

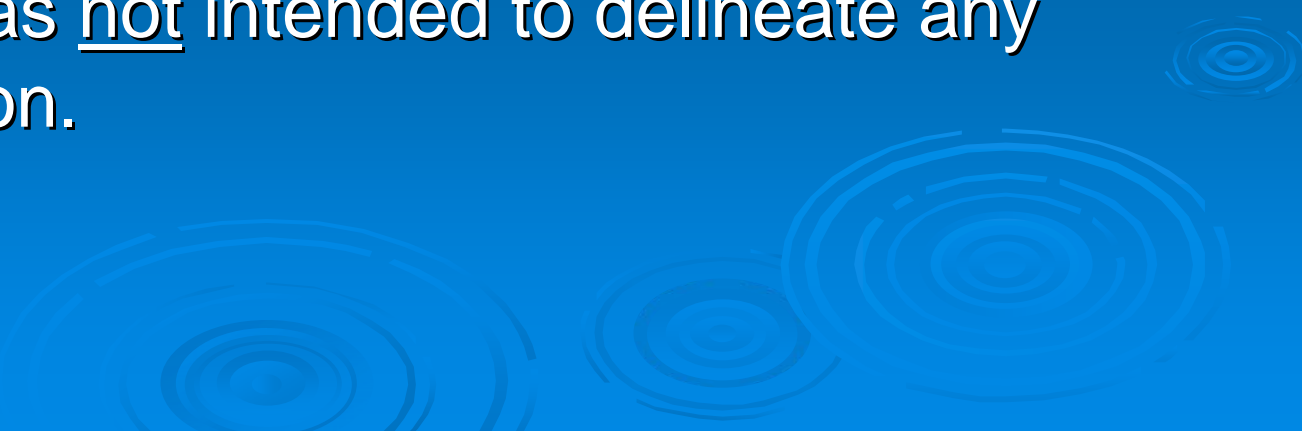
Vapor Intrusion Study Update

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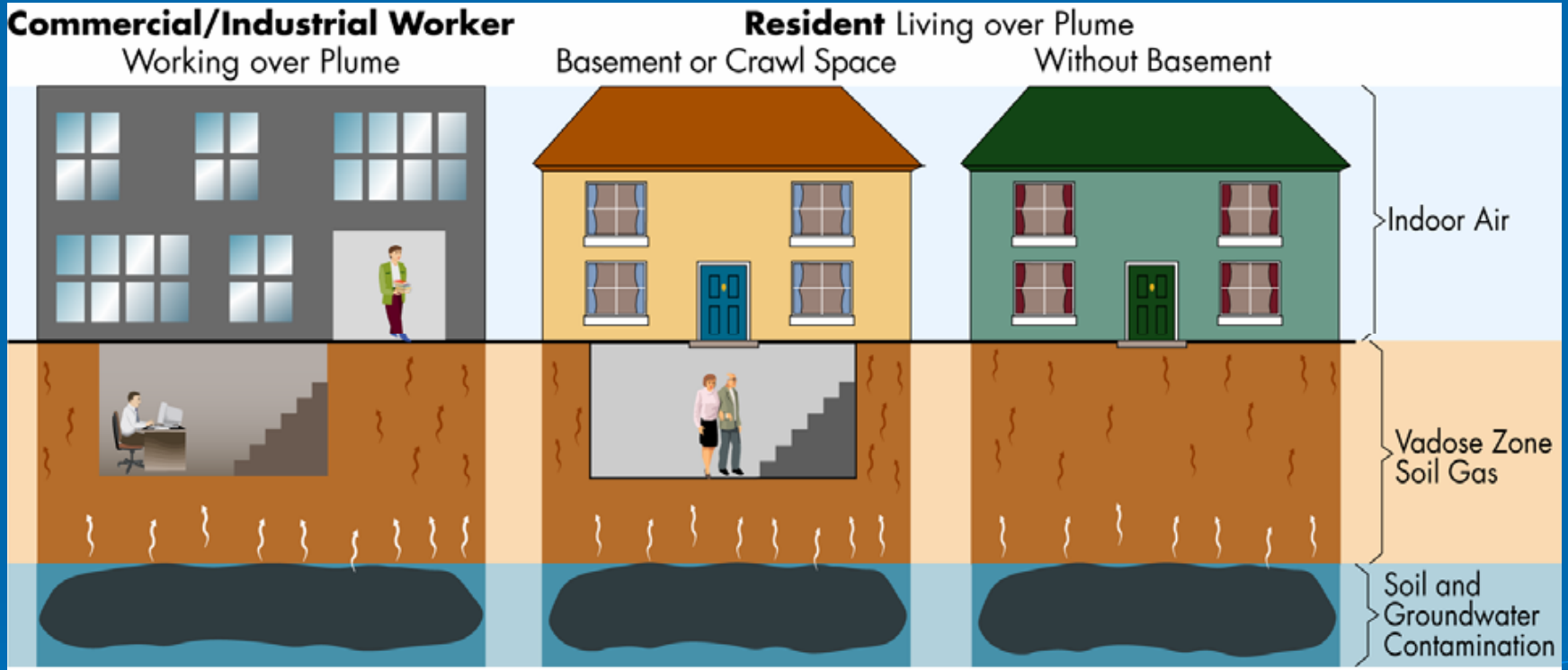
April 2009



Vapor Intrusion Sampling

- Sampling was conducted in areas with the highest off base groundwater contamination.
 - Sampling was intended to determine if there is a completed pathway from subslab to indoor air.
 - Sampling was not intended to delineate any contamination.
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What You Should Know About Vapor Intrusion



Questions for Vapor Intrusion Impacts

- If subsurface gas exists, is it entering the residence?
- If subsurface gas contamination exists in the residence, is it from the subsurface or elsewhere (i.e., Lifestyle or Ambient)?
- If gas contamination exists in the residence and it is not from the Subsurface, have other sources been identified?

Trace Atmospheric Gas Analyzer (TAGA) Mobile Laboratory



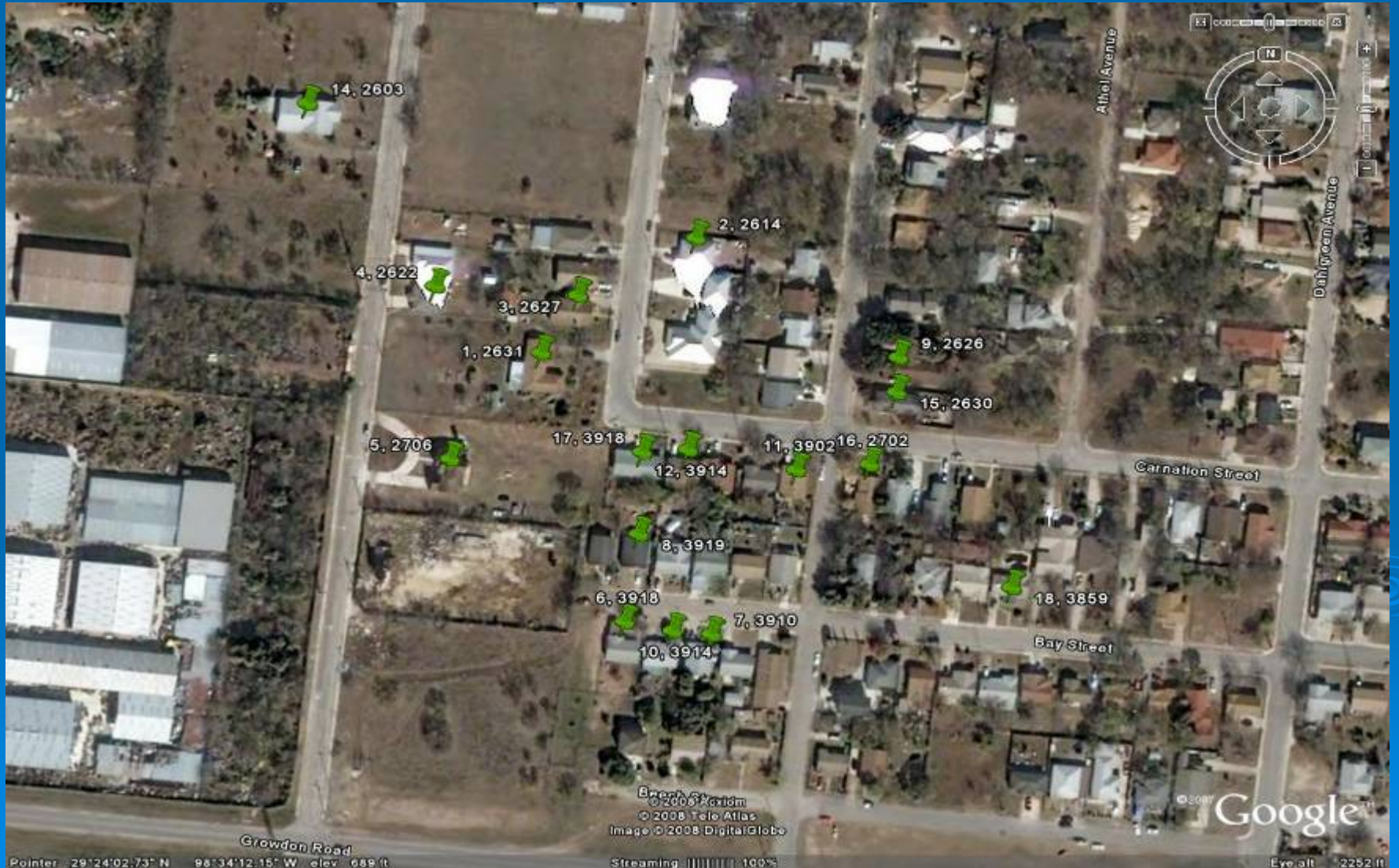
Vapor Intrusion Sampling



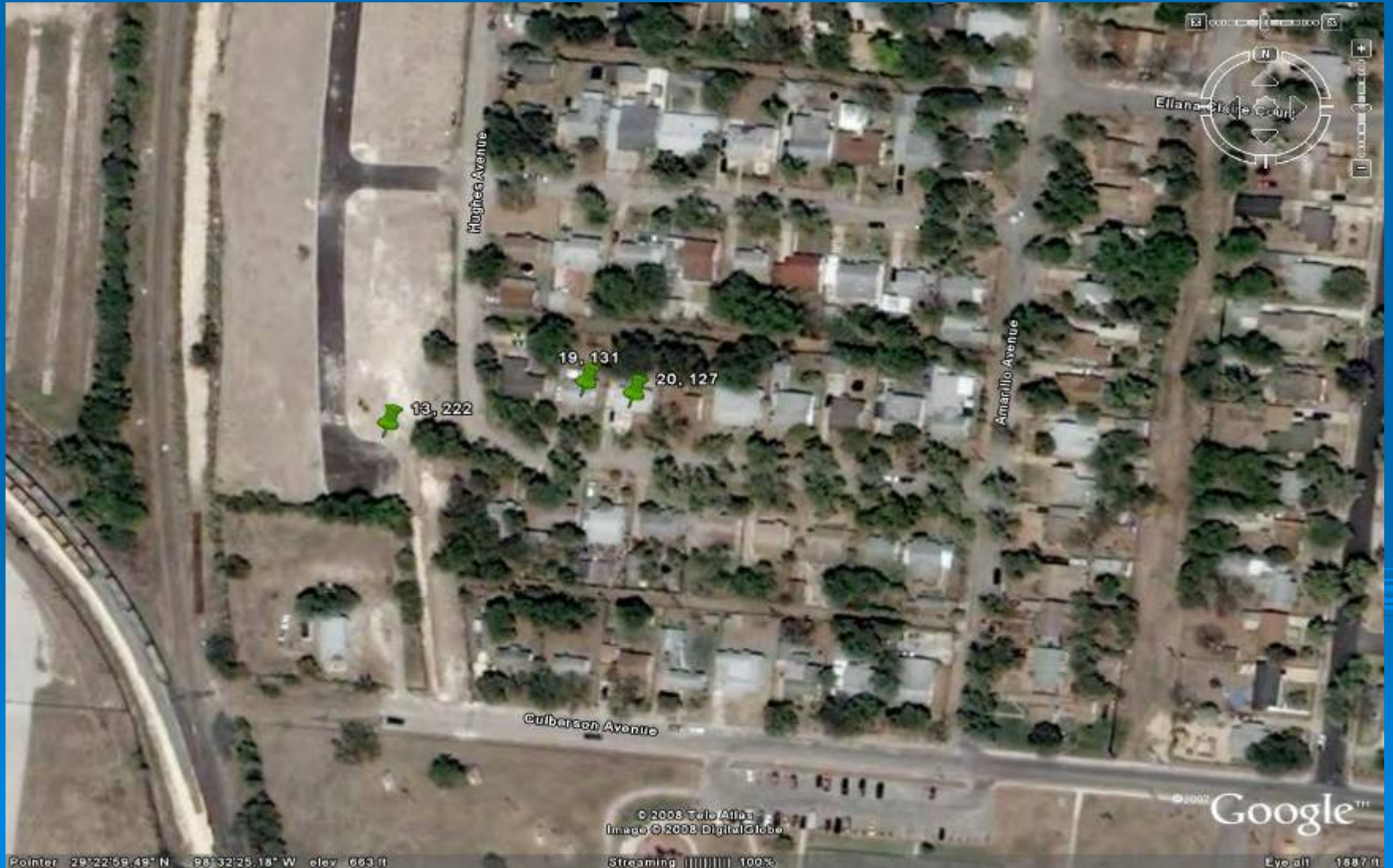
May 2008 Vapor Intrusion Sampling

- 20 residential structures were sampled.
 - 17 of these were in the 34th Street area
 - 3 were located southeast of East Kelly
- We collected 16 subslab soil gas samples and 4 crawl space samples.
- Based upon the results from the subslab and crawl space sampling, indoor air was sampled at 5 residential structures

May 2008 34th Street Area Sampling Locations



May 2008 East Kelly Sampling Locations



May 2008 Vapor Intrusion Sampling PCE Results

Unit Number	SUMMA Crawl Space ($\mu\text{g}/\text{m}^3$)	SUMMA Sub-slab ($\mu\text{g}/\text{m}^3$)	TAGA Indoor ($\mu\text{g}/\text{m}^3$)	SUMMA Indoor ($\mu\text{g}/\text{m}^3$)	Risk level for PCE in the Indoor Air
001	N/A	370/410	< 0.41	0.19/0.20	$4.63 \times 10^{-7}/4.88 \times 10^{-7}$
002	N/A	35	N/A	N/A	N/A
003	N/A	260/290	<0.41	0.11/0.16	$2.68 \times 10^{-7}/3.90 \times 10^{-7}$
004	N/A	230/250	<0.41	0.43/0.38	$1.05 \times 10^{-6}/9.27 \times 10^{-7}$
005	N/A	11	N/A	N/A	N/A
006	N/A	180/170	<0.41	0.13/0.78	$3.17 \times 10^{-7}/1.90 \times 10^{-6}$
007	N/A	14	N/A	N/A	N/A
008	N/A	13	N/A	N/A	N/A
009	N/A	23	N/A	N/A	N/A
010	N/A	86	N/A	N/A	N/A
011	N/A	47	N/A	N/A	N/A
012	N/A	610	N/A	N/A	N/A
013	N/A	3.8	N/A	N/A	N/A
014	0.10	N/A	N/A	N/A	N/A
015	0.079	N/A	N/A	N/A	N/A
016	N/A	370	N/A	N/A	N/A
017	N/A	600/570	<0.41	0.16	3.90×10^{-7}
018	N/A	140	N/A	N/A	N/A
019	0.15	N/A	N/A	N/A	N/A
020	0.12	N/A	N/A	N/A	N/A

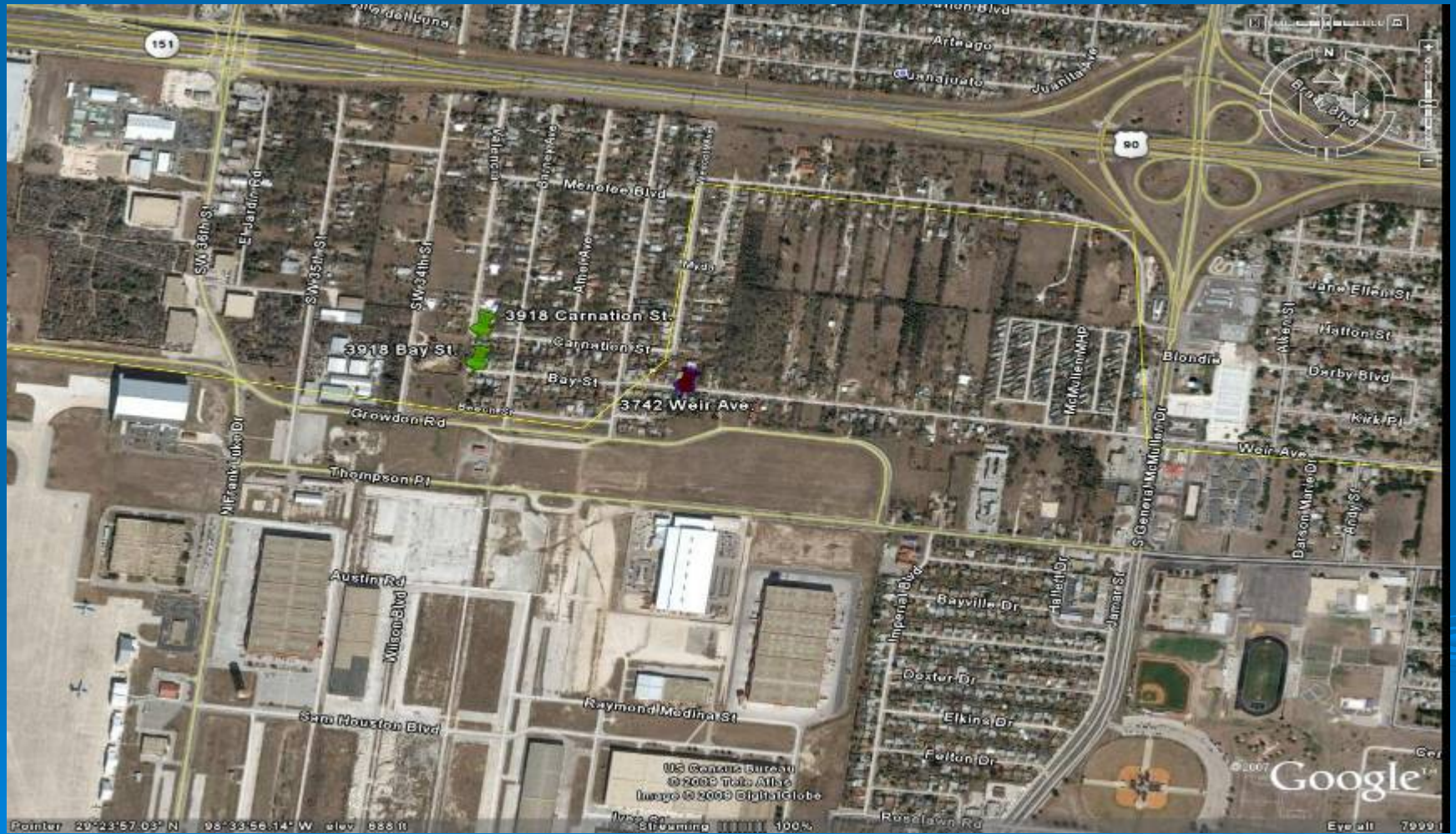
February 2009 Vapor Intrusion Sampling

- Based upon input received from community groups after the 2008 sampling EPA agreed to sample additional homes in other areas of the plume.
- Original plan was to re-sample the five homes in the 34th Street area where indoor air samples were collected in 2008.
- Only 2 of the homeowners agreed to having their homes sampled again.
- We added one additional home in the 34th Street area.
- In addition eight homes in the East Kelly area were included.

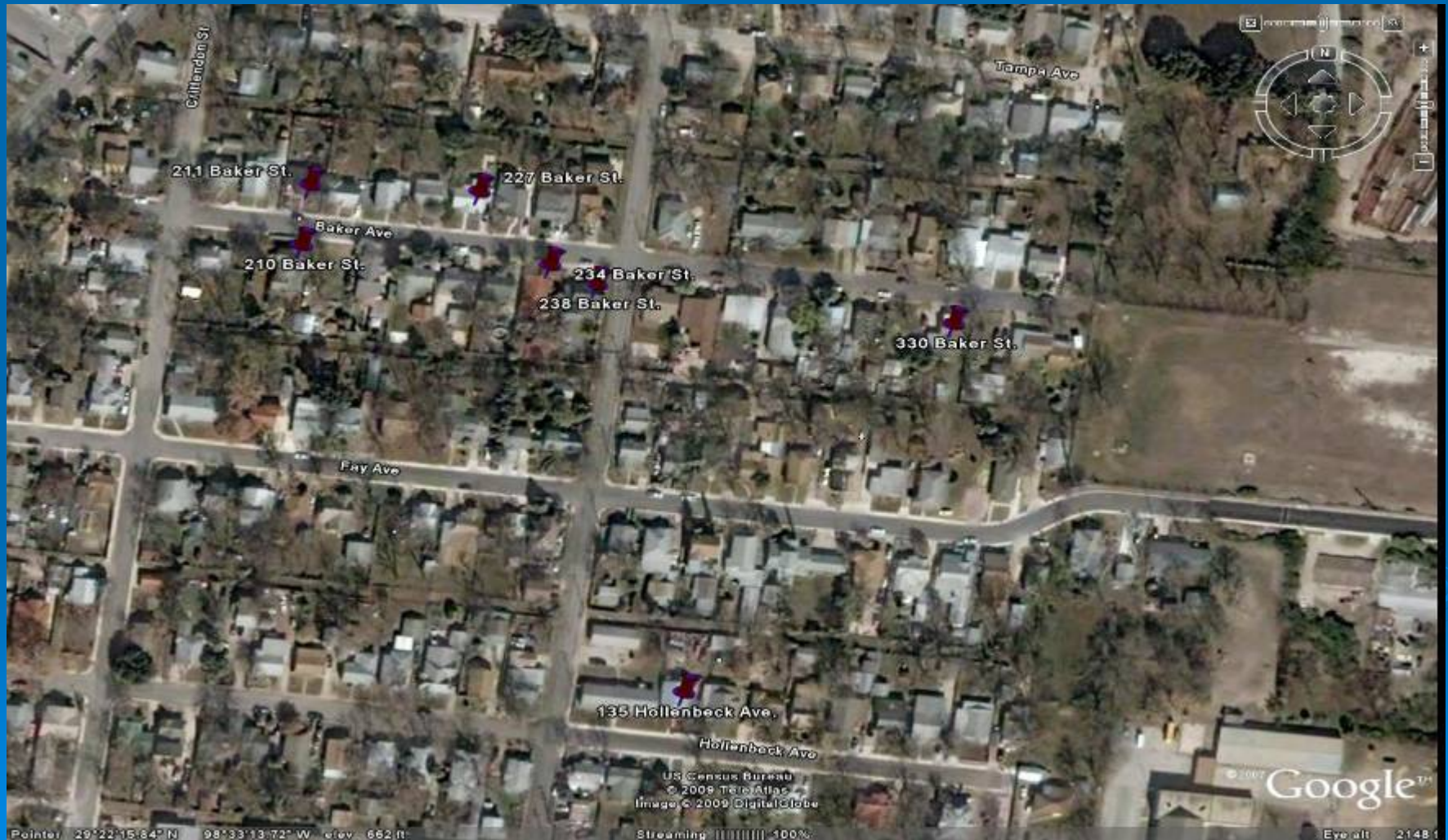
February 2009 Vapor Intrusion Sampling

- We collected 2 subslab soil gas samples and 9 crawl space samples.
- Because of the limited number of homes to sample, we were able to collect indoor air samples in all homes.
- In addition each home was screened with the TAGA.

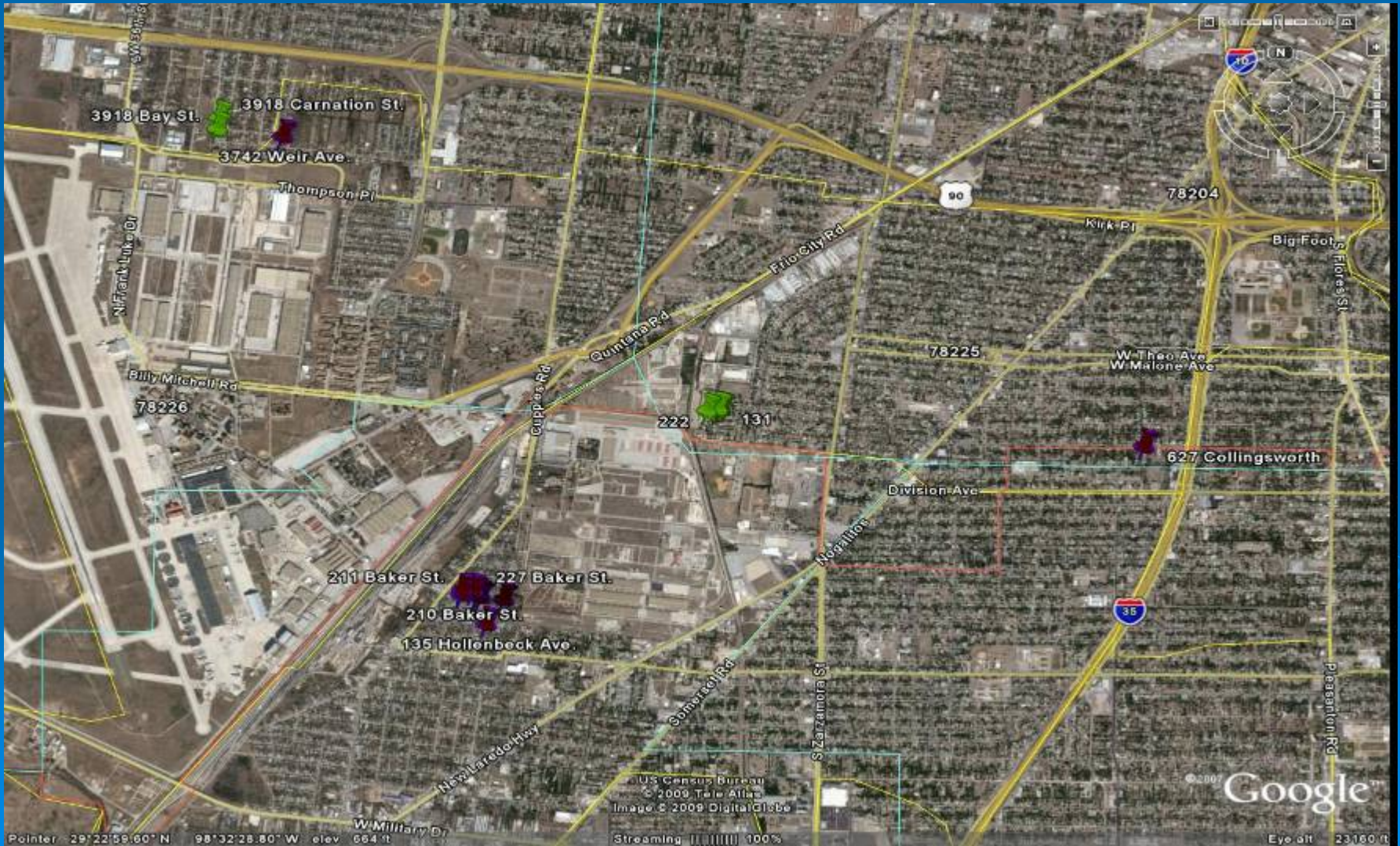
February 2009 34th Street Sampling Locations



February 2009 East Kelly Sampling Locations



Overview of 2008 and 2009 Sampling Locations



February 2009 Vapor Intrusion Sampling PCE Results

Unit No.	Summa sub-slab ug/m ³	Summa crawl space ug/m ³	Summa indoor ug/m ³	TAGA indoor ug/m ³	TAGA crawl space ug/m ³
6	120	N/A	0.2	0.37	N/A
17	280	N/A	1.3	1.83	N/A
21	N/A	0.24	0.24	<0.32	<0.32
22	N/A	<0.16	<0.15	0.36	<0.32
23	N/A	<0.16	<0.47	<0.41	<0.41
24	N/A	<0.13	<0.17	<0.41	<0.41
25	N/A	<0.15	<0.16	<0.41	<0.41
26	N/A	<0.18	<0.34	<0.41	<0.41
27	N/A	<0.15	<0.77	0.55	<0.41
28	N/A	<0.16	<0.16	<0.41	<0.41
30	N/A	<0.13	<0.17	<0.32	<0.32

Conclusions

- The results indicate there is a potential for a complete pathway to indoor air
- However, only one home had concentrations above our screening level, although well below an action level
- This home is a slab on grade, the groundwater concentrations are continuing to decrease in the area
- Pier and beam homes are generally well ventilated and no soil gas vapors were detected
- Monitoring of the groundwater plume will continue by the Air Force

Next Steps

- Will meet with each homeowner and discuss the results
- Will present a summary of the results during the April 14th Kelly RAB meeting
- Will present a summary of the results during the April 15th meeting with the Southwest Workers Union

Questions?

You can contact me at miller.gary@epa.gov or at 214-665-8306.

