

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

**Wednesday August 20, 2014**

**6 p.m. to 8:p.m.**

**Arcadia High School – Mt. Olympus Room  
4703 E. Indian School Road, Phoenix, AZ 85018**

**FINAL MINUTES**

CAB members present: Laura M. Ruffalo, Randy Dahl, Janice Forwood, Karen Kay, Ed Rhodes and Jolene Morris, Jacalyn Askin and Nathan Nelson

ADEQ Staff in attendance: Mel Bunkers, Project Manager and Wendy Flood, Community Involvement Coordinator (CIC)

Members of the public present: Laura Menken, Hargis + Associates, Inc.; Tony Rossi, Hargis + Associates, Inc. and Kathy Hunter, Hargis + Associates, Inc.

**Call to Order and Welcome and Introductions** – Meeting began at 6:05 p.m. ADEQ Community Involvement Coordinator called meeting to order, then handed over to Co-Chair. Introductions were made by CAB Members and audience.

**Accept and /or changes to the minutes of the March 2014 CAB meeting** - Ms. Ruffalo moved to accept the minutes with the correction of Jacalyn Askin’s name; Ms. Forwood seconded the motion; motion passed.

**East Central Phoenix Six Sites Data and Activities Update (see attached presentation)** – ADEQ consultant, Hargis + Assoc., went over the investigation history of all six sites, focused source investigation and preliminary investigation results and clean-up process status and updates on the Remedial Investigation (RI) report status for three of the sites.

Ms. Morris and Mr. Dahl questioned the site boundaries since what is shown seems to not encompass the true location of the site and the results on the map. Hargis + Assoc. respond it was an estimated boundary and more specific boundaries will be discussed later in the presentation.

For 24<sup>th</sup> Street and Grand Canal – Consultant discussed current concentrations and the installation of five additional groundwater wells in the 2013/2014 calendar year. Additional groundwater wells will be installed in the 2014/2015 calendar year to further characterize the plume. Hargis + Assoc. also reviewed the site map.

Ms. Forwood asked if anyone was drinking the water and if it was affecting anyone's health. ADEQ responded there is not active drinking water pumping from this area. The Salt River Project (SRP) well is an irrigation well that is blended. The issue is that all water in Maricopa County is considered possible drinking water at some point and that is why it needs to be cleaned to the drinking water standard. Ms. Forwood further inquired if the water was cleanable, the cost of clean-up, and the timeline for completing clean-up. The ADEQ consultant stated that the City of Phoenix has plans to include all their wells as a future potential source for drinking water so any water in the ECP area will need to be cleaned to the standard. Ms. Morris made the point that it is easier and less costly to clean up now while the contaminants are in the soil before they get to the water.

For 38<sup>th</sup> Street and Indian School – Consultant discussed the status of the Draft Remedial Investigation Report that was submitted to ADEQ and investigations activities since the last meeting. The site map was reviewed

Mr. Dahl asked if the time of year affects sampling/water results. The ADEQ consultant stated that there is minimal impact with regard to seasons. However, SRP adjusts their water supply well pumping schedule based on the seasons, which in turn affects regional groundwater levels.

For 40<sup>th</sup> Street and Indian School – Consultant discussed history and contaminant extraction at the site. The Draft RI Report was submitted to ADEQ. The consultant stated there is no further remedial action recommended and suggested quarterly groundwater monitoring and semi-annual soil vapor monitoring to verify concentrations. The site map was discussed that showed new well installation and recent concentrations.

For 40<sup>th</sup> and Osborn – Consultant discussed the installation of four well pairs to address data gaps in 2013/2014. The Draft RI Report was submitted in June there was a reported increase in tetrachloroethene (PCE) and trichloroethene (TCE) concentrations at various wells. Periodic groundwater monitoring will continue and it is suggested to install a deeper well screen to determine the vertical extent of the contamination.

Ms. Forwood asked why SRP was pumping the wells. The ADEQ consultant stated SRP pumps based on their water needs. Ms. Forwood then asked if the customers would have contaminants in their water. Ms. Flood stated that SRP complies with both drinking water and irrigation water standards as well as processes water through multiple treatment plants and performs blending.

Information regarding the status of the Baker nursery was requested for the next meeting.

32<sup>nd</sup> Street and Indian School – Consultant discussed current site conditions and groundwater concentrations at the site. A brief background of the different site chemical characteristics was presented to CAB members,

Maroney's Cleaners – A soil vapor extraction (SVE) remediation system was started up on June 3, 2013. The system was shut down on November 18, 2013 to measure the rebound of soil vapor concentrations. Rebound monitoring was completed in June 2014 with concentrations remaining low. Consultant and ADEQ are discussing the best path forward. ADEQ consultant described the system in place at Maroney's

Former Viking Cleaners – There is higher concentrations of contaminants at this location. SVE system construction was started in June 2014. The SVE system started-up on July 21, 2014 and data is being gathered for analysis.

Ms. Morris asked if there was an SVE system at the Viking Cleaners location already. The ADEQ consultant responded there were previously two small pilot test (PT) systems. Some of the SVE wells are being reused but the SVE unit itself is new and is above ground.

Mr. Rhodes asked why there was more plumbing on this SVE system and whether it was standard. The ADEQ consultant described the difference between a pilot system and the new installed permanent system. It was also clarified that there are two different plumes and sources that require two different systems.

The ADEQ consultant reviewed the start up numbers for the systems. A CAB member asked the life cycle of the system. The Consultant answered typically 5 – 10 years, but concentrations also dictate life cycle.

48<sup>th</sup> Street and Indian School – Consultant discussed current site conditions, groundwater concentrations and discussed the ongoing planning and design of a future SVE system and future well drilling.

#### Indoor Air Assessment

Consultant reviewed the indoor air results from the last years sampling and stated that there is little to no risk to from vapor intrusion to residential indoor air. Based on results, no additional residential indoor air sampling is planned and a summary report will be posted to the ADEQ website. ADEQ stated this is good news that there was no potential for indoor air. It was also stated the school was extensively sampled and any low hits were contributed to other indoor air sources.

#### Conclusion

ADEQ consultant went over the future plans for the sites including the RI comment period and the solicitation of the remedial objectives for three of the sites.

#### Site Visit Discussion

The CAB discussed viewing the new systems that have been installed. Ms. Morris inquired about a previous pretention about SVE systems and how it works. She requested the presentation be located and provided to CAB members. It was decided to hold the site visit in the fall. ADEQ will contact the CAB members in the fall to determine a date.

#### **CAB co-chair nominations, discussion and vote**

Co-chair nominations were made for Jolene Morris and Randy Dahl. Ms. Askin nominated Ms. Morris. It was seconded by Ms. Forwood. Ms. Forwood nominated Mr. Dahl and Ms. Ruffalo seconded the motion. Both were voted on unanimously

**Call to the Public** – No public in attendance.

#### **Next Meeting date and agenda topics –**

The CAB decided to hold the next meeting when the Draft RI goes out for public comment period. Meeting location is to be determined. Agenda topics/action items include:

- Schedule visit to and Q&A with engineering staff at the existing SVE system sites.
- Comments on Remedial Investigations.

- Solicitation of clean-up goals.
- Pictures related to the site and equipment used at the site.
- SVE site updates only on the ECP sites with treatment systems unless there is activity at another site (e.g. new well).
- Discuss program called “Next Door” for CAB to post to and increase social media presence.
- Change RI Summary site map so that Viking is in the correct location and monitoring wells should be shown in the site area. The “square” site boundaries need to be updated and changed.
- One page fact sheet for 24<sup>th</sup> Street CAB member.
- Updated on Bakers Nursery
- Further discussion on where wells are going to be placed at 24<sup>th</sup> Street and Grand Canal and how the plume is moving/flow and how that (flow) is determined.

**Adjournment**

Ms. Ruffalo motioned to adjourn and Ms. Akin seconds the motion. Meeting adjourned at 7:42 p.m.



**East Central Phoenix (ECP)  
Water Quality Assurance Revolving  
Fund (WQARF) Site  
Six Sites Data & Activities Update**

**Community Advisory Board  
Meeting**

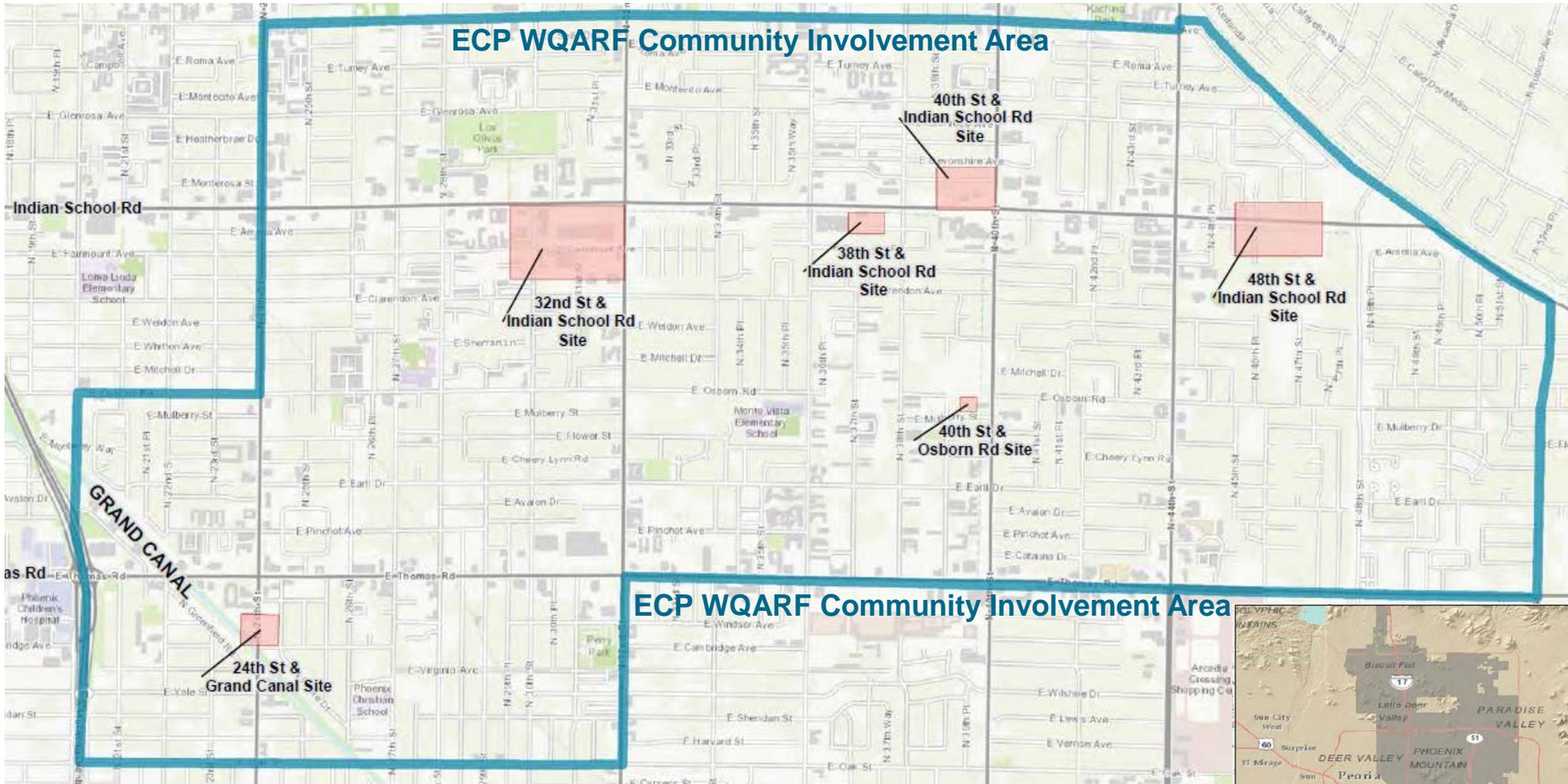
**August 20, 2014**

# General Overview ECP WQARF Site

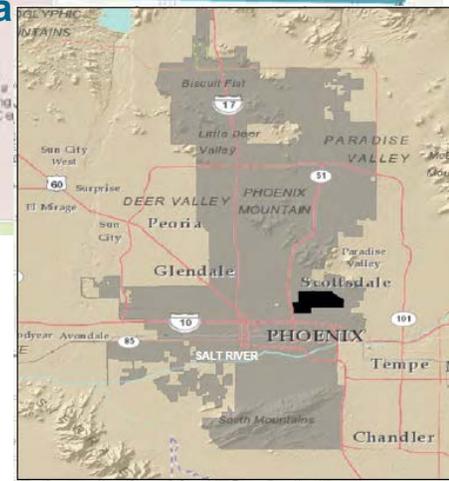
- 6 Sites part of the WQARF Program, all in the Remedial Investigation (RI) phase
- Several former dry cleaners as sources
- Groundwater and soil vapor contamination, Tetrachloroethene (PCE) primary contaminant of concern (COC) at all 6 sites
- Site characterization ongoing at all 6 sites

- Various historical Early Response Actions (ERAs), current soil vapor extraction (SVE) at 32<sup>nd</sup> St./Indian School Road Maroney Cleaners and Former Viking sub-sites.
- Draft RI Reports submitted June 2014 to ADEQ
  - 38<sup>th</sup> St./Indian School Road
  - 40<sup>th</sup> St./Indian School Road
  - 40<sup>th</sup> St./Osborn Road

# 6 ECP WQARF Sites

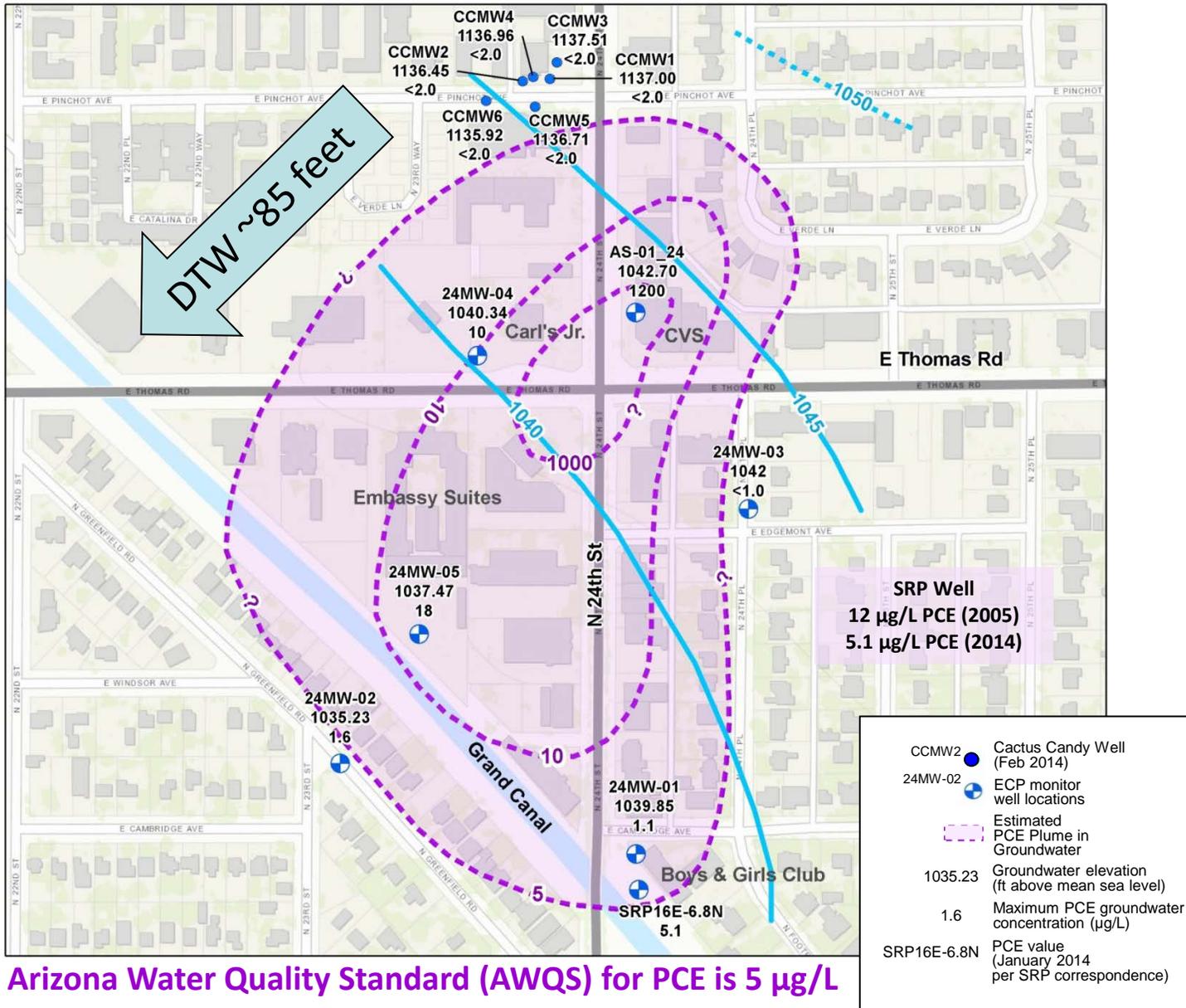


Approximate site boundary



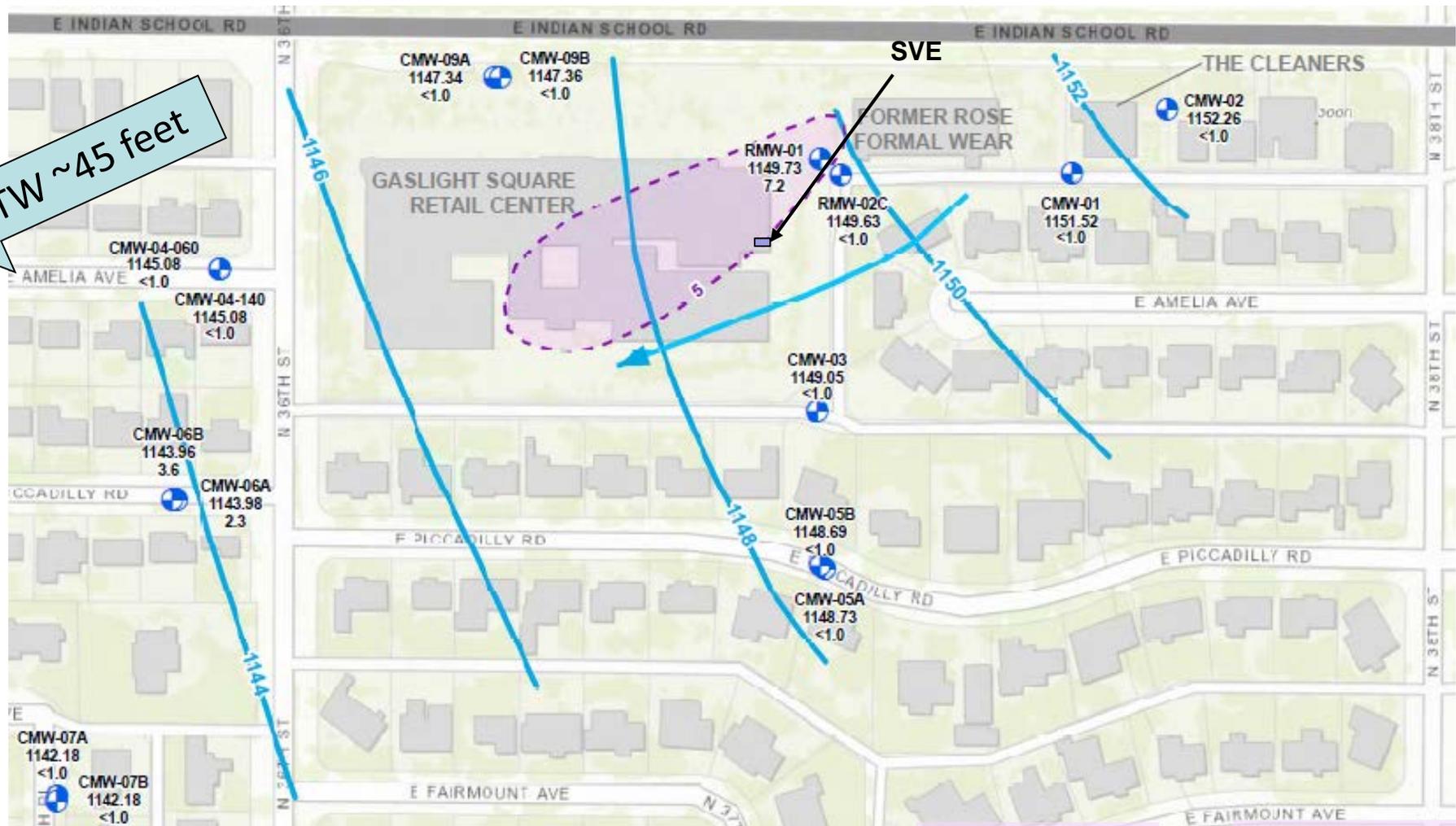
- CVS location historically a dry cleaner and print shop
- AS-01 (CVS property)
  - 170 micrograms per liter ( $\mu\text{g/L}$ ) PCE (2008)
  - 1,200  $\mu\text{g/L}$  PCE (2013)
- Five additional groundwater (GW) wells installed in 2013/2014
- Additional GW wells to be installed in 2014/2015 to further characterize PCE plume

# 24<sup>th</sup> St. & Grand Canal



- Sources:  
Former Rose Formal Wear & The Cleaners
- Installed 4 well pairs (shallow/deep) to address data gaps in 2013/2014
- Minimal PCE remains in GW
- Submitted Draft RI Report in June 2014 – Under Review
- No further remedial action recommended
- Suggested activities
  - Periodic GW and Soil Vapor (SV) monitoring

# 38<sup>th</sup> St. & Indian School Rd.



DTW ~45 feet

**EXPLANATION**

- Monitor Well Locations
- Water Level Contour
- Direction of Groundwater Flow
- PCE Groundwater Plume

CMW-07A -- Existing groundwater well  
 1142.18 -- Groundwater elevation (ft above mean sea level) - May 2014  
 <1.0 -- Recent PCE groundwater concentration (µg/L)  
 (May 2014)



RMW-1
2,500 µg/L PCE (1998)
37 µg/L PCE (2008)
3.3 µg/L PCE (2013)
7.2 µg/L PCE (2014)

CMW-1
34,000 µg/L PCE (1994)
<1.0 µg/L PCE (2008)
<1.0 µg/L PCE (2013)
<1.0 µg/L PCE (2014)

# 40<sup>th</sup> St. & Indian School Rd.

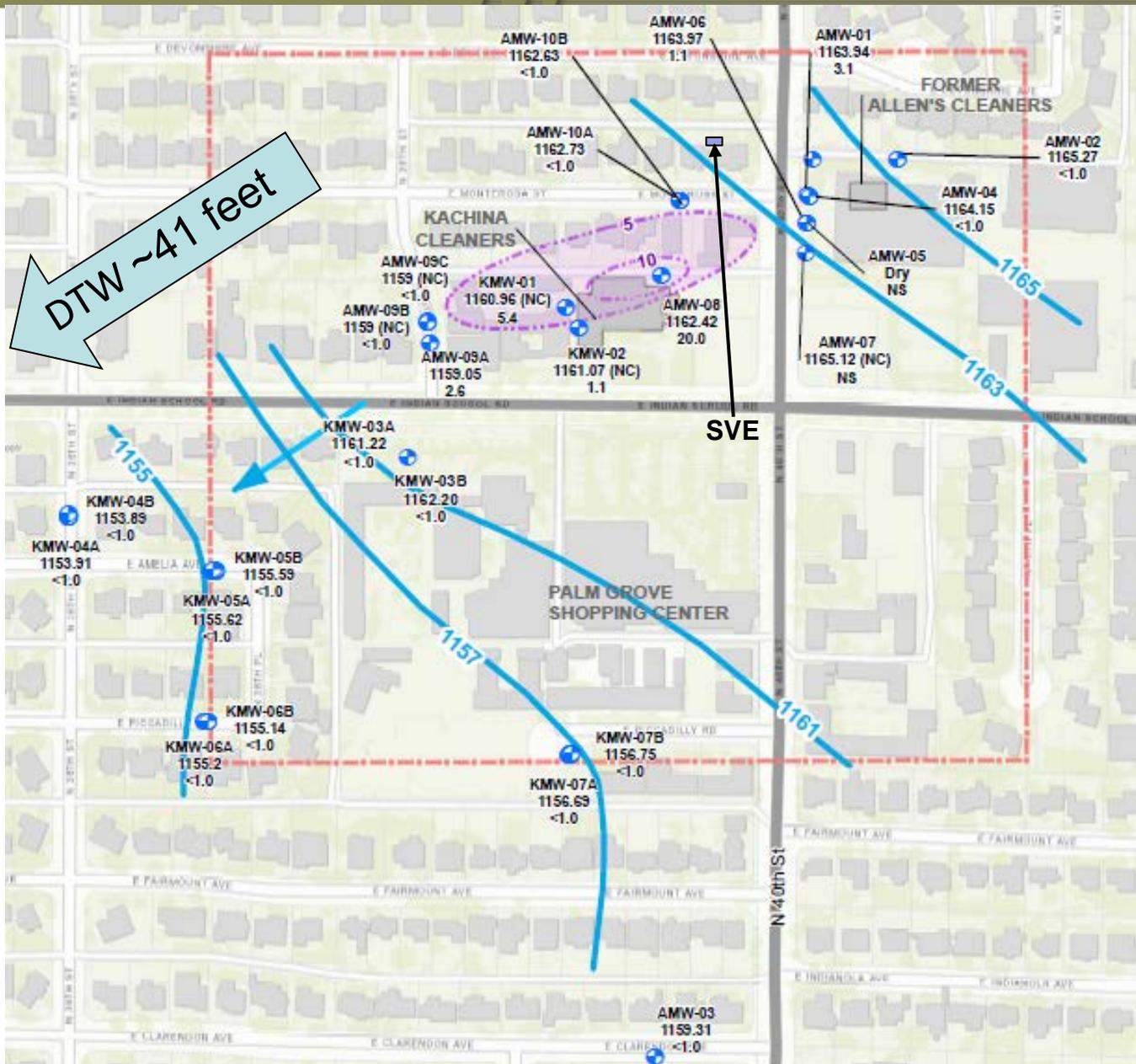
- Sources: Former Allen's Cleaners & Kachina Cleaners
- SVE system 2004-2005 (33 pounds (lbs) PCE removed) - (still in place)
- Installed 5 well pairs (shallow/deep) to address data gaps in 2013/2014
- PCE in GW detected in 6 of 23 wells

Well	PCE (µg/L) (May 2014)
AMW-01	3.1
AMW-06	1.1
AMW-08 (shallow, intermediate, deep)	20, 3.8, 4.6

Well	PCE (µg/L) (May 2014)
AMW-09A	2.6
KMW-01	5.4
KMW-02	1.1

- PCE (May 2014) > AWQS of 5 µg/L in wells AMW-08 and KMW-01
- TCE only detected in one well at 1.9 µg/L in 2014, not detected above AWQS of 5 µg/L since 2004
- Submitted Draft RI Report in June 2014 – Under Review
- No further remedial action recommended
- Suggested activities
  - Quarterly GW monitoring and semi-annual SV monitoring to verify concentrations

# 40<sup>th</sup> St. & Indian School Rd.



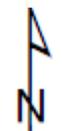
DTW ~41 feet

SVE

<p><b>AMW-01</b> 17 µg/L PCE (2008) 1.9 µg/L PCE (2013) 3.1 µg/L PCE (2014)</p>	<p><b>AMW-06</b> 33 µg/L PCE (2005) &lt;1.0 µg/L PCE (2013) 1.1 µg/L PCE (2014)</p>
<p><b>AMW-09A</b> 120 µg/L PCE (2008) &lt;1.0 µg/L PCE (2013) 2.6 µg/L (2014)</p>	<p><b>AMW-08 (shallow)</b> 78 µg/L PCE (2007) 6 µg/L PCE (2013) 20 µg/L PCE (2014)</p>
<p><b>KMW-01</b> 57 µg/L PCE (2007) 4.6 µg/L PCE (2013) 5.4 µg/L PCE (2014)</p>	<p><b>KMW-02</b> 3.8 µg/L PCE (2008) 1.4 µg/L PCE (2013) 1.1 µg/L PCE (2014)</p>

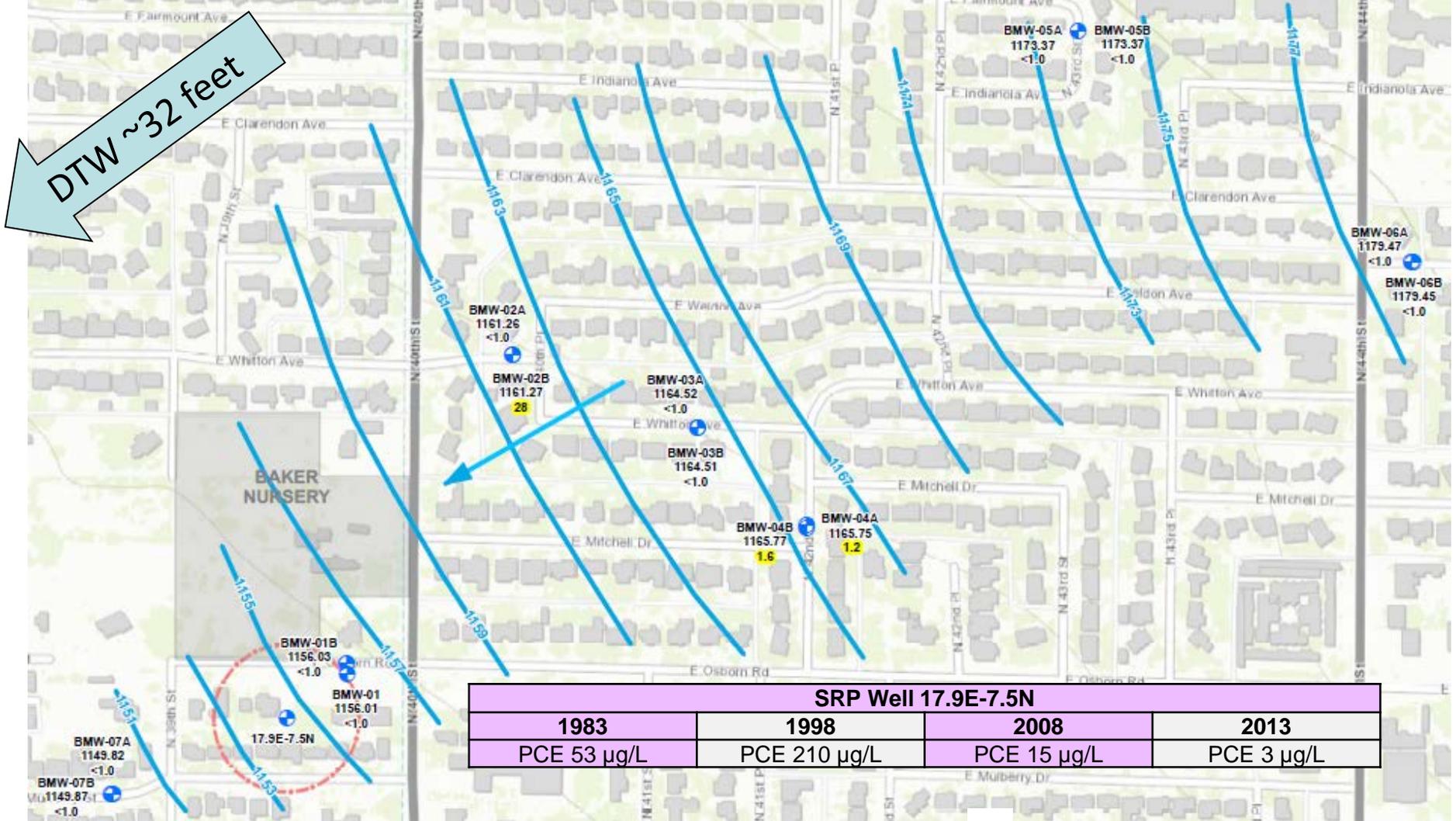
**EXPLANATION**

- Monitor Well Locations
- Water Level Contour
- Direction of Groundwater Flow
- Estimated PCE Plume in Groundwater
- NS -- Not Sampled
- AMW-03 -- Existing groundwater well
- 1159.31 -- Groundwater elevation (ft above mean sea level) - May 2014
- <1.0 -- Recent PCE groundwater concentration (µg/L) (May 2014)
- NC -- Data not used in contouring and interpretation of groundwater flow direction; casing elevation measurement is considered suspect.



- Source: None Identified
- PCE detected in SRP 17.9E-7.5N since 1983
- Installed 4 well pairs (shallow/deep) to address data gaps in 2013/2014
- May 2014 - PCE in GW high of 28  $\mu\text{g/L}$  in BMW-02B, and 1.2/1.6  $\mu\text{g/L}$  in BMW-04A/B
- May 2014 TCE at 1.8  $\mu\text{g/L}$  in BMW-02B
- Submitted Draft RI Report in June 2014 – Under Review
- No further remedial action recommended
- Suggested activities
  - Periodic GW monitoring
  - Installation of one deeper well screen at BMW-02B to determine the vertical extent

# 40<sup>th</sup> St. & Osborn Rd.



**EXPLANATION**

- Monitor Well Locations
- Water Level Contour

- BMW-02A -- Existing groundwater well
- 1161.26 -- Groundwater elevation (ft above mean sea level) - May 2014
- <1.0 -- Recent PCE groundwater concentration (µg/L) (May 2014)
- 1.6** -- Denotes a detected concentration of PCE.



BMW-02B	BMW-01B
67 µg/L PCE (2008)	<1.0-2.4 µg/L PCE (2008)
20 µg/L PCE (2013)	<1.0 µg/L PCE (2013)
28 µg/L (2014)	<1.0 µg/L PCE (2014)



# 32<sup>nd</sup> St. & Indian School Rd. – Maroney's Cleaners

- System start-up June 3, 2013
- Primary containment of concern is Tetrachloroethene (PCE)
- PCE is one of many chemicals grouped within the family of compounds known as Volatile Organic Compounds (VOCs)
- Other VOCs also detected in the subsurface vapor at smaller concentrations (e.g., Acetone, Benzene, Chloroform & Trichloroethene)
- SVE System removed 26 lbs of total volatile organic compounds (VOCs) (June – Nov. 2013)
- System Shutdown on Nov. 18, 2013 to measure SV concentration rebound on a monthly basis
- Rebound monitoring completed in June 2014
- SV concentrations remain low; determining path forward

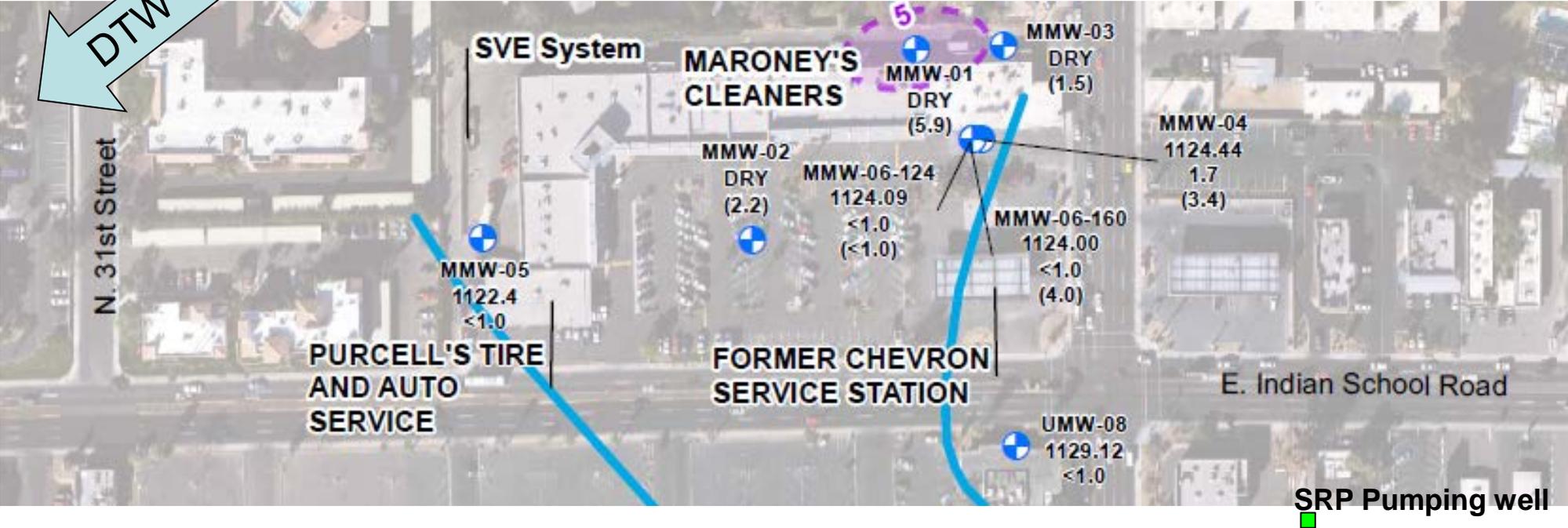
# 32<sup>nd</sup> St. & Indian School Rd. – Maroney's Cleaners

**MMW-05**  
<1.0 ppb PCE (2006)  
<1.0 ppb PCE (2013)

**MMW-01**  
34 ppb PCE (2003)  
9.3 ppb PCE (2013)

**MMW-03**  
180 ppb PCE (2008)  
4.6 ppb PCE (2013)

DTW ~55 feet

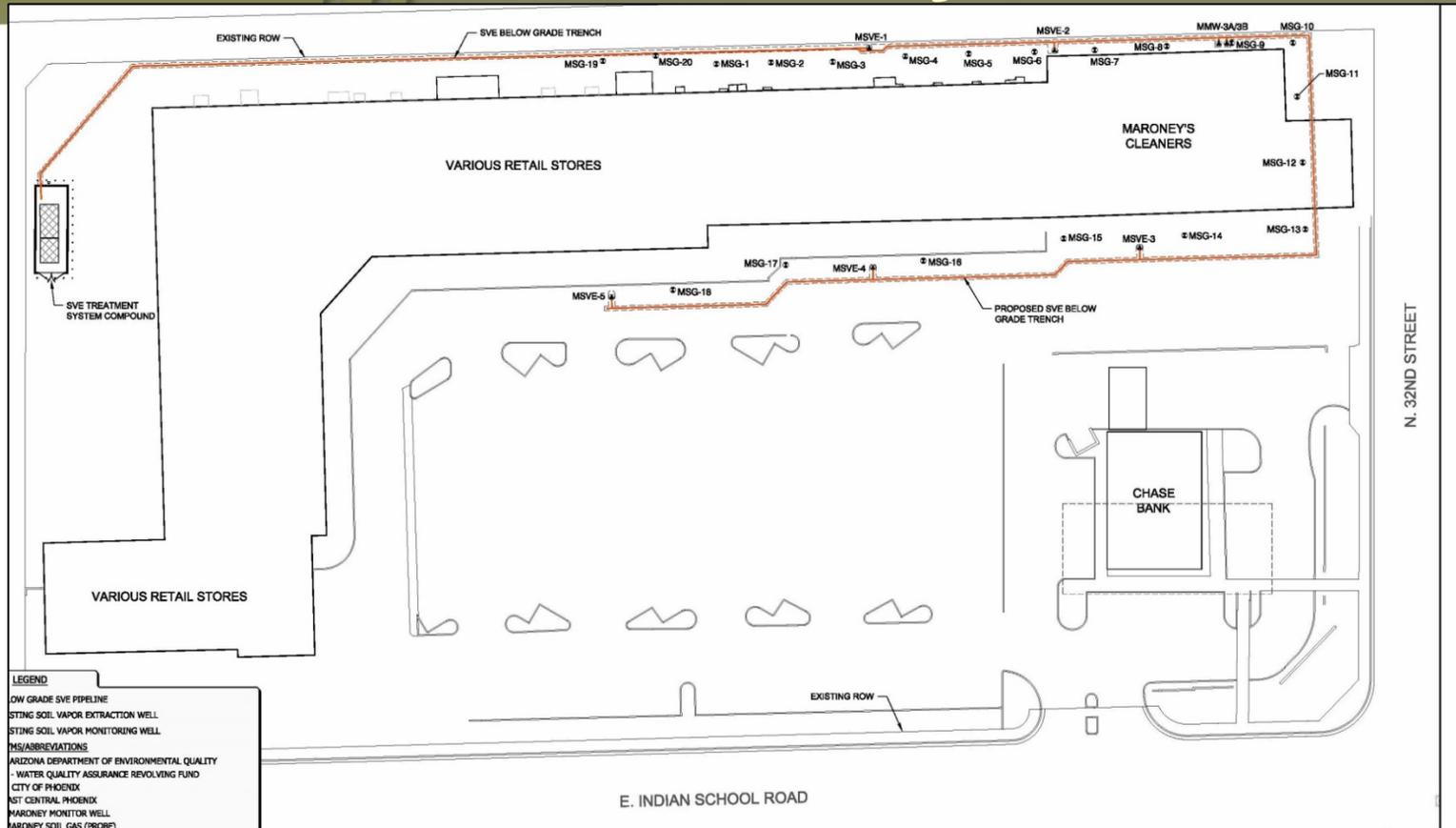


- Lower PCE concentrations in groundwater
- May 2014 sampling event impacted by drawdown of water table from nearby SRP pumping well
  - Dry screened intervals at Maroney's

Monitor Well Locations  
 May 2014 Groundwater Elevation Contour  
 Estimated PCE concentrations in groundwater  
 630 PCE concentration (May 2014) in µg/L  
 (29.1) PCE concentration (October 2013) in µg/L  
 µg/L Micrograms per liter



# 32<sup>nd</sup> St. & Indian School Rd. – Maroney's Cleaners

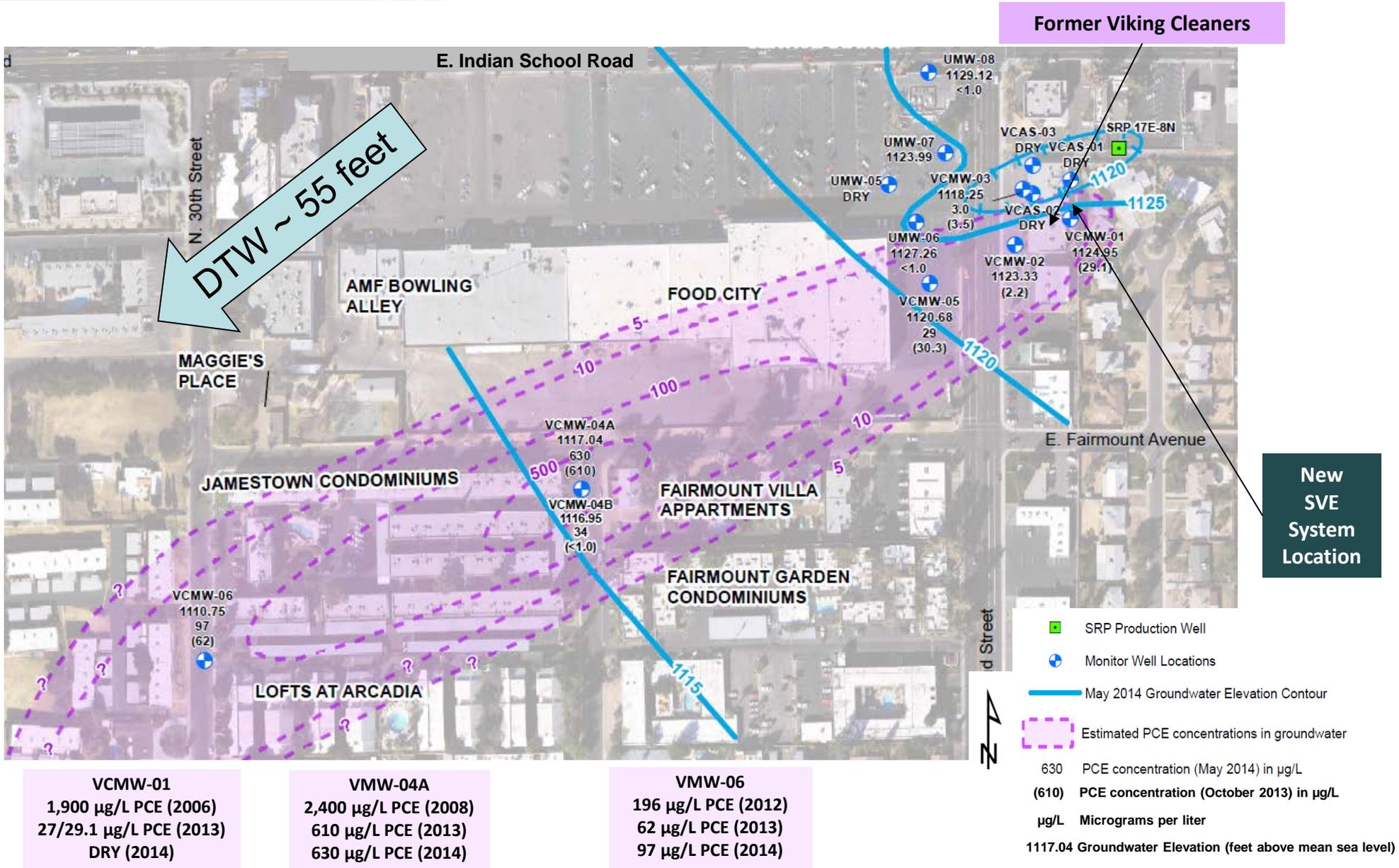


- 1,000 standard cubic feet per minute (scfm) vacuum blower
- Sound proof enclosure
- Three 1,500 lb vapor carbon vessels operated in series
- Extracted vapor from 7 SVE well screens
- Day 1 – Influent concentration was 15 ppm total VOCs (6/3/13)
- Influent concentration less than 1 ppm total VOCs by Nov 2013



**Maroney's SVE System**

# 32<sup>nd</sup> St. & Indian School Rd. Former Viking Cleaners





# 32<sup>nd</sup> St. & Indian School Rd. Former Viking Cleaners

- SVE installation at Former Viking Cleaners  
June 2 through July 18, 2014 (7 weeks)
- SVE System start-up July 21, 2014



# (32/IS) Former Viking Cleaners New SVE System Installation

**B  
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O  
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E**



June 2, 2014



**A  
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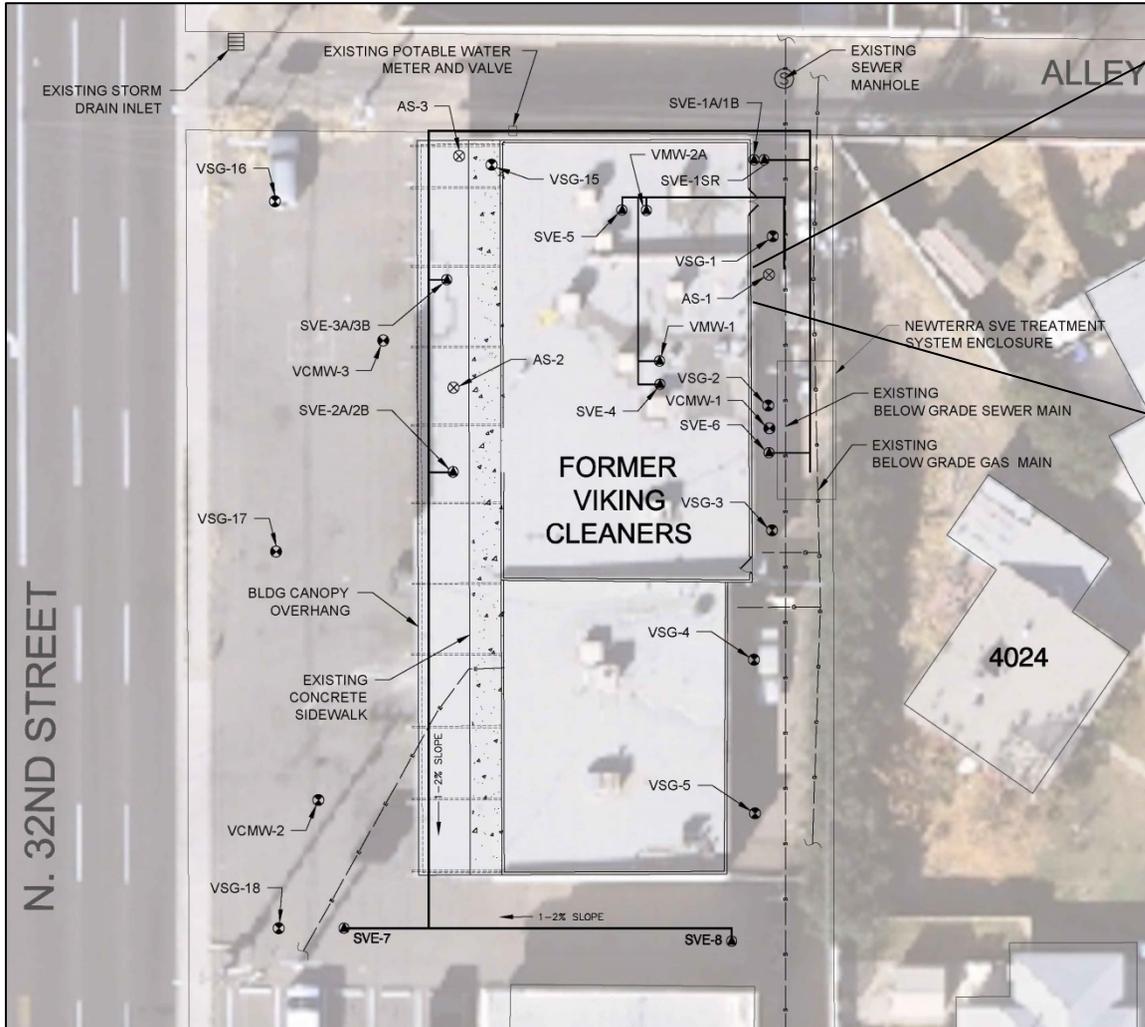
July 18, 2014



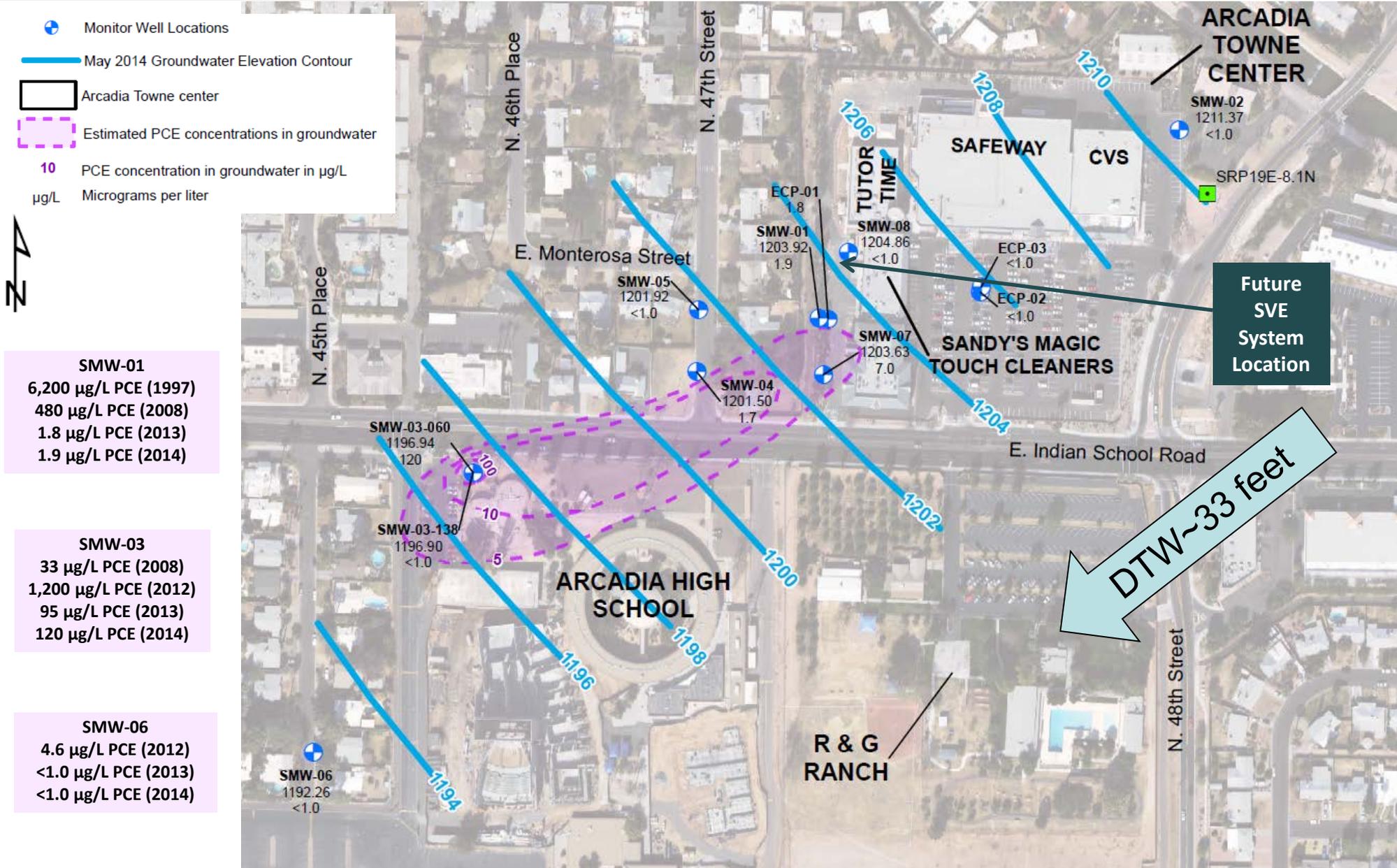
# (32/IS) Former Viking Cleaners SVE System Startup

- 550 scfm vacuum blower
- Sound proof enclosure
- Three 1,000 lb vapor carbon vessels operated in series
- Extracting vapor from 14 SVE well screens
- Day 1 influent concentration greater than 15,000 ppm total VOCs
- After 3 weeks of operation, influent concentrations have dropped to 90-100 ppm total VOCs

# (32/IS) Former Viking Cleaners SVE System Startup

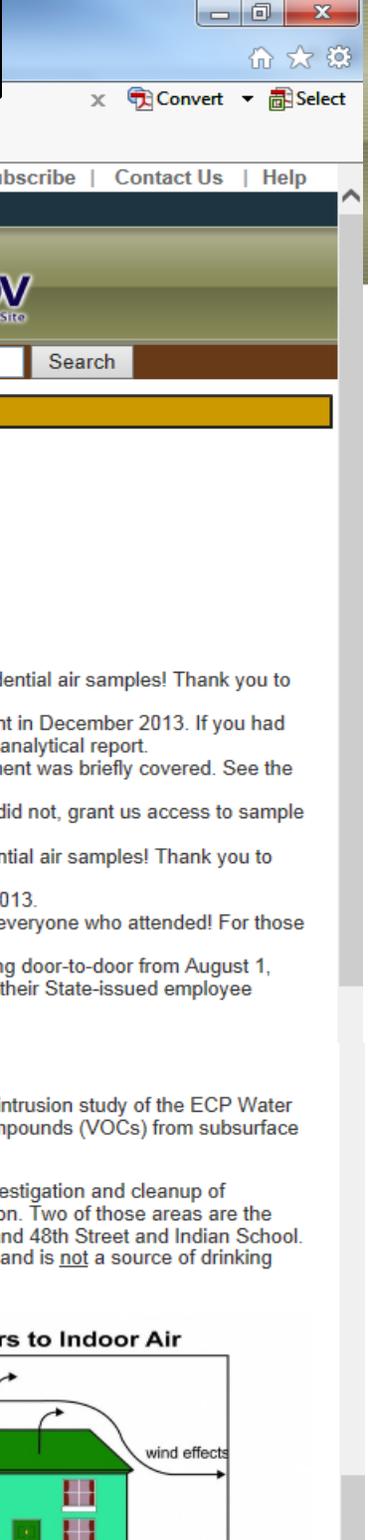


# 48<sup>th</sup> St. & Indian School Rd.



# Vapor Intrusion Results

- Indoor Air PCE Screening Level
  - Arizona Screening Level = 9.4 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )
  - OSHA Screening Level = 41.7  $\mu\text{g}/\text{m}^3$
- Summer Sampling Event – August and October 2013
  - Summer Data Set – low vapor intrusion potential
  - Sampled 100 residences out of ~325
- Winter Sampling Event – February 2014
  - Winter Data Set – low vapor intrusion potential
  - Sampled 140 residences out of ~400
- Little to no risk from vapor intrusion to residential indoor air
- A summary report will be posted to the ADEQ project website
- No additional residential indoor air sampling is planned



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[Introduction](#)

[Site-Wide Groundwater Plumes Map](#)

[Site History and Background](#)

- [32nd Street and Indian School Road](#)
- [48th Street and Indian School Road](#)

[Project Documents](#)

[Vapor Intrusion Information](#)

[List of Indoor Sources](#)

[Handouts / Brochures](#)

[Process Flow Chart](#)

[Indoor Air Sampling Process](#)

[Community Meeting Information](#)

- [ADEQ Event Calendar](#)
- [Meeting Agendas and Minutes](#)

[Frequently Asked Questions](#)

[Acronyms / Glossary](#)

[Contact Information](#)

## East Central Phoenix WQARF Site

### Indoor Air Assessment

#### What's New?

- ADEQ began indoor air sampling the week of February 18, 2014. We were able to collect 140 residential air samples! Thank you to everyone who gave us access!
- ADEQ sent out letters with the results of the Summer Sampling Event for the Indoor Air Assessment in December 2013. If you had your house sampled in August and/or October, see the [Project Documents](#) to view your laboratory analytical report.
- ADEQ held a Community Advisory Board meeting on November 13, 2013. The Indoor Air Assessment was briefly covered. See the [meeting minutes](#) for more information.
- ADEQ sent out Summer Sampling Event follow up letters in October 2013 to residents that did, or did not, grant us access to sample their indoor air. Did you get your letter? If not, go to [Contact Information](#) and let us know.
- ADEQ began indoor air sampling the week of August 26, 2013. We were able to collect 105 residential air samples! Thank you to everyone who gave us access! We hope to see you again during the Winter Sampling Event!
- ADEQ began another phase of soil vapor sampling within the Study Area the week of August 21, 2013.
- ADEQ held an Open House for residents within the Study Area on August 13, 2013. Thank you to everyone who attended! For those of you that missed it, see the [Handouts/Brochures](#) for items that were handed out.
- ADEQ began contacting residents within the Indoor Air Assessment Study Area individually by going door-to-door from August 1, 2013 until indoor air sampling started. Please note that ADEQ will always be in pairs and will carry their State-issued employee badges.

#### East Central Phoenix WQARF Program

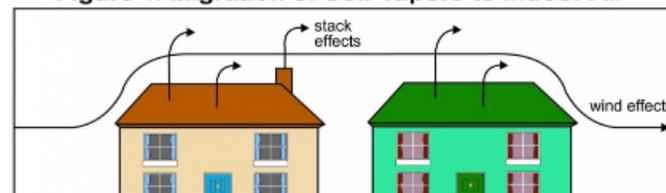
The Arizona Department of Environmental Quality (ADEQ) is conducting an indoor air assessment/vapor intrusion study of the ECP Water Quality Assurance Revolving Fund (WQARF) site. Vapor intrusion is the movement of volatile organic compounds (VOCs) from subsurface soil and groundwater into the indoor air of buildings.

The WQARF program, which is also known as the state's superfund program, funds and manages the investigation and cleanup of contaminated sites across Arizona. The ECP WQARF Site includes six areas of groundwater contamination. Two of those areas are the subject of our current indoor air assessment study area. These are 32nd Street and Indian School Road and 48th Street and Indian School. The groundwater under the two study areas is located between 32 feet and 55 feet below ground surface and is not a source of drinking water for residents of this area.

#### What are the Contaminants at the Site?

Currently the main contaminant of concern within the ECP WQARF Site is tetrachloroethene (also known as PCE). PCE is a solvent widely used for dry cleaning and metal degreasing. Contaminants of concern (COCs) at the site may change as new sampling information becomes available.

Figure 1. Migration of Soil Vapors to Indoor Air



- Develop Remedial Objectives (ROs) for 38th St./Indian School Rd., 40th St./Indian School Rd., & 40th St./Osborn Rd. Sites
  - Public meeting/Draft RI public comments and solicitation of RO
- Finalize RIs: 38th St./Indian School Rd., 40th St./Indian School Rd., & 40th St./Osborn Rd. Sites
- Additional investigation at 24th St./Grand Canal, 32nd St. /Indian School Rd., & 48th St. /Indian School Rd. Sites
- Continue SVE treatment and operation at 32nd St. /Indian School Rd.
  - Sites (Maroney and Former Viking)
- Ongoing SVE Planning and Design at 48th St./Indian School Rd. Site

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

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





# East Central Phoenix

## Questions?

Mel Bunkers

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Wendy Flood

Community Involvement Coordinator

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