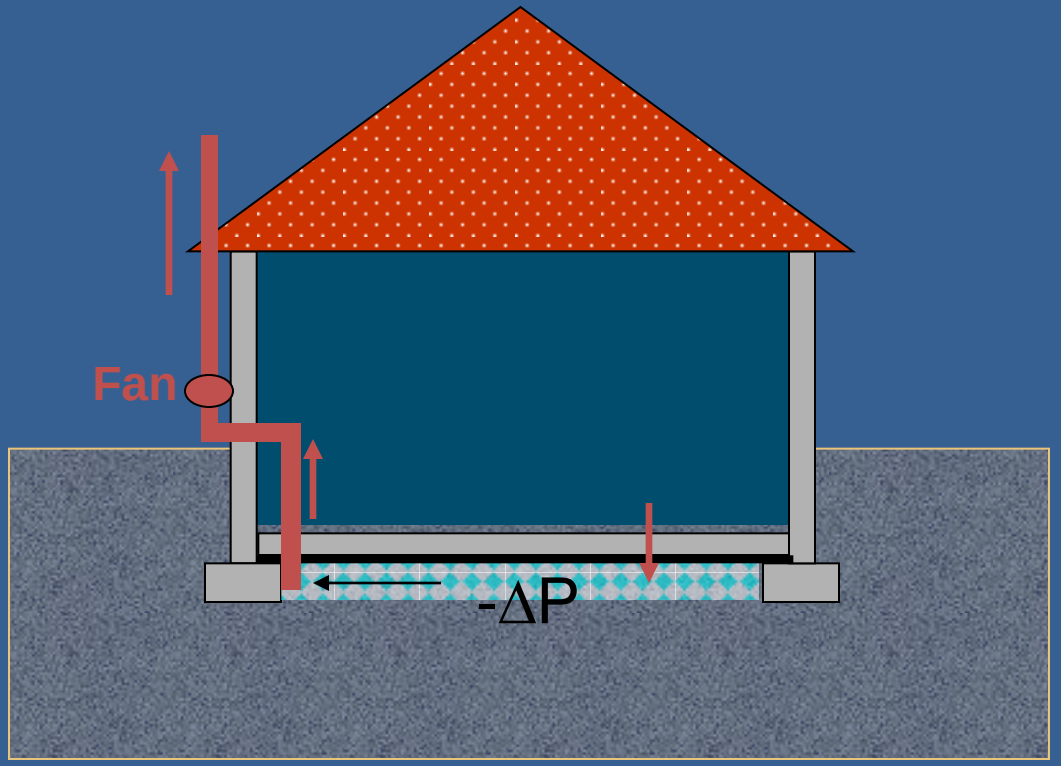
Example Sub Slab Depressurization System

- Intercepts vapors and prevents them from entering building



Example Sub Slab Venting Depressurization

- Active venting layers rely on fans to create suction (i.e., depressurize venting layer)

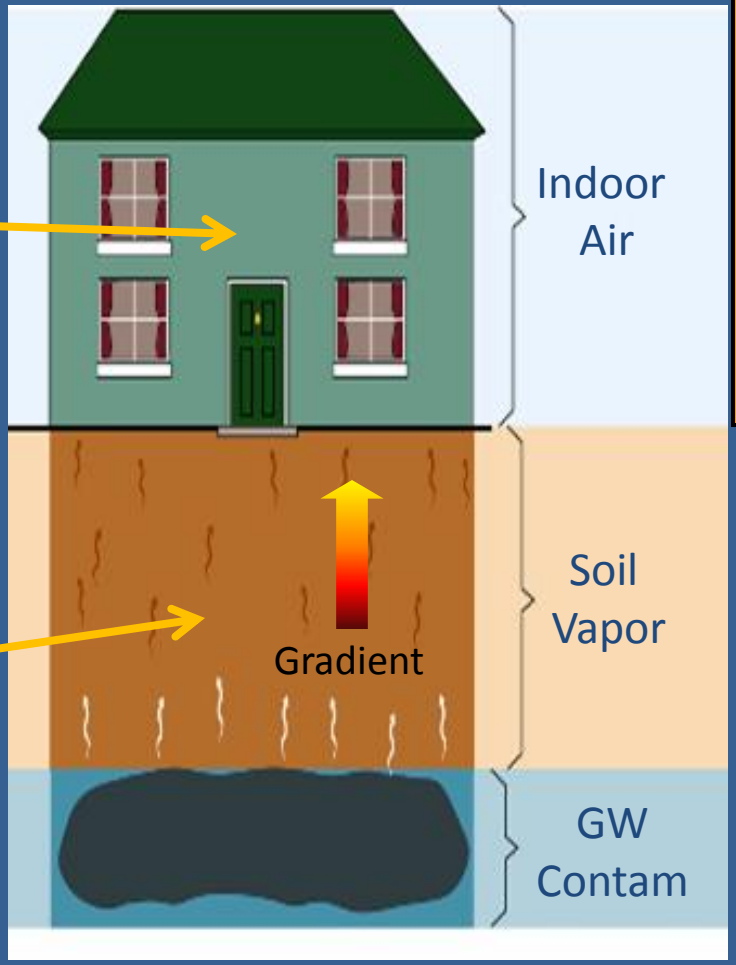


Vapor Mitigation System

Complimentary Lines of Evidence

Then indoor air less than:
TCE: 1.2
PCE: 0.41

If soil gas **less** than:
TCE: 520
PCE: 180
(SGHHSLs)



Potential for vapor intrusion - additional assessment needed: Additional soil gas (**step-out samples**) **Indoor air**

If soil gas **greater** than SGHHSLs
TCE: 520
PCE: 180

All values µg/m^3