

**East Central Phoenix Water Quality Assurance Revolving Fund (WQARF) Sites  
Community Advisory Board (CAB) Meeting**

**Wednesday, March 6, 2013  
6:00 p.m. to 8:00 p.m.  
Jamestown Condominiums  
3833 N. 30<sup>th</sup> Street, Phoenix, AZ 85016**

**FINAL MINUTES**

CAB members present: Jolene Morris, Laura M. Ruffalo, Randy Dahl and Shawn Reilly

ADEQ Staff in attendance: André Chiaradia, Manager, Remedial Projects Unit; Danielle Taber, Project Manager; and Wendy Flood, Community Involvement Coordinator (CIC)

Members of the public present: Brian Waggle, Hargis + Associates, Inc.; Barbara Murphy, Hargis + Associates, Inc.; Anthony Rossi, Hargis + Associates, Inc.; Kathy Hunter, Hargis + Associates, Inc.; James Mathien; Trent Hulfery; Heather Hayes; Jeff Fleetham; Ana & Bruce MacMillan; Jeff Trembly, Mogollon Environmental Services, LLC

**Welcome and Introductions** – CIC called meeting to order. Introductions were made by CAB members and audience.

**Accept and /or changes to the minutes of the October 2, 2012 CAB meeting:** Mr. Randy Dahl moved to accept the minutes as written and Mr. Shawn Reilly seconded the motion. All were in favor, motion passed.

**Community Involvement Plan (CIP)** – Wendy Flood, CIC - Ms. Flood distributed the final CIP to CAB members and interested public parties. Ms. Flood also indicated that hard copies of the document could be found at the ADEQ offices, it could be sent to interested parties on a CD, e-mailed, or can be available for viewing/printing on the ADEQ website at (<http://www.azdeq.gov/environ/waste/sps/download/phoenix/ecp.cip.plan.pdf>).

**Fact Sheet Mailer and Membership Drive** – Wendy Flood, CIC - Ms. Flood discussed the outcome of the mailer and that the voting of potential members would be done at the next meeting. Ms. Flood stated that the ECP charter states that membership is set between 5 and 15 members. New members will receive a member notebook with all the details/information of the project and the purpose and responsibilities of CAB membership. Ms. Flood handed out an explanation sheet for the public to review and stated the main responsibility was to disseminate information to the community and communicate information or questions back to ADEQ. CAB can play a vital role in the process and that was discussed further. Ms. Flood indicated that sometimes hearing about issues from a community member or group has more impact than hearing it from ADEQ.

An audience member made the statement regarding all the work that ADEQ has done and felt the community would want to know the following: 1. the long term timeline to remediate the affected areas; 2. how it would affect them, and 3. what needs to be done to make it happen. He felt that it would help the community remain solid and stable to have the site remediated quickly so that development or redevelopment within the community wouldn't be impacted. He felt that businesses or individuals within the affected areas should not hamper the process by lack of participation or access.

Ms. Jolene Morris asked if there was an established timeline for remediation and Ms. Danielle Taber responded that there wasn't.

Mr. Andre Chiaradia addressed some of the comments and questions regarding the WQARF process saying that it is a State process to remediate releases of hazardous materials and restore to previous conditions. He went on to say that there are a lot of current laws regulating the process, like to solicit input from the community. The CAB can input information at anytime and that there are key places where the agency is required to solicit input from the community. The community and CAB can talk to the State or legislature at any time, the CAB has a collective voice.

There was a question regarding potential buyers and the risk they might have to a property in an affected area, Mr. Chiaradia said that the State has programs specifically designed that would alleviate a potential buyer of risk related to ongoing activities. This process is critical to lending institutions and this keeps property values protected.

Ms. Laura Ruffalo asked for confirmation that the board could expand the membership if they had more interested parties. Ms. Flood indicated that the charter could be amended to a maximum of 20 participants per Arizona statute. A discussion could be held at a later date on how to handle any candidates over the maximum of 20. Ms. Flood continued on to say that even if a candidate was not voted onto the board, the applicant(s) are encouraged to continue to come to the meetings to get information and give opinions or voice concerns as the meetings are specifically for the community to be and get involved.

### **East Central Phoenix (ECP) WQARF Site: Danielle Taber, ADEQ Project Manager**

Ms. Taber introduced the new environmental consultant for the project; gave a update on abbreviations and definitions that would be used in her presentation; key Site personnel; State/Federal projects within "Central" Phoenix; a brief historic update on the East Central Phoenix site; and ended with present and future activities at 32nd Street and Indian School Road and 48th Street and Indian School Road.

### **See attached slide presentation**

An audience member asked if soil gas and soil vapor were equivalent. Ms. Taber indicated they were and can be used interchangeably. Ms. Morris asked if all WQARF sites have CABs. Ms. Flood stated that most sites do, it depends on where the sites are in the clean up process. Most of the sites have started, are in, or have, completed the Remedial Investigation process which is when the CABs are formed.

Mr. Dahl asked if the 6 ECP locations were the only ones in the metropolitan area. Ms. Taber responded that the ECP sites are the only ones in central Phoenix but that they could go to the ADEQ website for maps of WQARF sites to the east and west valley. Ms. Flood indicated that the ADEQ website has maps available for all the WQARF sites in the state.

Mr. Dahl asked if access has been acquired for the Bashas' property. Ms. Taber responded that not at this time and it has been put on hold until they are fully prepared and ready to install the SVE system. An audience member asked about statutory requirements for property access. Ms. Taber responded they do have statutory rights to properties; however the agency prefers to ask permission first, if permission is rejected then if needed, reciprocate with a firmer request and hold the statutory rights as a last resort for public relations purposes.

Ms. Morris asked if the SVE unit has been removed from the old Viking site. Ms. Taber responded yes. Ms. Morris also inquired as to whether access was given to Arcadia High school. Ms. Taber's responded that ADEQ was given access.

Another audience member asked if the drycleaners should have completed a pre-treatment before they discharged to the sewer. Ms. Taber responded that they have to now but that it has not always been a requirement. An audience member inquired as to whether it is now regulated and Ms. Morris stated that drycleaners are required to show proper disposal records for the same amount of chemicals as they have received to operate the business.

An audience member asked if the source at the 48th Street site attributed to dry cleaning businesses as there is a service station in that area. Ms. Taber indicated that the station was closed through a remediation process and has been closed for some time. The same audience member inquired whether the source could have come from the canals around the 48th Street site that connects to the CAP canal. It was determined that the canal between Indian School and Lafayette was just lined within the last 5 years; before the canals were lined, they could have been a hydraulic driver.

### **Call to the Public**

An audience member asked about the soil vapor removal remediation process. Ms. Taber explained the process. He inquired if these were the same types of systems they see at old gas stations and Ms. Taber responded yes. Ms. Ruffalo mentioned other means such as incinerating and Ms. Taber responded that burning is one way; another would be extraction and then bubble air through it. This is called air sparge and would be done when there is a lot of clay in the soil or tight ground configuration and it would be used to push the gas out. Ms. Morris asked Ms. Taber to explain the importance of getting the contamination out as quickly as possible before it reaches the water table. Ms. Taber explained how soil gas is the fastest and most cost effective way to remediate rather than pumping and treating underground water. An audience member wanted to clarify that putting a vacuum on the soil above the aquifer would not clean the water. Ms. Taber said that it does not remediate groundwater but it does help at the capillary fringe and that by pulling out the vapor close to it you are helping the groundwater volatilize the contamination which can help reduce groundwater concentrations.

An audience member asked about the SRP well with groundwater contamination and if the soil and groundwater remediations would be done simultaneously. Ms. Taber responded yes, the remediation would be done simultaneously. However, they are focusing on the soil vapor systems until they have more data to determine how to address the underground contamination. It is not logical or cost effective to treat groundwater before you have defined and treated the source. Ms. Taber also stated that by removing the soil source it alleviates more contamination through a hydraulic driver pushing the contamination down to the groundwater.

Mr. Reilly asked about how he could respond to his residents' questions with regard to their air quality safety. Ms. Taber responded that ADEQ asked for and received permission from the Governor to conduct indoor air sampling. This will be the first of this type of sampling ever done in the State by the State. The best way to respond to concerned residents is to explain the difference between perceived risk versus actual risk. Right now the data says that the indoor testing is the proper way to proceed based on perceived risk. Once the indoor testing starts they will be able to determine the actual risk to residents on a condo to condo basis. Environmental factors in each condo will make a difference to the indoor air quality levels.

Mr. Dahl asked if the air behind Viking cleaners was hazardous. Ms. Taber responded that there is a no-detect reading at the street and that asphalt was discovered behind the cleaners that may have been catching or stopping contaminants. Mr. Dahl then inquired about the Federal standard or limits. Mr. Chiaradia stated that they are going through the process to make assessments on the residences. ADEQ is doing all the background work to identify what locations/places need to be investigated further. These assessments are for long term hazards, not short term hazards. Once they determined the long term risk a plan to remove the risk factors will begin.

An audience member asked if the site work was state funded. Mr. Chiaradia responded that the WQARF was formed by the State legislature and funding was mandated through corporate taxes. The member then asked if sellers in the area are required to notify you of the contamination; show you data; have the site cleaned-up prior to the selling, etc. Ms. Morris responded it is the law that you must disclose if the property you are selling is within a Superfund site. If they have direct knowledge of having contaminants on their property they would have to disclose. The member then asked if the information was available to the public. Ms. Flood responded yes.

An audience member added that banks funding commercial properties have a third party environmental site assessment done to protect them. This report is a historical review and would identify any issues. The report would then be filed with the purchaser's agreement.

An audience member inquired as to the safety of drinking water. Ms. Taber responded that the City of Phoenix provides the water and they are held to the same standards/rules but instead of being called an Aquifer Water Quality Standard it is called the Maximum Contaminant Level and both are 5 parts per billion. She went on to say that the City is not pumping in this area. Ms. Flood continued saying that as long as you get water from a municipal provider, they are held to state and federal standards and testing/treatment procedures before the water can even be served to the public. In addition, the City has a relationship with ADEQ and knows where not to pump water. SRP has their own standards of what is allowed into the canals. Drinking water is regulated and monitored.

A previous audience member stated he thought there was little well water used for drinking water within Phoenix. Mr. Chiaradia confirmed that there is very little well water used and none is coming from wells in this area. The majority of water comes from Arizona's allotment from the CAP or from the mountains to the east.

An audience member asked another question about previous owner's liability for contamination. Mr. Chiaradia responded that yes, owners are held liable and that once they get to final remediation, ADEQ will request an allocation of fees from both past and current parties that are determined to be responsible for any contamination. Arizona does proportional liability, which requires us to know how many parties and the extent of their contribution to the contamination before the request for funds can be made from the various parties. The Federal government uses joint and several liabilities that can hold any one party accountable for an area. ADEQ has a department that searches and identifies responsible parties. Ms. Taber wanted to clarify that there have already been settlements with some of the responsible parties within ECP.

Mr. Dahl asked if property owners can be indemnified from responsibility. Mr. Chiaradia responded that responsible parties, once identified, are always held responsible and if the original parties are no longer viable, they go back to the insurer for the property to acquire an owner's settlement if possible. Mr. Chiaradia went on to say that a new buyer can purchase property through a Prospective Purchasing Agreement (PPA). This agreement is a covenant not to sue with the State. However, there is a process to confirm that the new owner has no relationship to the property, business, prior owner, and show that the prospective buyer did not contribute to contamination or have a connection to a company that released the contaminant.

### **Future Meeting / Agenda Discussion**

The next two CAB meeting dates are scheduled for Wednesday, July 17th beginning at 6:00 p.m. The location for the July meeting will be determined after location research is complete.

*Agenda items for July meeting include:*

1. CAB membership roles and responsibilities presentation.
2. Discussion of new CAB membership applications and voting in of new members.
3. Voting in of new co-chairs per the charter.
4. Visual examples and explanation of treatment techniques for soil, vapor and groundwater.
5. Visual graph of exposure rates and ratio comparisons that calculate/shows risk to community.
6. Site update.

### **Adjournment**

Ms. Morris motions to adjourn and Ms. Ruffalo seconds the motion. Meeting is adjourned.



# **East Central Phoenix Water Quality Assurance Revolving Fund (WQARF) Site**

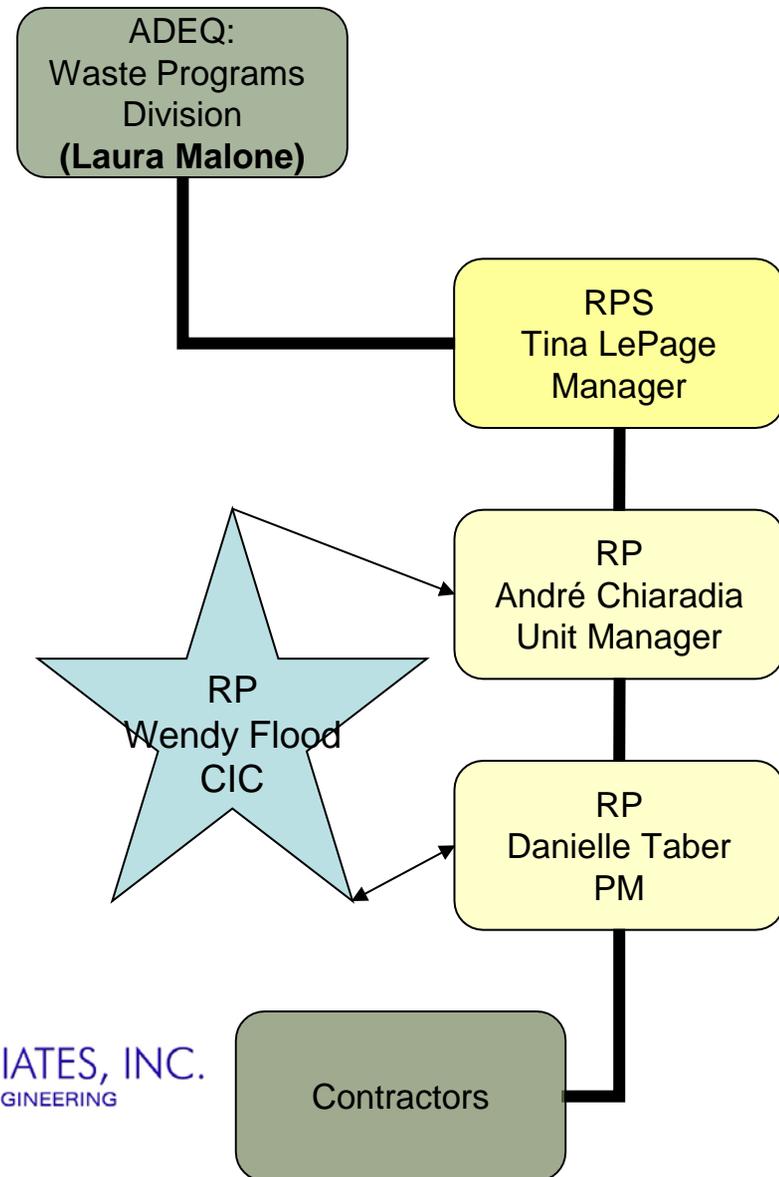
## **Community Advisory Board Meeting**

**March 6, 2013**

- Abbreviations/Definitions – See Handout
- Introductions
- Let's Talk Soil Gas/Vapor – Short Refresher
- WQARF Site Update
  - State/Federal Projects within “Central” Phoenix
  - East Central Phoenix
    - Refresher
    - Recent Activities
    - Groundwater Data
    - Soil Gas Data
    - Upcoming Activities
- Take Away
- Questions

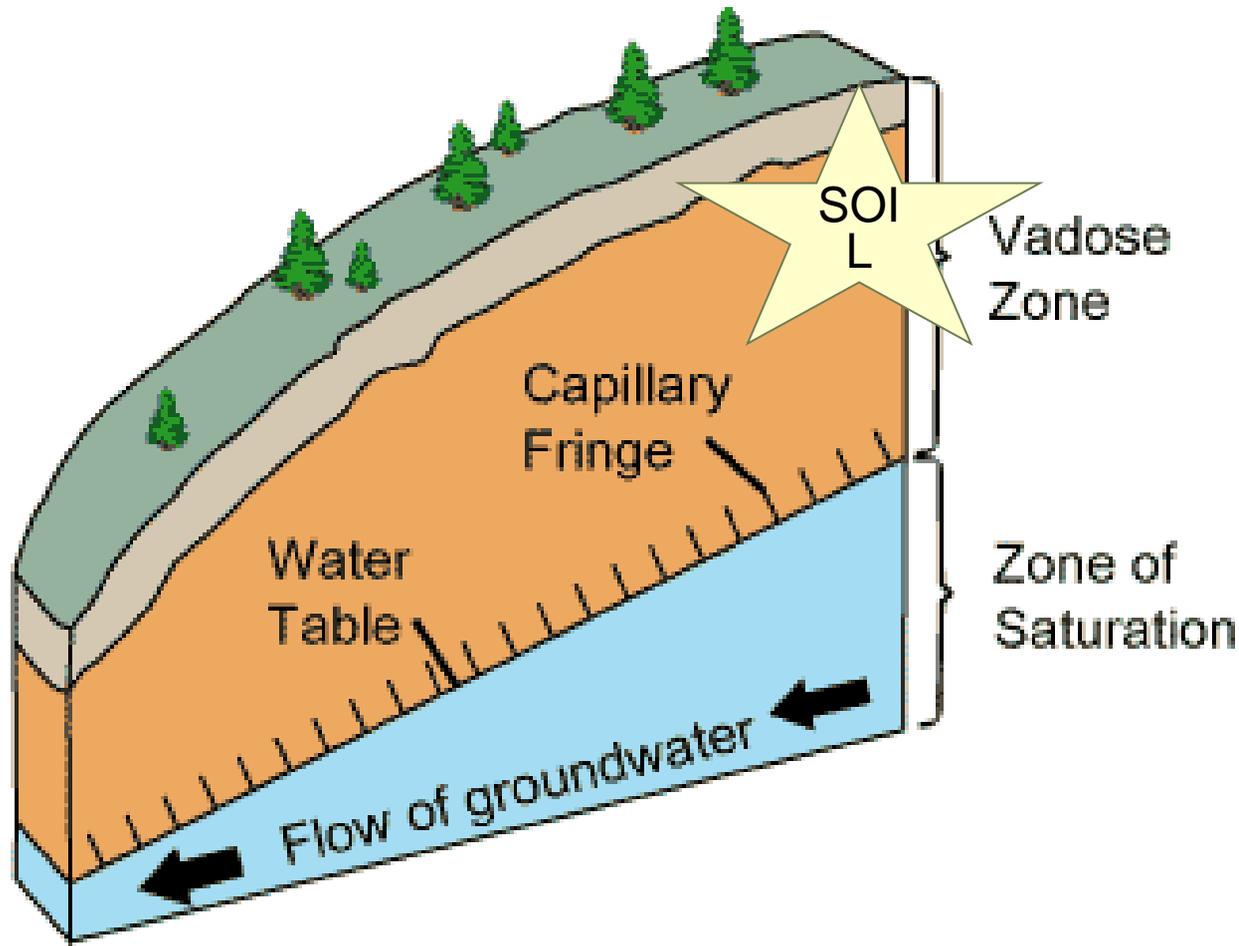


- **ADEQ Personnel**
  - Remedial Projects Section
    - Danielle Taber, PM
    - Wendy Flood, CIC
    - André Chiaradia, Unit Manager
    - Tina LePage, Section Manager
  
- **ADEQ Contractor(s)**
  - Welcome Hargis + Associates!!
    - Brian Waggle
    - Barbara Murphy
    - Tony Rossi
    - Kathy Hunter

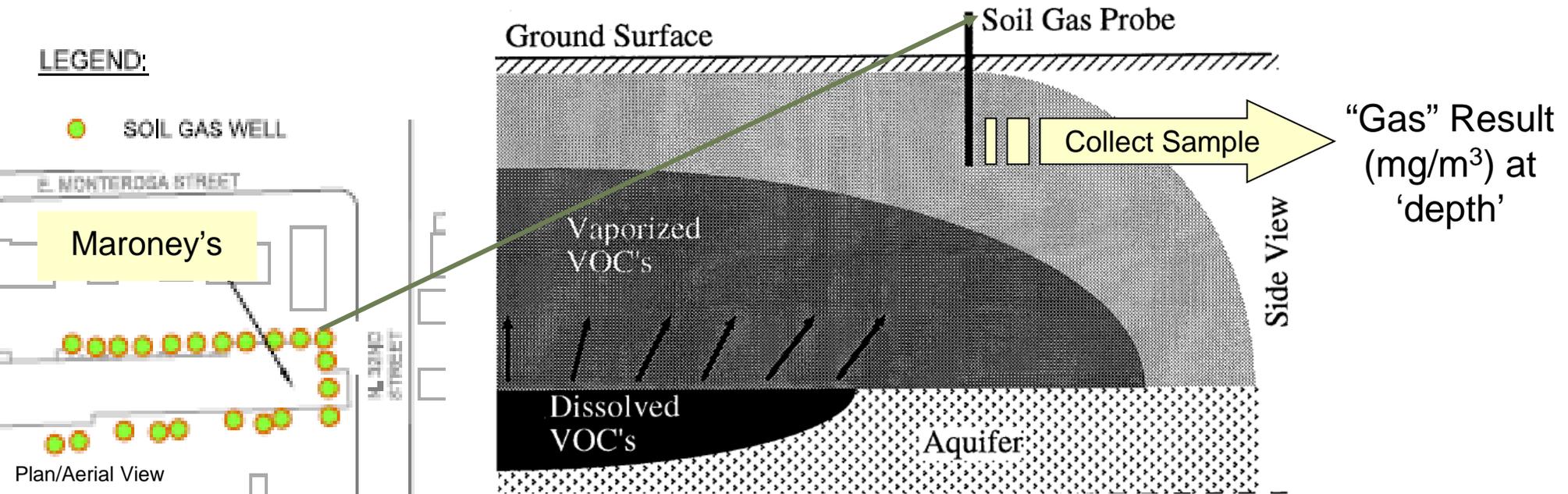


# Soil Gas/Vapor

- First, What's Soil?
  - ADEQ says “all earthen materials, including moisture and pore space contained within earthen material, located between the land surface and groundwater including sediments and unconsolidated accumulations produced by the physical and chemical disintegration of rocks.”  
(ARS R18-7-201 #41)



- Now, What's Soil Gas?
  - “Gaseous elements and compounds that occur in the small spaces between soil particles...”



# Soil Gas/Vapor



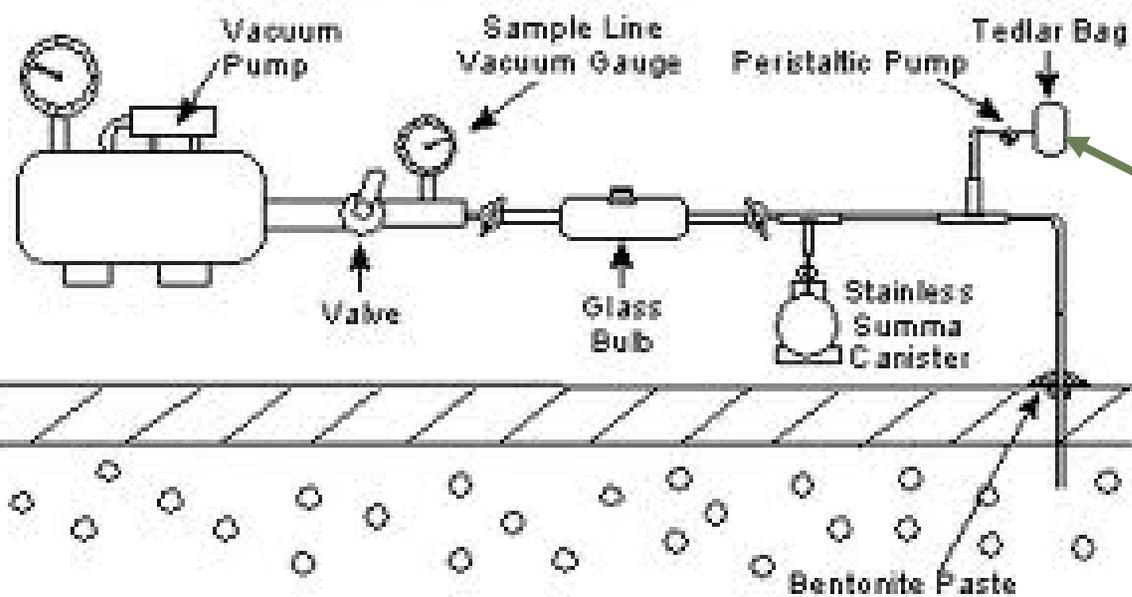
Gas Tight Glass Syringe

Stainless Steel Summa® Canisters



Summa® X-Can  
Model 100  
Capacity 4 L  
Sample Volume 1 liter

## Soil Gas Purging & Sampling Techniques



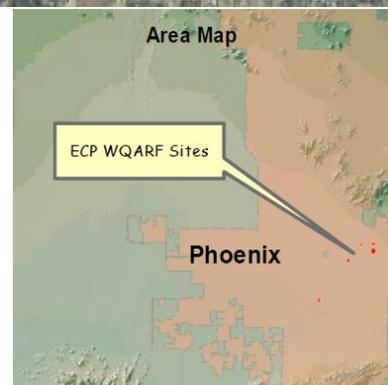
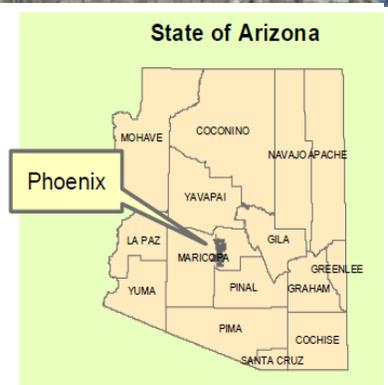
Tedlar® Bags



- ✓ Abbreviations/Definitions – See Handout
- ✓ Introductions
- ✓ Let's Talk Soil Gas/Vapor – Short Refresher
- WQARF Site Update
  - State/Federal Projects within “Central” Phoenix
  - East Central Phoenix
    - Refresher
    - Recent Activities
    - Groundwater Data
    - Soil Gas Data
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- Take Away
- Questions







- NAME**
-  ECP 24TH STREET AND GRAND CANAL
  -  ECP 32ND STREET AND INDIAN SCHOOL ROAD
  -  ECP 38TH STREET AND INDIAN SCHOOL ROAD
  -  ECP 40TH STREET AND INDIAN SCHOOL ROAD
  -  ECP 40TH STREET AND OSBORN ROAD
  -  ECP 48TH STREET AND INDIAN SCHOOL ROAD
  -  Canals



Location of SRP wells


# A Little History

- ECP was placed on the WQARF Registry list in 1987
  - SRP reported groundwater contamination in three wells ✦
  - **PCE** is the main contaminant of concern
  - **TCE and BTEX** is also present at the former Viking Cleaners
    - (32<sup>nd</sup> Street and Indian School Road)
- The **ECP CAB** was formed in November 2007
- Additional historic information, previous agendas, and meeting minutes can be found here:

– <http://www.azdeq.gov/environ/waste/sps/reg.html>

AND

– <http://www.azdeq.gov/environ/waste/sps/phx.html>



## Activities from February 21, 2012 to October 2, 2012

- 32nd Street and Indian School Road
  - Overall
    - Groundwater sampling
    - Cone Penetrometer Testing (CPT)
    - Soil gas/vapor sampling
  - Maroney's Study Area
    - SVE well install
    - SVE system construction
  - Former Viking Study Area
    - SVE well install
  - Fairmont Avenue Study Area
    - SVE well install
    - Groundwater monitor well install
    - Groundwater remediation well install
  - Property Access
- 48th Street and Indian School Road
  - Overall
    - Groundwater sampling
    - CPT
    - Soil gas/vapor sampling
  - Groundwater Monitor Well Install
  - SVE System
    - SVE well install
    - SVE pilot test
    - Ownership transfer
  - Property Access

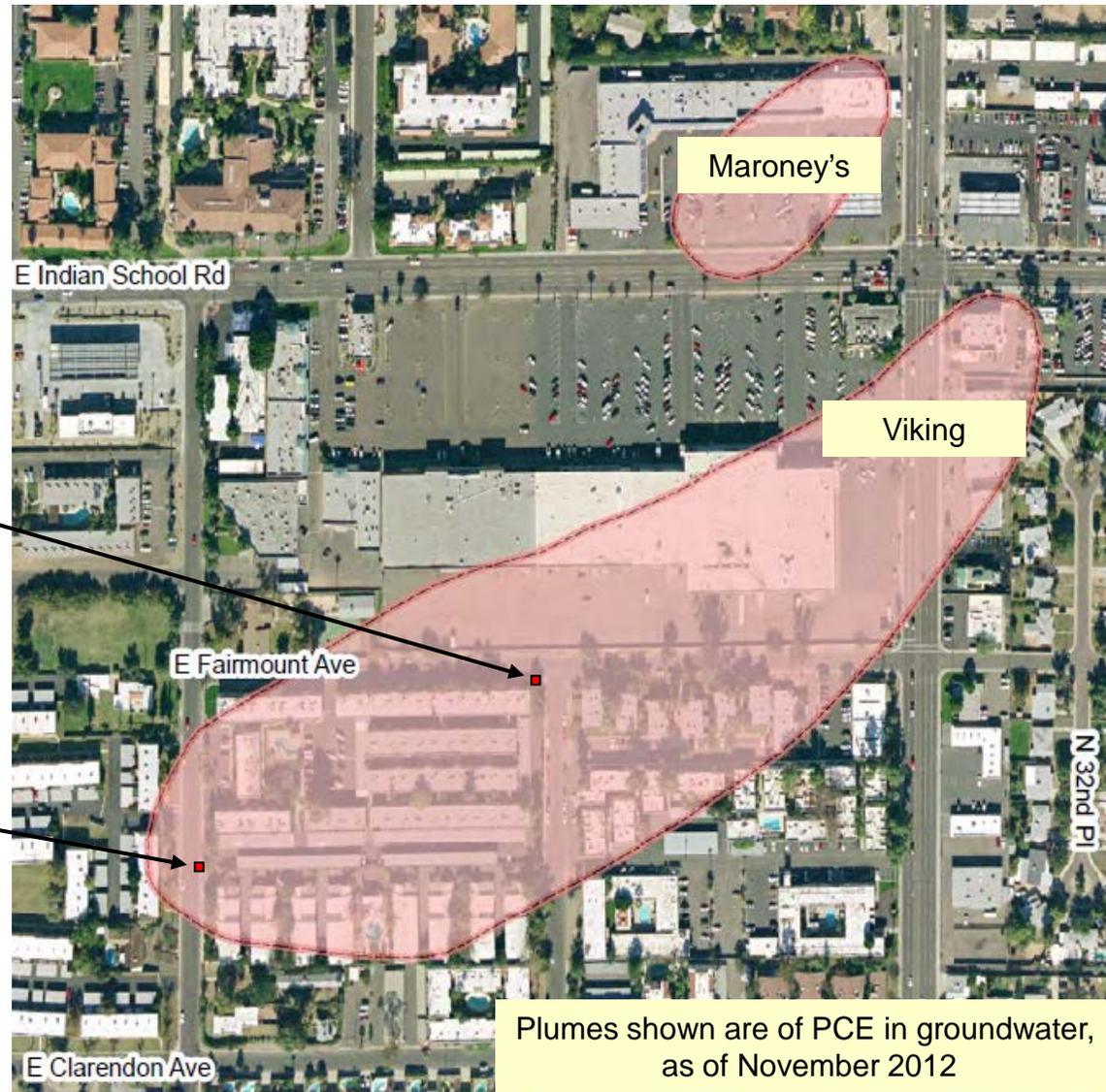
## Activities Since Last CAB Meeting on October 2, 2012

- **32nd Street and Indian School Road**
  - Reports: Received 7 (for a grand total of.....**18** in 6 months)
  - Property Access: 2 more (2 more in progress)
  - Soil Vapor Extraction Systems (SVEs):
    - Maroney's
    - Former Viking
- **48th Street and Indian School Road**
  - Reports: Received 4 (for a grand total of..... **9** in 6 months)
  - Property Access: 1 more (2 more in progress)
  - SVE design at 90 percent



# 32nd Street and Indian School Road

- Groundwater Characteristics:
  - ~55 feet below grade
  - Flow is to the south/southwest
  - <1.0 to **890** ppb PCE
    - (VCMW-4A, **4/2012**)
  - Two separate groundwater contaminant plumes
  - New well:
    - VCMW-6-61: 140 ppb
    - VCMW-6-68: 140 ppb
    - VCMW-6-78: 196 ppb
  - PCE plumes are still **undefined downgradient**





# 32nd Street and Indian School Road

## PCE Results in Groundwater

**11/2010**

Maroney's:

<1.0 ppb in MMW-5 & MMW-6  
up to **240 ppb** in MMW-4

Former Viking:

2.3 ppb in SRP Well to  
69 ppb in VCMW-2

Fairmont Avenue:

VCMW-4A (1 well w/ 2 casings)  
(shallow/intermediate/deep)  
1,100 ppb/980 ppb/1,200 ppb  
VCMW-4B  
(shallow/intermediate/deep)  
6.5 ppb/5.6 ppb/6.8 ppb

**8/2011**

Maroney's:

<1.0 ppb in MMW-5 & MW-6  
up to **120 ppb** MMW-3

Former Viking:

2.4 ppb in SRP Well to  
52 ppb in VCMW-2  
VCMW-5:  
1,100 ppb/470 ppb/470 ppb

Fairmont Avenue:

VCMW-4A:  
1,400 ppb/1,300 ppb/1,300 ppb  
VCMW-4B:  
6.7 ppb/6.8 ppb/6.1 ppb

(ppb = part per billion, ug/L)

**4/2012**

Maroney's:

<1.0 ppb in MMW-5 & MW-6  
up to **87 ppb** MMW-3

Former Viking:

1.3 ppb in SRP Well to  
30 ppb in VCMW-2  
VCMW-5:  
320 ppb/300 ppb/310 ppb

Fairmont Avenue:

VCMW-4A:  
860 ppb/890 ppb/870 ppb  
VCMW-4B:  
4.6 ppb/3.8 ppb/3.7 ppb  
VCMW-6:  
140 ppb/140 ppb/196 ppb

# 48th Street and Indian School Road

- Groundwater Characteristics:
  - ~33 feet below grade
  - Flow is to the southwest
  - <1.0 ppb to **1,100 ppb**
    - (SMW-3-60, **4/2012**)
  - New well:
    - SMW-6-32: 4.6 ppb
    - SMW-6-60: 2.8 ppb
  - One groundwater contaminant plume
  - PCE plume is still undefined downgradient
  - Appears to be very narrow



Plume shown is of PCE in groundwater,  
as of November 2012

## PCE Results in Groundwater

**6/2010**

<1.0 ppb in SMW-1,  
SMW-2, SMW-3-138,  
SMW-5, ECP-2, and ECP-3

**370 ppb** SMW-3-59.5  
4.3 ppb SMW-4-34

**10/2011**

<1.0 ppb in SMW-1,  
SMW-2, SMW-3-138,  
ECP-2, and ECP-3

**1,400 ppb** SMW-3-59.5  
6.9 ppb SMW-4-34  
2.1 ppb SMW-5-34

**4/2012**

<1.0 ppb in SMW-1,  
SMW-2, SMW-3-138,  
SMW-8, SMW-5, ECP-2,  
and ECP-3

**1,100 ppb** SMW-3-59.5  
4.2 ppb SMW-4-34

4.6 ppb SMW-6-32  
14 ppb SMW-7-32

Arizona Water  
Quality Standard  
for PCE:  
5 ppb

# 32nd Street and Indian School Road



Maroney's Study Area

Soil Gas results from April  
sampling range from:

<69 ug/m<sup>3</sup>

to

510,000 ug/m<sup>3</sup>



Maroney's



SVE System



The yellow pins are CPT  
locations.  
The green pins are temporary  
soil vapor sampling locations.

# Fairmont Study Area Pt 1

Soil Gas results from April sampling range from:

<69 ug/m<sup>3</sup>  
to  
99,000 ug/m<sup>3</sup>

Food City

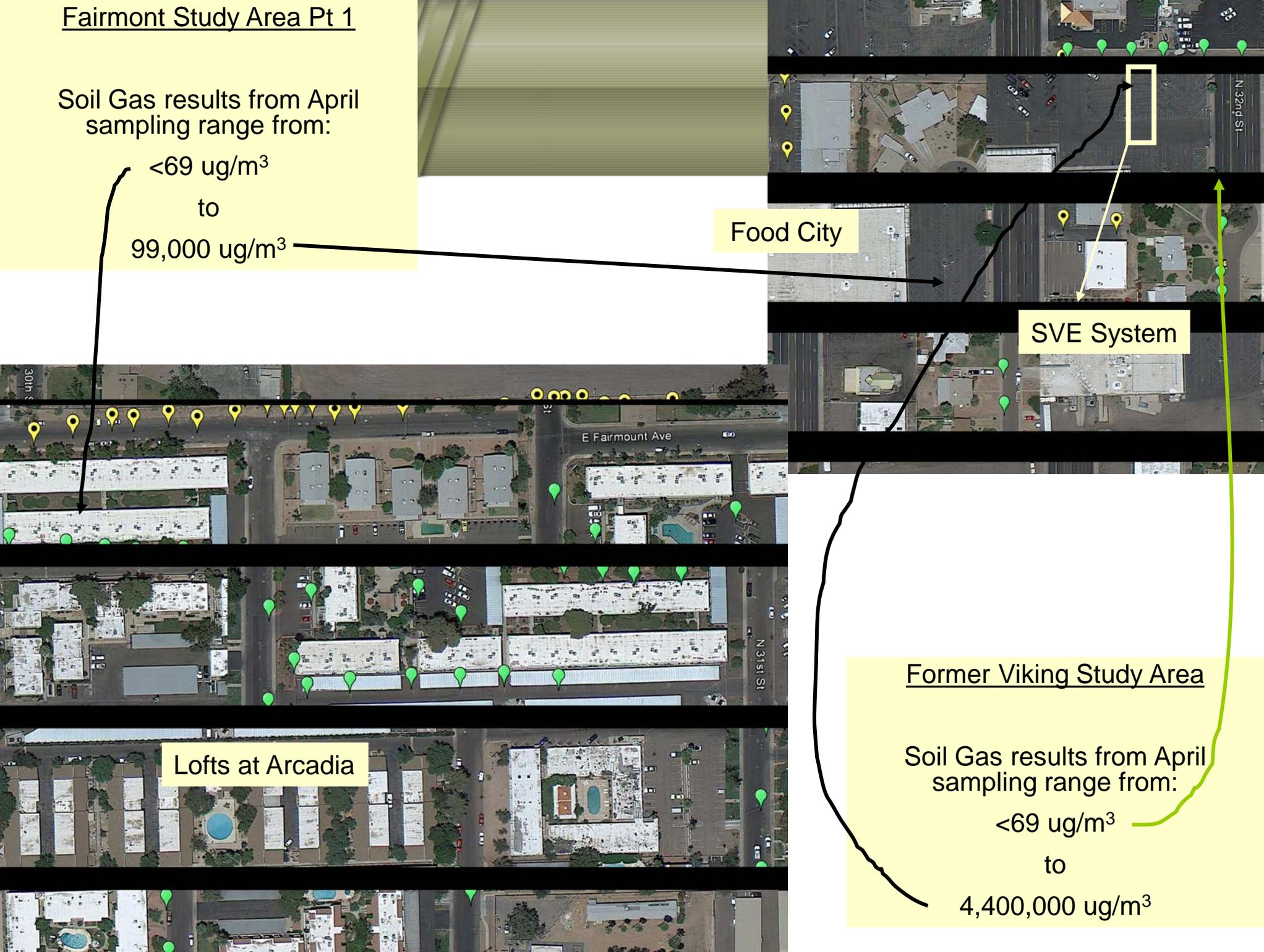
SVE System

Lofts at Arcadia

Former Viking Study Area

Soil Gas results from April sampling range from:

<69 ug/m<sup>3</sup>  
to  
4,400,000 ug/m<sup>3</sup>



# 32nd Street and Indian School Road



Villa Seville



Fairmont Study Area Pt 2

Soil Gas results from April  
sampling range from:

<69 ug/m<sup>3</sup>  
to  
7,600 ug/m<sup>3</sup>

The green pins are  
temporary soil vapor  
sampling locations.



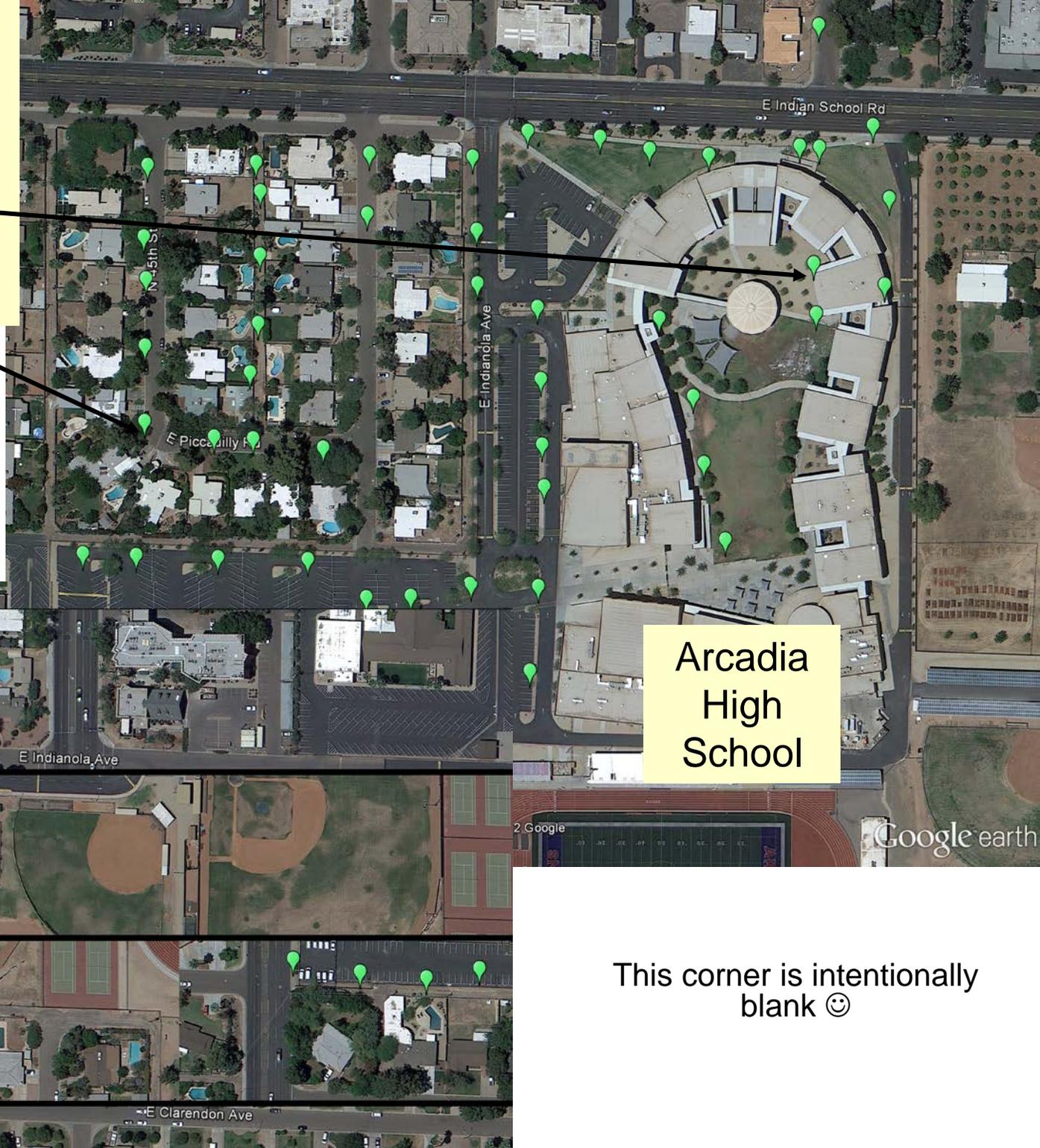
Study Area Pt 2

Soil Gas results from April  
sampling range from:

<69 ug/m<sup>3</sup>

to

8,100 ug/m<sup>3</sup>



Arcadia  
High  
School

© 2012 Google

Google earth

This corner is intentionally  
blank 😊

# Upcoming Activities

- 32nd Street and Indian School Road

- Property Access: 2 more in progress plus others
- Groundwater
  - Define Plume (FY2014)
  - Treatment Pilot - Fairmont (~FY2014)
- Soil Vapor
  - Extraction Systems (SVEs)
    - Maroney's (FY2013)
    - Former Viking (FY2013)
    - Fairmont (FY2014)
  - Continue soil vapor characterization

- 48th Street and Indian School Road

- Property Access: 2 more in progress plus others
- Groundwater
  - Define Plume (FY2014)
  - Treatment Pilot (~FY2015)
- Soil Vapor
  - SVE
    - Design, Construction, Install (FY2014)
  - Continue soil vapor characterization

**The Other Four Sites:  
Re-start remedial investigations  
(FY2014)**

## As a CAB member, what can you do to help?

- Share information with neighbors, groups, and friends about the Site
- Communicate questions or concerns with ADEQ
- Call Wendy, or Danielle, with questions or suggestions
  - What do you want to know or learn?
  - What do you want to visit?
- Keep attending CAB meetings!



## Questions?

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